

BOOK REVIEWS

THE PHARMACOLOGY AND THERAPEUTICS OF THE MATERIA MEDICA, by Walter J. Dilling. 19th Edition, 1951, Cassell pp x + 630. Price 21s.

A book with a lineage as long as this (the first edition appeared in 1884) needs little introduction. It is one of the accepted standard works on Pharmacology and Therapeutics, and although too detailed for the student reading for his early examination in Pharmacology, it will be of great value in his later studies and as a work of reference.

The drugs are so arranged that those having comparable actions appear together, and a comprehensive index serves the needs of the reader seeking information on one particular drug. A valuable part of the book is Part III which deals with general therapeutics classified under the various "systems" of the body.

In this edition there has been considerable revision based on the British Pharmacopoeia of 1948. There are not many points at which criticism can be levelled against this book, but one might hope for a clearer typographical lay-out in future editions. It is admittedly difficult in a book in which the subject-matter must be grouped under many headings, to devise a scheme of type which is clear and yet tasteful, but one wishes that greater prominence had been given to the name of a drug where it appears as a heading. It would then be immediately clear to which drugs any subsequent paragraphs on *preparations of actions and uses* referred. This is, however, a minor criticism and detracts little from the value of the book as a whole.

GUY'S HOSPITAL, 1725-1948, Edited by Hujohn A. Ripman, for Guy's Hospital Gazette Committee (1951). Guy's Hospital Gazette, pp. 176, illus. Price 18s. 6d.

Following the introduction of the National Health Service in 1948, several histories of hospitals have been published, to mark, as it were, the passing of an epoch. The present volume contains chapters on the History of Guy's Hospital, by the late Sir William Hale-White, brought up to date by Hujohn Ripman, the editor of the book; The Medical School, by Prof. T. B. Johnson; The Dental School, by F. N. Doubleday; Nursing at Guy's, by Dorothy H. Smith; Guy's Hospital in 1948, by Sir Herbert Eason; and the Historical Lists forming the concluding section.

Owing to its nature and scope, this book makes no pretence to take the place of *A Biographical History of Guy's Hospital*, by Wilks and Bettany, published in 1892, to which we shall still turn for information regarding eminent Guy's men of the past. But the new short history is beautifully produced by Adprint Ltd., contains a remarkable collection of illustrations, several being in colour, and, at current prices, is wonderful value for 18s. 6d.

It is of interest to note that this book is published out of the profits from the sale of the *Guy's Hospital Gazette*. We would welcome a short history of this Hospital on a similar scale, or, better still, a History of the Medical College, which is long overdue. But let us hope that publication will not be delayed until our *Journal* shows a surplus! J. L. T.



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ST. BARTHOLOMEW'S



HOSPITAL JOURNAL

Vol LVI

MAY, 1952

No. 5

ESPRIT DE CORPS

We have seen and read much of the new College Hall at Charterhouse Square. We have read of its architecture, admired its furnishings and sampled an excellent lunch in the new refectory. It is many years since the students of Bart.'s last had a hostel of their own, and we are glad indeed that this new building is of so excellent a quality. So much has been heard—and such is only natural—of the material make-up of College Hall, that its importance as a social institution seems almost to have been overlooked.

From all over London and its suburbs the students have travelled to Bart.'s. They have lived according to their means in "digs," or flats, and the lucky few have lived at home. So living, it has been hard indeed to maintain the team spirit so essential to College life. The social life of Bart.'s people has been strictly limited, and has seldom been associated with the hospital. The sentiment, that one saw enough of one's contemporaries during the day without going out with them at night, has not been altogether lacking; and this was not surprising. More surprising was that a house so divided stood so firm, that old Bart.'s men gained a reputation for "clannishness" wherever they foregathered, and that all were united at least in their pride in the name of Bart.'s.

Not only were the students widely scattered. They were divided further into pre-clinical and clinical; a divide crossed only by the bridge of the games field, the river or the golf-course, and not crossed at all by those (and they seemed not few) who played no game.

That was the position. For the majority, it will remain unchanged, some cannot afford to "live in," others will not want to, but at least a nucleus will do so, and they can provide the corner-stone upon which to build a real college life, a true students' union. Clinical students will live in the midst of the pre-clinical stronghold, and another bridge will cross the divide. Already the residents speak of "the day boys" and we welcome this sign of their pride.

If we are to take full advantage of the opportunities thus given to us, there is surely more that can be done to bind all Bart.'s students into a single community. Clubs can be formed—an account of a new one appears elsewhere in this issue—dances less formal (and cheaper) than the Dorchester Ball can be held, and the sport club dinners should be held at Charterhouse instead of in the restaurants of Soho. These things can be done and we shall hope to see them. An added interest, and a stimulus to such ventures, might well be provided by one or two formal occasions in the life of the Medical College. At other medical schools in London, Orations are held to open the sessions (Lord Horder addressed King's on such an occasion last autumn—but the opportunity for him to do the same at Bart.'s does not arise), and prizegivings have not been unknown even in the Great Hall. Is it too much to expect their return?

We hope to see these things and with them a drawing together of all the students at Bart.'s. The College Hall has provided the opportunity for a great reformation. It is our duty to grab that opportunity.

Freedom in Medicine

This was the title of an address which Lord Horder gave before the Abernethian Society on February 21st. His connection with the Society has been a long and close one; as a student he was its President and he has taken part in many of its meetings since, but he can seldom have received so enthusiastic a welcome as he did on this occasion.

The subject was one to which Lord Horder, as chairman of the Fellowship for Freedom in Medicine, has devoted much time in recent years, and he dealt with it with characteristic vigour and wit. Few who heard him will forget his point that so-called progress had brought medicine under the domination of the State about 500 years after it broke free from the domination of the Church. "But was it," he asked, "unfair to say that at least the Church was cultured?"

Tuberculosis

THIS month our articles take a rather more serious turn, and focus attention on tuberculosis. We are very fortunate that the Physician Superintendents of Colindale—Dr. Snell—and Clare Hall—Dr. Simmonds, an old Bart's man—have written specially for this issue. In a very interesting article the Senior Medical Registrar at Papworth—Dr. Clarke—writes on Sir Pendrill Varrier-Jones. And last, but far from least, we welcome Dr. Coulson to our pages, and he writes on the problem of tuberculosis among students.

Sir Pendrill Varrier-Jones, who was founder of the Papworth Settlement and its first director, seems barely to be remembered by the students at this—his old hospital. We hope that Dr. Clarke's article will go a long way to remedy this, so that future generations of students here may at least have heard of one of the greatest of old Bart.'s men.

We hope that our readers will appreciate the articles in this issue. They are of a type that does not correspond with articles elsewhere, and we feel that it is a useful function of the Journal to print such articles from time to time. They help the doctor and the student to get that wider view of a subject which is so essential to the good practice of medicine.

Prizewinners

Senior Scholarship in Anatomy, Physiology and Biochemistry, awarded equally between:

J. A. McKINNA and J. I. MISIEWICZ.

The Foster Prize: awarded to N. L. BROWSE.

The Treasurer's Prize: awarded to D. H. ELLIOTT.

Kirkes Scholarship and Gold Medal
Awarded to P. SLEIGHT.

Brackenbury Scholarship in Medicine
Awarded to M. G. PRICE.

Prox. Access.: R. E. DREAPER, J. F. PREECE.

Brackenbury Scholarship in Surgery
Awarded to J. A. GIRLING.

Burrows Prize
Awarded to P. SLEIGHT.

Prox. Access.: J. H. SMITH.

Skvinner Prize
Awarded to G. E. M. TARNOKY.

Prox. Access.: J. COOK, M. A. WINNER.

Walsham Prize
Awarded to P. SLEIGHT.

Willet Medal
Awarded to J. A. GIRLING.

Roxburgh Prize
Awarded to I. M. P. SMEED.

Matthews Duncan Prize
Awarded to R. C. COCHRANE.

Hichens Prize
A. E. BASHFORD
R. H. GIBBON A Prize awarded to each.

Herbert Paterson Medal
Awarded to J. I. MISIEWICZ.
Prox. Access.: M. J. LEFFORD.

Junior Osler Club

The Junior Osler Club held its first meeting on March 10th, 1952. This humble addition to the Oslerian family is a shy and modest child, but although she announces herself to the hospital with some trepidation she believes she answers a real need. Her aim, in short, is to bring together those in the hospital who are interested in the historical and literary aspects of medicine.

The club will meet once a month when papers will be read and discussed by the members. Details of the meetings will be posted in the libraries. Further information about the club can be obtained from Mr. John Thornton. Lest the objects of the club should sound too severe, the Junior Osler Club hastens to add that she wants interest rather than erudition; also, and on this she insists, her meetings will be held in an atmosphere of true Oslerian informality. To any true friend she will extend a most warm welcome.

Correspondent

Dr. Carruthers Corfield, who writes on another page, has his practice at Rustington in Sussex. He is the author of articles on "Memorials and Epitaphs," which have been appearing in his Parish Magazine. One epitaph he quotes may be of particular interest to our readers, it comes from the old Non-conformist burial ground at Bunhill Fields in Finsbury:

"Here lies

Dame Mary Page

Relict of Sir Gregory Page, Bart.,

She departed this life

March 4th, 1728

In the 56th year of her age.

In 67 months she was tapped 66 times, had taken away 240 gallons of water without ever repining at her case

Or ever fearing the operation."

Dr. Corfield has also sent us this explanation of the Epitaph which appeared in the February *Journal*—Christopher Burraway was the result of an incestuous connection between a father and daughter and was early placed in the Foundling Hospital whence, when he came of age, he was apprenticed to a farmer.

Coming in after years, by chance, to Martham he was hired by his own mother as farm steward, her father, being of course father to both of them, being dead.

His conduct proved satisfactory to his employer and she married him.

She thus became successively mother, sister, mistress and wife.

Later she discovered that he was her son by means of a peculiar mark on one of his shoulders and she was so horror stricken that she soon afterwards died, he surviving her four months.

View Day

View Day will be held this year on Wednesday, May 14th.

BIRTH

McADAM, March 28th, in St. Bartholomew's Hospital to Enid, wife of Bernard N. McAdam, a daughter (Helen Jane).

Mr. Keynes

In our valedictory notice about Mr. Keynes in our last issue we gave the impression that he was retiring completely from the surgical arena. This is not so, and we are glad to note that he will continue in practice, both privately and at the Thyroid and Thymus Clinic at New Hospital, Hampstead.

Great Ormond Street

The Centenary of the Hospital for Sick Children

This year *The Hospital for Sick Children* is celebrating its Centenary. We at Bart.'s have a particular pride in this event since it was Dr. Charles West, who received his medical training here, who was chiefly responsible for the founding of the Great Ormond Street Hospital. After leaving Bart.'s, West went to Paris and then to Berlin, where he received the degree of M.D. in 1837. His first interest was in obstetrics, and this he followed until he joined the staff of the Middlesex Hospital in 1845 as lecturer in midwifery. He was already at this time physician to the Royal Universal Dispensary for Children, and in 1847 he started lecturing at the Middlesex on the diseases of childhood. In 1848 he published one of the first books on this subject, and this brought him recognition in the medical world.

West had long wanted to enlarge the Dispensary for Children so as to be able to treat in-patients, but this had proved impossible because of lack of funds, and opposition from the other practitioners in the area. By 1850, he had gained the support of Sir Henry Bence Jones (whose name is perpetuated in "Bence Jones Protein") and public interest was aroused by their project for the founding of a Hospital for Children. A suitable house was found at 49, Great Ormond Street, and a public subscription was started by Lord Shaftesbury, who became first President of the new hospital. Charles Dickens wrote in support of the scheme, and in 1852, on St. Valentine's Day, the Hospital was opened with 10 beds—all in one large room of the house in Great Ormond Street. From that day to this the hospital has grown both in size and in stature, but has retained the fine spirit in which it was founded. We may well take pride in the thought that so great an Institution has its roots in our own Hospital, and especially so when we wish it a second century (and indeed many more) as successful as the first.

Changes of address

Dr. C. R. Taylor from West Acres, West Ayton, Nr. Scarborough, to 20, Egerton Road, Queen's Park, Bournemouth.

Dr. Hugh Middleton from 13, Valley Road, Ipswich, Suffolk, to 10, Trumpington Road, Cambridge.

SOME ASPECTS OF THE TREATMENT OF TUBERCULOSIS

by W. E. SNELL.

TUBERCULOSIS differs from all other diseases of bacterial origin in this country in its chronicity, its tendency to relapse and its uncertain outcome. Not infrequently patients have undergone a preliminary and apparently successful period of sanatorium treatment and have returned to work for five, ten or even more years, only to break down again, when they present more difficult problems in treatment. For these reasons the treatment of tuberculosis must start at the time of diagnosis and should continue in the form of a modified regime and regular supervision for many years and even for the remainder of life.

Sanatorium treatment is therefore only an incident, although perhaps the most important, in a protracted disease and it is essential to consider the disease as a whole rather than from this limited viewpoint. It will not be out of place, therefore, to discuss briefly some other aspects of the disease to which one's attention is focused from time to time. First *the diagnosis*: in the past this was usually made from symptoms which suggested the possibility of tuberculosis. These may be related to the lesion in the chest, commonly cough, expectoration, pain or dyspnoea or toxæmic symptoms such as lassitude, anorexia, loss of weight or amenorrhœa, and a combination of any or all of these may coexist. The disease may first present as one of its complications such as laryngitis, ischio-rectal abscess, epididymitis or diabetes, and chest X-rays should be taken in these conditions. Occasionally the accent is on intestinal symptoms such as morning vomiting or diarrhœa (without intestinal ulceration). One has the impression that the disease is changing in character, toxæmic symptoms often being absent and many patients will say that they have never felt ill. These are usually minimal cases, but recently a man was seen whose only complaint was dizziness on going upstairs; he was playing golf and swimming but X-ray revealed extensive bilateral cavitating disease.

The standard of diagnosis has improved but patients are still too frequently seen who have been attending their doctors for months with cough and intermittent attacks of so-

called influenza, and who in some instances have finally demanded an X-ray which has revealed the disease. It need not be stressed that the stethoscope is an inadequate tool in the diagnosis of early tuberculosis, useful as it is in the recognition and follow up of acute lung conditions. It can be fairly said that if signs due to tuberculosis can be detected with the stethoscope, then the disease is at least moderately advanced. It follows that a chest X-ray is essential on the least suspicion of tubercle—this will result in many normal X-rays, but with the probable introduction of 75mm. or 4in. x 5in. film as a routine in this type of case, the film shortage can be overcome.

At the present time an increasing number of patients are being discovered by mass miniature radiography and experience shows that some 3 per 1,000 of apparently healthy volunteers have active tuberculosis and some of these will already have extensive disease. Thirdly, a number of persons will be diagnosed as a result of their "contact" with previously known cases and some of the contacts so diagnosed may prove in fact to have been the initial infecting case. Instances of epidemics of primary tuberculosis in schools have recently been described when the teacher has proved to be the unsuspected infector.

Finally, remember that general appearance is no guide to the diagnosis of early tubercle and patients with all types of skeletal and muscular development, including well known athletes, have fallen victims to the disease. In females the main incidence remains in the 17-30 age group, but in males a recent gradual shift to the older age groups has occurred, the maximum incidence now occurring in the 45-60 group.

Most people, unless they have already had a case of tuberculosis in the family, have very hazy notions as to what it means. They are familiar with the unpleasant word "consumption," and those in the higher income groups will probably assume that they will be wafted away to Switzerland for "the cure." Switzerland has long had a high reputation for the treatment of tuberculosis and it cannot be denied that the dust-

free atmosphere of the mountains and the long hours of winter sunshine are an improvement on the winter climate of this country. On the other hand it should be known that there is a higher incidence of tuberculosis among the Swiss than amongst the English, that treatment in Switzerland is now considerably more conservative than that now in vogue in England, and that there are arguments in favour of people being treated in the climate in which they will have to live and work in the future. For the majority, free treatment must, for financial reasons, take place in one of the sanatoria provided in England by the appropriate Regional Boards. It is plain that the diagnosis must come as a great mental shock, except perhaps to those very few patients who from their feelings of ill health may have long suspected the disease and to whom its eventual discovery may come almost as a relief. The manner in which the diagnosis and its implications are conveyed to patients may permanently influence their attitude to the disease and it is therefore essential for the doctor to take time over this interview, and he will naturally suit his remarks to the level of the intelligence of the patient concerned. It will generally be essential to tell him or her that a long period of treatment will be required and that in the first instance this will take place in a sanatorium. No attempt should be made to say how long this treatment will last, or what particular form it may take. In order to soften the blow doctors sometimes tell patients that they will go to a sanatorium for "a couple of months," implying that they will be discharged cured, and this may lead to the premature self-discharge of patients from sanatoria when they find this is not the case. Fortunately it can now be pointed out to patients that their outlook has been greatly improved in recent years, owing to the discovery of streptomycin and similar substances, and by the increase of major surgery, but it must be impressed upon them that they will not be in any sense cured when they emerge from the sanatorium, and the success of their treatment and the maintenance of their future health will depend very much on themselves. For nearly all patients the diagnosis will mean a complete abandonment of work for the time being and in the case of women, perhaps mothers of families, fundamental re-arrangements of their domestic plans, and most

patients will require a few days to put their affairs in order. Unless they are acutely ill, and many patients nowadays are afebrile on diagnosis, they can be allowed to remain ambulant until these affairs are settled, when they can take to their beds with an easier mind.

As is well-known, owing to a number of factors which have become cumulative, the primary one being the nursing shortage, patients may have to wait for long periods before a vacancy for them in a sanatorium occurs. It is satisfactory, however, that there is, particularly in certain areas, a considerable improvement in this respect, and the waiting period, especially for patients who are in need of urgent sanatorium treatment, is now reduced to a few weeks only. During the period, long or short, while the patient is waiting, it is the duty of the Chest Clinic Physician of his area, who in most cases has made the diagnosis, to supervise his treatment at home, to make arrangements to prevent infection of his relations and to ensure that his family finances are adequate. In many areas arrangements have been made for patients to have chemotherapy at home and in a number Pneumoperitoneum is induced in order to assist bed rest. Experience has shown that it is unwise to induce A.P.s in the home owing to the lack of X-ray screening facilities and the liability in such patients of complications such as pleural effusion to occur. Arrangements may also be made for boarding-out of children and for raising their resistance to the disease by B.C.G. vaccination.

The day comes when a letter is received by the patient instructing him to present himself at a certain sanatorium, with a brief list of clothing, etc., required, and the patient sets off by ordinary transport, or if severely ill in an ambulance, to this sanatorium. His feelings must be rather like those of a small boy going to boarding school for the first time and the first impression of the sanatorium is likely to govern his reaction to subsequent treatment there. It is, therefore, essential that he should be given some sort of a welcome and not be left standing about in draughty corridors feeling that he is quite unexpected and that nobody knows where he should go. He should be accompanied to his Ward by a porter, and there handed over to the Sister or nurse in charge, who should indicate in a friendly way that she

has been expecting him and immediately set about getting him to his bed. The Ward doctor should see the patient as soon as possible after admission. The history is commonly taken at the bedside but there are obvious advantages in using the privacy of a separate clinical room, particularly for deaf patients. The doctor will decide what "grade" of bed rest the patient shall receive and will order the necessary X-rays, take blood for examination and prescribe any drugs required such as expectorants or linctus. At Colindale no patient receives any form of treatment (except in an emergency) until he has been presented and discussed at the weekly clinic, where all the medical staff and frequently visiting chest clinic physicians attend. Meanwhile he can "simmer down" for a week or two of bed rest. It is a mistake to plunge into active (i.e. collapse) therapy without this preliminary rest period—the patient requires time to adjust himself physiologically and psychologically to his new environment. Many patients too are slightly febrile on admission but will become afebrile with a few days strict bed rest. Patients who do not become afebrile, especially with streptomycin, are a small minority and active treatment should only be carried out on them with great caution. At the present time some 90 per cent. of patients at this hospital receive or have been given before admission a course of streptomycin gm. I and PAS gm. XV lasting usually 60 days and during their stay in hospital a similar percentage will have some form of active treatment—at the same time all will undergo the routine sanatorium treatment which has justified its use over many years. Those students who have attended Colindale will already have had an introduction to this, but it may be worth while to recapitulate briefly the general principles. They are (1) *Fresh air* is not bactericidal as many lay people suppose; its action therefore is indirect, improving the sense of well being and appetite as it does in normal persons. Fresh air also dilutes the infection to which doctors, nurses and domestics may be exposed in the Wards and inculcates this idea in the patients so that they will not be, if still infectious, a source of danger to their relations at home. It seemed at one time to be supposed, judging by the number of sanatoria built without heating, that cold had some beneficial effect in the disease, but there would appear to be no scientific basis for

this belief. (2) *Good Food*. The aim here is to build the patient up to his optimum weight and not to overfatten him. Special attention must be paid to the diets of ill and post-operative patients who cannot be expected to digest the standard dietary supplied to ambulant patients. Two pints of additional milk per diem are allowed for each patient and this can be "fortified" by addition of extra sugar, protein or dried milk where necessary. Alcohol in the form of bottled beer or stout in small quantities is helpful in stimulating appetite and assisting the digestion of post-operative cases. Many patients do gain much weight during their stay and I have wondered whether this can in any way be related to streptomycin therapy; one of the original Medical Research Council trial series doubled his weight and others gained several stones. (3) *Rest*. It is probably true to say that rest is still the most important single factor in treatment. To be effective it must be properly carried out and in most sanatoria this is "staged" in various degrees which are prescribed by the doctor. It is far more difficult for the average patient to rest at home where he is apt to stay in bed or get up as he feels inclined. However, certain chest clinics have succeeded in persuading patients to carry out this routine at home, and this can be reasonably well supervised if the patient is also receiving a daily injection of streptomycin. (4) *Graduated Exercise* was developed on Marcus Paterson's theory of auto-inoculation, based on the belief that increasing grades of exercise and later, garden work, liberated tuberculin in small doses from the lung lesions, thus stimulating the patient's resistance. This idea may have been based on sound theory but in practice it is so difficult to supervise these subtle differences in "grade work" that as a scientific therapy it is invalid. However, twenty years ago there was little really effective therapy for pulmonary tuberculosis and this exercise proved a useful substitute for it. Not only was a certain amount of useful work done in the sanatorium grounds, although this was, of course, quite disproportionate to the amount of labour involved, but the process was in fact one which now goes by the more fashionable name of "rehabilitation." Nowadays few sanatoria employ this treatment to any extent, partly because the demand for beds has been met by speeding up the discharge rate, few

patients staying after the "up all day" stage. However, when this pressure slackens, as it shows signs of doing, it is my belief that graduated exercise can still play a part both in testing out the success or otherwise of treatment under sheltered conditions of close observation, and starting the first stage of psychological and physical rehabilitation so necessary for a patient who has undergone prolonged bed rest.

(5) *Occupational therapy* and art therapy are designed to prevent boredom and occupy the energies of patients, many of them feeling well, who undergo long periods of bed rest. It is usual to provide patients with wireless headphones and at Colindale each patient can select one of the two programmes. Loudspeakers are a mistake—they annoy some patients and staff and create an atmosphere of noise and disorder. Portable cine apparatus and television can be shown either in the wards or in a recreation hall. Concerts may also be arranged. Many sanatoria have a patients' committee, each ward electing a chairman who makes recommendations with regard to entertainments, inter-ward games and competitions, and whist drives, etc., can also be arranged.

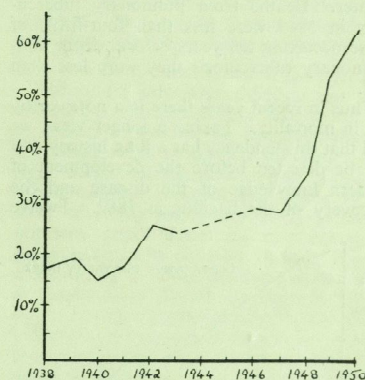
All these activities help to abolish boredom and keep up morale, but it must be realised that they are in no way substitutes for, nor must they be allowed to interfere with, medical or surgical treatment.

(6) *Education*. It was said at one time that this was the most important function of sanatoria. If so it must be admitted that it is an expensive form of education and with the present greater effectiveness of treatment, this is no longer the case. However, education in methods of preventing spread of infection and in future healthy living are an important function of sanatoria. Much is learnt automatically by patients undergoing the sanatorium routine and this can be reinforced by talks over the wireless by medical staff.

(7) *Medical and Surgical Treatment*. At the present time these are undoubtedly the most important functions of sanatoria. Streptomycin and to a lesser degree PAS and the thiosemicarbozones have revolutionised treatment. Many cases previously considered hopeless have been rendered quiescent by their use alone and other patients have been made fit for major surgery who in the past

could never have undergone these valuable collapse procedures.

The subject of collapse therapy, directed primarily to the closure of tuberculous cavities, has become so complex in its variety that no attempt can be made to discuss it in a general article such as this. The effectiveness of treatment can best be measured by the sputum conversion rate and as I have shown recently¹ this has shown at Colindale a progressive upward trend over the years which has been particularly striking since the streptomycin era. (See Graph).



Graph showing Percentage of Positive Sputum "Conversions" each year.

Finally let us remember that "patients" are not an inferior race apart—all of us who have a positive tuberculin test harbour live tubercle bacilli and are therefore "tuberculous" although the vast majority do not develop disease. Many patients, particularly the more conscientious, suffer a very real sense of social isolation. This is partly a reflection of our inadequacy in the past both in diagnosis and treatment. All the more important, therefore, is it to use vigorously the new and more powerful weapons at our disposal and to treat the victims of this long drawn out disease with sympathy and understanding.

Reference

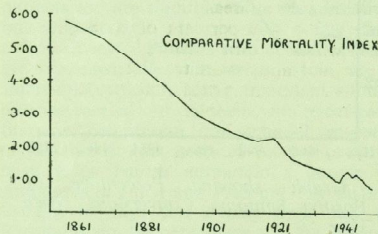
- (1) Ref. Lancet, Sept. 8, 1951.

IS TUBERCULOSIS DISAPPEARING ?

by F. A. H. SIMMONDS
Clare Hall Hospital

The British Medical Journal publishes each week the numbers of persons dying from tuberculosis in the great towns of England and Wales. For four weeks of January 1952 the figure was 645; in January 1950, it was 862, although the population of the great towns included is now 10 per cent. greater. Deaths from pulmonary tuberculosis in 1949 were less than four-fifths of those occurring ten years before; from non-pulmonary tuberculosis they were less than half.

Thus in recent years there is a noteworthy fall in mortality. Taking a longer view, we find that this tendency has a long history and can be detected before the development of modern knowledge of the disease and the discovery of the bacillus in 1882. Twelve



Pulmonary tuberculosis comparative mortality index: England and Wales.

The index measures the mortality rate in each year and is based on comparable populations. The rate for 1938 is taken as unity.

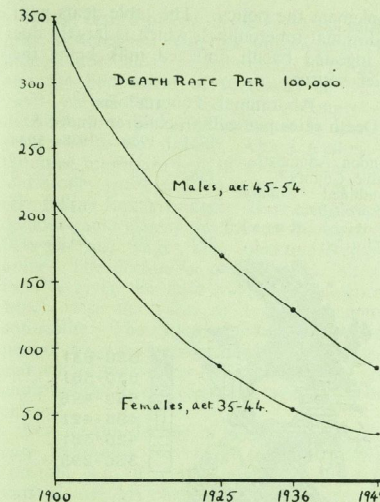
per cent. of all deaths in 1850 were due to phthisis; this meant that about 460 of every 100,000 young women of 20 years of age died each year, and so did 400 young men of the same age group. The total deaths due to this cause were six or seven times those occurring today. We are now inclined to think with mild amusement of the frequency with which young ladies of Victorian fiction went into a decline, but in reality it was all too common. Apart from other causes, tuberculosis must be blamed for the early fading of many young lives. Progressive primary tuberculosis may soon lead to miliary tuberculosis or meningitis, as is well

known, but we now realise also how close and immediate may be the development of bronchogenic phthisis from the primary focus, or how soon widespread bloodborne disease of the lungs may occur.

The findings of Von Pirquet and other early workers with the tuberculin test, and indeed post mortem studies also, seemed to suggest that childhood infection was extremely common and that later breakdown occurred in those already infected. Probably such studies were concerned with a selected group of hospital patients, and less infection might have been found among more protected families. In the latter, contact with a wider circle (as for example entering the army), or some mischance like the introduction into the house of a nursemaid suffering from phthisis, could have caused an outbreak of florid disease in previously sheltered persons. We see the same process at work today, but a better general standard of living including a healthy dietary, does much to improve resistance and contributes to the present fall in active disease.

The graphs illustrate the decline in mortality since 1900 in those age groups with the greatest incidence. This satisfactory change especially when compared with the mid-century figures given above is impressive, but one must note that the curves begin to flatten out. Figures for the separate age groups are not available for the most recent years, but there is reason to believe that the last two years have in fact shown further improvements; the special causes for this will be discussed below.

Clinical observations provide some lively parallels to the statistical evidence. Tuberculous laryngitis is on the way to becoming an interesting clinical rarity, and so is tuberculous enteritis. About 20 years ago, we saw many cases at Clare Hall Hospital; about 30 per cent. of those examined post mortem had definite involvement of the larynx. It is true that then a majority of patients had advanced pulmonary disease when admitted, while today the hospital is a centre of active treatment. Nevertheless, of the thousand in-patients treated yearly, laryngeal tuberculosis occurs in less than 1 per cent. Professor



Pulmonary tuberculosis deaths by age and sex.

The curves illustrate the fall for the ten year age groups that had the highest figures in 1900.

F. C. Ormerod draws attention to the decline in this disorder, noting that the fall began about 20 years ago; clearly, therefore, one cannot give the credit to streptomycin or to such recent remedies. A similar trend has been noted in America—it may even have started earlier there.

It seems most likely that the progressive decline in tuberculous laryngitis and enteritis is due to the progressive increase of collapse therapy, i.e., to the determined attempt to close cavities in the lung. It was realised years ago that if the pulmonary disease could be controlled, tuberculous laryngitis would heal; active treatment has, therefore, been able to prevent the onset of such disease in many patients. Even in those who succumb, we see less often the painful ulcerations of throat and bowel formerly so common.

Tuberculous laryngitis and enteritis are due to direct implantation of tubercle bacilli in the mucosa of the affected organs. Heavy contamination by large amounts of sputum passing over the mucous membrane is a potent factor, the bacilli possibly lodging in a traumatised area of the mucosa. Most patients with these disorders expectorate

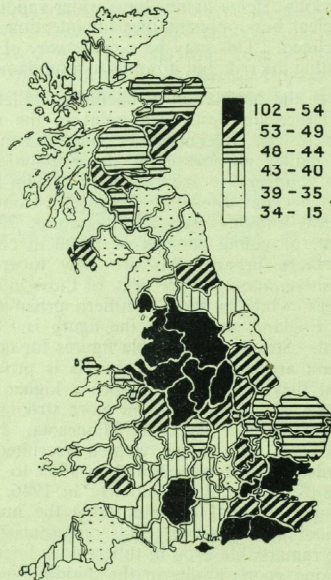
much sputum derived from cavities and this sputum contains many bacilli. Millions are present in each millilitre for even sputum with few visible bacilli in several microscopic fields probably contain about 10,000 per ml. In 1935, it was necessary to destroy about 4,300 mls. of sputum daily for every 100 patients in Clare Hall Hospital; today the quantity is approximately 330 mls. Though there were then more advanced cases, the significance of such a difference in the fall of the population of tubercle bacilli is obvious; if the figures have wider validity, it is clear how opportunities for infection have declined. This may be a crude way of estimating the risk, but it points to a fundamental

fact—the population of bacilli has fallen.

Tuberculin tests also point to the same conclusion. Recent surveys have shown that a smaller proportion of the population in the younger age groups are tuberculin positive. The Medical Research Council's recent enquiry revealed that about 73 per cent. of young persons of 19-20 in certain northern urban areas are now tuberculin positive, about 64 per cent. of those in rural areas, while in some southern urban areas of England and Wales the figure is 59 per cent. Strictly comparable figures for earlier years are not available, but it is probable that they would have shown a higher incidence of infection. Even more striking are the findings of Myers, in Minnesota. Forty per cent. of young women recruited as student nurses were found in 1932 to have positive tuberculin reactions; in 1946, only 10 per cent. of those entering the nursing school were positive. This represents fairly the remarkable drop in tuberculous infection among young adults in the middle Western States. In Canada, only 20 per cent. of those under twenty are positive.

Bovine tuberculosis also appears to be on the way out. Here again the U.S.A. has a notable story. A determined Federal policy has eliminated tuberculin reactors from herds of cattle in all States. In 1915 the proportion of infected cattle was about 5 per cent.; in Britain the problem is more difficult as there are still about 30 per cent. of cows infected. The Americans consume more milk per head than the British, but tuberculosis due to bovine bacilli is almost unknown among them. Even soldiers need milk, but the quality of the milk supplied from some British cattle was a source of

anxiety to the Medical branch of the American forces encamped here during the war. Nevertheless, progress has been made at home, and the policy of developing areas where all herds are tuberculin negative is bearing fruit. It is hoped by ten to 20 years to have removed all reactors from British herds. Several large districts have already eradicated tuberculous herds and the map shows that a number of counties had already achieved a low incidence of bovine tuberculosis in 1946.



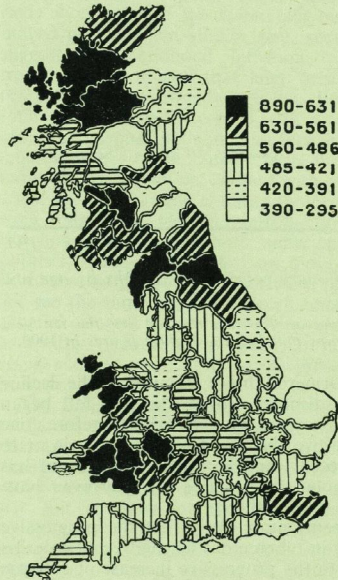
Incidence of tuberculosis in cattle.

These blocks are reproduced by kind permission of the Lancet.

Meanwhile in the great towns, bovine disease in human beings has markedly declined. This has followed a more general pasteurisation of the milk supplied in towns. The experiences recorded in the table illustrate the effectiveness of this policy. In the County of London, most milk is delivered by a few large organisations whose milk is heat-treated; probably about 95 per cent. of the milk is pasteurised. In other great towns, a considerable volume of milk is also pasteurised (over 50 per cent. by 1938), while in rural areas, it is obviously difficult to

implement the policy. The table deals with abdominal tuberculosis, which is largely due to ingested bacilli, infected milk being the chief source.

	Abdominal Tuberculosis			
	Death rates per million children under 5			
	1921	1930	1938	1944
London Administrative County ...	136	24	12	6
Combined County Boroughs ...	437	157	63	35
Combined Rural Districts ...	252	92	63	60



Human death rate (per million) from tuberculosis, in comparable country districts.

Hence, in London, bovine tuberculosis in man is now a rarity: any cases which are discovered are likely to have acquired the infection in a country district.

What are the causes of this decline in the mortality from tuberculosis, and in the incidence of tuberculous infection? Has treatment been an efficient cause in lowering the death rate? Clearly the number of infecting bacilli has been reduced. For hovine infections, this has been achieved by the removal or slaughter of infected animals, or the destruction of bacilli in their products.

Public health policy in the broadest sense must be credited with the improvement in human tuberculosis; amelioration of poverty and the betterment of standards of living have played the vital part. Improved nutrition is a powerful influence in raising resistance to the disease. Good feeding is the most important gain of adequate income, and money spent on food is the first casualty of a falling family budget. Hart and Wright demonstrated clearly the inverse relationship between real wages and tuberculosis mortality. The decline in poverty must, therefore, be given the chief credit—all influences which raise the value of a family income contribute. The rationing system of the war period saved many from tuberculous disease, and school meals and free milk make a real contribution to the campaign against tuberculosis.

Despite the decline in total mortality, the case mortality for long remained fairly constant—i.e., if a man developed tuberculous disease his chance of survival was no better than his father's. Recently this is no longer true. It seems as if present treatment is beginning to have statistical as well as individual value. A few years ago treatment may well have prolonged many lives and saved some, but not enough to yield detectable effects in the case mortality of the population as a whole. During the last two years the fall in mortality is greater than might have been expected with the previous trend, and it is probable that the wide use of chemotherapy and other methods of treatment have diminished the numbers dying. If the total number of bacilli in circulation has been diminished (as seems likely) by the control of cavitory phthisis, then we may expect further gain.

It might be thought that as increasing numbers of children and adolescents became tuberculin negative, showing no evidence of infection, and thus increasing the susceptible portion of the population, that there would be a risk of epidemics of tuberculosis among them and that the death rate would tend to rise again. In fact, provided the social condition of the people remains good, progress in the elimination of tuberculosis seems to continue. Wade H. Frost, an American epidemiologist, analysed the mortality figure of "cohorts" of the population. All persons born in a given decade were defined as a cohort. He prepared curves which described the experience of each cohort in regard to

tuberculosis, recording the death rates of each cohort at successive ages. The curve for each lay parallel to, but below its predecessor. Hence there is no reason to cease the attempt to banish the tubercle bacillus with the idea that a certain pool of infection is necessary to stimulate racial resistance.

We can, therefore, discover much evidence to support the opinion that tuberculosis is disappearing from communities with good social conditions, and that the fall in mortality is parallel with improvement in the state of the people. While such evidence is encouraging, we must not neglect other facts which call for caution. Favourable features are noted in those well organised communities which have recovered from the strains of the war. Social disorganisation leads to rapid disintegration of the tuberculosis front. Holland had a low death rate before the war—almost the lowest in Europe—but during the occupation it doubled, and in Amsterdam rose to thrice the pre-war figure. Fortunately the dangerous period was relatively short, and she has more than regained the favourable position previously enjoyed. But Holland has a high standard of living and good social and public health services. In large areas of the world conditions are the reverse of favourable and public health services are rudimentary or non-existent. Satisfactory statistics of the incidence or mortality from tuberculosis in such areas are unobtainable, but there is good evidence that tuberculosis is a grave cause of disease and death. Communications are increasing, and everywhere the tendency is for the countryman to migrate to the town; many susceptible persons are thus submitted to increased risk of infection in adverse circumstances. It is said that in India the incidence of tuberculosis is mounting—the average income per head is falling. In such a country, the extension of disease foci remains a threat to more favoured parts of a world in which there is increasing pressure on nutritional sources.

Even in Western communities a tempered optimism is necessary. Brownlee suggested some years ago that we are on the declining slope of a long epidemic wave of tuberculosis which reached its height at the beginning of last century. We may be near the trough. Fortunately, we have yet to exploit to the full modern advances in prevention, like BCG, or in treatment, such as streptomycin, and there is hope of finding more

successful remedies. These defensive measures may ensure continued progress and have probably aided the marked improvement of the last two years. Moreover, once we reach the position that less than one new case arises from each open case, the balance is weighted against the bacillus, and tuberculosis could become as preventable as typhoid fever. On the other hand, a falling standard of nutrition due to war or social disorganisation looms as a potential stimulant to tuberculosis. Even in flourishing societies, there remains a hard core of tuber-

culosis, consisting of patients with chronic untreatable disease. Such patients are often the less intelligent and least orderly, as well as the poorest members of the community. "From some crater in the depths of society, among the most wretched poverty and misery, unemployment and imbecility, the fountain of tuberculous infection is thrown up through the community and seizes on all who are susceptible."

Tuberculosis is declining in Britain; but will it disappear?

A CASE OF DEPRESSED STERNUM, WITH AORTIC REGURGITATION

by GEOFFREY BOURNE, M.D., F.R.C.P.

This case illustrates the diagnostic value of certain basic cardiological principles, and also draws attention to the effect of a shallow thorax upon cardiac physical signs.

The patient was a woman aged 35 who was seen for an opinion as to suitability for a general anaesthetic. She had had diphtheria at the age of five and was in hospital for three-and-a-half months. She had an attack of acute rheumatism at the age of 11 and remembers that her left shoulder was affected. She was not allowed to play games at school, and since then has noticed palpitation after exertion or with excitement. She walks normally for two or three miles and can climb hills, but thinks that she gets slightly more short of breath than other people. She works normal hours as a secretary in town, travelling to and from her home without symptoms. Her general life is reasonably normal.

On examination she was seen to have a very marked degree of funnel chest or depression of the sternum. The antero-posterior diameter of the chest at the level of the fourth space from the centre of the sternum to the centre of the spine and behind measured 13.0 cm. or 5½ inches, as compared with the normal figure for her age of 19.0 cm. or 7½ inches. The apex beat was in the sixth space, and as far to the left as the anterior axillary line, and the

murmur of aortic regurgitation was heard down the left border of the sternum but no mitral murmurs were audible. These two signs would at first seem to indicate a significant cardiac defect. In addition two exocardial murmurs, systolic and diastolic, were present in the third, fourth and fifth spaces to the left of the sternum. Each of these two murmurs were harsh, and started at a brief interval after the first and second sounds respectively. The systolic exocardial murmur completely disappeared when she took a deep breath. The blood pressure was 138/84. No abnormalities were found in the abdominal organs.

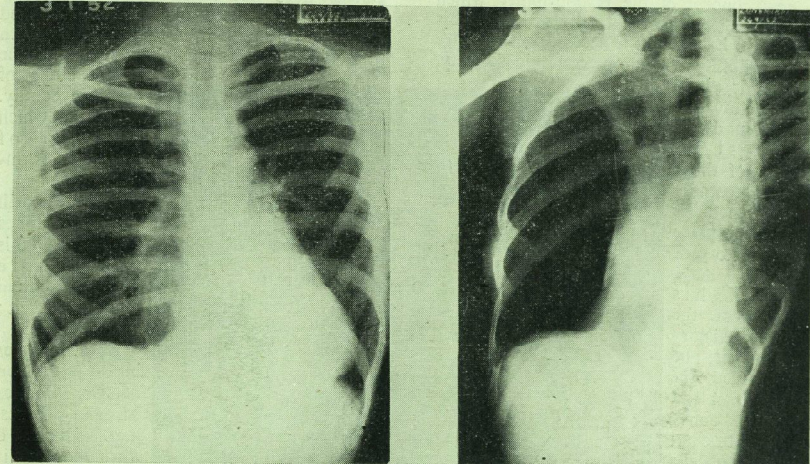
Radiologically, in the antero-posterior view the heart was seen to be displaced as a whole to the left, the right border of the spine being visible as a straight line throughout the thorax. In the left oblique position instead of the left ventricle being to the left of the spine or possibly just overlapping it, most of the left ventricle was visible to the right of the spinal shadow and little of the heart was visible to the left of the spinal shadow. The dark shadow of the depressed sternum was visible in the left oblique view.

In recapitulation, the typical high-pitched diastolic murmur down the left sternal border indicates the presence of aortic regurgitation; the position of the apex beat is displaced downwards and to the left;

sternal depression is well marked; a harsh systolic and a diastolic murmur, harsher than the aortic diastolic murmur, are present.

Evaluation of the physical state of the heart depends upon the correct interpretation of these signs.

inspiration. The true reason for the displacement of the heart is not enlargement of it, but because the thoracic antero-posterior diameter is so greatly diminished by the depressed sternum, that the heart has been squeezed away from its normal nearly central position into the left posterior thorax



Postero-lateral Displacement of Heart. Spinal Border visible throughout on Right Side. Line of Depressed Sternum borders Cardiac Shadow in Left Oblique. Left Oblique shows more Rotation than usual. Heart would otherwise appear further to Right of Vertebral Column, as shown in Description of Screening Examination.

The most important step is the realisation that the normal blood pressure (138/84) indicates that the aortic regurgitation is so slight as to have no effect upon the size of the heart, which remains normal. The abnormal position of the apex beat is therefore due to some other cause. Mitral regurgitation cannot account for this because there is no blowing apical systolic murmur conducted into the axilla. There is no hypertension. No pulmonary or pleural cause for cardiac displacement is apparent.

The to and fro murmurs in the third, fourth and fifth spaces to the left of the sternum are exocardial, because they follow the first and second heart sounds respectively at a slight interval of time, because they are harsh and brief, and in the case of the systolic sound because it disappears on full

The sternal depression alone is thus responsible for the abnormal position of the apex beat and for the exocardial murmur.

The final conclusion was that since there was no cardiac enlargement, and no significant valvular disease, the heart could be regarded as normal, in spite of the murmur of aortic reflux and the displacement of the apex beat to the left anterior axillary line.

The symptoms do not suggest any limitation of cardiac efficiency. They are of the effort syndrome variety, which condition is so commonly seen in people who have been made heart conscious by themselves, by their doctors, or by some physical cause. The patient was pronounced fit to lead a normal life, and capable of taking a general anaesthetic without risk.

SIR PENDRILL VARRIER-JONES (1883-1941) Kt. M.A.(Cantab) F.R.C.P.

Founder and First Medical Director of Papworth Village Settlement.

by OWEN CLARKE, M.D.

Senior Medical Registrar, Papworth

IN a life devoted to the care of the tuberculous Sir Pendrill Varrier-Jones developed a new concept of the responsibility which rests on a physician not only to restore his patient to health but, if necessary, to ensure the possibility of future economic security.

For this bold work he must be included amongst the highest of those whose greatness has earned a permanent place in the history of medicine. As a result of his study of the natural history of phthisis, he propounded the principle that although active medical treatment is of the first importance, there comes a time when further progress depends upon the stimulus which can only come from a return to work, and that this work must be satisfying to pride, useful

to the community, and with promise of future independence within the usual structure of a family society. To Varrier-Jones the family was always the important unit, and he realised that the misfortune of illness must not be allowed to disrupt the happiness of that unit.

During the past decade the developments of chemotherapy and thoracic surgery have greatly improved the prognosis of pulmonary tuberculosis, but even today there persists a sense of frustration at the incompleteness of

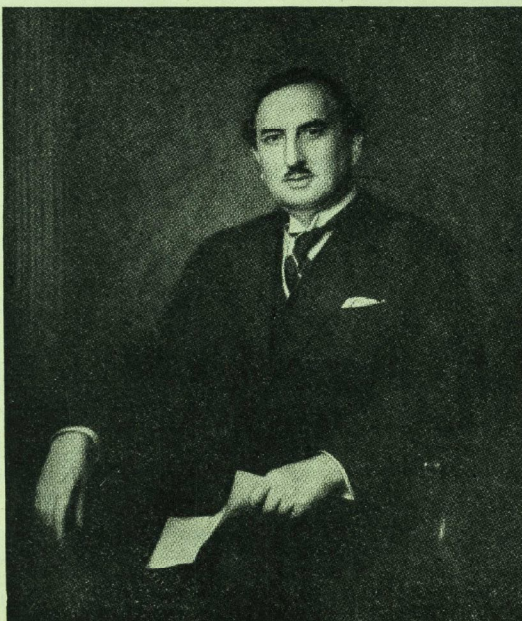
the results of modern treatment. The purpose of the treatment of pulmonary tuberculosis does not differ from that of any other disease; it is to restore the health and vitality of the patient so that he may return to a life of economic independence in the

happy circle of his own family. Anything which falls short of this goal is inadequate.

Dr. Pendrill Varrier-Jones understood this principle. He did more than understand it; he practised it.

Born in Wales in 1883, the son of Dr. Charles Morgan Jones, he showed throughout his life that restless energy and intolerance of mediocrity which often characterises the Celt. He was educated at Wycliffe College, and went as a foundation scholar to St. John's College, Cambridge,

taking 1st class honours in Part I of the Natural Science Tripos in 1905, and Part II in the following year. His clinical training was done at St. Bartholomew's Hospital, where he qualified in 1910, was a Wix Prize-man, and house physician, before moving to Cambridge in order to do research work in connection with tuberculosis. It was at Bart.'s that he first realised the gulf which divided the principles of the text book from the possibilities of practical medicine, and this influenced his later career when he was



Sir Pendrill Varrier-Jones

faced with the problems of the subnormal abilities of the victims of chronic phthisis.

The vital step which was to prove so decisive for himself and of such value to medicine, however, was taken accidentally when, in 1914, he agreed temporarily to undertake the duties of the County Tuberculosis Officer for Cambridge. As soon as he started to treat the patients with pulmonary tuberculosis he realised that the problem for these men and women was not merely to overcome their disease but to overcome their disability. Clinically the illness could be arrested, but it was impossible for the patient to find any suitable employment by which he could continue to earn his living.

"I had been taught, and the text books were full of it, that a consumptive should obtain a light job in the open air. I reiterated this advice . . . I had been taught that a nourishing diet was absolutely essential for combating the disease; that fats, preferably in the form of cream, should be liberally served, and that altogether a generous diet should most certainly be prescribed . . . I advised all this and yet little success attended my efforts. The patients returned again and again for further examination and advice. They lost weight, very soon their general condition was worse than before they were sent to sanatorium. Why did this state of affairs exist? I put the question squarely to myself, and in time I got the answer." (1)

Thus Dr. Varrier-Jones described in his own words the problem which he faced, and which still confronts the chest physician of today.

The idea of an industrial colony for arrested cases of tuberculosis had been first put forward in the U.S.A. by Dr. Herman Biggs in 1910, who believed that such a colony could be self-supporting. Varrier-Jones determined to prove it because he felt sure that the difficulties which might arise would be trivial compared with the "hopelessness of finding employment for the consumptive in mill or factory, in workshop or on the land."

It was necessary to build the environment in which his patients could continue to thrive after they had been treated, and with this purpose he started, in 1916, a small colony in the village of Bourn, near Cambridge, where six patients, in the care of a nurse, built the very chalets in which they lived in the garden of a small cottage; as more

shelters were made they were able to accept more patients until in two years the garden, and the nurse, were exhausted.

Such was the start, and even the imagination of that great pioneer can hardly have foreseen the steady growth of his little experiment into the hospitals, hostels and factories which today flourish at Papworth, producing goods of such craftsmanship that they are sold in all the markets of the world.

"Work creates hope; hope creates vitality"

Varrier-Jones has recorded how gratifying it was to see the clinical improvement which resulted when these men were given work and hope, and by 1918 it was obvious that the colony must find room for expansion, or remain as a small institution without progress and therefore without life. By good chance he was able to acquire the estate of Papworth Hall, and it is around that centre that Papworth Village Settlement has subsequently grown.

THE GROWTH OF PAPWORTH

"If only they would pay attention to principles and leave the details to look after themselves."

This comment by Varrier-Jones was made in later years, and referred to the French attempt at Clairvivre to apply the example of Papworth; he prophesied its failure from the start, and the reason that he was right was that the fundamental principles had been ignored. Varrier-Jones was himself a powerful and dominating personality; yet he knew that for a community to thrive it must grow slowly and naturally, being painfully built according to its own demands and by the work of those who form the individual cells of its structure. The industries grew for the benefit of the people, and the hospitals were built by the colonists of Papworth as part of the vital growth of that living community.

In these early days there were, of course, many problems to be solved, many difficulties to be overcome, and Dr. Varrier-Jones received invaluable assistance from eminent members of the profession in London as well as his colleagues in Cambridge and in the village. Of the former the names of Mr. Gask of Bart.'s, and later Sir James Paterson Ross spring together with those of Sir Arthur McNalty and R. O. Ward, foremost to mind, whilst in Cambridge he received much help and encouragement from Sir Clifford Allbutt, Sir German Sims

Woodhead and Sir Humphrey Rolleston; in the village Dr. L. B. Stott as Chief Medical Officer, and Miss K. L. Borne, the Matron, carried the burden of the clinical care of patients and settlers, and without their unstinting work and loyalty the task of Varrier-Jones would have been hard indeed, if not in fact impossible.

And what of the patients and colonists? Varrier-Jones knew that the success of his work would depend upon the confidence of the patients that their medical condition remained of permanent importance, and they were, therefore, allowed to work only limited hours strictly according to the advice of their medical officer. If further treatment was required they would return to the wards for as long as required.

In the Industries, a proportion of fit labour was employed for the heavier tasks: the maximum use was made of machinery to avoid fatigue, and by his daily inspection of the factories he gave personal supervision to the type of work being done and the response of the individual patients to their work. In due course, when a man had proved himself medically stable, he was considered for colonisation and permanent settlement, and I cannot do better than quote Varrier-Jones's own words on the problem of selection:—

"I come now to the vexed question of selecting cases for permanent settlement after sanatorium treatment. I have seen it alleged that we settle cases who are hardly ill at all, so that we can squeeze a lot of work out of them and achieve a showy but ephemeral success. Such statements are a tribute at once to the ignorance of their authors and to the degree of success that has been achieved. We do not want to settle "early" cases, for whom sanatorium treatment alone may suffice. Our aim is to settle patients whose lung tissue is so permanently damaged as to make it impossible for them to stand ordinary industrial conditions without collapse." (1).

Treatment, rehabilitation, and settlement if necessary—these were the principles of progress, and that triad is unaltered today.

VARRIER-JONES AS A CLINICIAN

Much has been written about the administrative difficulties of starting a village settlement, but less thought has been given to the clinical ideas of the doctor who was its Director. He realised clearly that the anti-

tuberculosis schemes at that time were unbalanced, being directed towards only one section of the problem: they were "all middle and no ends."

Despite elaborate arrangements for the treatment of established disease, early diagnosis was prevented by the dread fear in the hearts of men and women to whom a diagnosis of "consumption" implied social and economic disaster unrelieved by any hope for the future.

"We are saying to the early cases: 'We cannot promise to cure you and you may lose your job; but do come out of hiding,' and we wonder why they remain hidden . . . The diagnosis of pulmonary tuberculosis spells calamity, and the reasons for the failure of early diagnosis lie in human nature and in economics . . . We must get ourselves into the position to say: 'Accept treatment, for even if we cannot cure you, we can make you better, and if you lose your job we will give you a new one.'" (1).

These remarks ring as true today, in the era of mass miniature radiography, as they did in 1935, and the responsibility on the profession is as great.

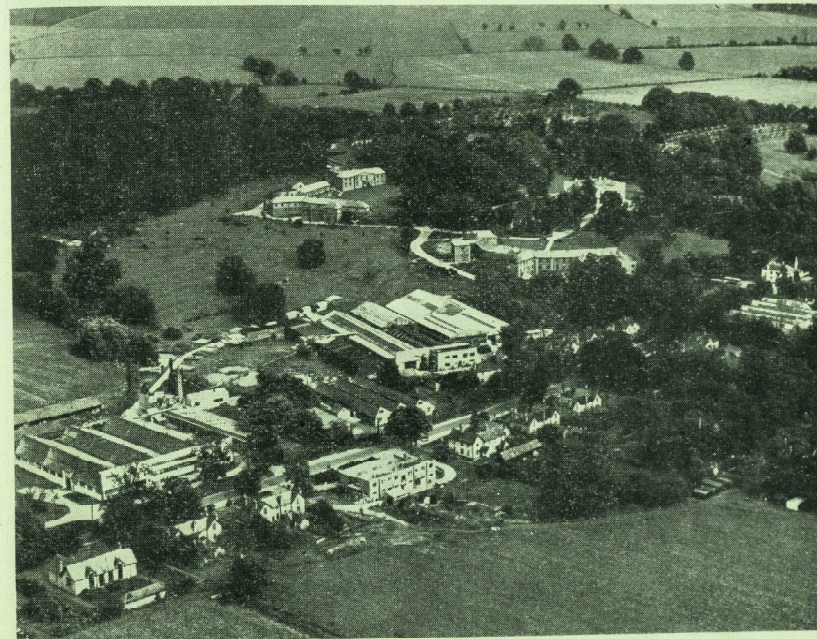
Three decades ago the true purpose of the sanatorium was being thwarted, as it is today, by the necessity to find some accommodation and segregation for men and women who did not require active treatment and yet could not resume their normal occupation. Although Sir Pendrill understood and used every modern form of active therapy, and appreciated the importance of rest during the active stage of the disease, he rebelled against the common habit of prolonging inactivity after the disease was quiescent, which only led to the demoralisation of the individual. He knew that a demoralised man is an unemployable man, a burden to himself and the State, and a permanent rebuke to his physician.

"We, as medical men, must accept a great deal of the blame for producing the unemployable consumptive. We have a responsibility towards the man which we ought to discharge, since his mental condition is largely of our own making. We knew, when we accepted him for sanatorium treatment, that no 'cure' could be expected, but we insisted on keeping him immobilised for months, in some cases for years, during which time he was thoroughly instructed in how to avoid exertion . . . (such patients)

become convinced that if they are to avoid fatigue (as the doctor insists) idleness must be their portion for the rest of their lives, and some become so demoralised that nothing but frequent terms of treatment will satisfy them.

This destruction of moral fibre is undoubtedly a fact which should gain more

therapy to attain the maximum benefit from treatment. But when all this has been done the responsibility still rests on the doctor to ensure the necessary arrangements to help that man or woman to regain economic independence at whatever level of activity may still be possible. It remains his duty to complete his treatment by providing security



View of Papworth Village from the air showing Papworth Hall and the hospitals in the background, and in the foreground the Coach-building Department and Cabinet Making Department. Most of the residential area is not shown.

attention than it does at present but . . . it is bound to be imperfectly realised so long as there are physicians who make the mistake of concentrating upon the damaged organ rather than upon its host.

"We are responsible for this wreckage . . . and we have no right to contrive the demoralisation of these people." (2).

Thus he wrote in one of the last articles of his life, published in fact after death, and in it he summed up his principles of the treatment of pulmonary tuberculosis. Early diagnosis must be constantly pursued and followed up by all forms of modern active

of employment, security of medical control, and security of family and social life.

THE REWARDS OF SUCCESS

The organisation and development of such an enterprise demanded a business ability that could understand the whole complexity of the problems, and a mind which could range beyond the scope of the immediate difficulties of each day. Dr. Varrier-Jones showed that he had a mastery of the economic and industrial problems which equalled his understanding of the medical requirements, and in addition he used the full force of his personality to attract the

large sums of money which were necessary for development.

Papworth grew rapidly, and in his 23 years there he saw the completion of a complete modern hospital of 200 beds, five large factories capable of absorbing a thousand employees, and the houses and hostels necessary for a village population of 1,200 people.

He believed that the Settlement would grow because of the growing need for the Settlement, and that thereby the result would be permanent. The future confirmed this belief.

The fame of his success soon brought other demands, and he was always ready to help other causes for the crippled or handicapped worker. He did much to establish at Enham a similar colony, which is now allied to Papworth; he played a major part in re-organising the British Legion Colony at Preston Hall, and he advised on the foundation of the Peamount Settlement in Dublin.

As early as 1927 he gave the Mitchell lecture on the subject of village settlements for the tuberculous. He gained his M.R.C.P. in 1929, was elected a Fellow of the College in 1934, and in 1939 he was awarded the Parkes-Weber prize for tuberculosis.

The real recognition of his work, however, came in 1931 when he was knighted for the national importance of the example and success which he had achieved at Papworth.

At the outbreak of war Papworth was ready and able to play its part in the industrial efforts of the country, and at the time of his sudden death, in 1941, he could see the security and future which rested firmly upon the solid foundations which he had built.

PAPWORTH TODAY

Any biography of the life of Varrier-Jones would be incomplete without a brief reference to the subsequent progress made at Papworth after his death. So often, when the pioneer is gone, his work proves unable to stand alone and dies with him. Papworth, however, was very fortunate in that

Air Commodore R. R. Trail was able to succeed Sir Pendrill as Medical Director, especially since he had already served the Settlement as Consultant Physician. Under his guidance it has continued its steady progress, and the inauguration of the Health Service, the introduction of Acts of Parliament to help the disabled, and the Ministry of Labour schemes for training and rehabilitation have been adapted for the benefit of the tuberculous. During 1951 more than 120 men and women were admitted directly into the Settlement from all over the country and have found that hope and opportunity for the future without which the mere treatment of the disease can be so cruel.

In his lifetime Sir Pendrill Varrier-Jones visited the continents of Europe and America to preach his gospel; today, eleven years after his death, doctors from those and other lands come to Papworth to study the principles upon which his success was based.

How many of us have ever thought about the aspirations and desires of a man crippled by illness? Varrier-Jones thought and understood them in all their complexity of social and economic disaster: "We have for years told consumptives what to do. At Papworth we have gone a little further—we have enabled them to do it . . . Surely that is a task worthy of our best endeavours, and of great service to the nation as a whole." (1).

Papworth remains as a memorial to a Pioneer, and his epitaph as an architect and builder of human life might well be that of another man of genius:

"Si monumentum requiris circumspecte."

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The Journal

Matter for the Journal should be handed in at least one month before it is due to appear.

MEDICAL STUDENTS AND TUBERCULOSIS

by JOHN COULSON

Do medical students really run a greater risk than students in other faculties of getting pulmonary tuberculosis?—and if so, are there any measures that can be taken to reduce this threat to their health and work?

Not enough evidence has been collected at Bart.'s yet for us to be able to answer these questions from our own experience. Some medical schools and universities, particularly in the U.S.A., have been conducting tuberculosis case-finding programmes for their students for many years now, and many reports of their work have been published. Our plan for dealing with the problem here has to a large extent been evolved from the various measures they recommend. In this short article we can examine briefly what a few of them have had to say on the subject; our own programme will then be explained, and the results it has yielded so far will be indicated.

Morris (1946) considers tuberculosis to be the major occupational disease hazard of the student of medicine and sums up her experience in these words: "Fifty-six active cases of tuberculosis in 449 medical students in twelve years, resulted in 6 deaths and, for an appreciable number of others in long periods of semi-invalidism while attempting to regain their health, leaving some still incapacitated. An infection rate of 100 per cent., X-ray evidence in 16.7 per cent., a clinical morbidity rate of 12.5 per cent., a case fatality rate of 10.7 per cent., and a mortality rate of 1.3 per cent., developing in a stronghold of medicine with facilities available, certainly constitutes a challenge of sufficient magnitude to interest the entire medical profession in a survey of conditions in other medical institutions and hospitals." A total of over 100 years was spent in recuperation in that small group.

Lees (1947) reported that in 15 years of tuberculosis control at the University of Pennsylvania, 177 cases of pulmonary tuberculosis had been found. Of these, 91 were amongst the medical students, and 86 from all other faculties. This was in spite of the fact that medical students accounted for only 9 per cent. of the student population, i.e., the morbidity rate was about ten times greater amongst the medical students. Similarly,

Myers (1937) found that though only a small proportion of a total student population of 12,000 was medical students, yet all the tuberculosis was in this group. High morbidity rates amongst their students are reported from many American medical schools. Dickie (1950) found that 21 cases of active tuberculosis occurred in 283 students at the University of Wisconsin Medical School. In a survey of the subject Shaffer (1950) listed five other universities where the incidence of active pulmonary tuberculosis amongst the medical students was between 0.8 per cent. and 3.3 per cent., and quotes similar figures for the medical schools of the universities of Copenhagen (2 per cent.), Paris (3 per cent.), and Buenos Aires (5 per cent.).

A similar picture is given by the British figures. The Prophit Survey (Daniels *et al.*, 1948) gives the annual morbidity rate of active pulmonary tuberculosis for male medical students as 5.1 per 1000 per year, and for female medical students as 9.9 per 1000 per year. This shows an enhanced risk compared with the figures of 1.4 per 1000 per year (males), and 5.5 per 1000 per year (females), in a control group of comparable age.

More recently, Malleon (1951) collected and analysed the data available from a number of British medical schools and universities for the years 1944 to 1949. He found that though the incidence in London University as a whole during this period had been 0.11 per cent., it was 1.0 per cent. among the clinical medical students—nearly ten times higher.

After this miserable array of figures you may well be wondering why you should be so favoured by Koch's discriminating Bacillus. Without producing a second battery of statistics it would be difficult to weigh the various reasons that have been thought to account for this phenomenon. In a nutshell, therefore, evidence has been brought in favour of three factors:—

I. (Probably generally agreed by all medical students.) The strains imposed by medical education.

These strains (especially those of having it and paying for it), may play a part in

many cases by causing the general resistance to infection to be lowered.

II. Laboratory and post-mortem room infection.

At one time a number of cases were traced to infection from tuberculous autopsy material, etc. With modern methods this hazard has been reduced, and is no longer considered to have the same significance.

III. Contact with tuberculous patients.

a. Unknown cases, e.g., undiagnosed cases admitted for investigation, or unsuspected cases admitted for some other condition.

b. Known cases, used for the demonstration of physical signs, etc.

The benefits of a case-finding programme have been shown to include :

1. The early diagnosis of active cases, before the appearance of symptoms (Stiehm (1940)), enabling

i. treatment of a minimal lesion instead of an advanced one, thus ensuring the earliest possible return to work :

ii. removal of the patient from his class before he has become an "open" case, and a source of infection to his associates.

2. The detection of Mantoux-negative students, enabling appropriate measures to be taken for their protection in view of their increased susceptibility to tuberculous infection.

3. Close observation of Mantoux-negative students when they undergo Mantoux conversion, so that any radiological or other sign of an active infection may be detected as soon as possible.

4. The demonstration of any unusually high infection rate, should it occur, in any one part of the teaching course or in any one group of students, which could lead to the identification of the source of infection and its removal.

The case-finding programme that has been followed here since October 1949, is as follows :—

All students, pre-clinical and clinical, entering the College are Mantoux-tested and have their chests X-rayed during their year of entry. Those found to be Mantoux-positive, with Normal X-ray, are then seen once a year for routine physical examination, weighing and chest X-ray.

Because it has been widely shown that

Mantoux-negative people run a considerably greater risk of developing active pulmonary tuberculosis than do Mantoux-positive, special arrangements are made (in addition to the annual routine examination mentioned above), for supervising the health of the non-reactors. The nature of this supervision depends on whether they are in their pre-clinical or clinical years. Pre-clinical Mantoux-negative students are offered B.C.G. vaccination and this is carried out according to the recommendations of the Ministry of Health (1949).

With regard to the Mantoux-negative clinicals a different plan is followed. It has not been thought wise at this stage to B.C.G.-vaccinate students who may be in contact with unknown but infectious cases of tuberculosis, and until the risks of such a procedure are more fully known the plan adopted for them is to repeat their Mantoux test every three months throughout their clinical course, together with a six-monthly chest X-ray.

It is perhaps worth explaining here that many observers have shown that allergy to tuberculin usually develops within six to eight weeks from the date of infection. Although abnormal radiological appearances may develop at any time up to two years or more from the date of Mantoux-conversion, they most commonly do so within three to nine months. In other words, in the case of known Mantoux-negative persons the Mantoux test is by far the quickest method we have of detecting a recent infection.

With regard to students who have Mantoux-converted, the measures advised by the Joint Tuberculosis Council (1945), have been followed to a modified degree. They have a chest X-ray at the time of conversion, at three-monthly intervals for the following year, and at six-monthly intervals for the year after that. At the time of each of these examinations the E.S.R., W.B.C. and weighing are also carried out.

So far this programme has worked satisfactorily here. In 2½ years 9 cases of active pulmonary tuberculosis have occurred (the number of students under observation during that time having been about 850), and only one of these presented clinically. One, a recurrence, was suspected after a routine clinical follow-up of an intercurrent infection, in view of the previous history, and confirmed radiologically. The remaining 7 were

all detected in the first instance by some facet or other of the plan described. Of the nine, 5 are now back at work, and the average time that these five have lost from work due to this cause is 8 months. It will be understood that in order to avoid any possible identification of the patients, no further details of these cases can be given.

About a quarter of the students arriving here each year are Mantoux-negative (the proportion is lower in the ex-Servicemen than in those straight from school).

So far 63 Mantoux-negative students have received B.C.G. vaccination. Forty-nine pre-clinical students and one newly qualified, were vaccinated, with a Mantoux-conversion rate of 100 per cent. A further 13 have been vaccinated this term, but this group is not yet due for post-vaccination Mantoux testing. No complications have occurred. The spontaneous Mantoux conversion rate amongst the Mantoux-negative clinical students during this time has remained constant at about 20 per cent. per year.

In order to reduce still further the time lost from work because of tuberculosis, post-cure centres have been developed where convalescent students of all faculties can resume their studies under university teachers while still completing their sanatorium treatment. This idea has given good results abroad and has received much publicity at home. Plans have recently been approved for the first post-cure centre in this country, and a pilot scheme providing 16 beds is now going ahead.

The Mantoux test and the chest radiograph are the two keystones on which our case-finding programme is built. I am especially grateful to Dr. Kemp Harper, therefore, for the help which the X-ray Department has given since the scheme started, and particularly through the recent period of difficulty. I am glad to have this opportunity of thanking the Dean and Dr. Young, not merely for their help with this article, but for all they have done to help our "one per cent." to be back on the job within their "eight months."

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SO TO SPEAK . . .

Not heart failure, surely?

"At length the patient dies, with a pulse which cannot be felt at the wrist, or even at the elbow."

Definition

A drug is a substance which when injected into a cat produces a paper.

Testimonial

"Mr. John Howkins has submitted the last edition to his customary critical analysis and has also been of great help."

—a Preface.

From a Case history

"... readmitted for trans-urethral resection of prostate, which had been delayed due to an electrical defect in the apparatus."

—a short circuit operation?

"ARE EXAMINERS REALLY NECESSARY?"

THOSE whose examinations are safely behind them are always ready to advise us toiling masses on their own infallible methods for dealing with examiners. "Examiners," wrote one eminent surgical pundit, "are really quite human." Are they indeed! Would any kind-hearted, fatherly individual have considered for a moment setting such a question as: "Discuss the physiology of sleep"? I remember turning over my physiology paper and being struck with acute mental cloudy swelling on reading this as the first question. The horror of that moment still keeps me awake at nights, and before I took my Pathology paper I was kept awake in the daytime too worrying whether the first question would be: "Discuss the pathology of insomnia."

There are even examiners in Public Health who really believe that Public Health is important. Mention of this subject brings to mind another frequently offered piece of wisdom: "Don't worry about Public Health and Forensic Medicine," say the clever boys, "you can read it up the day before the exam." I did; and now have six months more to disregard this advice.

"If you haven't the first clue about a question," counselled another Yobo (L.M.S.S.A.—just!), "write down something that you *do* know. Much better to put down something than just leave your paper blank." I said I thought it more likely that the examiner would deduct 20 marks. "Not if you go about it the right way," he replied. "Examiners, even if they do lag behind a bit in evolution, still have some of the weaknesses of human nature. Now, find out who your examiners will be and read up all their most recent papers. Just write down one of these as the answer to the question which stumps you, trying to give the impression that you realise that it is the question he really wanted to ask. The fellow's bound to be tickled pink that somebody reads his literary efforts. *You'll* get some marks alright!" I discovered that Dr. Giggleswick was one of my examiners, read his recent paper on the treatment of universal narcolepsy in the Mbongo tribe of Uganda by cold water douching and duly wrote this down as my

answer to the question, "Discuss the treatment of Anarcosis" (well, would *you* know anything about anarcosis?). Came the oral exam. and I found myself facing a benevolent gentleman who alternately looked at my written paper and at me over the top of his glasses. "I am indeed distressed," he remarked eventually, "that my paper in 'The Scalpel' seems to have been capable of being misunderstood. I thought that I had shown quite clearly that cold water douching is *not* the treatment of choice in anarcosis." No! Some people are fated to fail first time.

Then there was the registrar on a ward round who announced: "It is highly inadvisable to mention signs or diseases named after prominent men of the past, unless you know who these men were." This pearl of wisdom proved rather difficult to put into practice. There are quite a considerable number of such names, and nobody has yet thought of publishing a book of "Thumbnail Medical Biographies." I resolved to concentrate only on those Bart's men, whose names would be passed on to future generations by reason of their diseases, signs and tests. My enthusiasm soon waned, however, when I appreciated that this research would take up the whole of my three-months' revision period, and the day of the examinations arrived with my knowledge of famous Bart's men limited to Percivall Pott and Paget.

I faced my examiner in the Gynæ. viva, and everything went beautifully until I was asked the treatment for Stress Incontinence. I was stumped. "Oh, come now," coaxed my tormentor, "surely you can think of an operation devised by a member of your own hospital's staff, and known throughout the world." As a Bart's man my bosom swelled with pride at being even vaguely associated with a world-famous surgeon. I thought of Thymuses (or should it be Thymi, Thymus or Thymoi?), and sympathetic chains, and shells in German soldiers; in fact I could think of names associated with every diseased part of the body except sphincters. I had met my Abadan, and was coldly dismissed by the examiner. As I walked out I heard

the wretched fellow muttering some well-known verses:—

"You are old, Father Wilfred," the anaesthetist said,

"And your wisdom is now at its height. Yet you tilt this poor patient right up on her head,

Do you think, at her age, it is right?" "In my youth," Father Wilfred replied to the lad,

"I feared they might not stand the strain.

But now, if the stress makes them leak, then by Gad,

I can sling them again and again."

And the moral? Regard all examiners with suspicion—until the day when you become an examiner yourself. You will then suddenly realise what jolly good fellows examiners really are. And as for students—the less said the better! R. G. D. N.

EXAMINATION RESULTS

UNIVERSITY OF LONDON

Examination for the Academic Postgraduate Diploma in Medical Radiology (Diagnosis)

February, 1952

Dereczowski, A.
Hale, B. C.
Harris, M. A.
Kamdar, K. N.
Lundie, J. K.
Muir, D. M. K.
Wolpert, L. E.

SOCIETY OF APOTHECARIES

Final Examination

February, 1952

Pathology
*Shah, M. C.

Surgery
*Stanton, T. J.

*Diploma conferred.

Physiological Society

THE society has been addressed by a number of distinguished persons during the past six months and it is felt that a brief account of two of these lectures would be of wide interest.

Professor J. Z. Young gave an address early in October on "The Action of the Cerebral Cortex." Professor Young stated at the outset that he considered histological methods to be one of the most valuable tools in the hand of the cortical investigator. He spoke at length on the nature and structure of cortical tissue and dealt particularly with stellate and pyramidal cells. The immense complexity of the tissue was emphasised and it was shown that the number of theoretically possible neurone paths is infinite. In this connection he mentioned the ephapse, where adjacent nerve fibres come into contact and impulses travelling along one fibre can modify the activity of the adjacent fibre. An account of histological methods used to delineate layers in the cortex was given with the conclusion that the classical description was quite artificial and inaccurate. He told of a new method being developed in which a given area is subjected to cathode rays. Each interruption of a ray is recorded on a counter. The number of interruptions and hence the number of fibres crossed can thus be determined. The lecture was of intense interest and showed how little we know of the mechanism of thought.

Professor E. J. King delivered an informative lecture on "Methods of Hæmoglobin Determination" on Jan. 15. He commenced with an account of numerous methods developed over the years and compared their accuracy. Errors with these methods vary from 20.8 per cent. and the Medical Research Council set up a committee to investigate methods of increasing the accuracy of these determinations. The M.R.C. Grey-Wedge photometer is a result of their researches and combines a truly portable apparatus with a high degree of accuracy. After a discussion of photometric principles Professor King showed that error using the M.R.C. photometer was in the region of 2.3 per cent.

Several other lectures have been given and a number of films shown. One innovation took the form of a debate on the motion that "The functions of the Mind are purely physical and that, therefore, evil Thoughts do not exist." The standard of debate was low but the evening was voted by most to have been a success. One argument proved to be unanswerable—a young lady announced that she had never had evil thoughts and did not know what they were! The motion was rejected by 17 votes.

Several meetings have been arranged for next term. One worthy of especial note is to be given by Professor A. J. Cave on "The Origin of Man."

CORRESPONDENCE

MIDWIFERY FORCEPS

The Editor,

St. Bartholomew's Hospital Journal,
Sir,

I have read with great interest Dr. Rutherford Morison's letter in which he criticises the statement made by Dr. Matthews Duncan in his lecture notes, that William Smellie made "no single improvement in midwifery so great as to be worthy of being coupled with his illustrious name." With the greater part of this letter I am in entire agreement, and I do most sincerely hope that it will stimulate a renewed interest in Smellie's writings and teaching, in which he was far ahead of all his contemporaries. I am, however, unable to agree with two of Dr. Morison's assertions:

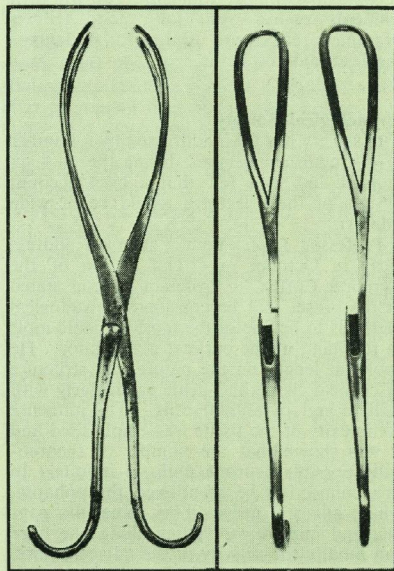
(1) That Smellie invented the lock of the modern forceps. It is true that Smellie himself claimed in a letter to a surgeon in Glasgow that about the year 1744 he "contrived a more simple method of fixing the steel forceps by locking them into one another." On the other hand we have the authority of Johannes Mulder, in his history of the forceps, that an instrument with a lock of this description, which he illustrated, described and measured, was invented about the year 1736, and was indeed in common use among leading London doctors about that date, or very soon afterwards. Mulder was unable to ascertain the name of the inventor of the instrument, but chronologically he placed it between the forceps of Erake of Bart's, 1739, and Mesnard, 1741. (Mulder, no 11, *Incerti Auctoris*, 1736).

An instrument which exactly fits Mulder's description is now on exhibition in the Museum of the Obstetric Department of the University of Edinburgh, labelled "Dr. Walker's forceps, 1736." Dr. A. S. Duncan has kindly had it photographed for me. How it came to be there is not known. The instrument is stamped with the name of the maker, "Best," and this suggests that it was made towards the end of the 18th century when this custom of marking the origin first became common, but it is without doubt the same pattern as that described by Mulder.

There is some uncertainty about Dr. Walker. In the obituary notice of Dr. Hugh Chamberlen, Jun., who died June 21st, 1728, is added the statement that "he was the last of that family who practised the art of midwifery in the kingdom, except Dr. Walker in Great Suffolk Street, who is a grandson of the aforementioned Dr. Peter Chamberlen." Great Suffolk Street is now in the S.E.1 postal district of London.

Of the seven grandsons of Dr. Peter Chamberlen, three are known to have been doctors: Hugh Chamberlen, M.D., who is buried in Westminster Abbey; Sir Chamberlen Walker, M.D., who practised in Dublin and was knighted in Ireland in 1721; and his younger brother Middleton Walker, M.D., of whom nothing else is recorded in the family papers. Another grandson was Admiral Sir Hovenden Walker. I am driven to the conclusion that Middleton Walker is the only one who could be identified with Dr. Walker of Great Suffolk Street.

It will be seen from the photographs that the instrument bears a closer relationship to the original Chamberlen forceps now in the Royal Society of Medicine, than do such contemporary patterns as those of Chapman and Giffard, which have very clumsy fenestrations, and most awkward incurved handles. William Douglas wrote that Dr. Walker "pretended to improve Dr. Chamberlen's forceps, but in truth spoiled them by making them male and female." In this statement Douglas was as far wrong as he could be, and there seems to me to be little room for doubt that this instrument is an example of Dr. Walker's improved Chamberlen pattern forceps. It is interesting to note that Best of Lombard Street, London, also made Smellie's forceps about the year 1750. Did he give Smellie the idea?



"Dr. Walker's Forceps, 1736."

(2) It was Sir Fielding Ould who first proved that the foetal head usually enters the pelvis in the transverse diameter. His explanation for this was published in his treatise in 1741. When Peter Camper attended Smellie's lectures in 1748, Smellie told his class that it was the "Irishman," Ould, who was the first to describe this mechanism, "which, Dr. Smellie asserts, threw great light on the problem for him." It is quite characteristic of Smellie to be the first to give credit where it is due.

WELSH MOUNTAIN NAMES

The Editor,

St. Bartholomew's Hospital Journal,

Sir,

Dr. Ivor Glyn Williams is of course correct. If you must in Welsh write, write right. But what hideous names these Celtic hills have! Who could look at Y Wyddfa on paper and connect it in any way with the beauty of Snowdon? This is, of course, the highest point south of the border and as it is almost the only Welsh hill with a pronounceable and spellable name, I don't mind betting it was christened by an Englishman. I suppose that Clogwyn Du'r-arddu means something to a Welshman and so may Pen Llithrig y-wrach, y Ddysgl or Gallt yr Ogof for all I know, but Dr. Williams does not need a second tongue to know what to expect from Gable, Pillar or Steeple. Grib Goch may have a stern, uncompromising name and Cwm Cneifion sounds indeed like the "nameless comb." Yet none has the Lakeland simplicity of Buttermere Moss, Stickle Tarn or Scale Force, none the music of Watendlath or the Dollywaggon Pike. Dr. Williams can take comfort, if he wishes, from the reflection that the Scotch are even worse. Try saying quickly Sgurr a' Mhadaidh or Stuc a Choire Dhuibh Bhig which, a Highlander has the satisfaction of knowing, means the peak of the little black bastards or something to that effect. Ireland fares somewhat better, for Errigal and Muckish, Hungry Mountain and the Poisoned Glen must surely be simply full of Little People.

Incidentally, it is not only the names which are more attractive among the fells than in the Highlands or Snowdonia. Why, even the sheep look more intelligent and as for the natives . . .

Yours respectfully,

HOGARTH.

Portland Place, W.1.

DOUBLE CONDUCTORS

The Editor,

St. Bartholomew's Hospital Journal,

Dear Sir,

I was very interested to read in your *Journal* the correspondence following my recent article, and am pleased to see that others have had similar experiences in the past. I might amplify Mrs. Cooper's letter in your December issue by recalling a day during the first year of the recent war when I was engaged in limb-fitting at Roehampton, and during my lunch hour dashed up to the National Gallery to conduct a concerto for Dame Myra Hess and was back again in the hospital on time for the afternoon session! I had this kind of experience many times during the war when I was, whenever possible, dividing my time between my two professions.

I am,

Yours truly,

BOYD NEEL.

Hogarth Place, S.W.5.

Sir Fielding Ould in 1733 married Grace Walker, a niece of Dr. Middleton Walker, thus uniting two great medical families.

I am greatly indebted to Professor R. J. Kellar and Dr. A. S. Duncan of Edinburgh University for kindly sending me full details of Dr. Walker's forceps, and for the photographs, which were specially taken; to Mr. Chamberlain William Walker of Knaresborough, a direct descendent of Sir Chamberlen Walker, M.D., for supplying me with information about his family which has not hitherto been published; and to Dr. Douglas Clendon, archivist and librarian of the Colchester Medical Society, for allowing me to use the books in the Society's library which were once the property of Mr. H. H. Cawardine, who, in 1818, was instrumental in rescuing the original Chamberlen forceps at Woodham Mortimer Hall, now to be seen in the library at the Royal Society of Medicine.

I am,

Yours faithfully,

WALTER RADCLIFFE.

Wivenhoe, Essex.

GENERAL PRACTICE

The Editor,

St. Bartholomew's Hospital Journal,

Dear Sir,

I would like to congratulate you on your very excellent article "Under the Stethoscope" in the *Journal* of February 1952 and also the other very excellent articles "The Worms Eye View" and "Looking Back."

As a general practitioner I feel these points are most important as it may surprise a large number of medical students and junior housemen to know that a general practitioner, especially in the country may spend anything up to three months persuading certain patients to attend hospital, so the day the patient actually attends a large hospital is often the most momentous day of that patient's life and anything that can be done to make him feel at home as a human being and not a case is most important.

I was also very interested to read the obituary notice of Dr. W. H. Square, both in the February *Journal* and also another in the March *Journal*. Dr. Square, from these reports, was obviously a very fine general practitioner, being respected by all he came in contact with, which is shown by his being for many years Chairman of the Bench. I see that his qualifications were L.R.C.P., L.R.C.S., Edin., and have a feeling that in present times he probably would not be admitted to Bart's, as I understand these days admission is more easily obtained for those candidates who are entering for the B.M. I am making this point as I feel that to be a successful general practitioner does not depend on medical qualifications and I hope that those responsible for the selection of candidates for the medical profession will bear in mind the suitability of personality rather than pure brains. I am Conjoint only and proud of it too!

I remain,

Your humble servant,

J. B. BAMFORD.

Ely, Cambridgeshire.

BOOK REVIEWS

The Editor,

St. Bartholomew's Hospital Journal.

Sir,

The ways of reviewers of books are notoriously unaccountable, and it is usually inadvisable for the authors of books to offer any remarks in reply. The *March Journal* contains, however, two reviews which, taken in conjunction, seem to call for brief comment. The works are selections from the writings of Ambroise Paré and Sir William Osler, with both of which I had some connexion, having edited the first and contributed introductions to both. The preparation of Paré's writings for the press entailed a considerable amount of hard work and the introduction could only be done at the cost of much reading and investigation. The reviewer nevertheless does not even mention the editor or his introduction and the value, or otherwise, of his labours is only obliquely indicated. Of this I do not complain. It is an editor's business to remain in the background. The second review, however, goes to the other extreme. It is suggested that my potted version of Osler's career may prove more enjoyable and profitable to the reader than Osler's own writings! This suggestion I must blushing and strongly rebut. It does far more than justice to me, and a great deal less than justice to Sir William.

Yours, etc.,
GEOFFREY KEYNES.

31, Weymouth St., W.1.

FOOD

The Editor,

St. Bartholomew's Hospital Journal.

Sir,

I am aware that wherever food is cooked or served "en masse," it has long been the fashion to consider it the worst of its kind. However, I feel, now that I have had the opportunity to compare it with other medical college refectories, that criticism of the refectory at Charterhouse is justified. The other refectories provide a lunch at prices between 1s. 6d. and 1s. 9d., of a standard superior to that of the Charterhouse refectory. No one who uses the Charterhouse refectory could claim to get a full meal for less than 2s. 3d.

The refectory charges 4d. for a small cup of coffee and threepence for a cup of tea, while three cafés in the vicinity charge 2d., or 2½d. for a cup of tea and 3½d. for coffee (in large cups), and at two of these cafés a meal can be obtained which is both cheaper and better than that at Charterhouse.

The refectory is presumably intended as an amenity for students, and as such should aim to provide food at *cost price*. Its prices are not compatible with this—particularly when it is remembered that cafés must make a profit to exist, and that the refectory pays no rent or rates.

High prices are not the prerogative of the refectory. College Hall is presumably intended to give students a place to live at reasonable cost—more reasonable than digs., as no profit is to be made. But the charge of three and a half

guineas a week is 12s. 6d. more than your correspondent spends on digs. and travelling expenses in one week. The only amenity offered that I do not now enjoy is that of a telephone by my bedside.

I trust that these matters will be considered by those responsible, and hope that anyone who considers this criticism unjust or wishes to endorse it will enter this correspondence.

Yours, etc.,

JOHN HUNTER.

Abernethian Room.

AN OLD WIVES' CURE FOR HICCUP

The Editor,

St. Bartholomew's Hospital Journal.

Dear Sir,

Some months ago I underwent a successful operation for inguinal hernia in Addenbrooke's Hospital, in Cambridge. A few days after the operation I experienced, during the night, a most irritating hiccup, which must also have been disturbing to other patients in the ward. I asked the night nurse if she could give me something to stop it. She gave me something, in a tumbler, to drink. This apparently had no effect whatever, though I eventually got to sleep. Next night the troublesome hiccup recurred. Another nurse was on duty. Though not hopeful, I asked if she could give me something to stop it. She gave me something in a teaspoon. The moment I had swallowed it, the hiccup stopped instantaneously, as if by magic. There was no latent period. It was like using a switch to turn out an electric light! When—some hours later—the hiccup recurred, I asked for the same medicine. It was again instantaneously effective, and the hiccup did not recur. I asked the nurse later if she would divulge the secret of her magic potion. To which she replied, "Oh, yes. It was a little vinegar and sugar."

Now I should like to know:—

(1) Is vinegar, with a little sugar, often given for hiccup?

(2) Is it usually instantaneously successful, as with me?

(3) What is the explanation of its action? Please note that I did not expect the dose to be instantaneously effective, if effective at all. Its action astonished me beyond measure. An "old wives' remedy," if effective, should in no way be despised.

I am, etc.,

W. BALFOUR GOURLAY.

Cambridge.

N.B.—The term "old wives'" is used figuratively.

EPITAPHS

The Editor,

St. Bartholomew's Hospital Journal.

Dear Sir,

Seeing Christ. Burroway's epitaph in this month's *Journal*, and as I am writing a series of articles on "Memorials and Epitaphs" I am emboldened to send you the following.

Commemorating a Doctor who was a great epicure:—

"At this rude stone ye sons of Bacchus pause;
Here lies a martyr to the good old cause:
A doctor fam'd for most voracious parts,
Profoundly vers'd in culinary arts;
Skilled in the merits of renou'd sirloin,
Nor less de vino prov'd a sound divine,
Long shall the generous juice embalm his clay,
Nor vulgar worms upon his carcase prey,
Full many a sparkling stream his lips have quaff'd,
But relish'd not this last and bitter draught;
So strong the potion prov'd or weak his head
Here lies our doctor—down among the dead."

From Dulverton, Somerset:—

"Neglected by his doctor,

Ill treated by his nurse,

His brother robbed the widow

Which made it all the worse."

Yours faithfully,

CARRUTHERS CORFIELD.

Rustington, Sussex.

SPORT

RUGGER CLUB

Monday, 18th February.

St. Bartholomew's Hospital v. Guy's Hospital.
At Richmond. Lost: 0—14.

Bart's were knocked out of the Hospital Cup competition by Guy's, who won by a goal, two penalty goals and a try (14 points) to nothing.

Like all cup matches, it was a hard battle, with plenty of vigorous tackling by both sides. Guy's won because they were generally the more purposeful side, made fewer mistakes, and because they had a hooker who ensured that they got the ball from most of the fixed scrummages.

Nevertheless, Bart's had their moments, and the three-quarters, particularly Davies and Taylor in the centre, looked more dangerous than their opposite numbers. In spite of getting most of the ball, Guy's never looked constructive behind the scrum; partly because they did not run straight, and partly because of some solid tackling by the Bart's centres.

It was an even first half with neither side able to show any particular advantage, the only score being a penalty goal by Howells, for Guy's, from nearly 40 yards out. That happened fairly early in the game, and for the rest of the half Bart's forwards, by good work in the loose and line-out, gave the backs the opportunity to show what they could do. Taylor cut through well and might have scored if he had not been looking round for support from a non-existent wing, and Clare once started a dangerous attack when he cleverly made a man over in the three-quarter line.

While Bart's were only, and rather unluckily, three points down a try might have made all the difference, but with another penalty goal by W. G. Davies early in the second half, the picture looked different and Bart's seemed to lose their sting. Guy's pack were in control for the rest of the match and had in W. G. Davies the best forward on the field. When Honey scored after a forward rush, one felt that justice had been done, and Howells kicked the goal to make the score 11, and in what appeared to be the 46th minute of the 40-minute second half, James picked up a Bart's fumble in the corner to score a second try.

From St. Paul's, Bedford:—

"Patience, the wife of Shadrach Johnson,
The Mother of 24 children died in childbed
June 6th, 1717, aged 38 years.

Shadrach! Shadrach!

The Lord granted unto thee

Patience

Who laboured long and patiently

In her vocation

But her patience being exhausted

She departed this life in the midst

of her labour

Actat 38

May she rest from her labours.

more of the ball, but at no time in the first half was the Bart's line seriously threatened.

Sidcup began the second half with renewed vigour and by sheer enthusiasm and judicious kicking kept the Hospital to their side of the field for the better part of the remainder of the game. Sidcup scored a try in the corner after prolonged pressure on the defence. Scott-Brown was unlucky not to score after an excellent swerving run, and the pack at one time carried out a good forward rush. Against the run of play, Thomas scored the third Bart's try in the corner from a three-quarter movement, proving that Bart's wished the game to be open, but were allowing the opposition to dictate the play.

At the Annual General Meeting of the club held on March 14th, the following were elected officers for the season 1952-53:—

Captain : E. D. F. Gawne
Vice-captain : F. I. Macadam
Secretary : L. Cohen
Treasurer : J. M. Jones
Pre-Clin-Rep. : J. R. Nicholson

ATHLETICS

The 1951 season ran smoothly under the presidency of Mr. J. P. Hosford and the competent administration of the brothers Stainton-Ellis, to whom we express our thanks for their tireless efforts, in spite of disappointments and difficulties.

Sports Day proved a great success, a record attendance did much to offset the effect of bad weather. As usual, the Dance held in the pavilion after the running, rounded off the day making it, as always, one of the highlights of the season.

In spite of the valiant efforts of A. S. Wint, we relinquished the United Hospital Shield to St. Thomas's, but like any rightful possession it will not be away from Bart's for long, a fact repeatedly borne out by historical evidence.

The following Colours were awarded:—
K. A. Clare, P. McDonald, L. Pringle, L. Cohen, J. Laurent, J. A. McKinna.

We begin the 1952 season reinforced by a healthy addition of new blood, determined to push through a sharp counter-attack, to win back the United Hospitals Challenge Shield. But it must be pointed out that the established reputation can only be sustained by adequate support. We, therefore, extend a warm welcome to new members of the club.

Regular trainings on Monday evenings will be conducted under the competent leadership of Mr. A. H. Driver in preparation for our three main events—

University Championships, May 6th, 8th, 10th, Mootspur Park.
Sports Day, May 24th, Chislehurst.
United Hospitals Championships, June 4th and 7th, Mootspur Park.

We are delighted to have Mr. J. P. Hosford as President for another season, remembering his interest and assistance during 1951. A. H. Macdonald will captain the team, assisted by J. A. Stainton-Ellis as vice-captain. The secretary is L. Pringle, and assistant secretary and treasurer, H. Porrier.

MENS' HOCKEY CLUB

"Retrospect"

The hockey season began early in October with trials at Chislehurst. These were well attended and provided an opportunity for new members to show their paces.

As a result, H. T. Shacklock has successfully filled the position of right-half in the 1st Eleven, and P. Bliss has stoutly kept goal for the 2nd Eleven. Several other new members showed promise and have since played for the Hospital in one of the three elevens.

The 1st Eleven, captained by J. A. Clappen, for the second season in succession, showed little change in its make-up from that of last year. The defence stood firm with J. P. N. Hicks in goal, D. J. Buttery and H. B. Ross as backs; the half-back line with J. A. Clappen at centre, and B. K. Arthur on the left, felt the loss of that stalwart Dr. J. Platt, whose position was now taken by H. T. Shacklock. The forwards had lost two fine players in Dr. J. B. Dossitor (capt., 1949-50) and Dr. J. Godden, but their places were now filled by H. W. Whitting and A. S. Baker, the latter having captained the 2nd Eleven in their very successful last season, during which they won the Junior Hospitals Cup. With that fleeting veteran J. W. Mellows at centre forward, and E. J. Batterham and I. G. Tait filling the two inside positions, the team was complete. During the latter part of the season Dr. C. Todd played regularly, deputising ably in any position that could not be filled.

The first round of the Hospitals Cup was lost to Guy's Hospital, but not without a hard struggle on our home ground against mud, rain and wind, and what proved to be a superior side. The score was 1-5.

Results : 1st XI—

Won : v. Sevenoaks, 4-1. v. Kingston Grammar School, 1-0. v. Westminster Hospital, 6-4. v. Ealing Dean, 1-0. v. Vauxhall Motors, 4-3.

Lost : v. Lensbury, 0-3. v. R.N.C. Greenwich, 0-6. v. London Hospital, 1-2. v. U.C.H., 3-4. v. Imperial College, 0-5. v. R.M.A. Sandhurst, 0-2. v. Blueharts, 0-9. v. N.P.L., 0-1. v. Old Dunstablians, 2-3. v. Middlesex Hospital 0-1.

Drawn : v. University College, 1-1. v. Lloyds Bank, 2-2. v. Hampstead, 2-2.

To play : Five matches.

The 2nd Eleven, under the captaincy of J. J. McL. Hill, drew with Charing Cross and Royal Dental Hospital, 3-3, in the first round of the Junior Hospitals Cup, and were then awarded a "walk-over." They met a much improved St. Thomas's side in the semi-final round at Chislehurst to whom they lost 1-4, after a hard-fought battle.

Team : Goalkeeper, R. P. Doherty; Backs : P. Ford, D. Hennessy; Halves : T. Grant, J. Preece, M. Stanford; Forwards : A. H. MacDonald, M. Price, D. R. Pederson, J. J. Hill (capt.), A. Page. Also : P. Bliss, I. Eastwood, B. I. F. Eminson, C. J. R. Elliott, Dr. J. Milligan, J. S. Murrell.

Results : 2nd XI—

Won : Five matches. Lost : Eight matches. Drawn : Two matches. To play : Five matches.

The 3rd Eleven turned out and gave battle on three occasions before Christmas; eventually

beaten by sheer weight of numbers, 0-3 by London Hospital, and by well-aimed blows from the "truncheons" of the Metropolitan Police, 2-5, this gallant band of men finally drew with "honours even," the "seige" of St. Thomas's.

The Hockey Club would like to take this opportunity of welcoming Professor A. Wormald to the office of Vice-President.

BOAT CLUB

Owing to most members of the club taking examinations in March or April, it was not possible to enter an effective crew for the Tideway Head-of-the-River on March 22nd. A four is now practising and they hope that by getting together early in the year they will be able to give a good account of themselves in the summer regattas and at Henley. In addition two eights will certainly be rowing this summer, and it is hoped that sufficient members will be available to form a third eight. New members from the 1st and 2nd years are particularly wanted. No previous rowing experience is required.

Colours for 1951 have been awarded to F. R. Spink.

BOOK REVIEWS

PAINTING OUT ILLNESS by Adrian Hill. First Edition, 1951. Williams and Norgate Ltd., pp. 127 with 19 illustrations, three in colour. Price 15s.

Adrian Hill's name is already becoming less familiar than is the great movement of "Art Therapy" of which he has been the pioneer, a fact which reflects its gathering momentum! Mr. Hill, himself an artist who was struck down with tuberculosis, is in the best position to understand and tackle this venture, and in this book he tells how "Art Therapy" came to be accepted. In these days when every patient can avail himself of "Occupational therapy," "Educational broadcasts," and the admirable Hospital Libraries (termed "bibliotherapy" in America, I understand), it is difficult for us to imagine the problems of a layman who tried to interest the medical profession with an idea. Here is the tale of a pilgrim's progress and how he won his way into the hospitals with his enthusiasm, took on the giants of public apathy with pen and microphone, battled with the scepticism of the doctors, whittled away the prejudices of the ward sisters against oil painting in bed, overcame the shortages of materials and money. The beautifully reproduced coloured illustrations in this book and the delightful exhibitions of paintings from various sanatoria, which are held from time to time demonstrate Mr. Hill's success. But the true test is to talk to patients who have been under his influence.

THE DIAGNOSIS AND TREATMENT OF INTRATHORACIC NEW GROWTHS, by Maurice Davidson, David W. Smithers and Oswald S. Tubbs. Geoffrey Cumberlege, Oxford University Press. London, 1951, pp. 260, figs. 170. Price 42s.

A year ago articles appeared in the medical press which seemed to show that cancer of the lung was caused by smoking, but that was a year ago. Those of us who modified our habits, either because we

FENCING

The University of London individual championships for foil and épée were held in our gymnasium at the beginning of the month, and members of the club fought in both weapons. The sabre pools are being held later.

In the first round of the London University de Beaumont Trophy we beat Kings College Hospital by 10-6, and we have now reached the final of this event by eliminating Kings College (Strand) in the second round, and Chelsea Polytechnic in the semi-finals. The final will be fought after Easter. Beatley's fencing in these matches has been exemplary. Middleton and Nye have fought vigorously and very well, and Tilleard-Cole has given a unique performance, fencing throughout in an orthopaedic plaster jacket.

In the Inter-hospitals Cup we beat the London Hospital (holders) 11-5, but were ourselves knocked out in the semi-finals by Guy's, the score being 9-7. In these matches, W. Beatley won all his fights, and in the Inter-University matches he gained first places for London in both the foil and sabre.

thought there was something to it or our wives did, have by now returned to our bad old ways. This new volume upon intrathoracic new growths, which is not concerned one way or the other with tobacco, is a delightful companion for a couple of long winter evenings and can safely be recommended to smokers. Its outstanding feature is its readability. Dr. Davidson, in his quaint and rather roundabout style, reviews the subject as a whole. Professor Smithers exercises his great powers of ingenuity in trying to irradiate lesions which are far from the surface of the body and the limits of which cannot be accurately assessed. Tubbs packs many sound clinical observations into a small space; one feels that his chapter contains all that a senior student or general surgeon would wish to read about growths of the lungs.

The appalling results of treatment, even with all modern facilities, in malignant disease remain a challenge to physicians, surgeons and radio-therapists. There has been some improvement in recent years, but our present weapons, even if they are modified and improved in the years to come, seem hardly to be the answer to this depressing problem.

The numerous radiographic illustrations are of good quality but unfortunately are presented as positive prints, as is the present fashion, and must be difficult of interpretation by students. Surely some body should be given the power to order that all future illustrations in books and journals are in the form of negatives, so that they may be appreciated by all in their usual form and not, as at present, only by those who have become used to examining radiographs of the chest of various exposures, sizes and contrasts. Most of the pathological illustrations are too dark.

This volume can be confidently recommended to students partly for its substance and partly as an exercise in scientific methods. Few students will wish to possess a book upon so specialised a subject.

NEVILLE OSWALD.

HYGIENE, INFECTIOUS DISEASES AND DIETETICS, by Dennis H. Geffen, M.D., D.P.H., and Susan Tracy, M.R.C.S., L.R.C.P., D.P.H., Longmans Green & Co., London, pp. 276. Price 9s. 6d.

This is a new book, written primarily to provide a text-book for nurses, but also to supply readable information for teachers and students of social welfare. The field covered is a large one, and the reader will find information on such diverse subjects as the design of the domestic fireplace, the aetiology, pathology, symptoms, varieties, complications, diagnosis, treatment and prophylaxis of enteric fever, and the preparation of a plain omelette. To cover such a field in 276 pages and yet to avoid a telegraphic style must mean that the subject matter has been rigorously selected, and if this is borne in mind, this book should serve the purposes for which it is intended.

R. A. SHOOTER.

A SYNOPSIS OF SURGICAL ANATOMY, by A. Lee McGregor, 7th Edition, 1950, John Wright, pp. 778, figs. 746. Price 25s.

This work follows the now familiar pattern of the "synopses," and like many of the others in the series it has already established itself as a refuge for the examination-harassed. It deserves a better fate, for, although it is of especial value to the Fellowship candidate, its intelligent use throughout the surgical course might elucidate many a problem on which dim memories from dissecting-room days shed little light.

Special mention must be made of the drawings which illustrate the text. They are admirably clear and form a most valuable feature which will be appreciated by the junior student.

CUNNINGHAM'S TEXTBOOK OF ANATOMY, Edited by James Cooper Brash, Oxford Medical Publications, 1951, 9th Edition, pp. xx + 1,604 + figs. 1,249. Price 90s.

It is seven years since a new edition of this classic text-book has been published, an event which now celebrates the Jubilee of *Cunningham's Textbook of Anatomy* and the centenary of the original author's birth. In the Preface the Editor announces several changes in those responsible for the various sections, and records the death of Arthur Robinson, the editor of three past editions and the last surviving original contributor. Revisions have been made in most sections, new illustrations and plates added. The references have been brought together at the end of each section. Some may feel a nostalgia at the passing of the last of the epinymy but all will commend the attempt to standardise the anatomical nomenclature. The production, as one expects from the Oxford Medical Publications, is sturdy and of a high quality.

ANY QUESTIONS? Published by the British Medical Association, pp. 240. Price 7s. 6d.

In 1943 the "Any Questions?" section of the *British Medical Journal* was started and now, after eight years, a selection of questions and answers has been produced in book form. Specialist, practitioner and student will each glean much from this small volume and with its clearly marked sections and adequate index quick reference is possible. It is hoped to publish subsequent volumes each year.

A DOCTOR'S LONDON, by Harvey Graham, Published by Allan Wingate. Price 13s. 6d.

As one of a new series of volumes that explore the less familiar byways of London life, history and tradition, "A Doctor's London" examines the London scene as it is reflected in medicine. The fluent style and fascinating details of the science and practice of medicine are completely captivating. The text is rich with anecdotes and sketches of London life from the time of Rahere to the present day.

Many references are made to Bart's. Few will disagree that "they say you can always tell a Bart's man, but not much," and *most* will laugh to see the 1949 duck eggs "queen of puddings" episode in print, but is the Saseon Unit really "beginning to look like a model T Ford?"

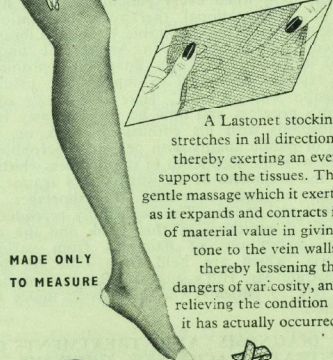
The volume is delightfully illustrated from old prints, paintings and drawings and is well produced. Paul Hogarth's jacket is in keeping with the high standard.

Harvey Graham—the pseudonym for "a well-known scholar-doctor"—need not fear that, like Servetus, he will be burned for his work. If he is a Bart's man as his familiarity with the hospital might suggest, there could be two people ready to assist him towards but certainly not round the fountain!

FELLOWSHIP EXAMINATION PAPERS for the diplomas of the Royal College of Surgeons, Edinburgh, 1947-51, 1951, Livingstone, pp. 50. Price 5s. 6d.

Useful as far as it goes, but does it go far enough for 5s. 6d.?

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ST. BARTHOLOMEW'S



HOSPITAL JOURNAL

Vol. LVI

JUNE, 1952

No. 6

WHERE IS WILLIAM HARVEY TO GO?

ONE of the most interesting and entertaining characteristics of "The Times" is its habit of fomenting small private disputes—esoteric storms which threaten to crack the teacups that hold them before they subside as quickly as they arose. Recently there has been the Controversy over the Chilianwalla Obelisk. As readers are, of course, aware Chilianwalla was the scene of the battle that settled the fate of the Second Sikh War. A commemorative pile was raised in the grounds of Chelsea Hospital, and now someone wants to move it to Brecon. The Colonel of the South Wales Borderers—whose regiment won the battle—says in effect: "Over my dead body".

More recently still a new storm has arisen—or rather, it has been blowing up for some months and "The Times" is just giving it an airing—if you will forgive the mixture of metaphors. This concerns the fate of William Harvey's tomb.

On April 1 last the Harveian Society celebrated, as always, Harvey's birthday—on this occasion at his birthplace, Folkestone. The ceremony was attended by local civic, religious and medical dignitaries and protests were made about the condition of St. Andrew's Church, Hempstead, Essex and the Harvey chapel therein, which contains the sarcophagus of William Harvey, erected by the Royal College of Physicians in 1883. The President of the Harveian Society said that it would cost between £16,000—£25,000 to restore the Church and that while many were generous with advice, none had reached for their cheque books. It was resolved that Harvey's remains should be moved and four suitable resting-places were

suggested—Canterbury Cathedral, Folkestone parish church, Westminster Abbey, and St. Bartholomew's, London. The Vicar of Folkestone said he could not promise a place for Harvey's remains in his church, and read a letter from the Bishop of Colchester (in whose archdeaconry the parish of Hempstead lies), who, like the Colonel of the South Wales Borderers, says in effect: "Over my dead body".

On April 9 "The Times" published a report on the state of Hempstead Church and two photographs, one showing Harvey's tomb, and the other the bells of the church still lying in the church yard where they have been since the tower collapsed in 1882—one year, you will notice, before the Royal College saw fit to resurrect Harvey's coffin from the family vault lying under the chapel and to erect round it a sarcophagus. "The Times" correspondent says of it, "It is large and far from handsome". He confirms that the Harvey chapel is in a poor state, and goes on to point out a possible reason. Hempstead, it seems, has two "favourite sons". Harvey is buried there, but no less a person than Dick Turpin was born there. And if many have heard of Harvey, many, many more have heard of Dick Turpin, who, incidentally, is still a commercial proposition, as any publican will tell you. He concludes: "Perhaps it is one of Turpin's crimes that he has stolen the doctor's thunder".

Five days later "The Times", perhaps feeling that events were not moving quite fast enough, returned to the issue, this time in a Fourth Leader, entitled "Unequal Fame". The writer describes how the many pilgrims to Hempstead travel not to the tomb of

Harvey but to the pub of Turpin. "Poor Harvey has no chance from the start. The circulation of the blood was a great discovery, but it cannot be called romantic, whereas Turpin . . . with his mythical Black Bess and their mythical rides together . . . simply oozes with murky romance".

This had its desired effect, for on the following day, April 15, the first letter appeared—from the Bishop of Colchester. He grants that the fabric is not too good, but complains that when he asked various bodies in the medical profession two years ago to help restore the chapel they at first suggested enthusiastic and lucrative schemes, but then underwent a change of heart and now only want to remove the remains. He goes on to the effect that if the doctors won't help, Essex will help herself, and concludes: "at Hempstead the body of William Harvey, as truly as the Shunammite in her time and place, dwells among his own people."

In a rather narrow sense this is true, for Harvey lies above the family vault containing thirteen members of his own family. But as Mr. Geoffrey Keynes pointed out four days later—and here the tale starts coming near home—Harvey's entombment at Hempstead is quite fortuitous. On his death he left to his brother, Eliab, the decision as to where he should be buried, and Eliab who was a wealthy man, had brought various properties up and down the country and preferred his Manor of Hempstead to the others, built a family vault in the local church and put William in it. Mr. Keynes implies, rather than says, that he dislikes the sarcophagus, but admires the monument and bust of Harvey on a neighbouring wall. "I believe it to be not only a life-like rendering of Harvey's features, but also a good work of art."

So runs the controversy, and it will probably be many months or years before a decision is reached. But that is no reason why the *Journal* should not add a little fuel if it can.

The proposal to move Harvey from Hempstead has been so tactlessly made that it is no wonder that the villagers and their Bishop are indignant. A direct proposal to transfer Harvey to Westminster Abbey would probably have been regarded as an honour rather than a slight, but the original meeting at Folkestone took the form of a vote of no-confidence in the desire or ability of Hempstead to look after its own,

and has not unnaturally provoked a parochial pyrexia. But £16,000—£25,000 is a lot of money to be found for one church's fabric when the finances of the Church as a whole are so low and her needs so great. The prospects of seeing Harvey in an environment suitable to his fame are, for several years at least, dim indeed. If the parish and Bishop could be persuaded to part with him without further acrimony, many people would be so much the happier.

Assuming this to be done, where is he to go? He was born at Folkestone, but does not seem to have lived there after his childhood, and his removal there does not seem justified. He went to the Grammar School at Canterbury but, again, has no further association with this City, though there is no doubt that the magnificence of the Cathedral is a match to his fame. From there he went to Caius College, Cambridge, who have the best claim so far to a say in his disposal. But there is no evidence that late Elizabethan Cambridge made a marked impression on his mind, and there are two other seats of learning which can lay a much better claim to him.

The best claim, undoubtedly, is that of the University of Padua where Harvey graduated Doctor of Medicine in 1602 and which is described by an Englishman in 1670 as "the Imperial University for Physic of all others in the world." The three men on whose work Harvey built so splendidly—Vesalius, Colombo and Fabricius—all learned and worked there. Copernicus and Galileo were there at important periods of their lives, and besides Harvey, there were there from England John Caius, Sir Thomas Browne and Thomas Vicary, who came to Bart.'s on his return. It cannot be doubted that the training Harvey got at Padua was the most powerful outside influence leading to his great discovery.

But this claim, though the best, is one not likely to be made by Padua. There is there no memorial to Harvey whatever, and it was only after prolonged search that his "stemma," in the form of the Harvey coat of arms, was found—and this is no more than a formal record of his graduation there. Moreover, Italians generally dispute the claim of Harvey to have discovered the circulation, and advance that of a fellow countryman, Cesalpino, who lived about 50 years before Harvey and taught anatomy at Pisa and Rome. No one outside Italy will

support Cesalpino, but then neither will anyone inside Italy support Harvey. So we are not likely to have the Chancellor of Padua University entering the lists of "The Times."

The best English claim to Harvey is that of Bart.'s, where he was physician for 34 years, during which time he worked on and published his great work, *De Motu Cordis*. But if Bart.'s is to have any voice in Harvey's fate, we must have a clear idea in our minds of Harvey's greatness. There can be no doubt that William Harvey was the greatest man to practise medicine at Bart.'s. He stands high above all our other great men, and rubs shoulders on equal terms with such as Newton and Darwin who are not national, but international, figures in the history of science. We, in 1952, know all the answers about the circulation and Harvey's simple explanation of events was so obviously an advance on the complicated theories held by his contemporaries that we may tend to belittle his achievement. How great that achievement was is well described in Butterfield's "The Origins of Modern Science." After describing current theories, such as the direct passage of air from the lungs to the heart and the patent, but invisible, holes in the interventricular septum, he writes, "Here we have a complex system of errors concerning which it has to be noted that the doctrine was not only wrong in itself, but, until it was put right, it stood as a permanent barrier against physiological advance—for, indeed, nothing else could be

right . . . The establishment of the circulation of the blood released physiology for a new start in the study of living creatures."

If, then, Harvey is to come back to Bart.'s, is he to go to St. Bartholomew-the-Less or -the-Great? St. Bartholomew-the-Less is the hospital's own church and was standing in Harvey's time. But it is small and it would not be easy to find room in it for Harvey's tomb. That leaves St. Bartholomew-the-Great—or Westminster Abbey. Harvey's stature is well up to that of the other great men lying in the Abbey, but there are so many there already that he might be as lost in the publicity of the Abbey as he is in the oblivion of Hempstead. And St. Bartholomew-the-Great is not only the oldest parish church in London, but also it is one of the finest. Though far smaller than in the Middle Ages it is still large enough to find room for Harvey and its close connection with Bart.'s from their joint foundation would make it a fitting resting-place for Harvey. It would be suitable indeed if this church which houses the tomb of its own, and our, founder, should also contain the remains of the greatest Bart.'s man.

Where is William Harvey to go? Why, to St. Bartholomew-the-Great, of course!

I.H.B.

[Readers who are interested may care to look at the letter from Dr. David Roatman, in the December, 1935 *Journal* which quotes the "People's History of Essex" and discusses William Harvey and his tomb.

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Contributors

Dr. Bernard Myers, M.D., F.R.C.P., who writes in this issue, will be well known to many of our readers. He wrote not long ago on diverticulosis of the small intestine, and completes the subject of diverticulosis with the present article. Dr. Myers was born in New Zealand, and was educated at Wellington College, N.Z., before coming to Edinburgh University and Bart.'s where he received his medical training. He qualified M.B. in 1898 and received the Edinburgh M.D. in 1900. Dr. Myers was Director of Medical Services, New Zealand Expeditionary Force in the recent war.

Mr. Warren Yudin, who writes on American medical education, has had ex-

perience of medical students at Harvard and Yale in the United States and at Cambridge University. He brings to the subject some of the freshness of an impartial observer—being himself not medically qualified.

Everest

Since Professor Matthews' article in the April *Journal*, we have heard that Dr. Charles Warren, who was at the time Chief Assistant to the children's department, went on the 1936 and 1938 expeditions to Mount Everest. Dr. Warren qualified in 1932 and took the M.R.C.P. in 1946. He is the author of papers on climbing and oxygen supply as well as on children's diseases.

Exhibition of Medical Illustration

An Exhibition of Medical Illustration, jointly sponsored by the Medical Group of the Royal Photographic Society and the Medical Artists' Association of Great Britain, will be held at 'The Old Library', British Medical Association House, Tavistock Square, London, W.C.1., from June 13th to June 28th, 1952. The opening ceremony will be performed at 3 p.m. on Saturday, June 14th by Sir Henry Cohen, Professor of Medicine at Liverpool University, and Professor H. J. Seddon, of the Institute of Orthopaedics will preside. Sir Harold Gillies will propose the vote of thanks. There will be shows of selected medical films at 7 p.m. on Thursdays, June 19th and 26th.

It is hoped that work from the Department of Medical Photography of St. Bartholomew's Hospital will be on show.

Dr. Joseph Bell

From a former student at St. Bartholomew's Hospital.

"In 1895 I was in Edinburgh and heard of the renowned person who had made such an impression on Conan Doyle and I greatly looked forward to seeing him.

I had the opportunity of observing Dr. Joseph Bell on many occasions and he fascinated us all, as we never knew what story would next emanate from him. I can still visualise this extraordinary physician driving in his victoria with his coachman, both immaculate but the most immaculate of all was himself. Always neatly and perfectly dressed in the manner usual in those days in the reign of Queen Victoria, with his silk hat immaculate as himself, he would be seen driving along the street between the university and his Hospital, his hands resting one on the other and his eyes—and what eyes, how they seemed to penetrate everywhere—taking in all he saw, like a camera making a picture for a film, but with this difference that his astute mind deduced the importance of everything visible.

Joseph Bell was a fine looking man and, I thought, most distinguished in appearance. His eyes were prominent and yet pleasantly so. One day I met a distinguished surgeon while Dr. Joseph Bell was passing and the surgeon remarked to me, "I cannot understand why Dr. Bell never reads a book instead of watching so many unimportant things." But were they unimportant? I do not think so.

The only other person I have known who was like him in the power of observation was an admiral of the Fleet whom I met in 1915, but extraordinary as were his powers of seeing everything I think the palm must certainly be given to Joseph Bell.

I was informed by several medicoes who were present that on one occasion a man came into the Out-patients and immediately Dr. Bell asked him if he did not belong to a certain Scottish regiment; he answered, "Yes." Then Dr. Bell said, "I see you are in the band"; again, "Yes." Next Dr. Bell said: "I note that you play the big drum;" again, "Yes." "I want to ask you one more question. Did you enjoy your walk in the middle meadow this morning, you must have been there about 6 a.m.?" "Quite right," answered the bewildered man. When he went out from the room (he was in mufti) the students amazed at what had occurred, asked Dr. Bell how he knew these things. "Quite simple, because I know that the men of the regiment always walk differently from other regiments and like the patient. Again the band have a particular walk varying from the rest and I knew he was the drummer because of the manner in which he held his shoulders and moved his legs." "But how about the Middle Meadow walk?" "That is simpler still," answered Dr. Bell, "for the mud under one shoe was of the kind only seen there and at six o'clock in the morning."

Truly he was a wonderful man and as observation is essential to our profession, the cultivation of it pays big dividends.

Opinion

"—for we may lay it down as a maxim that when a nation abounds in physicians it grows thin of people."

—Addison, 1711.

Change of Address

Dr. H. W. Bunjé has changed his address from 53b, Queen's Gardens, W.2, to c/o University College Hospital, Mona, St. Andrew, Jamaica, B.W.I.

MAPS FOR SALE. Thirty-seven 1" and six ½" Ordnance maps (on linen) covering south and east England, 4th and 5th editions, excellent condition. Cost price £5 10s., best offer over £3. Box 113.

PRE-MEDS IN THE 'COLONIES'

by WARREN H. YUDKIN

Instructor in Chemistry, Northwestern University, Evanston, Illinois, U.S.A.

THE least common denominator, the germ of all doctors in America and England is the same—the undergraduate. The only thing undergraduates have in common anywhere at all is that any generalisation about them is false. I yield to the temptation and will generalise.

When a freshman comes up to an American university he is considerably greener intellectually, than his English counterpart. Thus, the four years the pre-medical student may spend in acquiring a B.A. means that he must at some time be exposed to the elements of inorganic and organic chemistry, elementary biology, comparative anatomy or embryology, elementary physics, and often a foreign language. Very few medical schools dictate the field in which a student must concentrate his B.A. studies providing that he fulfills the above requirements. He may be violently interested in studying Sumerian dialects, obtain his B.A. in archaeology, and still go on to medical school.

Here's the rub. Upon completion of his B.A. or, as many students are allowed to do now, upon completion of his third year, a pre-med must seek to matriculate at a medical school. There is nothing automatic about this process. He must apply and be accepted. American colleges and universities put forth about 25,000 pre-med students a year. The seventy-two four-year medical schools in the country can accommodate but 7,500 freshman students. To increase his chances of matriculation, each pre-med student applies to an average of 1.8 medical schools and therefore each medical school receives an average of six applications for every student accepted and some schools may receive as many as forty. Of the 17,500 failing to gain admission it is estimated that about half have fulfilled the necessary scholastic requirements for admission.

I believe that these figures show the essential difference between the English and American system of medical education. The competition to matriculate at a medical school is so keen here that the qualifications are necessarily high. These qualifications are both academic and personal. A student

is selected by a medical school on a complex and varying combination of academic record, racial, religious and cultural background, personality and clandestine influence. In general it is difficult to predict who will be accepted to a medical school because there are too many *parameters with which to deal.

This competition has given rise to many situations, both good and bad. The average native intelligence of the American medical student is generally higher than the comparable Briton although his level of training may be lower. The prevailing tendency of American higher education is to grant the B.A. for a high level of mediocrity whereas at Oxford and Cambridge the intensity of undergraduate enlightenment varies from abject tenebrosity to peerless resplendence. In America, usually, the idiot is not allowed to continue and the genius is often stifled by the highly touted normality of his comrades.

Once the pre-med becomes a medical student, his work takes the form of two pre-clinical years and two clinical years before he can achieve the degree of M.D. which is a prerequisite to practice. The first year medical student now learns human anatomy (gross and microscopic), biochemistry and physiology—all laboratory sciences. In his second year he takes pharmacology, pathology, bacteriology, immunology, and perhaps physical diagnosis. His third and fourth years are spent in wards, clinics, classrooms, and operating theatres learning basic clinical practice in medicine, surgery, obstetrics, etc. Upon graduation the M.D. may apply for a license to practise medicine from the state in which he resides. In practically all cases he resides in a hospital for one or two years as an interne before beginning to set out on his own, in fact some states will not issue a license to practise until internship is completed. Granting of a license requires that an examination be taken and passed by the applicant and if the doctor changes his residence to another state

*Chamber's Dictionary—"the constant quality which enters into the equation of a curve." A Dictionary of American Slang—"variables."

he must be relicensed. A standard for all medical schools is set up by a National Board which administers examinations to all second year and fourth year medical students in the country. This standard is country-wide and so prevents any single state from licensing anyone obviously deficient. State licensing examinations vary a good deal from state to state and so do the prerequisites, the only uniform one being that the candidate has an M.D. The Federal Government, thus, has no control over the practice of medicine and the states, each differing in laws, can lead to considerable confusion.

The pre-medical student, like any undergraduate here, has what is imperfectly described as an "active" social life. Perhaps it is not so limited by university regulations as it is in England. Most of my experience has been at Yale, Harvard and Cambridge, England, therefore, my vision is limited and must be excused. Now I am in a mid-western co-educational university—a very far cry from what I have known. Still it's broadening. The rules for undergraduate conduct and scholarship at Yale and Harvard were simple, "Stay out of the newspapers (especially Boston newspapers) and get a gentleman's C (roughly equivalent to a low second)." Associated with Harvard University is Radcliffe College for women. The Radcliffe staff is essentially that of Harvard and many classes have both men and women present. Radcliffe is familiarly known at Harvard as the "Annex" and it is generally considered a lapse in taste to go out with an "Annex" girl.

At most American universities there are no residence requirements for men. Often, attendance of classes is required of freshmen. Residences are kept open and hours are unlimited. Oddly enough, the undergraduate who is allowed to remain out until any hour is not credited with any judgment concerning women. Usually, females (even grandmothers) are allowed in undergraduates' rooms only between twelve noon and six in the evening. Americans are often criticised for their haste!

The freshman entering any large university will tend to get lost unless that university is subdivided into social groups. The colleges at Oxford, Cambridge and Yale and the houses at Harvard serve to ease, broaden and guide the friendships the newcomer forms. In many American universities the place of the college is taken by the Greek-

letter social fraternity. The difference between a fraternity and a college becomes apparent when one considers that the members of a fraternity decide who the new members shall be. Thus a self-perpetuating body elects only men exactly like themselves; men with close to identical values, personalities, interests, intelligences, haircuts and friends. A father who is an alumnus of a fraternity often will feed his son those qualities which will make him "the fine Phi Sig his old dad was." Whether these qualities are any good is hardly considered. The greatest evil of the fraternity is that it rigidly delimits friendships, both male and female, for most fraternity men will date only "sorority" girls. (Sororities are, incidentally, even more pernicious than fraternities.) There is nothing new to learn about your friends; they are all the same as yourself. A fraternity gives one the greatest opportunity to develop a jaundiced outlook. Perhaps a lesser evil of the fraternity is the anxiety it causes among those whom it excludes. As a freshman you may see your best friends joining a closely knit fraternity which, for some reason or other, you are not invited to join. Again, your father may consider you a chip off some other block because you have failed to be pledged by his old "frat." Altogether it does not bode good for either the included or the excluded.

The encouraging trend, however, seems to be towards a more balanced approach and to less of the aspect of a select London club. Many universities shackle fraternity activities enough to prevent them from dominating the social scene. And, in fact, many fraternities are beginning to reform themselves. Consequently their membership is broadening together with the perspective of their members. Adverse reaction to the discouragement of fraternity activity comes mainly from the old alumni who threaten to withdraw support, financial and moral, from the university if their old frat is squelched. Also the fact remains that many smaller colleges cannot supply residences for all or most of their students. They have no choice but to encourage a fraternity system which will house and feed undergraduates. The other evils, then, seem unavoidable.

The future of pre-medical education in the United States is indicated by the custom many medical schools now have of admitting students after only three years of

undergraduate work. Indeed, during the war many men matriculated at a medical school after but two years as undergraduates. This is no longer customary, but even so, it showed that it can be done. The more radical medical educators go so far as to suggest that students from high schools enter medical schools directly and, concomitantly, that medical schools extend their training period to five or six years to provide themselves the premedical training these men would acquire in an undergraduate school. This does not seem to be overly practical, I think, because the standards in American high schools seem rather to be declining. Medical education, on the other hand, can never afford to half-rate.

DIVERTICULOSIS OF THE COLON

by BERNARD MYERS

In the November number of the Hospital Journal, 1949, I wrote an article on Diverticulosis of the intestine and in the summary suggested that certain further investigations should be carried out in the Hospital and laboratories. However, just previous to his passing Dr. Geoffrey Evans asked me to write on this subject and deal personally with the points raised.

Particular information was required on three points: (1) Is there a tendency for the mucous secretion of the colon to be decreased from the age of 45 onwards; (2) What is the cause of the spasm which occurs not infrequently in these cases at the splenic flexure of the colon or in the descending colon; (3) When a patient with diverticulosis of the colon receives a fracture of the right middle ribs followed by splenic spasm, what path does the pain take?

With regard to the first point, I find that no definite work on this subject has been done. From clinical experience it seems to me not unlikely that there is a decrease of mucous secretion in the colon after the age of 45 to 50.

Now as to the second point I have received the following letter from Professor A. J. E. Cave of St. Bartholomew's Hospital Medical College:—

"The Recognised sphincters of the gut beyond the duodenum are:—

(1) The ileo-colic sphincter—an anatomical entity.

It cannot deny services, all of which are vital, on the excuse of insufficient funds or facilities.

Characteristic, if you will, of Americans is their tendency to proclaim loudly and affectionately their virtue and their vice. This communication is highly opinionated, as you can easily see, and perhaps I have dwelled entirely too much upon vice because I have no doubt that you believe the virtues in Americans to be implicit. Lest this be not so, I would say, therefore, in conclusion, that American medical education although wasteful of its material, inadequate in capacity, and tainted with nepotism, gives us what I believe to be the best trained practitioners of modern medicine.

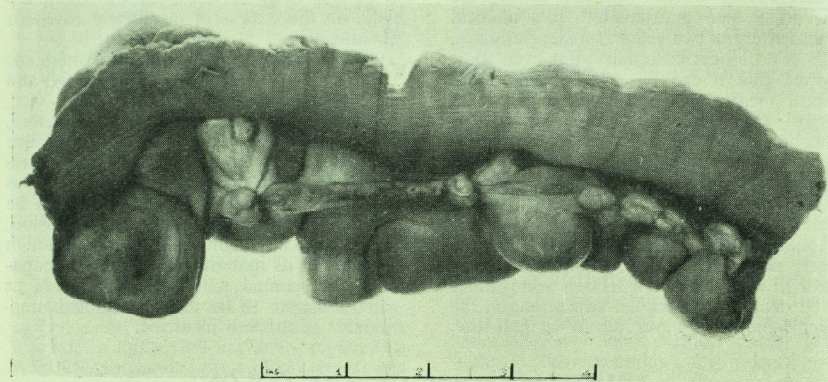
(2) The Caeco-colic sphincter—a possible physiological entity.

(3) The mid-colic sphincter—according to some, not a demonstrable anatomical structure.

(4) The recto-colic sphincter—(O'Beirne's sphincter).

In Nos. (2), (3) and (4) there is no demonstrable anatomical arrangement in the nature of a "pylorus"; these sphincters are functional rather than morphological. But wherever there is a tube of circular plain muscle, sphincteric action is always potential, if not actual. The whole of the descending colon from splenic flexure to sigmoid can be looked upon as a physiological sphincter. This part of the gut is usually empty and contracted, for its office is merely to transfer the contents of the distal half of the transverse colon into the storehouse of the pelvic (sigmoid) colon, prior to passage through the rectum at the appropriate time. The observation of sphincteric action anywhere along the descending colon is, therefore, not surprising; functionally this entire piece of gut is nothing more than a much-extended sphincter. Anatomically, however, it is not possible to localise sphincteric action in this bowel segment on any basis of histological structure—i.e., no special modification of the gut-wall can be detected at splenic flexure or elsewhere. And to be a sphincter anatomically a gut-segment must manifest some specific structural arrangement."

The third point is equally difficult of



Specimen from the Royal College of Surgeons museum (by kind permission of Dr. Proger) showing enormous diverticula, commencing two inches from the duodenal-jejunal junction and extending for four feet. Some diverticula were ballooned to the size of a closed fist. A few diverticula were also present in the duodenum. Mr. H. F. Vellacott, of Plymouth, states that the patient complained of going down hill rapidly, loss of weight, vomiting, loose stools, and the presence of a lump in her stomach which "comes and goes." He resected the affected area in the jejunum from the duodenal junction and end to end anastomosis was performed. The patient made an uninterrupted recovery.

explanation and I am indebted to Dr. C. B. B. Downman, Senior lecturer in Physiology at St. Thomas's Hospital for his explanation of the path of pain after fracture of the right ribs. He states: "I do not think there can be any direct pathway from the site of the injury to the colon. Any consequences of the injury would probably involve a reflex action, the afferent (? pain) impulses entering the spinal cord via the intercostal nerves and dorsal spinal roots. Within the cord the impulses would not only pass upwards in the spino-thalamic tracts, but would also relay within the cord along its proprio-spinal relay fibres. Thence impulses could pass out along the sympathetic and parasympathetic nerves to the colon. In the production of a spasm one suspects that the motor parasympathetic nerves, namely the outflow from the second, third and fourth sacral nerves via the pelvic plexus would be reflexly activated. On the other hand there is the possibility that the spasm was a consequence of an inhibition of the sympathetic outflow, via the inferior splanchnic nerves and inferior mesenteric ganglion, leaving the motor parasympathetic unbalanced. This last seems unlikely to me, but could be borne in mind. The effects of stimulation of the nerves to the colon in man

and in animals are not by any means yet clearly understood. The pathology of a segment of the bowel would make it more reactive to the nervous discharge.

"As to why the spasm should last two days that is another problem. If a reflex nervous discharge started the contraction it is possible that continuing stimulation of pain endings in the chest wall might have kept it up, but, like spasm in arterics, there is the possibility that an extrinsic influence started the spasm and an intrinsic one keeps it up.

"In my experiences with animals the latency of a nervous process would be a matter of seconds.

"Whether one is justified in assuming a spinal reflex alone is open to doubt. Certainly the higher levels, even up to the cerebrum, can influence our intestines via their nerve supply. Do you find that the splenic flexure is liable to spasm on any occasion of mental irritation or frustration? If so, I think we must consider the possibility of a supraspinal factor."

I might add to the above that I have as a child suffered from white (dead) fingers in the cold weather, also been subject to sudden contraction of the muscles of the abdomen and calves, and a contraction of

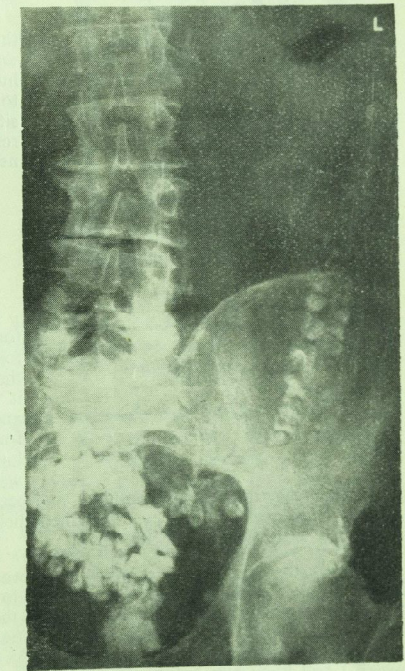
an artery in the right frontal region at the commencement of attacks of right migraine from which I suffered severely for many years, indeed until my right sinuses were cured by Bedford Russell.

It might prove of interest to relate an experience which I had a year ago when I suffered from right renal colic which continued for two days while the stone was passing down the ureter, and finally entered the bladder and was expelled. The pain remained below the umbilicus during this period. No motion was passed while the colic lasted, nor did high colonic irrigation, which was used twice, result in the passage of any faeces or even flatus. On the third day, after the passage of the stone a natural normal motion was passed. It would appear that the spasm was in the region of the ileocolic sphincter and that it relaxed as the stone passed into the bladder.

Points of clinical importance concerning diverticulosis of the colon have been already dealt with in the previous article in 1949 and all that I would like to emphasise is that I believe the *Predisposing Causes* of Diverticulosis of the Colon to be:— Advancing age with some accompanying trophic changes in the muscular coat and mucous membrane of the colon, sepsis in the colon which may have emanated from the nasal sinuses or the teeth etc., decrease of mucous secretion in the colon with consequent drier faeces and tendency to constipation, and possibly from over-action of the internal anal sphincter. It is just possible that in some cases spondylitis in the lumbar region may play a part through effect on the sympathetic nervous system. Personally, I believe that trophic changes appearing in the colon in many persons from middle-life onwards and diminution of mucous secretion in the colon are the most important. As to the *Exciting Cause* my conviction from clinical observation is that increased pressure produced inside the colon by too great effort at stool acting on the weakened musculature of the colon is all important and I previously produced evidence in support of this contention.

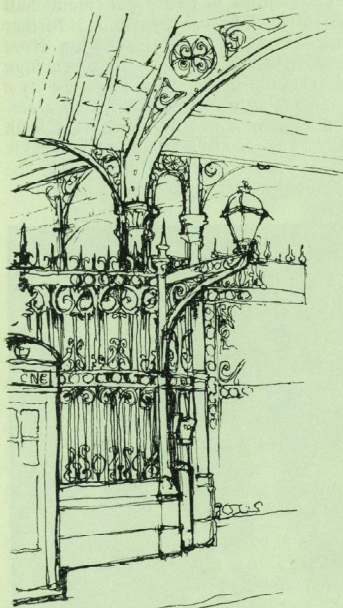
Treatment was dealt with in my previous article including the distinct importance of suitable food for all sufferers and for the individual case, also the necessity for one or better still two easy soft daily actions with as little accompanying effort as possible. For this purpose I advise each case to take a tablespoonful of medicinal paraffin half an

hour before breakfast, followed by a dessert-spoonful before the midday meal, and one or two tablespoonfuls of petrolagar (plain) half an hour before the evening meal. It is further advisable for every person suffering from diverticulosis of the colon to be given high colonic irrigation of the colon (*but only by a really expert nurse in this method of treatment*) at regular intervals which vary with the necessity of each case from once weekly to once in two months. Above all let the sufferer adopt a cheerful attitude of mind.



X-ray by Cecil Bull of my descending colon and pelvic colon show numerous diverticula. They are fairly large, such as are often found in the colon, and are for the most part passive sacs which retain barium and no doubt faeces. There is little associated spasm. Such diverticula, although large for the colon, are relatively small compared with those found in the jejunum.

SMITHFIELD



THE queer juxtaposition of fruit and opera at Covent Garden is paralleled nowhere in London, except at Smithfield where meat and medicine are joint rivals. Unless one is so unfortunate as to come across a meat porter as he reads that his "snip" for the 3.30 came in last, or a medical student as he successfully enters a vein only to find his needle blocked, then one cannot avoid the impression that Smithfield is as respectable as any other part of the City.

But it has only recently become so, for until the middle of the nineteenth century it had had an uninterrupted notorious history for several hundred years. This reputation Smithfield owes to Bartholomew Fair, to its use as an execution-site, and to the cattle market. Since the latter's removal to Islington in 1852 Smithfield has been nearly as genteel as Portman Square.

Now the fair's a-filling
O for a tune to startle
The birds o' the booths here billing
Yearly with old St. Bartle.

Bartholomew Fair was yet another of Rahere's foundations and was held regularly every August for 700 years. The Priory of St. Bartholomew had the running of it until the Dissolution, but though it soon became the resort of jugglers, wrestlers and every sort of mountebank and thief to be found in London, the Prior does not seem to have interfered very much so long as the dues were paid. A considerable amount of trade was

done, mainly by drapers and clothiers, and because of the slowness and inflexibility of the ordinary medieval courts they established their own 'court of pied poudres' with a jury of traders to settle disputes on the spot.

Towards the end of the seventeenth century the moral tone began to fall—it was no longer the responsibility of the Priory—and in 1668 Samuel Pepys paid a visit to it, seeing there an extraordinary performing horse—"the mare that tells money, and many other things to admiration and among others, come to me when she was bid to go to him of the company that most loved a pretty wench in a corner. And this did cost me 12d. to the horse which I had flung him before, and did give me occasion to kiss a mighty belle fille."

At the Dissolution the rights in the Fair passed to Sir Robert Rich and then to Lord Kensington, from whom the City Corporation—which had been critical of the Fair for many years—bought them in 1830. The Corporation last held the Fair in 1855 and it has only been revived once, in 1923, during the octocentenary celebrations of this hospital. The spirit of the Fair has been well-captured in Ben Jonson's "Bartholomew Fair" which has been staged in recent years in both London and Edinburgh.

Throughout the Middle Ages, but especially under the first three Edwards Smithfield was the scene of magnificent joustings and tournaments, lasting many days and accompanied by much feasting and great ceremony. These have been vividly described by two medieval

chroniclers, FitzStephen and Froissart.

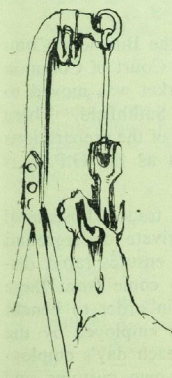
Nor was the entertainment of the poor forgotten, for until Tyburn (now Marble Arch) began to be used in Elizabethan times, Smithfield was the main place of execution for common criminals. In 1305 William Wallace, the Scots patriot, was executed there, and other notables included the Earl of Mortimer, who made a cuckold of Edward II by making a mistress of his Queen, and the Fair Maid of Kent, who in Edward VI's reign, fell an innocent victim of Archbishop Cranmer's religious intolerance. Many of Mary's 227 religious executions took place close to where the King Henry VIII Gate now stands. It was also in Smithfield that Lord Mayor Wallworth put an end to Wat Tyler's revolt in Richard II's reign. It is said that having felled him with a sword-cut Wallworth went on to hack the body in an uncontrollable fury, an action accounted for by contemporaries by the fact that Wat's men, in approaching the City through Southwark, had destroyed the large number of brothels there from which Wallworth drew much of his wealth.

Hanging and decapitation were the commonest forms of execution, with burning reserved for religious martyrs, and boiling for poisoners. FitzStephen describes how "this yeere was a cooke boyld in a caldron in Smythfelde for he would a-poysond the Bishop of Rochester, with dyvers of his servants; and he was locked in a chain, and pulled up and down with a gibbet at dyvers tymes til he was dede."

The meat market was one of the few things in Smithfield that Rahere did not found, for there is evidence that a cattle market, known as the King's Market, existed before his time, in the place where the public garden is now. It continued throughout the Middle Ages but no attempt was made to regulate it until 1615, when it was drained, paved and railed and some organisation was introduced.

There was a market held every day except Sunday, but the most important market days were Monday, when fat cattle and sheep were sold, and Friday, when horses were sold. The animals would be driven into the City overnight from outlying country districts—at enormous depreciation of value—and the market would begin at dawn, farmers and butchers coming from all over London and the Home Counties. The scene is most vividly described by Charles Dickens in "Oliver Twist." "It was market morning: the ground was covered nearly ankle-deep with filth and mire, and a thick steam perpetually rising from the reeking bodies of the cattle and mingling with the fog which seemed to rest upon the chimney pots, hung heavily above.

All the pens in the centre of the large area, and as many temporary ones as could be crowded into the vacant space, were filled with sheep, and tied up to posts by the gutterside were long lines of oxen, three or four deep. Countrymen, butchers, drovers, hawkers, boys, thieves, idlers and vagabonds of every low grade,

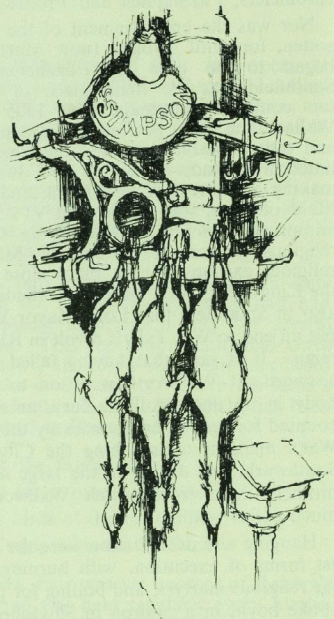


were mingled together in a dense mass. The whistling of drovers, the barking of dogs, the bellowing and plunging of beasts, the bleating of sheep, and grunting and squeaking of pigs; the cries of hawkers, the shouts, oaths, and quarrelling on all sides, the ringing of bells and the roar of voices that issued from every public house, the crowding, pushing, driving, beating, whooping, and yelling, the hideous and discordant din that resounded from every corner of the market and the unwashed, unshaven, squalid and dirty figures constantly running to and fro, and bursting in and out of the throng, rendered it a stunning and bewildering scene, which quite confused the senses."

Dickens was content to describe the scene, but others protested bitterly at the cruelty to the animals, the inconvenience to passers-by, especially church-goers, the dislocation of traffic and the deterioration in the meat. One sententious Victorian writing a pamphlet for "the Association for promoting Rational Humanity" remarks tartly—"As the 'March of Intellect' opens improvement in all other trades, the London butchers cannot expect to be wholly exempt." Referring to the horse-market on Fridays, a City Officer wrote—"this market brings together all the thieves and rogues within 10 miles of London: it is the most abominable scene which can be imagined: if we interfere we are generally obliged to take our staves and fight." Another pamphleteer wrote—"The drovers may often be seen clambering, with lighted links in their hands, over the backs of the beasts, in places where it has not been possible to leave a free passage between the animals, and the barking of dogs, the shouting of men, and the moaning of the beasts under the reiterated blows of the drovers would rather remind one of Milton's or Dante's account of the regions guarded by Cerberus than the orderly arrangements with which the business of a civilised community is usually conducted."

For 20 years the protests grew in volume despite the opposition of the Butchers' Company and local publicans, and the success of the salesmen in packing the Court of Common Council of the City. At last, 100 years ago, in 1852, the live cattle market was moved to Copenhagen Fields at Islington, and the dead-meat market replaced it at Smithfield. There is little information of the part Bart's played in the protests, but the noise of the preparations for the market at night must have been as troublesome to patients then as the G.P.O. is now.

Just before the war the market employed 7,000 men and enjoyed a trade whose total value was £35 million a year, and the volume 30,000 tons a week. A private underground station lying under the public garden, as well as a large fleet of lorries, ensures rapid distribution to all parts of London and nearby counties. Butchers used to come from these districts to buy at the wholesalers' 'stances', often coming twice a day in order to benefit by the cheaper prices at the close of business. The meat porters were employed by the individual wholesalers, though a few acted as free-lances, bargaining for each day's employment. Like any other institution the meat market had developed its own customs and traditions, lending relief and colour to the day's work.



Now, and until meat rationing ends, all is changed. The market is deserted for much of the day, business being largely completed by noon. And it is not true business at all, for Smithfield is, in effect, just a vast warehouse, supplying butchers in the City and the West End with meat whose weight has been calculated to the nearest lb. and whose price is controlled by the Ministry of Food. Salesmen who used to arrive at 4 a.m. now travel at an hour more familiar to medical students, but all complain that much of the excitement has gone from their work.

Smithfield, whose life has been so riotous, so tragic and so exciting, is now as staid and respectable as the Men's Department at Harrods.

I. H. B.

EXAM RESULTS

SOCIETY OF APOTHECARIES Final Examination

<i>Pathology</i>	<i>Medicine</i>	<i>Surgery</i>	March, 1952
Ladell, R. C. H.*	Leach, J. W.*	Leach, J. W.	* Diploma Conferred

UNIVERSITY OF CAMBRIDGE Examination in Pharmacology for Medical and Surgical Degrees

Cowper-Johnson, H. F.	Gibbs, J. T.	Norbury, K. E. A.	Lent Term 1952 Ogden, W. S.
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UNIVERSITY OF OXFORD 2nd M.B. Examination

<i>General Pathology & Bacteriology</i>			Hilary Term, 1952
Rewcastle, R. M.			
<i>Forensic Medicine & Public Health</i>			
Barber, P. J.	Davies, M. J. A.	Fairley, J. H.	Smith, J. H.
Green, H. E.	Skeggs, D. B. L.		
<i>Special & Clinical Pathology</i>			
Barber, P. J.	Fairley, J. H.	Green, H. E.	Smith, J. H.
Skeggs, D. B. L.			

CONJOINT BOARD First Examination

<i>Physiology</i>		<i>Anatomy</i>	March, 1952
Canning, W. C.	Greenwood, R. A.	Batterham, E. J.	
<i>Pharmacology</i>			
Austin, S.	Shere, S.	Morgan, C. I.	Jones, A. R.
Geldhart, R. E. M.	Dunger, G. T.	Thomas, P. I.	Reid, K. M.
Marker, H. R.	Gray, I. M.	France, G.	

CONJOINT BOARD Final Examination

<i>Pathology</i>			April, 1952
Biddell, P. B.	Gretton, A. H.	McKerrow, M. B.	Watmough, G. C.
Clark-Wilson, L. J.	Kenney, P. M.	Maskell, J. F. A.	Ryan, A. M.
Cuthbert, D. M.	Lewis, J. A.	Mules, R. J.	
Daniels, R. G.	Luke, M. F.	Penty, P. R.	
<i>Medicine</i>			
Clappen, J. A.	Lewis, J. A.	Sarma, V.	
Cookson, T. S.	Middleton, G. W.	Thomas, H. A. J.	
Dodge, J. S.			
<i>Surgery</i>			
Brown, H. E.	Dodge, J. S.	Lewis, J. A.	Page, A. R. W.
Clappen, J. A.	Gretton, A. H.	Middleton, G. W.	Thomas, H. A. J.
<i>Midwifery</i>			
Bartley, R. H.	Brown, H. E.	Page, A. R. W.	Stoke, J. C. J.
Hall, M. C.	Heckford, J.	Hill, F. A.	Thomas, H. A. J.

The following students have completed the examination for the Diplomas M.R.C.S., L.R.C.P. :—

Cookson, T. S.	Lewis, J. A.	Sarma, V.	Thomas, H. A. J.
Dodge, J. S.	Hall, M. C.		

BART'S

by TIMOTHY BAKER

IN thinking back to my short stay at Bart's I find that, impressed as I was with the inner square and fountain, the hospital buildings, and the chapel, my strongest impressions are of the people of St. Bartholomew's Hospital.

My first contact with the hospital staff was with Dean Harris, who took time out from his busy teaching and administrative schedule to talk with me and arrange an assignment which would have the most educational value. After my interview he introduced me to Professor Christie, to whose firm I was attached for my stay. Unfortunately I was able to attend only one teaching session with Professor Christie, but that one session made me realise why the students hold him in such high regard as a teacher, physician and person.

When Professor Christie went on vacation, Dr. Hayward took over the bulk of teaching. I was embarrassed more than once when put on the spot by Dr. Hayward's question, "And how do they do this in the States?" when I was sure that he knew much better than I how they did it. I never failed to be amazed at the immense store of medical knowledge that he had. His teaching rounds were among the most thorough that I have ever attended: with one patient as a focal point for his discussion he would cover, not only the purely medical aspects of the case, but the economic and social as well.

In general, I feel that, in comparison to American teachers, the teachers at Bart's take more time and expound more fully on their clinical material, bringing out the interesting side-lights of a condition as well as driving home its salient points. The teachers never seemed too busy to answer questions. In particular I remember Dr. H. V. Morgan taking three of us around the ward for a whole morning demonstrating the signs of mitral stenosis and how to elicit them. Reading about it a hundred times would never have given me the clear picture I have as the result of his painstaking teaching.

Although I was attached to a medical firm, the attachment was loose enough to allow me time to visit other clinics and see operations. I remember particularly Mr. Alan Hunt's stimulating surgical outpatient clinic. Mr. Donald Fraser invited me to

attend several of his operations which were interesting, not only from a technical point of view but also for the "pearls" that he dropped as he talked during the procedure. Among the aforementioned doctors and all the other members of the staff that I met, although methods varied, there was one thing in common: the aim and desire to instruct. I can honestly say that I was taught more while I was at St. Bartholomew's than during any other single month of my life. During my stay I was quite dis-

I found the students at Bart's to be strikingly similar to medical students in the States. Although any medical school class is a group of individuals, I found the same types at Bart's as I had known at home: the specialist in esoteric knowledge, the would-be surgeon who could never hear heart murmurs, the man-of-parts whose outside business life left him little time to work up his patients, and so on. I always enjoyed my teatime talks with the English students, for it gave me a chance to hear their ideas on the National Health System, as well as to compare American and English systems of medical education. Most of all I was impressed by the helpfulness and hospitality of the students. They were always glad to give me advice on anything I needed to know, from what clinics were the most interesting to how to live cheaply in London. In any country there is no one who knows better than a medical student how to live cheaply!

Despite my greater interest in the men who make up St. Bartholomew's Hospital, I was far from unimpressed by the buildings and the traditions there. The beautiful, peaceful inner court with its trees and fountain is something one seldom finds in a mid-city hospital—I found it a perfect spot to sit and read over the material covered in the morning's clinics. I enjoyed being shown the beautiful staircase with the Hogarth murals, the Great Hall with the paintings of the famous men of the past of St. Bartholomew's, and the old chapel. When

In conclusion I must say that the thing that impressed me most about St. Bartholomew's Hospital was something which I found throughout the British Isles. This was the spirit of kindness and friendliness of everyone I met.

SIR MILSOM REES, G.C.V.O., D.Sc., F.R.C.S. Ed.

With the passing of Sir Milsom Rees at the ripe age of 86 a considerable figure in the practice of Laryngology between the two world wars has disappeared. He was a graduate of St. Bartholomew's who always retained a keen interest in his old hospital although he never held any post there either in the house or afterwards. He did, however, become a Governor of the Medical College which he helped in a practical way when appeals were made and the hospital has a lasting memorial to his generosity in the Milsom Rees operating theatre, the cost of which he defrayed when the surgical wing was built. In the practice of Laryngology he will chiefly be remembered for his association with music and musicians, particularly singers. Melba and Patti were patients of his and he had a permanent seat at Covent Garden as Consulting Laryngologist to the Opera. His was perhaps the greatest opinion on a singer's larynx in this or any country and was often the deciding factor on many occasions of doubt whether a performer could safely carry on without damage to the larynx. In other branches of the speciality he was not so interested or indeed so skilful.

He became laryngologist to King George V and his household in 1910, and held the post for the whole twenty-six years of the reign.

He had many interests outside medicine, both in business where he was a successful director of several companies, and in sport, chief among which he counted golf and the pursuit of big game. As a result of his large practice and success in business he became a wealthy man and it gave him pleasure to use his wealth in a host of substantial benefactions among which was a keen and practical interest in preparatory school education.

F. C. W. C.

CORRESPONDENCE

SIR PENDRILL VARRIER-JONES

The Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

The article by Dr. Owen Clarke on Sir Pendrill Varrier-Jones brings to mind vivid memories of Papworth in its earlier days, and of the interest which V-J always showed in medical education and, of course, especially in Bart's men. I remember his address to the Abernethian Society, and how at the outset he captured the attention of his audience—"The first thing you will want to know must be where Papworth is. Well, Cambridge is near Papworth!" To take the Firm there not only gave the men perhaps their first and certainly their most important experience of practical social medicine, but also gave him the utmost pleasure.

He was a striking figure. He was above the average height, but his massive shoulders and slight stoop seemed to diminish somewhat his true stature. He had a fine head, and his dark complexion, piercing gaze and gentle but rather high-pitched voice, his bow tie and his manner of conducting one round the village almost as though he were producing an opera gave him the air of an impresario. He seldom wore a hat but always carried a walking stick and his spectacle case as he went on his rounds.

His achievement was due in part to his personality and his courage, but there were many other attributes without which this great experiment in social medicine could not have succeeded as it did. He was first a good doctor, and knew

and practised his subject both from the clinical and the research aspects before he ever undertook the rehabilitation of tuberculous patients. There were patients at Papworth in all stages of pulmonary tuberculosis—the criticism that he took only the slightly infected who were able to work was quite unfounded—and they graduated from hospital to chalet to hostel as they became convalescent and were able to undertake more and more work in the factories. Selection certainly was exercised when it came to picking the permanent residents in the village, but this was a selection on grounds of character, sociability and citizenship rather than on a clinical assessment. In his turn he was critical of the selection of patients for operative treatment—"The surgeons want watching, you know. They seem to want to operate on my best patients—even one of my own clerks who is now working six hours a day, and I would regard him as pretty stable, they want to cut out several of his ribs! Is this reasonable of them? Why don't they choose some of the ones I can't manage by myself?"

He was a great administrator. As Dr. Clarke has pointed out, he soon realised the fallacy of the "open-air job," but he knew equally well the uselessness of "a bit of raffia work." The factories he ultimately established for printing, and for making furniture, trunks and suit cases were all carefully worked out on the same principle—the machine did the work and all the man or woman had to do was to feed it and watch it—even a person with a very poor exercise tolerance could earn a living without doing himself the

slightest harm. When during the war it was necessary to introduce heavier work to fulfil certain government contracts fit people were brought in to do it; and so carefully was the hygiene of the tuberculous workers controlled that no harm came to the healthy ones. For the same reason the children born in the village of tuberculous parents did not develop the disease.

He was also an able man of business and tackled successfully the difficult problems of keeping the peace between Papworth Industries and the trade unions, and of obtaining sickness and unemployment benefits for patients who were yet fit for part-time employment. The industries were run on excellent business lines and each factory paid its way. But V-J was never satisfied; he was always planning new buildings—a surgical block with a perfectly equipped theatre, or a new factory—and for these projects he was always in need of money. He was a magnificent beggar and was able to interest many influential and wealthy people, from the very highest in the land, in his schemes. I remember an Annual General Meeting at which after he had given a review of the year's work and all the new projects, he went on—"Of course all this, most unfortunately, will cost money. You may say, 'Why not get it out of the bank?' Well, I have been to the bank and the manager is very worried about my large overdraft. I said I was sorry he was so worried, and I even offered to take the overdraft away and put it in another bank, but he didn't like that at all." Of course, cheque books came out at once to try and help this worthy but "most unbusinesslike" doctor out of his difficulties.

His restless insatiable enthusiasm for helping the sub-efficient man to earn his living in a sheltered job did not stop at tuberculosis, and we had many discussions about the employment of men who had lost limbs in industrial accidents. From this idea sprang Enham-Alamein, and thus what V-J had planned for men disabled in peaceful occupations has developed into a great institution for the employment of those disabled in war. He often wished that the Papworth principle would be adopted on a National scale supported by the Treasury, but that he never lived to see. History records how many institutions started by private enterprise and proved to be of benefit to the public have subsequently been taken over by the State. During the past few years much has been done in the way of establishing centres for rehabilitation and resettlement, but most of them still fall far short of the ideals which V-J pursued, and even captured. At Papworth and Enham the work is being ably carried on by Dr. Trail and his collaborators who learnt it from the Founder himself. It is of the first importance that his teaching should be widely disseminated, and many of Sir Pendrill's old friends will be grateful to you, Sir, for publishing this article about him and his great contribution to social medicine.

I am, Sir,

Yours, etc.,

J. PATERSON ROSS.

Dunn Laboratories.

Readers may be interested to read the Obituary of Sir Pendrill Varrier-Jones, which Mr. Geoffrey Keynes wrote in the *Journal* for April 1941.

TOO MUCH SHERLOCK HOLMES

The Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

I am well aware that from Sherlock Holmes's fans to whom their idol is sacrosanct, I shall invite contempt and scorn as well as hatred. Nevertheless, I venture to suggest that addiction to their pastime is somewhat overdone, and seems a little puerile to onlookers.

Up to a point I admire their ingenuity in deductions from what has to be regarded as true history. But it would all be more appropriate if Conan Doyle had written with a realisation of such a future possibility. The circumstances in which the individual stories were produced have inevitably led to inconsistencies, anachronisms and flat contradictions; so that the attempt at reconciliation is rather like solving a jig-saw puzzle in which some of the pieces are missing and others completely extraneous have been added.

I yielded to no one in admiration of the genius that created fictitious characters who are almost universally accepted as actual living beings. But what perhaps inspires my protest is my enthusiasm as a "Conan Doyle fan." For he was a superlative writer; and I feel that a disproportionate worship of Holmes and Watson diverts his claim to immortality through his really great works—Rodney Stone, The White Company, Round the Red Lamp, The Stark Munro letters, Micah Clark, to mention only a few.

Recently, in conversation with one of the leaders of the Sherlock Holmes's Society (or whatever it is called), I gathered that he had not read one of these, and, *horrible dictu*, had never even heard of them!

I am,

Yours diffidently,

ADOLPHE ABRAHAMS.

Brook Street, W.1.

EPITAPHS

The Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

Under the caption "Worthy of Mark Twain" (*Journal*, February), the postscript runs, "Can anyone think of an innocent explanation?"

Yes; Christ. Burroway was acquainted with French literature and has rendered into English rhyme the first few lines of one of the letters of Madame de Sabraw to the Marquis de Boufflers. They run as follows:—

"*Tai pour toi tous les sentiments; je t'aime comme une mère, comme ta Soeur, comme ta fille, comme ton amie, comme ta femme et mieux encore comme ta maîtresse.*"

Surely the expression of the perfection of love in the most beautiful of languages for this theme?

Yours, etc.,

GERALD STANLEY.

Plymouth.

HOBBIES

The Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

With reference to the subject, which, unfortunately, wasn't raised in your last issue, namely "Hobbies for Medical Students," may I tell you

about my grandfather. For years he has had a fascinating pastime. It is interesting, educative, useful, inexpensive and requires no intelligence. He collects "Bottles with notes in."

Every warm, sunny afternoon, he goes down to the beach with his rug and pillow (in summer he takes his spy-glass as well) and waits for "bottles with notes in" to be washed ashore; mind you, he hasn't found one yet, but he tells me that it is a very relaxing sort of hobby.

Yours, etc.,

R. HUWS.

Abernethian Room.

WELSH MOUNTAIN NAMES

The Editor,
St. Bartholomew's Hospital Journal.

Sir,

Hogarth is perilously near precipitating civil war were it not that his letter is written by one who finds sheep intelligent.

He should change his pseudonym, for his great namesake found beauty even in the curves of a chamber pot.

I would indeed to very goodness take comfort in the Scotch, if I knew where to buy a bottle.

Yours respectfully,

I. G. WILLIAMS.

Harley Street, W.1.

OXYGEN AND EVEREST

The Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

I was most interested in the article by Professor Matthews on "The Physiological Problems of Mount Everest."

Before the war, I gave a good deal of thought to this subject, and came to the conclusion that the summit would not be reached unless the problems of oxygen inhalation and prevention of heat loss were tackled scientifically. Very briefly the position appeared to me that as a man ascended, the partial pressure of oxygen gradually fell until if he exerted the utmost will power and determination, a point was reached where his utmost efforts of breathing just supplied enough oxygen for his vital functions, and at that point, he would be unable to perform a single voluntary movement and would inevitably die unless rescued by another climber with oxygen equipment. Although there are several variables, I calculated that this point would be reached at between 28,500 feet, and 29,500 feet. As Mount Everest is believed to be approximately 29,000 feet high, it appeared to me that it could only be climbed without oxygen by an exceptionally fit man, acclimatised to exactly the right extent and who had not deteriorated after this. The fact that anoxia prevents clear thinking would make the already great natural hazards even greater.

I eventually worked out a simple respirator which I think would solve the problems of oxygen therapy and prevention of heat loss simultaneously. The climber holds in his teeth an oval mouth-piece which is attached to a short length of wide bore corrugated rubber tubing which leads to the inside of a double waistcoat on the lines of the Paul-Bragg respirator. This contains a carbon

dioxide absorber in the form of soda-lime encased in flat muslin bags which could be replaced simply and quickly by undoing a zip fastener. The oxygen supply was carried in a vibrac or other light alloy cylinder suspended horizontally from the shoulders.

Unfortunately the calculations and drawings of this equipment were lost by enemy action during the war, but I believe that at altitudes of around 28,000 feet, a climber breathing from the apparatus alone, could do hard physical exercise for over two hours on one light 33-gallon cylinder and 1½ lbs. of non-hygroscopic soda-lime. If two cylinders were carried, the first could, of course, be jettisoned when used up. It appears to me that a great deal of body heat would be retained by using the closed-circuit principle, not only from the expired air, but also by the chemical action of the carbon dioxide on the soda-lime, as in the ordinary anaesthetic canister. This would have the advantage of preventing the rubber from getting hard and brittle which up to now has been one of the bugbears of oxygen equipment, and the fact that the climber is breathing a warm saturated atmosphere should minimise the intense discomfort of a dry and parched throat which is inevitable if he is breathing deeply through an open mouth at these altitudes and temperatures.

I have no idea what type of oxygen apparatus the Swiss expedition has taken with them but I would suggest that some type of closed-circuit technique is essential for success.

So far as I know, the oxygen equipment carried up to the present time has been of a very crude nature, and as the closed-circuit principle has not been utilised, the weight of the cylinders has been excessive.

Yours faithfully,

C. LANGTON HEWER.

Department of Anaesthesia.

COLLEGE HALL

The Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

We, being permanent or compulsory residents of the new College Hall, wish to protest at the rule forbidding residents to entertain members of the opposite sex in their rooms.

Officially, one is meant to entertain guests in a ground-floor room which is unattractive and quite inadequate for nearly 100 residents. It seems a great pity that life at the hostel, which must be one of the finest of its kind in Britain, should be marred by this restriction, which leads to such anomalies as that one cannot entertain to tea members of one's own firm—nor even one's wife! Surely it is unreasonable to treat clinical students—many of them ex-Servicemen—in such a manner?

We are not unmindful of the fact that there must be some special regulations in a mixed hostel, but we would like to suggest that a trial period be instituted during which residents can entertain guests in their own rooms.

Yours faithfully,

JUNE BRADY, PETER BURROWS, DUNCAN THOMAS.
College Hall.

PHOTOGRAPHIC SOCIETY

The Photographic Society held its annual View Day Competition on May 6th, when Mr. E. R. Ginger came to judge the entries. He thought the standard of entries was high and the technique equally so but that composition needed more care. After two hours of careful and detailed criticism he selected the superb photograph by Adrian Griffith of the Helsinki children's hospital as the winning print. On View Day a most successful exhibition was held in the Library, by kind permission of the Librarian, all the entries were displayed, and in addition some delightful colour transparencies.

FENCING CLUB

On May 7th we met St. Thomas's in the Finals of the University Inter-Collegiate Fencing Trophy. The match was an extremely good one and the result very close; the number of wins was 8 each. Bart's winning by 55 hits to 53. Much of the fencing was a great pleasure to watch—in particular Beatley's fight with Reynolds, an Olympic foilist. Beatley's victory preserved his splendid record of never having lost a fight for Bart's. The support given by members of the hospital at this contest in Senate House was greatly appreciated by the members of the Fencing Club.

MEN'S TENNIS CLUB

1st VI. v. R.M.A. Sandhurst 1st VI.
Result: Lost 4-5

The first fixture of the season proved a close affair, but we showed that our old defect is dying hard, viz., our inability to raise our game slightly at the crucial moment.

At tea time each pair had lost one match and won one—and we stood 3-3.

Resuming, Havard and Davies scored quickly and convincingly. Mellows and Forget could only lose by a shaky score. By that time, Dowie and Pearsons were playing well in the decider of their three closely-fought sets. A slight relaxation in concentration cost Pearsons his service and they were 5-3 down. Although perceptibly score-conscious, they produced some of the best rallies of the afternoon. At 5-4 down, Dowie served and played well to reach 5-5, but in the next two sets their opponents well deserved to win.

BOOK REVIEWS

ALICE AND THE STORK, by Egbert Morland.
Hodder & Stoughton, pp. 87. Price 7s. 6d.

This is the fascinating story of Alice Gregory who with her two colleagues created the training school for midwives at Woolwich. Throughout her life she strove to raise the status of the midwife. Egbert Morland is to be congratulated on the story he has woven from material supplied by Maud Cashmore. The reader is treated to glimpses into the life of a "pro" at "New Hospital, Euston Road"; into the Midwife's Log; into the very life of Alice Gregory.

CHESS CLUB

The Club is coming to the end of its most active season since its formation in 1949.

In the Eastern Section of the Second Division of the University of London Chess League, the following matches have been played.

v. Chelsea Polytechnic	Won
v. Northampton Engineering College	Drawn
v. Imperial College II	Lost
v. Woolwich Polytechnic	Drawn
v. Sir John Cass College	Won

A friendly match against Guy's Hospital was won by the Club.

Dr. France, of the Bromley Chess Club, has given a cup to be played for annually, between Bart's and Bromley, for "the encouragement of chess at Bart's." Two very enjoyable matches have taken place between the two Clubs this year. Bart's won the first, played at Charterhouse, and Bromley the second, at Bromley, where we were entertained very hospitably indeed. It was decided that the cup, for its inaugural year, should be held by Bart's, who have a superiority on points over Bromley in matches played so far between the Clubs.

The best wishes of all members of the Club go to A. G. May, who left the Hospital to take up a post at Epsom early this year. With M. B. Watts, May was the moving spirit behind the formation of the Club in 1949.

UNITED HOSPITALS SWIMMING CLUB

An Inter-Hospital Swimming Gala will be held on June 11th, 1952, at Seymour Hall Swimming Pool, Seymour Place, Marylebone, W.1 (near Marble Arch).

This is the first event of its kind since 1938 and it is hoped that keen support will be forthcoming in order to re-establish the Gala in its former position on the Inter-Hospital calendar.

Since the last Gala, changes in the rules have made Water Polo a faster and more attractive game from the spectators' point of view. A match will be played between United Hospitals and Cambridge University.

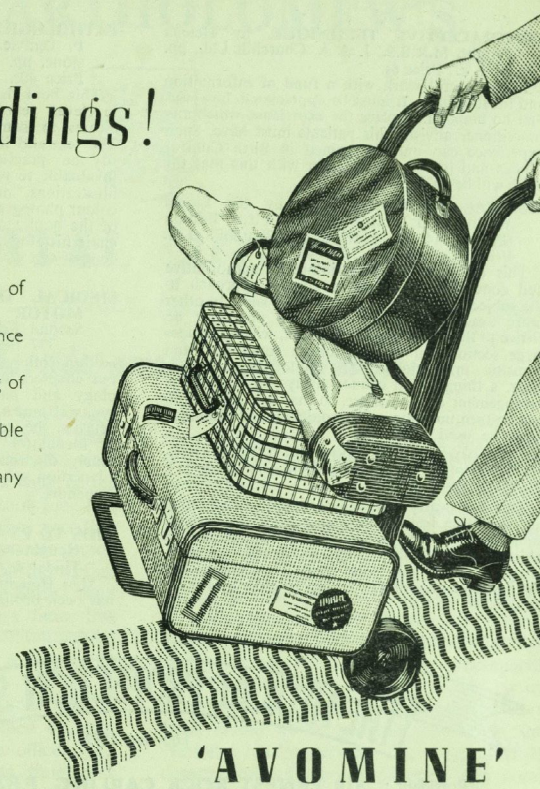
Tickets (5s. and 2s. 6d.) may be obtained from the Club Secretaries of individual Hospitals or from the United Hospitals Swimming Club (Hon. Treasurer: E. A. M. Tuck, St. Mary's Hospital Medical School, Paddington, Hon. Secretary: H. M. Thomas, London Hospital Medical College, Whitechapel).

TEACHING IN SCHOOLS OF NURSING, by A. M. Jackson and K. F. Armstrong, New Edition, Published by Faber & Faber, pp. 263. Price 12s. 6d.

The newly qualified sister tutor will read this edition with profit, for, if not an inspiring book, it is honest and sincere and contains plenty of information. In view of the widespread interest in new schemes of training, it would have been interesting to read about future developments as well as descriptions of long-established methods of teaching.

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manufacturers of new drugs are of considerable value. Our Medical Information Division is at all times glad to receive requests for information from medical students. When writing it is essential to give particulars of your medical school and status (i.e. whether clinical or pre-clinical).

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CONTRACEPTIVE TECHNIQUE, by Helena Wright, M.R.B.S., J. & A. Churchill Ltd., pp. 68 + x. Price 6s.

It is a useful work with a fund of information and illustrations. It must be appreciated, however, that no book can replace the experience which any practitioner advising his patients must have. Such experience can only be gained in Birth Control Clinics and it is in conjunction with this that the book will be valuable.

MEDICAL BACTERIOLOGY, by Sir Lionel Whitby and Martin Hynes, Fifth Edition (Pages 544 + Figs. 92). Churchill Ltd. Price 22s. 6d.

This text-book of bacteriology is authoritative and convenient, it adopts a clinical approach to the subject, and may be preferred by some to other more academic books. The title does not do justice to the full scope of this book, which includes large sections on viruses, fungus conditions, and parasitic infestations. The style diagrams are clear, a thing which cannot always be said of the arrangement of the matter, so that it is often difficult to turn up some subject quickly, and the index must be used frequently.

HANDBOOK OF DISEASES OF THE BLOOD, by A. Piney, Harvey and Blythe, 1951, pp. 213. Price 21s.

This is a neatly and well-produced book aiming at "depicting haematology as a primarily bedside subject which is the province of the physician," an object commendable enough, but hardly achieved. Some may find this book useful, but others like the reviewer may prefer to turn to older and more established books.

PATHOLOGICAL HISTOLOGY by Robertson F. Ogilvie. Fourth Edition, 1951. Livingstone, pp. 506 + 295 illustrations in colour. Price 40s.

This book has now reached its fourth edition in eleven years of difficult publishing, which indicates to some extent its deserved popularity. The text and illustrations are a useful companion to the practical course and will be found invaluable to revision. The text is good, and the illustrations, made by the Findlay process of colour photography, represent the most useful part of the book; and although a temptation to arm-chair histology, it will repay a careful study and comparison with the actual microscope slide.

MEDICAL DISORDERS OF THE LOCOMOTOR SYSTEM by Ernest Fletcher. Second Edition, 1951. Livingstone, pp. 884 + 377 illustrations. Price 60s. This second edition follows the same arrangement as the first but chapters have been added on pain, the physiology and pathology of bone, synovial fluid, synovial mucin, laboratory findings, neuralgia and neuritis, the collagen diseases, psychiatric aspects of locomotor disorders and hydrotherapy. A timely discussion on cortisone, ACTH and the adaptation syndrome is contained within the first Appendix.

AIDS TO PRACTICAL NURSING, by Marjorie Houghton, 7th Edition, Published by Baillière, Tindal & Cox, pp. 378, figs. 57. Price 5s. Miss Houghton's useful and sensible little book has been brought up to date again.



President: **SIR ERNEST ROCK CARLING, F.R.C.P., F.R.C.S., F.F.R.**

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HOSPITAL JOURNAL

Vol LVI

JULY, 1952

No. 7

GENERAL PRACTICE, AWARDS, AND GOODWILL.

You bought a practice in 1937. In 1941 you sold it and joined up, you were an army doctor for eight years and in 1949 you went back into general practice—this time in the National Health Service. You took the same job twice, and the main difference was that on the first occasion you were a private person negotiating a private sale, and on the second you were being employed by the State. And the changes *you* found? Less time, less money, and many more forms to fill in—more work with less to show for it. A change, in fact, for the worse.

In 1937 your best friend went into a solicitor's office, in 1941 he joined up, and after the war back he went to the office. And the changes *he* found? Less time, less money, and many more forms—more work and fewer results. A change let's face it—not unlike your own.

Compare general practice with 1939 and despair. Compare it with other professions over the same period and blame the times as much as the Health Service.

Compare your surgery with the grocer's shop down the road. In 1937 all was well. You had a comfortable practice and the grocer had a comfortable business. By 1947 you were both of you suffering from queues, shortages and overwork. But, while the grocer may have groused a little over this, on the whole he kept pretty quiet. You, on the other hand, got together with your 'mates' and said it was not good enough, you were overworked anyway, and you wanted more pay.

Why the difference? The grocer was mostly concerned with earning his living. You, though, cared at least as much for your patients as for your wages—at any rate that's the assumption. So *you* complained—on behalf of your patients, who you did not like to see queuing for hours outside the surgery door—while the grocer kept quiet hoping that no-one would notice all the money he made from his queue. It was your patients you complained for—not yourself. If you are not already scandalised at being compared with the grocer, we might profitably go on to consider the various complaints that have been raised about general practice in the National Health Service. To escape further comparison with the shopkeeper, your complaints will have to be those that affect your patients; and to escape black looks from other professions you must avoid complaining about conditions that they are 'grinning and bearing'—remember your solicitor friend.

The most formidable criticism of the Health Service was that practitioners' lists were far too large. Until the recent award you had say 3,000 patients on your list—you needed that many to earn your living—but you could not give real service to more than 2,500. So you made a racket about it, and like everybody else you said you wanted more pay. The man in the street thought to himself 'those greedy doctors', and put you in a class with all the other workers who wanted more pay for less work just then. You could have tried to explain to him, but he probably would not have listened, it would still have

sounded like an excuse for more pay to him. But after all, so long as your award really *does* benefit the patients, nobody is going to complain for long—nearly everybody else is a patient.

Since you got your award a new idea has been suggested. This is that the sale of the goodwill of a practice should be resumed, and it is a suggestion that has much to commend it. At the moment the State is busy buying goodwill from general practitioners on the 'never-never'. It is not that the State particularly *wants* goodwill (however much it may need it), but it feels—or rather Mr. Bevan did—that you would be better off without it.

The medical profession, after five or six years of this, has begun to realise that trading in such an abstract property holds definite benefits for both patient and doctor, however unlikely this may seem. Many of these benefits have been noted in recent letters to the B.M.J. Supplement—and a very good case they make too.

At present, it is virtually impossible for a middle-aged practitioner in the middle of Birmingham to move to a smaller country practice, as he would have done before the war. The exchange is gravely limited by the restrictions of the service, and almost as much by the fact that no country practitioner wants to just *give away* his hard-earned practice—his only means of livelihood. A return to simple trading would solve these problems for the doctor. But would it also solve any

Royal Academy

Readers of the *Journal* may be interested to know that a bust of Dr. E. B. Strauss is being shown in the central gallery of the Royal Academy in the summer exhibition. The head is by Mr. David McFall and is in bronze.

Marriage

On April 9, at St. Mary's Church, Truro; John Vandeeper Clarke to Miss Anne Williams.

problems for his patients? Certainly it would. A middle-aged doctor working to his death in the centre of Birmingham, when he yearns for the country, can hardly give of his best, and it is the patients who may suffer.

But what of the young doctor going into general practice for the first time—surely he may be held back through lack of capital to buy a practice? Not necessarily. The money can be borrowed (with some difficulty), and when it has been repaid the now not-so-young doctor has acquired the ownership of a considerable capital sum in the form of his practice. More important, it is immediately convertible into another practice of his own choosing.

Since the Health Service began, the retiring doctor has no longer introduced his patients to his successor. A small point? Not to the patient, and it is the patients who have to be considered.

An even more important point is this. At present the State puts you into a practice, and does so according to its whim. It may be a practice that is quite unsuited to your abilities. Who suffers? You do; but not only you—if you do not like the place the patients will almost inevitably suffer too. And the cure? Well, nobody is going to pay good money for a practice he does not want.

Only the State does that sort of thing—it pays good money (yours and mine) for good-will it does not want and cannot use.

Round the Fountain

Are you a curse, or a Gold Medal Nurse,
A belt or a pink or a sister?
A frolicsome stripe whose sole vice is a
pipe,
A pro. with one foot mostly blister?
Whatever your trends you are sure to have
friends,
And will give birthday presents perforce;
If your friendship depends on what token
you sends—
Give 'em all *Round the Fountain* of
course!

The Second Exhibition of Painting at Bart's

It has been suggested that a second exhibition of painting by members of the nursing and medical staff and students should be held sometime in the autumn. Early notice of the exhibition has been given so that contributors may have time to prepare their exhibits. Further information may be had from notices which will appear shortly and from J. S. Malpas (pre-clinical student) and H. Poirier (clinical student).

Enquiries will be welcomed on such matters as subjects, number of exhibits allowed from each contributor, etc. It is hoped that as many people as possible will take part.

Harvey's Sarcophagus

We are indebted to Mr. Andrew Lloyd, a descendant of Eliab Harvey, William's brother, for a cutting from the *Daily Telegraph* of October 19, 1882, which describes the ceremony at St. Andrew's Church, Hempstead, in which the sarcophagus of his distinguished ancestor was erected and dedicated in the presence of the President, Council and many Fellows of the Royal College of Physicians. Having described the procession, service and placement of the sarcophagus, the correspondent goes on: "This done, the massive marble lid, weighing upwards of one ton, was gently moved on rollers to its position, the lowering being then accomplished in a manner to avoid any sudden jar, a great number of lumps of sugar being so placed as to crush beneath the weight and so break the shock. A little water then applied had the instant effect of dissolving the crushed sugar, and the application of cement within the very small space left open . . . completed the operation."* William Harvey would surely have approved this ingenious trick.

*Reprinted by permission of the Editor of the *Daily Telegraph*.

Prizewinners

B.Sc. Scholarships, 1952

Awarded to J. A. McKinna, J. J. Misiewicz.

Wix Prize, 1952

Awarded to R. A. Roxburgh.

Bentley Prize, 1952

Awarded to R. J. Blow.

Cambridge Bart's Club Dinner

The sixty-second dinner of the Cambridge Graduates Club of St. Bartholomew's Hospital was held on Friday, March 14, 1952, at Frascati's Restaurant with Mr. Geoffrey Keynes in the Chair and ninety-three other members and guests present. After the royal toast, the Club was proposed by the Chairman, who referred to the loss by death of no less than eleven members. Dr. Geoffrey Evans, particularly, was a great loss to the Club; Chairman in 1937, he had always taken a great and active interest in it, and he had not only enlivened it by his vivid personality and gift of speech, but had, in recent years, held open house in his beautiful Adam house in Mansfield Street to all who cared to come there after the dinner and join in song and the ritual of "Hairy Rouchy". After reciting the scanty honours that had befallen members during the year, Mr. Keynes contrived most gracefully to combine entertainment with instruction by resurrecting Bart's Cambridge men through the ages—alas, mostly physicians, Harvey among them, because only recently had the surgeon been a University man. Mr. Keynes has been prevailed upon to contribute his discourse to the *Journal*, and it appears on another page. Dr. R. R. Armstrong, proposing the guests, who included Lord Horder and the President of the Royal College of Physicians, seemed to know the chinks in everybody's armour and took advantage of them in the manner of a hardened and happy warrior. Sir W. Russell Brain replied for the guests with the grace and humour expected of a distinguished President of the Royal College of Physicians, albeit an Oxford and "London" man. Mr. Michael Harmer proposed the health of the Chairman in an outstanding maiden speech which has marked him out for many future occasions. The Chairman thanked Mr. Harmer for his observations, the company for their good wishes and the secretaries for their labours. These functionaries having briefly replied, the formalities gave way to the traditional recital of "Hairy Rouchy" by Mr. Reginald Vick and songs at the piano accompanied by Dr. J. A. Smith.

Change of Address

Dr. A. J. Gray from 24 Garstang Road, Fulwood, Preston to 9 Camden Place, Preston.

PERCUTANEOUS CAROTID ANGIOGRAPHY

by J. ANDREW

SINCE its introduction by Egas Moniz in 1926, carotid angiography has become of increasing importance in the investigation of intracranial disease. At first employed to localise intracranial neoplasms, the procedure has been extended to demonstrate aneurysms and vascular malformations, thrombosis of the internal carotid artery or its main branches, as well as space occupying lesions other than neoplasms. It was formerly the practice to expose the internal carotid artery in the neck in order to inject the contrast medium, but this relatively major procedure tended to limit its usefulness. Percutaneous common carotid angiography, popularised in Sweden, has led to a greatly increased application of the method.

Using this method general anaesthesia is rarely required provided the patient has been well sedated. The head is rested on a cassette holder which provides for three X-ray films to be taken after each dye injection, in the lateral and antero-posterior planes. An intradermal wheal of 1% procaine is made over the common carotid artery just below the cricoid cartilage and 20 cc. of the solution are injected around the artery. A 3 inch long No. 18 gauge needle attached to a length of narrow rubber pressure tubing, with a Labat syringe adapter at the free end, is filled with normal saline. As the artery is usually readily palpable insertion of the needle into it rarely presents much difficulty. 18 cc. of a 35% solution of Diodone are injected rapidly, and the first exposure is made after two-thirds of the injection have been completed. Two more films are taken at two second intervals. Separate injections are made for lateral and antero-posterior views, and the procedure may be repeated on the opposite side at the same session. The patient is forewarned of a momentary sensation of hotness in the side of the face and eye as the injection is made. Complications are few. A haematoma is prevented by digital pressure over the artery after withdrawing the needle. Iodine sensitivity is rare and slight; transient hemiparesis has occasionally occurred. Epilepsy is not a complication if the 35% dye solution is used.

The Normal Angiogram

The first exposure outlines the arterial circulation. The termination of the common carotid artery, the external carotid artery and its branches, and the internal carotid artery and its branches are seen. After emerging through the base of the skull the internal carotid artery is seen to travel anteriorly and then superiorly through the cavernous sinus; after leaving this structure the artery travels posteriorly before dividing into its terminal branches. Thus a horizontally placed 'U' with its open end posterior, is formed, and is known as the 'carotid siphon'. The ophthalmic, posterior communicating, and anterior choroidal arteries, arising from the superior limb of the 'U' are often seen. After travelling medially to gain the midline the anterior cerebral artery is seen to describe a large arc in its course around the corpus callosum. In its latter part, from the genu to the splenium, the artery is called the pericallosal. In addition to its cortical branches, the marginal callosal artery is constantly seen arising from the anterior cerebral artery. After travelling laterally to gain the outer end of the Sylvian fissure the middle cerebral artery is seen to divide into four main branches, namely the pre-Rolandic, posterior parietal, the artery of the angular gyrus, and the posterior temporal artery. This nomenclature does not conform to that of anatomical text-books, but has been largely evolved by Moniz and his colleagues from their study of numerous angiograms.

The second exposure demonstrates the superficial and deep cerebral veins. From the level of the insula, cortical veins are seen ascending to drain into the superior sagittal sinus, or descending to drain into the lateral sinus. The anastomosis between these sinuses is often demonstrated by the presence of dye in the veins of Labbe and Trolard.

The third exposure outlines the posterior cortical veins, the superior and inferior sagittal, straight and lateral sinuses and the Great vein of Galen. The remaining sinuses are not seen as their dye content is too diluted by blood drained from other parts of the brain.

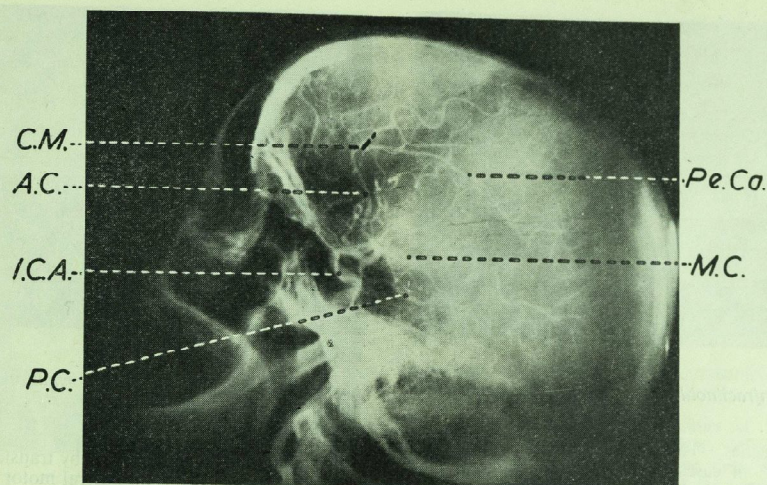


FIG. 1. Normal Angiogram

C.M.—Marginal callosal artery
Pe.Co.—Pericallosal artery
M.C.—Middle cerebral group

P.C.—Posterior cerebral artery
I.C.A.—Internal carotid artery
A.C.—Anterior cerebral artery

Rapid serial angiography, by which ten exposures are made, has thrown further light on to the intracranial circulation time. Just before completion of the dye injection the internal carotid artery and all its branches are outlined. One second later dye has passed into the cerebral capillaries and is invisible on X-ray. At this moment the branches of the external carotid artery are filled and outlined. Between 2-3 seconds after the dye injection the internal cerebral vein, anterior and then posterior cortical veins are filled in this order. After four seconds the venous sinuses are shown, and they may retain dye up to two seconds. The anastomotic function of the circle of Willis is frequently shown by overflow filling into the ipsilateral posterior cerebral artery, the opposite anterior cerebral artery, or even into the basilar artery.

Intracranial Vascular Lesions

A most important indication for cerebral angiography is subarachnoid haemorrhage. This condition is most frequently due to the presence of a small aneurysm, which can usually be shown by an angiogram, and is

often amenable to surgical treatment, and thus a further, perhaps fatal haemorrhage may be prevented.

Aneurysms

These most commonly arise from the internal carotid artery or from the circle of Willis. Those arising from the former are classified as infraclinoid or supraclinoid, according to their position. Infraclinoid aneurysms are less common and consist of a general saccular dilatation of the whole artery within the cavernous sinus. Angiography reveals a large dense shadow in the middle cranial fossa, and slowing of the circulation time. Supraclinoid aneurysms have a narrow neck and are very much smaller. They are saccular in shape but their mouths are less than half the circumference of the artery. They may be asymptomatic until rupture causes subarachnoid or intracerebral haemorrhage and an ocular palsy due to the proximity of the fundus of the sac to the IIIrd cranial nerve; this palsy may be present before rupture occurs. Similar saccular or 'berry' aneurysms may occur in any part of the circle of Willis, and always arise near one of its

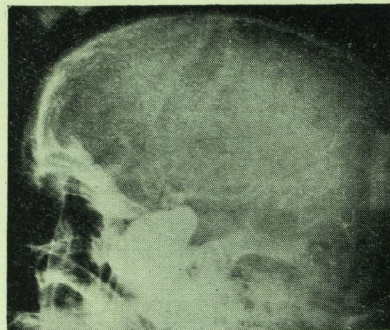


FIG. 2
Infraclinoid aneurysm of internal carotid artery

branches. These aneurysms are multiple in 10% of cases, and bilateral angiography is therefore required. By compressing the carotid artery in the neck on the side opposite to that on which the dye is being injected, the degree of cross circulation may be estimated. As ligation of the internal carotid artery in the neck is usually the treatment of choice for intracranial aneurysms arising from this artery, the test will show if sufficient blood can reach the hemisphere on the affected side from the opposite side. If cross circulation is inadequate, or if the aneurysm arises beyond the division of the internal carotid artery, craniotomy is undertaken to apply whatever direct measures are indicated.

Arterio-venous Malformations

These present a well-defined picture, of one or more subarachnoid or intracerebral hæmorrhages, epilepsy, and a cranial bruit over the site of the lesion. The malformation consists of a mass of thin-walled tortuous vessels, containing arterial blood. In addition to revealing the lesion, angiography demonstrates the main feeding arteries, which have to be secured before excision of the malformation. As there is a direct communication between the arterial and venous systems, the circulation time is considerably increased, and no dye may be visible after three seconds.

Post traumatic carotico-cavernous aneurysms similarly show a rapid circulation time. On angiography, after outlining the internal carotid artery, dye is only seen to fill the cavernous, and sometimes the superior petrosal sinus, by reflux.

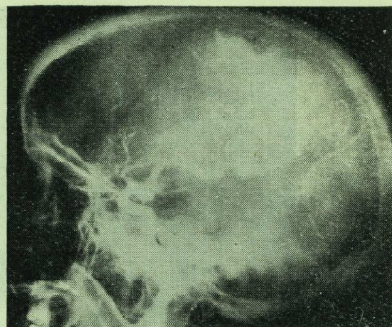


FIG. 3
Congenital arterio-venous malformation, parietal

Internal Carotid Thrombosis

This condition is characterised by transient prodromal episodes of contralateral motor or sensory disturbance, and ipsilateral amblyopia before a permanent hemiplegia develops. The thrombosis is secondary to an atheromatous plaque usually at the carotid sinus, so that angiography will show dye in the common and external carotid artery and its branches only. Injection of the opposite side may show good cross filling unless a permanent hemiplegia has developed.

INTRACRANIAL NEOPLASMS

Carotid angiography is of considerable value in the diagnosis of supra-tentorial neoplasms; as the procedure does not interfere with the tumour relationships, unlike a ventriculography it does not necessitate preparation for craniotomy on the same day. Not only indicating the site of the tumour, the method may reveal its pathology and operability. These points are demonstrated by (1) the displacement of normal vessels; (2) abnormal neoplastic circulation, and (3) alteration of the circulation time. Frontal tumours cause the greatest vascular displacement; in the A.P. view the anterior cerebral artery is seen to be markedly displaced across the midline before it regains its normal position over the body of the corpus callosum. This displacement is less marked with more posteriorly placed tumours. Parietal neoplasms cause a depression of the middle cerebral artery, but this vessel may be grossly elevated by a temporal lobe tumour. Cystic, or avascular gliomata cause a separation of



FIG. 4
Meningioma of right sphenoidal ridge showing medial displacement of middle cerebral artery

the branches of the main arteries, whereas meningiomata, owing to their usual position on the surface of the brain, displace the vessels away from the cranium.

The neoplastic circulation of the gliomata varies with their malignancy. Glioblastoma multiforme, the common malignant hemispheric tumour, shows extensive abnormal vascularity with ill-defined limits; the circulation time may also be increased. Unlike gliomata, meningiomata may be fed by branches of the external as well as the internal carotid artery, and these feeding vessels may

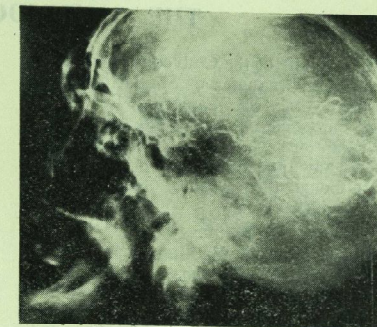


FIG. 5
Glioblastoma multiforme, parieto-occipital, showing neoplastic circulation

be seen simultaneously; the limits of the abnormal vascularity are better defined. Owing to the delay in circulation time, dye is contained in the capillaries of the tumour for several seconds, and the X-rays show these as a dense homogenous shadow, indicating the size of the tumour.

It will be seen that carotid angiography is becoming of ever increasing importance. It has already thrown new light upon the physiology of intracranial circulation, and more has yet to be learnt. Its value in the precise localisation of vascular and neoplastic lesions is inestimable; what was until recent years a rarely performed, experimental procedure, has become a routine method of investigation of many forms of intracranial disease.

The author wishes to express his thanks to Mr. J. E. A. O'Connell for his help and encouragement, and Mr. N. K. Harrison for the photographic reproductions.

SO TO SPEAK . . .

"He should have four weeks in bed with a night nurse to start with, and I suggest your giving him tab. codeine co. for his pain. I shall be interested to hear how he gets on."

—specialist to G.P.

Doctor to patient

"Come on now, relax—take a deep breath and look at Sister."

For sale

Bugatti. A unique and historic car in very good order, except that almost all the engine is missing.

—a motoring paper

The mere male

Male student on hearing how many women there were in the short list for the Brackenbury Scholarship: "Ah, well there is nothing for us chaps to do but go away and have babies."

THE CAMBRIDGE-BART'S MAN

CHAIRMANSHIP of the Club constituted by the Cambridge Graduates of St. Bartholomew's Hospital—otherwise Cambridge-Bart's men—led me to enquire into what exactly were the conditions which merited this classification at any time during the last 400 years; for, although the founding of the club was comparatively recent, it could have existed for quite a long period.

The term Cambridge-Bart's man would obviously imply that some sort of education had been lavished on the individual and it would have been satisfactory to be able to claim that Linacre, the man who first established medicine as a "learned profession" by founding the College of Physicians in 1518, could be claimed as one of us. Unfortunately, though he had Cambridge connexions, he had none with Bart's, though the claim may perhaps be made for his immediate successor, Dr. Keys. This learned man entered Gonville Hall at Cambridge in 1529 and ten years later studied for eight months at Padua with Vesalius. This must be the closest connexion between Bart's and Vesalius that there is, for a few years later, in 1547, Dr. Keys became tenant of a house within the Hospital precincts, which stood on the site of the present pathological block. Here he lived when not in Cambridge and here he wrote the first medical monograph—on the sweating sickness—composed in English; it was printed by Richard Grafton, Treasurer of the Hospital. When Dr. Keys refounded his old college as Gonville and Caius, he added the Latinized form of his name—though it has been pronounced ever since as spelt in English. When he died, his feelings for Bart's were such that, in addition to leaving a benefaction for the poor patients of the Hospital, he directed that his viscera should be buried in St. Bartholomew's-the-Less, while his outer shell was taken to Cambridge. Unfortunately there is no evidence that Dr. Keys ever attended the patients in the Hospital, since no physicians were formally appointed at that date. Nevertheless the association was so close that Dr. Keys must surely be claimed as the original Cambridge-Bart's man.

After the Reformation physicians began to be appointed to the refounded Hospital, the first being the notorious Dr. Lopez. This man, reputed to have plotted against the life

of Queen Elizabeth, we do not have to claim for our company, as he was not a Cambridge Graduate. His successor, Dr. Turner, physician to the Hospital from 1581-1585, was the first Cambridge man to be appointed. After him came the more celebrated Dr. Timothie Bright, who seemed to forecast his special status by being born in Cambridge and being present at the massacre in Paris on St. Bartholomew's Day, August 24, 1572. He was also a Cambridge graduate and lived in the Hospital as physician from 1585-1590. During these years he published his well-known *Treatise on Melancholy*, 1586, and his *Characterie*, 1588, in which he ranks as the inventor of short-hand. The next physician but one, Dr. Ralph Wilkinson, 1603-1609, was educated at Trinity College, Cambridge. I have recently been informed by Dr. Walter Radcliffe that he had been headmaster of Oundle from 1574-1582—surely a unique qualification for a Bart's man to possess! Wilkinson was succeeded by the brightest jewel in our crown of fame, Dr. William Harvey. He took his degree at Gonville and Caius College in 1597, his M.D. in 1602, and was appointed physician to the Hospital in 1609. Harvey was thus the sixth physician and the fourth Cambridge-Bart's man, his tenure of office lasting until 1643. During the latter part of the seventeenth century there were only three more Cambridge graduates on the hospital staff, Dr. Arthur Dacres, 1669-1678, Dr. Francis Bernard, 1678-1698, and Dr. Edward Brown, 1682-1708. Dr. Bernard was less famous than his brother Charles, the Bart's surgeon, but he was demonstrably learned, since he owned a library of over 15,000 volumes (including the first edition of *De Motu Cordis*) all of which he was reputed to have read. Dr. Brown was the not very distinguished son of a very distinguished father, Sir Thomas Browne of Norwich, author of *Religio Medici*.

During the eighteenth century there were four Cambridge men at Bart's—Dr. Richard Tyson, 1725-1750, a Pembroke man and nephew of the founder of the science of comparative anatomy, Dr. Edward Tyson; Dr. Anthony Askew, another notable book collector and owner of Charles the First's copy of Shakespeare's Works, 1632, now to be seen in the Royal Library at Windsor; Dr.

David Pitcairn, 1780-1793, discoverer of the "rheumatic heart", who died in 1809 from oedema of the glottis; and Dr. Richard Budd, 1780-1801, whose chief claim to fame was the possession of two housemaids, one of whom became a celebrated tragic actress, Mrs. Powell, and the other, Nelson's Lady Hamilton.

After Dr. Budd came a succession of Oxford graduates until the appointment of Dr. George Roupell, 1834-1854. Among the physicians elected to the staff of the hospital after that date we find the names of several distinguished Cambridge men—Sir Norman Moore, Dr. H. H. Tooth, Dr. Herbert Morley Fletcher, Dr. J. H. Drysdale, and Sir Percival Horton Smith Hartley. This brings us up to quite recent times—and meanwhile what of the surgeons? In fact there were none, the lamentable fact being that surgery was not a "learned profession". No surgeon on the staff of the hospital had had a university education until the appointment of James Shuter as assistant Surgeon in 1882. Every one of our distinguished line had begun professional life in London as an apprentice. Even Sir James Paget only achieved Cambridge-Bart's status by being given the honorary degree of LL.D. late in life. Sir George Paget and Sir George Humphrey both

went from Bart's to achieve distinction respectively as physician and surgeon in Cambridge, but neither was educated there. Howard Marsh, elected assistant Surgeon in 1873, after retiring from Bart's, became Professor of Surgery at Cambridge in 1903.

Even James Shuter, the first Cambridge-Bart's Surgeon, survived only a very short time, dying in the year of his appointment from an accidental overdose of morphia. He had in the meantime founded the Cambridge-Bart's Club, for which we may be very grateful, and his name is commemorated by the Shuter Scholarship, awarded to Cambridge men coming as clinical students to Bart's.

During the present century Cambridge connexions with Bart's have multiplied, beginning on the surgical side with L. B. Rawling, appointed assistant Surgeon in 1904. From this time, the surgical staff may be reckoned to have run parallel with the physicians as claimants to the proud title of "educated", even if not "learned", and Cambridge-Bart's men practising every branch of medicine have spread over Great Britain and the Dominions to show the world that Oxford does not provide the only good academic prelude to professional competence acquired at Bart's.

Geoffrey Keynes.

MEDICOS

With Apologies to JOHN MASEFIELD

Visiting physician in his phantom Rolls,
Driving down to hospital from W.I.
To teach in the tradition
Of Hippocrates, Vesalius,
Harvey, Osler and Sherrington.

Erudite young houseman standing in the square,
Waiting with his ward clerks for the chief he serves
With a pile of X-rays,
Encephalograms, Cardiograms,
Blood Counts and E.S.R.s and Lange's Gold Curves.

Scrubby little G.P. in the N.H.S.,
Scribbling with a Biro on his E.C.10's,
Scripts for Aspirin,
Cotton Wool, Paraffin,
Gripe water, trusses and Pil Aperiens.

THE HOSPITAL'S COLLECTION OF PAINTINGS

by C. K. ADAMS

Director of the National Portrait Gallery

AS far as we know the earliest painting to come into the Hospital's possession was the portrait of King Henry VIII now in the Clerk's Office. This was a commission which is recorded in the *Journal* in February 1616/7 when it was ordered that ". . . . picture maker to be paid £6 for the portrait of Henry VIII recently made by him." There is a blank space left for the picture-maker's names. Perhaps he was a foreigner and the clerk hoped to fill the name in when he had got someone to give it him correctly. The £6 was duly paid and is entered in the accounts. The portrait bears the date 1544 and Henry's age is given as 55. The year is that of the letters patent reconstituting the hospital and incorporating a Master and four Chaplains to govern it.

The portrait is well painted and is likely to have been from the studio of a foreigner in London. Few copies of portraits of early kings and queens can rival this in quality. At this period painters from the Low Countries were getting the cream of the portrait-painting business and sets of paintings of the Kings of England were on sale in London. The remnants of such a set, bought by Edward Alleyn for his school in 1618 are in the Dulwich College Picture Gallery.

The next person to be commemorated by a portrait was Martin Bond, Treasurer of the Hospital from 1620 to 1642. He died the year after his designation, probably in his 90th year. The portrait, as was the custom at that period, was inscribed with his age when painted and the date. "AET 48 1602." As one rarely finds an age given incorrectly on a portrait it seems likely that the Dictionary of National Biography is wrong in giving his birth-date as 1558. The portrait was painted long before Bond became Treasurer; it must therefore be assumed that it was commissioned by himself and that he gave it on his retirement or that it was acquired from his family after his death. Bond was Captain of the City's Trained Bands from the time of the Armada scare (1588) when they were raised, until his death, after the commencement of the civil war. He was also a benefactor of the hospital which still possesses his silver inkstand.

A few years junior to Bond in age Sir Nicholas Rainton, President of the Hospital

1634-1646, is portrayed in his Alderman's gown, and wearing a long gold chain round his neck. He was Lord Mayor, 1631-2. Is it more than a coincidence that President and Treasurer of the same period are commemorated by portraits? The portrait of Rainton was painted 30 to 40 years later than the portrait of Bond.

Sir William Pritchard, President 1688-1705, was the next President to be commemorated by a portrait. It was not until the 19th century that another Treasurer was thus commemorated (James Bentley, 1842-55).

The portrait of Sir William Pritchard is a life-size whole-length and similar to the portrait formerly in the possession of the Merchant Taylors' Company which was signed by Sir Godfrey Kneller and was painted in 1687, of which it is a copy, perhaps made in the mid-19th century to hang with the whole-lengths of Presidents and Treasurers of that period. The Merchant Taylors' portrait was destroyed by enemy action during the last war. It is not one of the four portraits Mr. Partington, a limner and governor of the hospital, was desired to clean and mend in 1723. They are recorded in the *Journal* on April 20, 1723, as King Henry VIII, Sir Nicholas Rainton, Mr. Martin Bond and Sir Edward Colston. The last named, a benefactor both during his life and at his death, had only died in 1721. His portrait which is dated 1693 may be from the hand of John Closterman. Another portrait of the same period is that of John Radcliffe, M.D. 1650-1714, the wealthy physician and philanthropist who included the hospital among his benefactions. Much of his fortune was devoted to the building of the Radcliffe Infirmary and the Radcliffe Camera at Oxford.

When the Great Hall was built in the 1730's the stained glass window of Henry VIII, said to be presenting the Charter, was given its present home as the centre window. It was then that the painting of St. Bartholomew was framed in the panelling over the fire opposite this window. As this was not among the paintings cleaned in 1723 it is probable that it was given or purchased for the purpose of placing in its present position. The original canvas was approximately 40 x 30 inches and is Flemish work of the second half of the

17th century. The space allowed for it was 60 x 60 inches. To fill in this space the canvas was extended and a sculptured circle was painted round the original painting.

About the same time, in 1737, Benjamin Sweet presented the life-size whole-length portrait of Henry VIII for the overmantel at the far-end of the hall. This is a mediocre copy, probably commissioned by the donor. It is derived from the figure of Henry in the life-size group depicting Henry VIII, his third wife Jane Seymour and his father and mother, Henry VII and Elizabeth of York, which was painted by Holbein on a wall of the King's ante-chamber in Whitehall. The portrait of Henry VIII was extremely life-like and is said to have struck awe in those about to have an audience with him. It was one of the sights of London until the fire which destroyed old Whitehall Palace in 1698. A small copy of the whole painting had been made for Charles II and it may be seen at Hampton Court. Most existing portraits of Henry VIII derive from this Whitehall painting; one of the best whole-length versions is that which descended in the Seymour family and is now in the Walker Art Gallery, Liverpool. Henry did not sit again to Holbein whose studio had to use the same head for all other portraits which were ordered from him, though the costume was varied. Holbein's head of Henry VIII indeed is the archetype of almost every later portrait of him such as that in the hospital's other painting of him and his head in the Charter Window.

It was now that William Hogarth with the aid of assistants painted the walls of the grand staircase. These paintings are on canvas. *The Good Samaritan* and *The Pool of Bethesda* have been well described by the late Sir Norman Moore in his history of the hospital. Moore diagnosed the complaints of the sufferers round the pool. The ornamental work near them is painted directly on the plaster. Nichols and Steevens in their book on Hogarth published in 1808 tell us that he paid John Lambert for painting the landscape work, and that "The ornaments together with the compartments carved at the bottom were the work of Mr. Richards." Lambert had a high reputation in his day as a landscape painter. Those unacquainted with the history of painting in this country may be interested to know that many paintings of the later 17th and first half of the 18th century were the joint work of two or

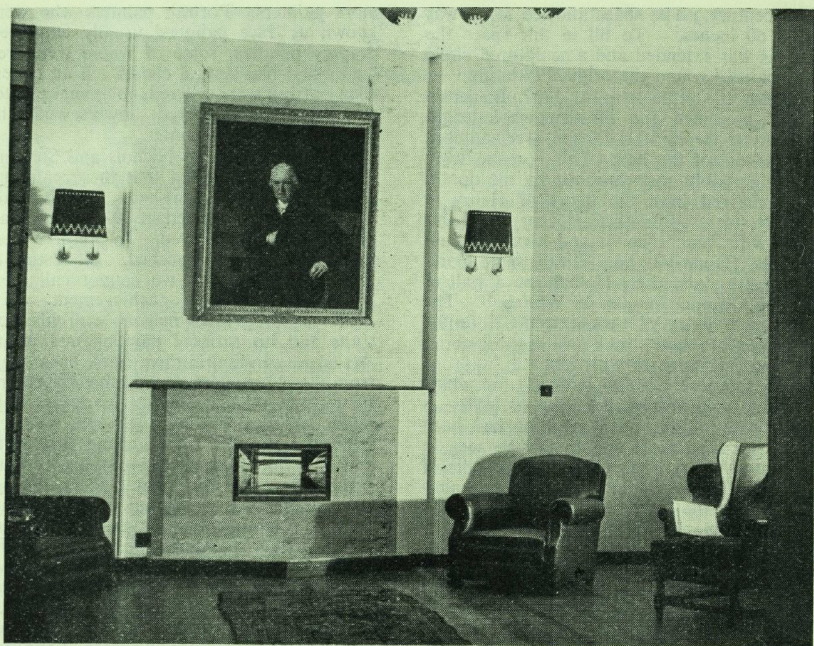
more painters. Portrait painters who were known as 'face painters' usually employed drapery painters, some of whom were free lances and had several clients. If an equestrian portrait were ordered, an animal painter would also be employed; flowers would be put in by a flower painter.

We also learn from Nichols and Steevens that Hogarth requested that these paintings should never be varnished. Despite this, when they were cleaned in 1934 seven coats of varnish were removed. To preserve them they had to be re-varnished. Interesting as these paintings are we cannot call them Hogarth's crowning achievement. He achieved far greater heights with his portraits and his satirical painting and prints. Art critics can find in them frank borrowings from the old masters; for instance the central figure in the *Pool of Bethesda* appears to be taken practically direct (though reversed) from the painting of the same subject by Murillo which was then in Seville, recently presented to the National Gallery through the National Art-Collecting Fund. Perhaps a copy or another version was known to him.

No further paintings were acquired for about 60 years. The next two gifts are two of the hospital's most prized possessions, the portraits of Percival Pott, F.R.S., by Sir Joshua Reynolds, P.R.A., and John Abernethy, F.R.S. by Sir Thomas Lawrence, P.R.A. Pott sat to Reynolds in 1784, and Reynolds exhibited the portrait at the Royal Academy the same year but did not receive payment (£105) for it from the Earl of Aylesford until 1789. It was given to the hospital by the Earl of Aylesford and the Marquess of Salisbury in 1790 two years after Pott's death. Pott had been Surgeon to the Hospital from 1749 until 1787, and he holds a very high place in the history of surgery. He suffered from a compound fracture of the leg which is known as "Pott's fracture" when thrown from his horse in 1756. He probably saved his life by the instructions he gave for his own treatment after the accident.

John Abernethy is venerated at Dart's more than any other member of its bygone staff. He was assistant surgeon from 1787 and Surgeon to the hospital for 12 years, 1815-27. His enormous influence was accounted for by his power of exposition rather than his written works. He was a remarkable teacher. Like great preachers he had much of the poet and the actor in him.

The portrait was commissioned by his



pupils and was painted in 1820 and exhibited at the Royal Academy in that year. On his retirement his former pupils, wishing for some tangible memorial in their own homes, subscribed for an engraving in line by W. Bromley which was exhibited at the Royal Academy in 1828.

Abernethy is also represented by a painting on a similar scale, three-quarter length, by C. W. Pegler, and by two marble busts. The Pegler had remained in the possession of Abernethy's descendants until recent years when in her absence abroad Miss Warburton gave directions that it should be offered as a gift to the hospital. The wrong portrait was unfortunately sent and the Abernethy was sold as a portrait of an unknown man. Later it was recognised in a dealer's shop at Cheltenham and brought to the notice of Sir Alec Martin by whom it was purchased and presented to the College. (The illustration shows this portrait hanging in College Hall).

Abernethy's contemporary, Richard Powell, Physician to the Hospital, 1801-24,

had his own portrait painted by James Lonsdale the year after Abernethy's was subscribed for by his pupils and this was given at his wish after his death 'for the Hospital Gallery'.

From then onwards portraits have flowed in at a rapid rate and in the spacious Victorian era on such enormous canvases that space where they can be seen properly can only be spared for the most interesting of them. Portraits of four Presidents, four Treasurers and many of the Surgeons and six Physicians were subscribed for by the Governors or pupils and painted by leading portrait painters. Several copies of portraits of men distinguished in the medical profession in previous centuries and associated with the hospital were presented. In addition, of recent years many gifts of views of the hospital in black and white and in water-colours have been received. Room can only be found here for mention of some of these.

A spate of large canvases began in 1837 when the painting of St. Bartholomew by

Carducho (in the vestry of St. Bartholomew-the-Less) was presented. Two years later Sir David Wilkie, R.A. painted the whole-length of Prime Lucas who was President 1831-48. There are life-size whole-lengths of several of the Presidents and Treasurers of the mid half of the 19th century. In the next few years most of the acquisitions were portraits painted by H. W. Pickersgill or copies made by his son of earlier portraits, including William Harvey and Sir Henry Halford. These were given in or around 1850 by G. L. Roupell, Physician to the hospital 1834-54 whose own portrait by H. W. Pickersgill is in the collection. Among these Roupell gifts by H. W. Pickersgill were portraits of Sir Richard Owen who had been lecturer on Comparative Anatomy at the Hospital from 1839 to '45, Sir Thomas Watson, Bart., a President of the Royal College of Physicians, and Peter Mere Latham, Physician to the Hospital 1824-41. Pickersgill also painted in 1841 a portrait of Sir William Lawrence, Bt., F.R.S., Surgeon to the Hospital, 1824-65.

A portrait of John Painter Vincent, F.R.S., Surgeon to the Hospital, 1816-47, by Eden Upton Eddis, was presented by his pupils in 1850.

J. P. Knight was the painter of four portraits, two Treasurers and two Physicians, including one painted posthumously of William Baly, F.R.S., an assistant Physician

of great promise who was killed in a railway accident.

The series is continued by two paintings by Sir J. E. Millais, P.R.A., of the distinguished surgeons, Luther Holden and Sir James Paget, and a Herkomer of Sir Sydney Waterlow, philanthropic Lord Mayor to whom the public was ever grateful for the beautiful Waterlow Park at Highgate. He was Treasurer from 1874 to 1892. The Hon. John Collier, Huxley's son-in-law, painter of the very well-known portraits of Huxley and Darwin in the National Portrait Gallery, painted three portraits for the Hospital. They are of Sir Thomas Smith, Sir Henry Trentham Butlin and James Andrew. The portrait of Butlin was given by his daughters, those of Smith and Andrew were given by their friends and former pupils.

King Edward VII is the only sovereign represented in the collection other than Henry VIII. Of him there is a version of the state portrait by Sir Luke Fildes, R.A., in the Great Hall and a small whole-length by Sir E. J. Poynter, P.R.A., in the Staff Common Room. The last two members of the Staff to be represented are Sir Anthony Alfred Bowlby whose portrait by Sir William Llewellyn, P.R.A., was painted and given in 1921 and Lord Horder whose fine small scale whole length portrait by Sir William Nicholson, was painted and presented in 1938.

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THE CAT AND THE FIDDLE

"So yer a Medical Student, are yer?" said Charlie, flicking a particle of cigarette ash off his immaculate Bronx-style suit. "Cor, wot a prize sucker! Doctorin's a mug's game these days."

I said that I was inclined to agree with him.

"Works yerself silly, yer does; and yer don't get paid overmuch, do yer?"

I said that in twenty years' time I might be earning sufficient to support my wife, and maybe stand him a beer instead of vice-versa.

"Must be nice to 'ave ambition," said Charlie dreamily, "but 'ard work don't get yer nowhere these days. Yer got to 'ave brains, see, like me an' 'Arry. Then yer don't 'ave to work too 'ard."

I asked who Harry might be.

"'Arry's me mate, and me an' 'Arry got an idea wot'll make thousands o' pounds in double quick time—only we need annuver bloke, sorter geyser like you wiv scientific trainin', wot'll look arter the cats an' keep 'em 'ealthy."

"Cats", I said, beginning to show interest. After all, I could do with a thousand quid or two just at the moment. "Where are these cats?"

"Well, we ain't got 'em yet, but we only wants about a million to start off with."

"A million cats!" I gasped, "where on earth would you get a million cats from?"

He looked at me pityingly—" 'Arry gets 'em; any amount of 'em. Where d'yer fink yer 'orspital gets all them cats for their experiments? From 'Arry of course. 'Arry's got a bruvver wot runs a small business dahn Befnal Green way, making ladies' gloves, and fur coats, an' fings. They needs 'undreds of catskins every month, and 'Arry don't 'ave no trouble gettin' cats. S'easy when yer knows 'ow, see. Yus, 'Arry can get almost anything. 'E don't 'arf 'ave a packet of the old grey matter, 'Arry don't."

I agreed that Harry must have considerable ability to get a million cats, and asked how I came into the scheme of things. Charlie's manner rapidly became that of a man getting down to serious business. He suggested that we should take our drinks over to a table in the corner, and when we had settled he continued:

"It's like this, see. 'Arry's gettin' an old poultry farm in Essex. We puts the cats in the farm, get it! Now cats don't stay single fer long; they soon gets crackin' on the old kitten production, and 'Arry reckons on about twelve kittens per cat per year. Cor, that don't 'arf make a tidy pile o' catskins. It's amazin' the number o' fings yer can make outta catskins, an' reckonin' on an average of a tanner each fer black skins, an' a bob a nob fer white 'uns, six million catskins'll bring in an 'andy two 'undred fahsand smackers a year." I said I thought that feeding most of the cats in England would be quite an expense.

"Won't cost a flippin' nicker, mate! Cats eats rats, don't they? Right! 'Arry gets a few rats, an' rats bein' what they are it ain't long before yer got enough rats to feed any number o' cats. 'Arry reckons as 'ow rats multiplies four times as fast as wot cats does, so each cat gets four rats a day"

I said it sounded fine, but the rats still had to be fed.

"It don't surprise me one little bit," said Charlie wearily, "that you doc's 'aven't yet found a cure fer cancer, if they all got as little 'savvy' as you. I suppose it 'adn't occurred to you that rats is carnivorous animals. They likes a spot o' the old cat-meat now and then, and there ain't arf a tidy pile o' cat-meat inside of six-million catskins. Cor, it's money fer old rope. All we need is a scientific bloke like you wot runs the farm, an' keeps the cats all 'ealthy an' 'appy, and a few other blokes as skins the cats. 'Corse, mind yer, we'd split the takin's wiv yer. Give yer a nifty sixty fahsand cracklers a year, it would."

Now sixty thousand a year is not to be sneezed at. I don't suppose many G.P.s make that much, and even in Harley Street probably not more than the odd psychiatrist here and there reaches such dizzy financial heights. I pictured myself setting up in Harley Street, after a year or two, as a fashionable 'Cat Doctor', and coming in daily from Essex in my Rolls for consultations with society cats who had escaped Harry's clutches. I informed Charlie that when I had failed my finals for the third time, I would certainly get in touch with him.

R.G.D.N.

WARD NAMES OF ST. BARTHOLOMEW'S HOSPITAL—3.

by G. W. MIDDLETON.

Abernethy

John Abernethy (1764-1831) came to Bart.'s as an apprentice at the age of 15. His father belonged to London but was of Scottish-Irish extraction. Abernethy was an assistant surgeon for 28 years becoming a full surgeon in 1815. He lectured in Anatomy, Physiology and Surgery whilst still himself attending the lectures of John Hunter. It is said that he was one of the greatest of all Bart.'s teachers. In his time he taught Benjamin Brodie, William Lawrence and the poet Shelley. His great success was due to his strong individuality and his clear description of disease. In addition to the Ward name, his memory is perpetuated by the Abernethian Society and Room. His portrait, painted by Sir Thomas Lawrence, is in the Great Hall.

Stanmore

The Right Hon. Lord Stanmore, P.C., K.C.V.O., held office as Treasurer of the Hospital from 1921-1936. During this time many changes took place in the Medical School and Hospital. The School received its charter; Charterhouse Square was obtained from Merchant Taylor's School; the New Athletic Ground at Chislehurst was bought and the New Nurses Home built. In addition the Medical and Surgical blocks were constructed. The charge of the Treasurer reads as follows: "All the Treasure of this House is committed to your charge, of the which ye shall keep a true and just account." The first treasurer of which we know was Sir Martin Bowes in the time of King Edward VI.

Lawrence

William Lawrence (1783-1867) was a doctor's son born in Cirencester who came to London and worked for John Abernethy. In 1824 he was appointed full Surgeon to the Hospital and later Serjeant Surgeon to the Queen. Among his pupils were Holden Paget and William Savory. Lawrence was made a Baronet in 1866 and was succeeded by his son, Sir Trevor Lawrence, who was also a Bart.'s man and became Treasurer of the Hospital (1892-1905). A bust of William Lawrence is in the Great Hall and a portrait in the Muniment Room.

Harmsworth

Geraldine Mary Harmsworth was the daughter of William Maffett—a land agent in County Down. She was the wife of Alfred Harmsworth, Barrister of Dublin and Middle Temple. Their eldest son was Alfred Charles Harmsworth, later Viscount Northcliffe, the journalist and newspaper proprietor. The ward was named in 1930.

Butlin

Henry Butlin (1845-1912) was born in Cornwall, entered Bart.'s and qualified in 1867. He became House Surgeon to Sir James Paget and was profoundly influenced by his example and teaching. Butlin spent 12 years in the Throat department and played a great part in the advancement of British Laryngology. In his time he was the first Dean of the Faculty of Medicine in the University of London, President of the B.M.A. and President of the Royal College of Surgeons. Sir Henry was an excellent teacher, having taken the trouble to train himself in public speaking and could deliver an address or Hunterian oration without notes, in admirable form and with good emphasis. His name is associated with his gag (a specimen is in the museum) and his operation (excision of the tongue and removal of the contents of the anterior triangle of the neck in cases of malignant disease of the tongue). A wall tablet in the present Martha Ward reads: "In memory of Sir Henry Trentham Butlin, Bart, F.R.C.S. for many years surgeon to the Hospital. Born 1845, died 1912".

Bowlby

Anthony Alfred Bowlby (1855-1929) entered Bart.'s in 1867. In the South African war he was surgeon in charge of a hospital and later became Advisory Consulting Surgeon to the whole of the British Forces in France. He played a great part in the provision of advance operating theatres which could move as the fighting progressed. He became a full surgeon in 1903 at Bart.'s. He gained many honours in two wars and in the public service including the K.C.M.G. and K.C.V.O.

A three-quarter length portrait of Sir Anthony, painted by Sir William Llewellyn, hangs in the Great Hall of the Hospital.

CORRESPONDENCE

WILLIAM HARVEY

*The Editor,
St. Bartholomew's Hospital Journal,
Dear Sir,*

Even if the proposal to remove Harvey's remains had been made tactfully, instead of in the way in which it was staged at Folkestone, resistance would remain unaltered. I maintain the simple proposition that, if Harvey left the decision of his burying place to Eliab and Eliab chose Hempstead, Harvey's body lies where he himself wished it to be. What I chiefly resent is the quotation of £16,000 to £25,000 as the sum necessary to be spent on the church. These are the inflated figures representing what you call the "enthusiastic and lucrative schemes" mooted last year by members of the medical profession, including the refurbishing of the church and a capital sum for permanent endowment of the fabric. I recently filled in an official form to the effect that no church in the Archdeaconry of Colchester was likely to require more than £3,000 for complete restoration. To this statement Hempstead is no exception.

Yours, etc.,
DUDLEY COLCHESTER.
Derby House,
Colchester.

*The Editor,
St. Bartholomew's Hospital Journal,
Dear Sir,*

Not long ago when I was visiting my cousin in Essex, he asked me whether I had become involved in the Harvey dispute. I am not a reader of *The Times* and therefore the various designs on the remains of my great ancestor were news to me. My cousin had extracted the letters; we read them together and we came immediately to the same very definite conclusion. To us it was indeed remarkable that not one of the well-meaning people who had become so interested in the matter and so partisan about it, had thought fit even to waste a thought on the feelings of the great man's own family.

I returned home and by strange coincidence your letter awaited me. What were my views as head of the family? Would I care to state these views in a letter to your *Journal*? If I were hesitant about writing a letter to a journal of such high literary accomplishment, I certainly lost no time as you know, in expressing to you my sincere gratitude; for as far as I was concerned, here at last was someone who not only realised that William Harvey might have an interested living descendant but had gone to the trouble of seeking him out.

Usually there is some interest taken in the subsequent family history of the very great, but in the case of William Harvey there seems to be very little apart from that shown by a few persons anxious to claim a relationship. This is the more curious because so many of the later Harveys were very distinguished men. Harveys fought with distinction and died on the battlefields of the 17th and 18th Centuries. There were eminent Harvey Lawyers and Diplomats. There were even Harvey Politicians although I must admit that one of them did represent a Rotten Borough. The Harveys,

in fact, continued their distinguished service into the early 19th century to a fitting climax on a memorable day in the autumn of 1805, after which the name vanishes.

Herein, I feel lies the difference between your point of view and mine. You, Sir, and your *Journal* are interested, and I admit with every reason, in the Doctor alone. I am interested in the entire Harvey family. I am also very proud of it and if I am sure of one thing, it is that the great William would share my pride. For this reason I am equally sure that could he come back to earth and express his feelings on this very personal matter, he would choose not an honoured, public place in Westminster Abbey or anywhere else, but to remain humbly where he is among his own kin.

The eldest Harvey girl of the time, married into my family at the turn of the 18th century and now, nearly 150 years later, it has become my sad lot owing largely to Hitler's bombs and Death Duties, to demolish the house that so many generations of Harveys knew and loved so well.

With the house gone and the Harvey name gone, the only evidence left that the family ever existed, apart of course from William Harvey's prominent place in History, will be found in the little Church at Hempstead. Take William Harvey away from Hempstead, install him in London, Canterbury or Folkestone, and the greatest of all the Harveys will be assured of his place among the other great pioneers of the past. But what of the remainder of his family? They will lie forgotten in a Church that is surely doomed. You have asked me to express an opinion on this matter. My opinion therefore is that such a course would not be doing justice to the family or to the village of Hempstead nor as I have already suggested to you, would it be in accordance with the wishes of the Doctor himself.

Now anyone who attended as I did, the Tercentenary Celebrations in 1928, could not fail to have been impressed by the world-wide interest in William Harvey. Eminent men—representatives, be it known, of important corporate bodies—had travelled from the ends of the earth to be present and to do honour to his name. I therefore believe that a well-reasoned appeal for the restoration of Hempstead Church could be successfully launched and the more so now that Church and Science seem no longer to be estranged.

By this means a shrine worthy of William Harvey could at last be created not far from one of the great seats of Learning, the family with William at its head would remain united and not forgotten, and the village people of Hempstead would retain their Church.

Yours, etc.,
ANDREW LLOYD.
Lyndhurst, Hants.

*The Editor,
St. Bartholomew's Hospital Journal,
Dear Sir,*

I am glad to have been given an opportunity of commenting upon your interesting article about William Harvey. It is agreed that his is one of the great names in the history of science and that his greatest work was done at St. Bartholomew's

Hospital. It is, however, understandable that Hempstead should not wish his remains to be removed from St. Andrew's Church, and it would therefore clearly be improper for me to suggest that such a step be taken. If, however, agreement were to be reached between the parties concerned that a more fitting resting-place should be sought, I should agree with the writer of the article that St. Bartholomew-the-Great has a strong claim. It is the Mother Church of St. Bartholomew's Hospital. Furthermore, it is visited by thousands from all over the world who would undoubtedly be interested to know that Harvey was buried in it. Finally, Harvey's work is so clearly associated with St. Bartholomew's Hospital that most people would feel it to be a fitting burial place for him.

In the event of any approach being made to the Rector and Churchwardens, I know that all those who are closely connected with the old Priory Church, would welcome it. But the decision does not lie with us.

Believe me,

Yours faithfully,

N. L. WALLBANK, RCUOL.

St. Bartholomew-the-Great.

SIR PENDRILL VARRIER-JONES

The Editor,
St. Bartholomew's Hospital Journal.

Sir,

I have read with great interest Dr. Owen Clarke's appreciation of Sir Pendrill Varrier-Jones in the May number of *St. Bartholomew's Hospital Journal*. I am glad to add a personal tribute to one of the world's benefactors, a man who was great and single-hearted, who was not content with deploring the sad lot of the consumptive but used his scientific and intellectual gifts to find a solution to the problem, and in spite of much misunderstanding and even veiled opposition, succeeded by the very force of his character and genius.

I first met Varrier-Jones in 1919, shortly after he had acquired the estate of Papworth Hall for the village settlement, when I went to inspect his work for the Ministry of Health. His previous experience with government officials had not been altogether happy, but with me he soon thawed and began to expound his beliefs and ideals. He had shocked one of my colleagues by erecting a treatment block without having had the plans approved by the Ministry in advance. "I don't send in the plans until a building is finished," he explained with a twinkle in his eye. "I always see lots of improvements and alterations to make in the course of construction." This, of course, was terribly unorthodox to the Civil Service mind, but I advised that here it would be wrong to insist on the letter of the law, and Sir Robert Morant, who greatly admired Varrier-Jones, endorsed my advice.

Varrier-Jones was not only a genius, an able business man and administrator—he would have made a fortune as a Captain of Industry—but he was an excellent clinician and knew the natural history of tuberculosis as well as its psychology. We were at one on the principles which guide the physician in the treatment of pulmonary tuberculosis, which I summarized in the Second Varrier-Jones Memorial Lecture, 1943, as follows:—

1. The diagnosis of pulmonary tuberculosis at the earliest possible stage, as well as careful examination, including X-ray, of all contacts, especially adolescents and young adults.
2. A proper selection of patients for sanatorium treatment.
3. Full co-ordination between the tuberculosis officer or medical practitioner and the medical superintendent of the hospital-sanatorium.
4. Correct co-ordination of hospital and sanatorium treatment.
5. Study of the individual patient.
6. A proper hospital and sanatorium regime.
7. Prolonged duration of stay in the sanatorium.
8. The goal to be aimed at is the discharge of the patient with the disease quiescent and in a fit condition to resume his occupation.

On these sound principles Papworth was founded to embody the secret of successful treatment of tuberculosis. There was added a large industrial business, which earned profits, and a thriving village settlement.

Varrier-Jones gave hope to the consumptive. Every advance in tuberculosis was enlisted for the benefit of Papworth and most of these Varrier-Jones discussed with me beforehand. For instance, research on tuberculosis was continuously carried on, artificial pneumothorax was instituted as soon as I told him of the results Burrell and I had obtained in our report to the Medical Research Council, and a surgical block was erected and a thoracic surgeon appointed. Along with all this the Medical Director knew the intimate family history of every member of the settlement and advised them out of his wisdom.

In 1919-20 Varrier-Jones, Dr. Nathan Raw, M.P., and I constituted a small Departmental Committee which explored the question of establishing village settlements for ex-Service men throughout England and Wales. In the end it was considered better to develop the existing settlements at Papworth and Preston Hall than to provide new organisations. In the course of our inquiries Varrier-Jones and I had a motor tour through North Wales in which Sir German Sims Woodhead accompanied us.

Varrier-Jones lived for his work. Even his holidays, which I sometimes shared, were devoted to seeing tuberculosis institutions and new methods of treatment. He knew his heart was diseased, but this only made him work harder in order to accomplish as much as possible before the end came to his labours. Only a day or two before his sudden death, I had a long letter from him sketching a scheme of lectures and demonstrations to be given at Papworth in which he urged me to participate. It is gratifying to know that Papworth and Enham go on from strength to strength under Dr. R. R. Trail.

Varrier-Jones faced much opposition: he crossed swords with those who preferred the ways of routine and established tradition. In the end he triumphed and had the satisfaction of knowing that his principles were sound—for contrary to common belief, he had the humility of the true scientist in all his investigations—and that they had stood the tests of time and experience and were becoming generally accepted. He died too early, but his works do flourish and follow him.

I am, Sir,

Yours faithfully,

ARTHUR S. MACNALTLY.

COLONIAL MEDICINE

The Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

We read with interest the article by Sir Philip Manson Bahr in the *March Journal* noting that it repeated all the old myths about the Colonial Medical Service. We are residents in Northern Rhodesia and so can only speak first-hand about the service in that colony, but our friends in the service give us to understand it is similar elsewhere. We do not belong to the Colonial Medical Service ourselves. This appeal of their's may take in men from other hospitals but we would like to open the eyes of "Bart's Men."

The idea that the ordinary medical officer is likely to get much chance to do individual research is a miasma. He has to cope with every type of disease, tropical and otherwise, every type of injury and any surgical emergency in most cases with only the aid of one trained Sister, for there are more outlying stations than posts in hospitals. Even such hospitals as there are, are in the main primitive with minimal equipment. He even has to spend much time dispensing medicines for native dispensaries and a greater time filling in the forms to get the meagre allowance of drugs allotted. He has to travel vast distances in the month, visiting the outlying villages, arranging public health, and poor is the outlook of a doctor who is not a good motor mechanic. It is recommended that he should know something of the building and sanitary trades. Only in rare cases does promotion lead to specialisation. Usually it leads to an office desk and divorce from clinical work.

Nevertheless, it is a good job for the right type of man. He must be self-reliant, enjoy the open

air and be able to live in a community with only a few other Europeans. He must be prepared to do without theatres, dances, etc., and be ready to move a thousand miles over night, at the whim of a D.M.S.

Should one reach the heights of a specialist, one cannot count on the provision of either adequate number of beds or adequate instruments. Drugs are always short.

Pay rates which appear on paper good may in some cases be marginal owing to the living standard obtaining amongst other Europeans and the long leaves which are very pleasant mop up a lot of money.

The reward is the work amongst primitive people who need our medicine in every direction. But do not look for thanks, the educated Bantu will only sling insults at you in return for your sacrifices.

Yours sincerely,

G. P. NIXON,
F. W. HANFORD.

Medical Officers—
Roan Antelope Copper Mines, Ltd.
Luanshya, N. Rhodesia.

PEPSI-COLA

The Editor,
St. Bartholomew's Hospital Journal.

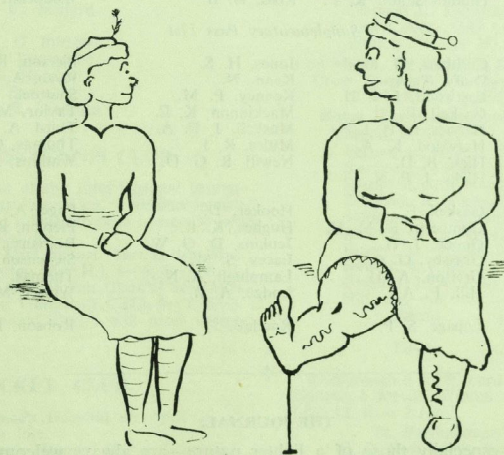
Sir,

We have observed some amongst us whose originality of dress suggests they are of American origin. Their arrival coincided with that of Pepsi-Cola at the bar. Is this a subtle sales campaign?

Yours, etc.,

THE NATIVES.

Abernethian Room.



"Yes, dear—I've not missed a week since that young Mr. Horder was made a Houseman!"

EXAMINATION RESULTS

UNIVERSITY OF LONDON

Special Second Examination for Medical Degrees

Ashworth, E. J.	Cairns, D. A. O.	Harris, W. G.	Menzies, I. S. I.
Bergel, D. H.	Catnach, T. B.	Hopkins, D. H. G.	Misiewicz, J. J.
Berry, W. M.	Clark, R. W.	Hurn, B. A. L.	Nerney, J. M.
Black, D. H.	Cohen, L.	Irwin, M. H. K.	Rees, E. L.
Bott, M. M. L.	Edmonds, C. M. F.	Jepson, B. A.	Sharer, P.
Boxall, T. A.	Ellis, C. D'A.	Lefford, M. J.	Smart, P. J. G.
Boyton, J. O.	Evans, T. A.	Luscombe, A. H.	Snow, J. T.
Browse, N. L.	Farmer, D. R.	Lytton, A.	Staley, M. E.
Bugler, R. A.	Farrar, J. F.	McDonald, P.	Stroud, R. A.
Burgess, E. H.	Fletcher, F. M.	McKinna, J. A.	Wyatt, A. P.
Burton, M. F. D.	Grant, B. H.		

March, 1952

Examination for the Postgraduate Diploma in Psychological Medicine

Moynagh, D. W.

Third (M.B., B.S.) Examination for Medical Degrees

March, 1952

April, 1952

Honours

Davies, H. T. (Distinguished in Medicine)
Tarnoky, G. E. M. (Distinguished in Medicine)

Pass

Arthur, B. K.	Cook, J.	Jackson, D. A. T.	Small, G. I.
Blake, A. S.	Cookson, T. S.	Lascelles, B. D.	Stanford, R. M.
Blau, J. N.	Dean, L. C.	Lockett, H. I.	Stoke, J. C. J.
Boyse, E. A.	Dodge, J. S.	Moore, J. D.	Thomas, G. E. M.
Brown, H. E.	Fitt, W. P.	Mortimer, K. E.	Todd, J. N.
Bruce, J. D.	Frears, R. E.	Newman, W. T.	Train, P.
Bush, A. M.	Girling, J. A.	Painter, N. S.	Waddy, G. W.
Cave, J. D. H.	Palmer, C. A. H.	Palmer, C. A. L.	Watson, L. P. E.
Clappen, J. A.	Heckford, J.	Poole, G. H. G.	Watts, M. B.
Cochrane, R. C.	Hill, I. I. McL.	Price, M. G.	Winston, F.
Cohen, M.	Hindley-Smith, R. F.	Ross, H. B.	Woodruff, W. A. A.

Supplementary Pass List

Part I			
Bartley, R. H.	Cuthbert, D. M.	Jones, H. S.	Pierson, R. V.
Batey, I. S.	Duffy, T. A.	Kaan, N.	Ryan, A. M.
Beale, I. R.	Eastwood, J. J. H.	Kenny, P. M.	Shattock, F. M.
Brooks, E. F.	Gaskell, F.	Mackinnon, K. E.	Taylor, M. G.
Brydson, M. D.	Harries, E. H. L.	Maskell, J. F. A.	Third, A. J.
Clark-Wilson, L. J.	Harwood, K. A.	Mules, R. J.	Thomas, G. E.
Coole, C. W.	Hick, B. D.	Newill, R. G. D.	Watkins, D.
Cretney, P. N.	Hicks, J. P. N.		
Part II			
Caplan, J.	Gaskell, F.	Hooker, D.	Page, A. R. W.
Cohen, H.	Gompertz, R. M. H.	Hughes, K. R.	Pierson, R. V.
Coole, C. W.	Goode, J. H.	Jenkins, D. G. W.	Romanes, J. L.
Davies, G.	Grassby, G. C.	Lacey, S. M.	Stevenson, K. M.
Davies, P. E.	Gretton, A. H.	Lamplugh, A. N.	Thomas, D. H. C.
Dreaper, R. E.	Hill, F. A.	Lodge, A. B.	Winsor, M. A.
Part III			
Derrington, M. M.	Lapage, S. P.	Randall, J.	Robson, B. E. C.

THE JOURNAL.

Contributions—especially those of a lighter nature—are always welcome. They should be addressed to the Editor, typed if possible, and on one side of the paper only. Matter for a particular issue should be handed in at least one month in advance.

SPORT

BOAT CLUB

London University Allom Cup Regatta.

Saturday May 31.

As four senior members of the club are practising in a four for Henley, the club did not enter for the Senior Division, and we competed in the Clinker Division, and the Junior Fours. The eight rowed extremely well to win the clinker pennant; the first time a hospital crew has won an event in this regatta since 1924. We reached the final last year only to be beaten by University College and Hospital, but this year against the same opponents in the final we won by two lengths.

The Junior Four had had insufficient practice together and were beaten in this first heat. However when this four becomes fitter we hope to see them winning an event in a provincial regatta.

Results were:

Clinker Eights.

1st Heat—Beat Northampton Engineering College, 1½ lengths.

Semi-final—Beat Imperial College, 2 lengths.

Final—Beat University College and Hospital, 2 lengths.

Clinker Fours.

Beaten by Birkbeck College, 2½ lengths.

Crews:—

Clinker Eight—

1. Bow C. J. W. Hunter.
2. P. G. Burton.
3. R. I. D. Simpson.
4. J. D. Salmon.
5. P. J. G. Smart.
6. J. M. Jones.
7. D. H. Black.
- Str. B. P. Harrold.
- Cox F. J. C. Millard.

Junior Four—

1. Bow M. F. D. Burton.
2. A. H. Luscombe.
3. W. G. Harris.
- Str. T. A. Evans.
- Cox M. A. R. Manhire.

NURSES' TENNIS CLUB

In the first round of the Inter-Hospital tournament for the *Nursing Times* Cup, St. Bartholomew's nurses beat King's College Hospital nurses by two matches to nil. Results:—

Miss Booth and Miss Funnel (Bart.'s) beat Mrs. Flute and Mrs. Houton (K.C.H.), 4—6, 6—1, 6—4.
Miss Foster and Miss Collett (Bart.'s) beat Miss Middleton and Miss Gingell (K.C.H.), 9—7, 6—3.

In the second round Bart.'s will meet Queen Elizabeth Hospital.

CRICKET CLUB.

1st XI v. St. Thomas's Hospital on April 26, at Cobham. Match lost.

St. Bartholomew's Hospital 80 for 8 declared. (Brambridge 36 retired, Lawson 21).

St. Thomas's Hospital 81 for 5. (Foy 3 w. for 10).

1st XI v. U.C.S. Old Boys on May 3 at Chislehurst. Match drawn.

St. Bartholomew's Hospital 136 for 8 declared. (Brambridge 73 n.o., Murley 30).

U.C.S. Old Boys 129 for 3 (Ford 2 w. for 17).

1st XI v. Radcliffe Infirmary on May 10 at Chislehurst. Match drawn.

Radcliffe Infirmary 133 for 9 declared. (Winton 5 w. for 39, Taylor 2 w. for 24).

St. Bartholomew's Hospital 88 for 9 (Ross 33).

2nd XI v. Erith Town on May 11 at Chislehurst. Match drawn.

Erith Town 186 for 5 dec. (Ellis 2 w. for 31).
St. Bartholomew's Hospital 96 for 7 (Gillett 20, Williams 20).

1st XI v. Middlesex Hospital on May 17 at Chislehurst. Match lost.

Middlesex Hospital 239 for 5 declared (Foy 2 w. for 45).

St. Bartholomew's Hospital 38 (Jose 8 w. for 11).

2nd XI v. Middlesex Hospital on May 17 at Chislehurst. Match drawn.

Middlesex Hospital 177 (Ellis 5 w. for 76, G. Ross 4 w. for 49).

St. Bartholomew's Hospital 122 for 4. (Gillett 68, G. Ross 22, Ellis 20 n.o.).

1st XI v. Romany on May 18, at Chislehurst. Match lost.

St. Bartholomew's Hospital 95 (Ford 22).
Romany 98 for 3 (Foy 3 w. for 26).

1st XI v. Balliol College on May 24, at Oxford. Match drawn.

St. Bartholomew's Hospital 256 for 5 declared. (Murley 77 n.o., Brambridge 65, Ross 48, Clappen 21, Tomlinson 20).

Balliol College, 167 for 8 (Foy 4 w. for 45, Winton 2 w. for 35).

Cup Match. 1st Round v. Royal Dental & Charing Cross Hospitals on May 14 at Grove Park.

Match won by 7 wickets.

Royal Dental and Charing Cross Hospitals

Myall, b. Foy	6
Farnes, ct. Keil, b. Ford	0
Stammer, st. Keil, b. Clappen	19
Sheppard, ct. Rosborough, b. Foy	28
Boughey, b. Winton	3
Solomon, b. Brambridge	0
Brown, b. Brambridge	2
Bowers, ct. Winton, b. Ross	18
Hewett, b. Ross	3
Griffiths, lb.w. Ross	0
Hill, not out	2
Extras	8

Total 89

Rosborough 0 for 9, Ford 1 for 5, Foy 2 for 15, Clappen 1 for 26, Winton 1 for 13, Brambridge 2 for 12, Ross 3 for 1.

St. Bartholomew's Hospital

H. B. Ross, lb.w. Boughey	41
J. R. Nicholson, ct. Hill, b. Boughey	9
M. Brambridge, not out	21

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July, 1952

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

455

P. B. Biddell, b. Bowers	1
J. A. Clappen, not out	19
Extras	2
Total (for 3 wickets)	22
D. Lawson, B. N. Foy, F. W. Winton, F. D. C. Ford, D. Rosborough, A. M. Keil did not bat.	

Bowers 1 for 29, Sheppard 0 for 12, Boughey 2 for 50.

Cup Match

This game was played on a damp pitch on somewhat of a slope, from which only low scores were expected. The Charing Cross captain won the toss and decided to bat, hoping the wicket would dry out. Later, Rosborough and Ford, opening the attack, found it possible to swing the ball, but it was coming through much too slowly to be of use. After one quick wicket, Foy and Clappen were brought on to try their spin, which worked well enough but again slowly. The batsmen, in spite of this, found runs hard to come by and were always in difficulties, since Foy was producing an occasional unplayable ball, while Clappen kept an excellent length. Up to lunch-time, thanks to Stammer and Sheppard, our opponents did not look too easy to dislodge although they were scoring very slowly. But when these two were out, only Bowers of the remaining batsmen put up much resistance. This may in part have been due to the brilliant tactics of the captain in putting himself and last year's captain on to bowl. The effect of their "straight" breaks was immediate and somewhat disheartening to those who had been bowling "proper" stuff previously.

In fact, we had not overmuch confidence in our own batting strength, but the wicket still played truly and we had no serious difficulty in scoring the necessary runs by teatime. Ross, as usual when he makes runs, scored his 41 quickly. Nicholson was beginning to play well, but was unhappily caught at the wrong moment, whereas Biddell had not time to find his form. Braimbridge and Clappen together then took us out of any danger by successfully preventing the remaining batsmen doing anything at all. Most of the team then hurried off to View Day and a free tea, and to celebrate sound victories over the Charing Cross and the Finals examiners.

Our advertisement now reads: Play cricket and get through Finals.

The Battle of Furunculus

A correspondent has pointed out that the version of The Battle of Furunculus which appears in "Round the Fountain" is by no means the same as the original which appeared in the *Journal*, in 1909. The "Round the Fountain" version has ten verses, and even those which are common to both editions have been considerably altered, whilst only seven verses appeared in the *Journal*. What our correspondent particularly regretted was that the author had changed his favourite verse:

"Shame on the Eosinophile
Who lingers in his lair,

1st XI v. Crofton Park at Chislehurst, on May 31st. Match drawn.

St. Bartholomew's Hospital 177 for 9 declared. (Riddell 35, Page 29, Aubin 53 n.o., Keil 24). Crofton Park 163 for 3.

1st XI v. The Rabbits at Chislehurst, on June 1st. Match lost.

The Rabbits 241 for 3 declared (Winter 116, Ellis 2 w. for 73).

St. Bartholomew's Hospital 124 (Nicholson 32, Haysey 24 n.o., Freeman 22).

'A' XI v. Roan Old Boys at Chislehurst on June 2nd. Match lost.

St. Bartholomew's Hospital 107 (Aubin 36, May 33).

Roan Old Boys 108 for 5 (Ellis 3 w. for 44).

CUP MATCH v. Middlesex Hospital (2nd Round), at Chislehurst (away), on June 4th. Match lost.

Middlesex Hospital.

W. Lush, b. Foy	12
N. H. Mills, ct. Keil, b. Foy	49
D. Hamilton, l.b.w. Foy	0
R. G. Dunning, b. Foy	25
T. G. Davis, st. Keil, b. Taylor	39
R. Snelling, ct. Biddell, b. Ford	26
M. R. Ashken, not out	74
M. B. Haywood-Wadlington, not out	32
Extras	14
Total for 6 wickets	271

C. M. Monvoy, A. V. Jose, J. Allen did not bat. Taylor 1 for 73, Ford 1 for 23, Foy 4 for 73, Winton 0 for 29, Ellis 0 for 14, Clappen 0 for 41.

St. Bartholomew's Hospital.

H. B. Ross, ct. Hamilton, b. Jose	0
J. R. Nicholson, ct. Lush, b. Jose	6
C. P. Juniper, b. Jose	8
P. B. Biddell, b. Jose	9
J. A. Clappen, b. Allen	20
F. D. C. Ford, l.b.w. Jose	1
F. W. Winton, ct. Dunning, b. Allen	1
B. N. Foy, ct. Lush, b. Jose	43
A. M. Keil, ct. Hamilton, b. Snelling	20
C. D. Ellis, b. Jose	3
J. H. Taylor, not out	0
Extras	4
Total	120

Jose 7 for 62, Allen 2 for 35, Snelling 1 for 18.

When Polymorphs and Lymphocytes
Go out to do and dare!"
to the following, which appears in "Round
the Fountain":

"Shame on the Eosinophile
Who comes not forth to foil
The deadly Golden Coccus
At the Battle of the Boil."

We can only presume that this change was made because the author was not too sure that Lymphocytes did "go out to do and dare" at the Battle of the Boil; he must have had, on the other hand, no doubt of his disgust for the cowardly Eosinophil!

BOOK REVIEWS

THE MANAGEMENT OF THE "HOPELESS" CASE, by C. J. Gavey. Buckston Browne Prize Essay of the Harveian Society of London, 1950. H. K. Lewis. Price 9/-.

It seems not a little presumptive to review a book which is already a prize winning essay. To praise such a book is permissible, if unnecessary. The reviewer of Dr. Gavey's essay need be bound by no such considerations, for no excess of praise could spoil so excellent a book as this one. The *master* of a subject can always be relied upon to provide a clear and simple picture, and if we are to judge Dr. Gavey by this criterion, then he must indeed be the master of "the management of the hopeless case". For here are subjects controversial, complex and debatable so clearly discussed that there seems only one answer to each, and that the correct one. In discussing such difficult subjects as death and euthanasia the author's masterly touch not only avoids controversy, but avoids also the necessity for it. The essay is rich in quotation, not—as one often sees—quotation for its own sake, nor yet to impress, but quotation to enlarge, to support and above all to colour the author's own words.

Nine shillings may appear a high price for one short essay, but in the recognition that here is something of inestimable value to all medical men it should be a price most willingly paid. To acquire such understanding of one of the most difficult

subjects in medicine by experience would be to pay a price in human misery which could by no means be justified. If the simple and sensible words of Dr. Gavey are widely read then they will be widely understood, and an immeasurable improvement in the treatment of the hopeless case might well result.

CLINICAL HAT PEGS FOR STUDENTS AND GRADUATES, by R. J. Willan. 1st edition 1951. Heinemann, pp. 115. Price 12/6.

By "clinical hat pegs" the author means mnemonics to aid the memory; and the book gives an exposition of these in the surgical subjects. The lay-out is frequently confusing, but when the reader has become used to it the confusion recedes and it is not easy to see how it might be improved upon. One might fairly say that here is a book for those that like this kind of thing. There are omissions which it is hard to excuse: in the paragraph headed Scrotal Swelling we find no mention of Varicocoele, spermatoceole, epididymo-orchitis or tuberculous epididymitis, whilst in the list are included such rarities as Chronic Psos or iliac abscess, which few students will see as a scrotal swelling. This kind of carelessness, when we are asked to pay 12/6 for little over one hundred pages, will hardly endear the book to its buyer.



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ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol LVI

AUGUST, 1952

No. 8

RELATIVE VALUES

"Two hours' work as a nurse is worth twenty-five years' work as a typist."

(The Archbishop of Canterbury, addressing school-children recently.)

The Rev. Sydney Smith, the least theological and the most witty prelate who ever graced the Church of England, once said: "I have, alas, only one illusion left, and that is the Archbishop of Canterbury." Not so a correspondent of the *News Chronicle* who, indignant at Dr. Fisher, wrote: "Some people might consider two hours' work as a farm labourer on food production worth twenty-five years' preaching." Without resorting to this terse vehemence, we too must take the Archbishop to task for what we conceive to be a sadly unbalanced scale of values.

We must not imagine that Dr. Fisher wishes to be taken literally, but to have meant "nursing is a far more valuable profession than secretarial work." In spiritual or in personal terms this may be true, but the assessment would be very difficult and is not to be attempted here. But the country's economy is a subject on which everyone who reads a morning newspaper knows himself to be an expert and does not hesitate to say so. And in this context Dr. Fisher's dictum just won't hold water.

The Archbishop himself, in the June issue of *Look and Listen*, which appeared a few days after his above-quoted speech, helps to refute his own contention. In a sharp criticism of television in schools, he attacks it as much on economic as on cultural grounds. "Here we are, an almost bankrupt nation, desperately trying to make ends meet. It is the duty of us all in public and private to be abstemious." If we are "an almost bankrupt nation"—and "wolf!" has been cried so often and so long that many are beginning to wonder if we really are—then, surely, the importance of the commercial

professions, directly concerned with producing and selling the fruits of our industry abroad, is greatly enhanced, while the expense of a public service, however beneficial it may be, becomes almost a burden to the society that supports it. Shorthand-typists and secretaries are as essential to commerce as nurses and doctors to medicine, and it is good clever efficient salesmanship which will make and keep this country solvent, and not good clever efficient medicine. He would be a fool who underestimated the service of a trained nurse to the individual patient; he would be a bigger fool who thought she added one penny to the country's national income. The respective incomes of nurse and typist provide harsh confirmation of the validity of this reasoning.

But though the Archbishop is in error, he was merely giving voice to the layman's instinctive feeling that those who enter medicine in almost any of its branches are deserving of respect, and acquire virtue and honour almost *ex officio*. The pernicious feature of this myth is that most of us unconsciously agree with it.

What attracts a girl into nursing is a difficult problem to solve. To some the aura of romance about the medical life will be irresistible, to others the fact that nursing is the sole respectable *women's* profession (in which it is men who are the intruders) will be the deciding factor. It is probably true to say that in almost no other profession do so many of its members have a true sense of vocation—and this not necessarily Christian in origin.

But we hasten to exclude doctors from this satisfying assertion. When, on our first firm, some pleasant appreciative patient says to us

for the first time: "Doctor, I do think it wonderful the way you're devoting your life to other people . . ." (or words to that effect), we should blush furiously and deny it strongly. We don't, of course; we thank them for their compliment and feel rather pleased with ourselves. From that time onwards we come more and more to assume that the medical profession is almost the sole repository of human goodness left on earth. Probably this assumption can be regarded as one of the perquisites of the profession. Probably it is necessary for us to believe in our own virtue in order to keep going through long surgeries and difficult early-morning labours. But it is salutary to recall, every now and again, that those large commercial druggists whom we rather despise have contributed more to the country's recovery from the war than the whole of the nursing and medical professions put together.

What makes a boy become a medical student is a question even more difficult to answer than what makes a girl take up nursing. Some of those who follow their fathers into medicine have probably never thought why at all—and certainly won't make the worse doctors for that. Others combine an interest in human beings with an interest in science and find each best satisfied in medicine; others, again, fall for its romance. But

Journal Appointments

George Birdwood, who has been Editor for the last six months, has resigned.

Ian Backhouse is the new Editor, and Stephen Lock the new assistant Editor.

Journal Subscriptions

It has been decided that the concession whereby newly-qualified Bart.'s men receive the *Journal* at the cheap rate of 12/6, post free, for one year after qualifying shall be extended to cover a second year. Thereafter, the subscription is one guinea per annum. It is hoped that this will encourage students to continue receiving the *Journal* after they have qualified. Subscription forms are obtainable from the Manager at the Hospital.

Change of Address

Dr. G. L. Colenso-Jones from c/o Iraq Petroleum Company, P.O. Box 150, Tripoli, Lebanon to 92a, Harley Street, W.1.

whatever their reasons, not nearly so many have a vocation to medicine as would like, either openly or covertly, to suppose. It is not unreasonable to suspect the motives of one who avers that he had a call to a profession which seems to provide the majority of its members with a good income, interesting work, a position of trust and influence, and much of the mystique of occult knowledge.

In the eyes of the public one cannot have a vocation to shorthand-typing or to carpentry: but you can have a vocation to the Church or to medicine, and no one will think you mad for saying so—in fact, they will be rather shocked if you don't. It is significant, then, that when the Church was wealthy there was no shortage of clergy, whereas now it is poor all denominations are appealing for recruits. Medicine, on the other hand, seems to be surviving the torments of the Health Service fairly comfortably—a fact which has not escaped discerning parents who send their children to medical schools in far greater numbers than can be accepted. Were medicine to be paid at a teacher's salary, and carry the same social status, it would not be so popular.

No. Our virtue is part of our stock-in-trade. It is something which we acquire from the profession, not something we bring to it. Someone ought to tell Dr. Fisher.

Scholarships

Junior Scholarships in Anatomy and Physiology:

- 1st Scholarship: E. R. Nye.
- 2nd Scholarship: M. A. Bedford.
- Prox. access: D. H. Elliott.

Congratulations

To Dr. C. H. Andrewes on being awarded the Stewart Prize this year. The prize is awarded by the B.M.A. for important work done upon epidemic disease. Dr. Andrewes was one of the discoverers of the influenza virus and is in charge of scientific work at the Common Cold Research Unit at Salisbury.

* * *

To Wing Commander A. J. Barwood, R.A.F. Medical branch, on receiving the O.B.E. (Military Division) in the Birthday Honours on June 5.

Dr. Mervyn Gordon

On behalf of all at Bart.'s the *Journal* sends its congratulations and best wishes to Dr. Gordon on reaching the distinguished age of 80 on June 22nd.

Dr. Gordon entered Bart.'s in December 1895 and qualified three years later. Ever since then his work has been centred here in the Pathology Dept., and since 1923 he has been Consulting Bacteriologist to the Hospital. There are few branches of bacteriology to which he has not made major contributions, his work being particularly notable in air hygiene, virus research into variola and vaccinia, cerebro-spinal meningitis, Hodgkin's disease and cancer.

He kept himself in the background, but his many interests, warm personality, and refreshing lack of conventionality brought him many friends. His lively sense of humour is shown by the following story.

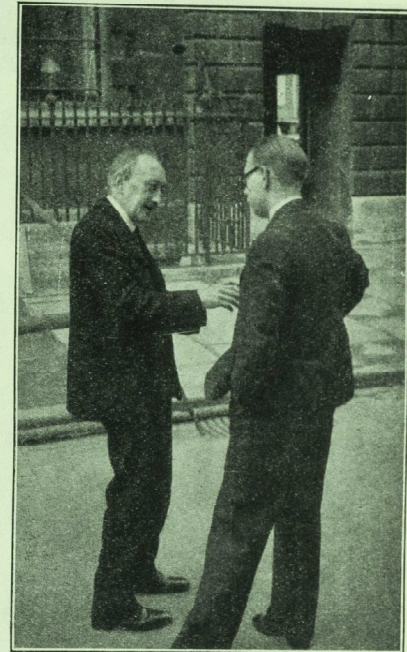
Dr. Gordon had a monkey of which, by way of reward for surviving many experiments, he had made a pet. He kept it on the fourth floor in the Pathology block and was in the habit of taking it fruit from the Refectory after lunch. One day he was returning from lunch and found Sir Holburt Waring—himself now a respectable nonagenarian—stuck in the lift between two floors. Sir Holburt was very annoyed, as was readily to be seen. His ruffled feelings were not improved by Dr. Gordon, who came and fed him with a peeled banana through the bars of the lift!

Occupational Hazards.

The ordinary occupational hazards of Editors are those normally to be expected by those who have to please everybody, offend no one, and simultaneously provoke interest and argument. A silver tongue is as important to us as a typewriter and a pot of paste. But we have recently heard of a special hazard which we are at pains to avoid.

A predecessor of ours, his brief case full of files and papers, one day stuffed into it the "paste-up" copy of the next month's *Journal*. During that morning he received a letter from his current girl-friend, couched in most intimate terms, and this also he stuffed into his brief-case when he had read it. But, unfortunately, it fell within the pages of the paste-up.

This, which already contained two new letters to be set up, duly went back to the

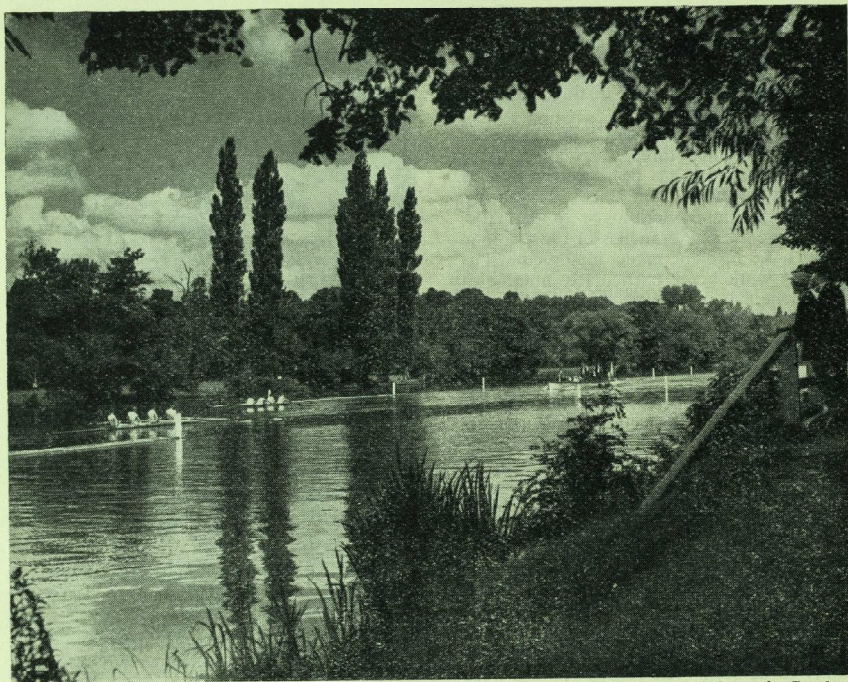


"I think I've got the right guinea-pig by the ear this time."

(A "Candid Camera" snap. Dr. Gordon has the pig; with him is Mr. Fenton Braithwaite.)

compositors, three letters were somehow or other fitted in and the final draft sent direct to the printer. He, glancing idly through it, came by sheer chance upon a problem early in the *Journal*, long before the correspondence columns were reached. He phoned the Editor who went to see him, soon straightened out the difficulty, and then he, in turn, skimmed through the rest. Imagine his surprise to see that one of his correspondents addressed him as "Darling" and signed herself "Bubbles."

Albeit reluctantly, he felt compelled to extract it and to write to himself upon some dull subject in substitution. The dignity of the *Journal* was saved, but by how narrow a hair's breadth!



By courtesy of the Daily Graphic

The Bart's IV beating First and Third Trinity, Cambridge, in their heat in the Wyfold Cup at Henley

Bart's at Henley

The traditional success story in sport is of a club, hitherto unknown, breaking into the limelight by winning a major event against strong opposition. This year was the first occasion, so far as is known, that the Hospital has sent a crew to row at Henley, and all rowing men here hoped that the Senior IV might win the Wyfold Cup first time.

They didn't, but it was not for lack of training or hard work. They rowed together for several weeks on the Tideway and were one of the first to start training at Henley, three weeks before the Regatta. They soon won golden opinions and were a much-fancied IV. *The Times* Correspondent singled them out for praise.

In the eliminating heat they disposed of First and Third Trinity, Cambridge, at a firm paddle, and on the first day of the

Regatta they rowed beautifully to beat Emmanuel, Cambridge, by four lengths in a fast time. The second day, alas, found them off colour, but they led the R.A.F. (Benson) IV from the start to the Mile-post—where the usual little accident occurred. They lost a length, they lost heart, and they were finally beaten by half a length after a very close race.

That a Bart's IV should be at Henley at all is a tribute to those members of the Boat Club who have built up rowing at Bart's from nothing to the point where the Hospital has won the major events at the Hospitals Regatta two years running. The *Journal* congratulates the Club and sends its best wishes for Henley next year.

Senior Four : Bow, F. R. Spink (steers) ; 2, G. F. B. Birdwood ; 3, J. F. G. Pigott ; str., D. H. Black.

CARCINOMA OF THE BREAST

A brief historical survey of the treatment*

by GEOFFREY KEYNES

At the present moment I have in my ward a woman, aged 46, with a hard lump in her right breast, having the characters of an early mammary carcinoma. I propose to remove the breast with the diathermy needle, following the operation with a course of deep x-ray therapy to the whole lymphatic area. The situation of this patient shews nothing unusual, but it may be of interest to trace briefly the steps by which, over the years, the treatment, such as I propose, has been arrived at.

Cancer of the breast in its late stages has been recognized for at least 3,000 years, and there have always been quack cancer-curers, working usually with some form of caustic application to produce sloughing of the mass of the growth. For breast surgery we need look no further back than to the middle of the sixteenth century, the time of Ambroise Paré, the great French surgeon, who dominated the surgery of his era. Paré does not, in his published works, describe any specific operation, but his account of the disease shews that he recognized the importance of lymphatic spread: "When cancer possesses the breasts, it often causes inflammation to the arm holes, and sends the swellings even to the glandules thereof." In surveying the methods of treatment he recognized the value of sometimes doing nothing at all. "When it is increased, and covers the noble parts, it admits no cure but by the hand; but in decayed bodies whose strength fail, especially if the cancer be inveterate, we must not attempt the cure, neither by instrument, nor with fire, neither by too acrid medicines, as potential cauterics, but we must only seek to keepe them from growing more violent, and from spreading further, by gentle medicines, and a palliative cure. For thus many troubled with a cancer have attained even to old age."

An idea of the kind of operation practised around the year 1600 may be gained from

the writings of a German surgeon, Fabry of Hilden, or Hildanus (1560-1624). In his *Works*, published in 1646, he insisted that the tumour must be mobile and admitting of radical excision. The operation, he said, was fruitless, if any portion, however minute, were left behind, and he recognized that a growth which "sprouts again" is even more malignant than before. Fabry described two operations. In one, for a small tumour, the skin around it was incised, the tumour was partly separated from its surroundings with the finger nails, and then an instrument called a forceps was applied. The tumour was thus dragged off, and the bleeding vessels were ligatured. In the other, for larger tumours, after the skin had been incised, the mass was separated from the chest wall with a large knife.

The practice of the later 17th and early 18th centuries is represented by Laurence Heister in his *General System of Surgery*, 1743. He removed the smaller tumours through a straight incision, bleeding being stopped by styptic powders, or by a large thick compress dipped in warm ale and butter. Larger tumours he would pierce with enormous needles carrying thick strings; by pulling on these the mass could be elevated away from the chest wall so that it could be cut off cleanly with a long knife. Alternatively the breast might be raised by piercing it with a long two-pronged fork. It seems that the very newest method was to encircle the breast with two semicircular double brass rings hinged together. On the same hinge was a falciform knife which passed like a guillotine between the rings and sliced off the breast.

Samuel Sharp, an English surgeon, was somewhat more advanced. In his *Treatise on the operations of Surgery*, 1735, he described the excision of the breast through an oval incision, the main gland being carefully cleaned away from the pectoral fascia. If it was found to be adherent to the fascia, Sharp judged that the operation was impracticable, and further, if it was associated with "knobs" in the armpit, no service was done unless the "knobs" were taken away. Sharp sounds the

* The substance of Mr. Keynes' last clinical lecture given at St. Bartholomew's Hospital on February 29th, 1952.

first note of modernity when he writes: "The possibility of extirpating these knobs without wounding the great vessels is very much questioned by Surgeons, but I have done it when they have not laid backwards and deep."

In the early 19th century pathology was still primitive in spite of Hunter, so that early diagnosis of cancer was seldom or never made, and local operations were still done in the advanced stages of the disease. These tended to be made less and less extensive as time passed, until in 1867 Charles Moore¹ of the Middlesex Hospital was moved to protest against the influence of the inadequate operation. Moore was fully aware of the value of the "follow-up" principle and had made a study of a series of patients with recurrences after removal of their breast carcinomas. He was ready to allow that tumours of the breast were now removed earlier than formerly, but complained that the technique of the operations was worse than it was one or two centuries earlier. Then a wide removal had been the rule: but now the skin was undermined by dissection and, after removal of the tumour, was laid down again. Sometimes even the nipple and areola were allowed to remain. Moore enunciated two important principles: firstly, that the tumour should not be cut into and should, indeed, not be seen at all during the operation; and secondly his belief that the recurrence of the cancer was determined by centrifugal dispersion from the primary growth and not by any independent organic origin. Moore's advanced views were further reflected in his three main conclusions.

1. That cancer of the breast calls for careful extirpation of the entire organ.
2. That removal of the breast is most likely to be incomplete at the sternal edge.
3. That unsound adjoining tissues, especially the skin, should be removed in continuity with the main mass of the disease.

Lord Lister was practising free removal of the breast at this period, and Sir James Paget was at work at St. Bartholomew's. There was thus advance in surgery while post-operative sepsis receded, and contributions to literature by competent observers multiplied. One of the most interesting of these was Samuel Gross² of Philadelphia, a surgeon eminent in his own right and not to be remembered only as the first husband of Lady Osler. Gross maintained that the rules laid down by Charles Moore in 1867 were to be strictly

observed and even extended. He insisted that in the most favourable circumstances, namely when the tumour was of small size and devoid of superficial and deep attachments, without any enlarged axillary glands, then the proper procedure was to remove the entire breast and its coverings by a circular incision, to dissect away the fascia covering the pectoral muscles and to prolong the incision into the axilla, which should be dissected clear of lymph glands even when it was apparently free of disease. Gross had, indeed, enunciated for the first time the fundamental principle of present practice, and further developments were only modifications of what he had laid down.

Meanwhile Mitchell Banks³ in England was supporting Charles Moore's protest against inadequate operations. Surgeons were persuading patients that they removed their cancers, and almost persuaded themselves, but there was always that little bit left which they fondly hoped would not grow because it was *such* a little bit. They did it better, he said, 150 years earlier. The breast was then siezed with great pincers, struck off with an enormous knife, and the cut surface seared with a red-hot poker. Now surgeons removed a little elliptical bit of skin round the nipple and the remaining skin full of cancer germs was carefully laid down again. Banks advocated a much wider excision than was usually practised, though he did not remove the pectoral muscles. He would pinch away the axillary lymph nodes with the nails of his forefinger and thumb (rubber gloves being, of course, unknown in his time). Patients were followed up, but so imperfectly, that Banks was inclined to believe that if a patient remained well for three years she was permanently cured.

A lively discussion took place in 1887 and was reported in the B.M.J.⁴ Banks held that extirpation of the axillary glands was a necessary part of the operation, but other eminent surgeons criticised this position. Sir Thomas Smith expressed the reactionary opinion that "it was a question for consideration whether a local excretion of cancer did not render patients less liable to constitutional disease." All experienced surgeons even at the present day have seen patients, whose survival in good general health in spite of extensive local growth, might, if regarded uncritically, lend support to this view. Smith even asserted that "the patient lived longest who had never been operated on," thus

echoing Paré's dictum from the sixteenth century. Sir Henry Butlin lent the weight of his experience to the conservative view. He said that very free removal in every case was an unsurgical and unscientific proceeding. The operation bore no relation to the extent of the disease. He would not cut open the axilla unless enlarged glands could be felt. When no glands could be felt the disease was less malignant and therefore the results were better.

Butlin's figures were instructive.

<i>axilla not opened</i>	<i>opened</i>
mortality 10%	20%
well in 3 yrs, 18%	5%
in 101 cases.	in 209 cases.

He was thus distinguishing more or less between what is now called Stage I and the later stages, and it will be noticed that only half as many patients were treated in Stage I as in the later unfavourable stages. The operative mortality was high, but Mitchell Banks suggested that, though the statistics were affected by the mortality from sepsis, the vitality of the patients was affected by the cooling from the Listerian carbolic spray, thus accounting for the heavy mortality following the more severe operations.

During the next ten years the main advance in treatment was made in the United States of America. Halsted, working at the Johns Hopkins Hospital, Baltimore, reviewed his patients over a period of ten years, and in 1898 showed that the radical operation for cancer of the breast had by this time been carried to its logical extreme. So much skin was removed that it was often necessary to cut grafts larger than a hand from the patient's thigh to cover the raw area on the chest wall. The pectoral muscles were removed, and not only was the axilla dissected clear of glands, but also the supraclavicular region, part of the clavicle being removed at first to make this easier. On three occasions Halsted's then unknown assistant, Harvey Cushing, cleaned out the anterior mediastinum for recurrent cancer, and thought it likely that in the near future this would be done at some primary operations. Halsted and Cushing found that operating for the cure of cancer of the breast was a very great labour, taking from two to four hours and they never attempted more than one of these operations in a day.

It will be seen that the so-called "Halsted operation" of the present day is not really following out that master's principles, which

had indeed carried him beyond what is now regarded as justifiable. Infection of supraclavicular glands usually indicates mediastinal infection, which is beyond the reach of surgery, so that any operation is likely to be only palliative.

The value of simultaneous oophorectomy was also being discussed about this time. The general opinion agreed with the view held at the present time, that its effect, though often good, is only temporary.

The next landmark in the history we are tracing is the work of Sampson Handley, whose book on the mammary gland was first published in 1906. Handley's aim was to put operative surgery as applied to the breast on a scientific basis by picturing accurately the microscopic ramifications of a cancerous growth and its modes of dissemination. In effect, Handley was re-stating the principles enunciated forty years earlier by his predecessor at the Middlesex Hospital, Charles Moore, the doctrine of centrifugal permeation being his central theme. It was amplified and fully illustrated histologically, centrifugal growth being shown to be often followed by centrifugal death, cancer cells in the lymphatics being destroyed by tissue reaction between the primary growth and the head of the advancing column. The importance of local spread of the disease by infiltration was not overlooked by Handley, but he laid the emphasis on permeation through the main highway of the lymphatic plexus in the deep fascial layer. He based his operation on this, maintaining that, as the growing edge of a permeating cancer cannot be recognized, its invisible presence must be assumed. On this basis Handley insisted on a wide removal of skin with a still wider removal of deep fascia together with the muscles beneath it. He also insisted, as Moore had done before him, that the tissues removed, including the contents of the axilla, should be dissected away in continuity, so that permeated lymphatics should not be cut across.

Handley's scientific-sounding thesis has had immense influence, and orthodox surgery carries out his principles to the present day. Its publication in book form was undoubtedly followed by a great improvement in the general results of surgical treatment of breast cancer. A rule-of-thumb had been established which eliminated the necessity for further thought, and it was comforting to believe that little further improvement was possible. At the same time it is as well to remember that

surgery is not merely carpentry, and that intellectual processes are not to be neglected.

The first shock to complacency came from a Ministry of Health survey published in 1924 showing that the improved results of surgery were due in large measure to earlier diagnosis of the disease, and not very much to technical improvement in the operation. Handley's thesis has undoubtedly been of great value, but Surgery should never stand still, and a critical examination of surgical dogma is always wholesome. Most of the work described in Handley's book was done nearly fifty years ago, and it probably now has few readers. Its influence might perhaps be lessened if it were read oftener, so that more readers could appreciate the fact that its conclusions are vitiated by a fundamental flaw in the premises. For it will be found that all the pathological material was taken from patients who had died of the disease. In other words, a wholly abnormal state of affairs was taken as the basis for a system of treatment which was to be applied to all stages of the disease, early as well as late. Handley has, it seems to me, laid too much emphasis on the importance of centrifugal permeation of lymphatics, leaving an impression that the spread by this method takes place almost equally in all directions. In fact, spread by embolism along lymphatics and by invasion of venous channels are probably much more important, the second of these being rapid and determining most of the secondary deposits in liver, lungs and long bones. Embolism will almost invariably take place first along the line of least resistance, that is, the large lymphatic channel leading to the axillary lymph nodes, particularly those on the inner wall, and experience shews that these nodes are almost always the first secondary infections to become clinically evident. When this channel is blocked, then other abnormal channels will develop, such as those supposed by Handley to proceed by the fascia of the rectus abdominis and the falciform ligament to the liver. These channels, together with others, such as those supposed to cross the mid-line to the other breast, are not known to anatomists and do not in fact exist except in the abnormal condition described by Handley. There can, however, be no doubt that the position of the primary growth is of great importance in determining the spread. Charles Moore pointed out that extirpation of the disease was always more difficult when it started near the

sternal edge of the breast, this being due, as we now know, to the presence of lymphatic channels piercing the intercostal spaces to terminate in the internal mammary lymph nodes. Richard Sampson Handley has made an important recent contribution by following Harvey Cushing's example, and, by diving into the anterior mediastinum, he has shown that secondary disease in this position is not uncommon; this may be one of the quicker lines of embolic spread when the disease starts in the mesial part of the breast.

The routine performance of the "radical operation" should perhaps be regarded as an over-simplification of the problem, and I have probably made the same mistake by taking the line that the operation is unnecessary in the early, and useless in the later, stages. I have not, indeed, performed it for nearly twenty-five years, and I am sure that my patients have not suffered thereby; but my practice has been profoundly affected by the simultaneous use of irradiation in its different forms. An experiment with the use of radium was initiated by Professor George Gask in this hospital, and he briefed me in 1922 to ascertain what could be done with radium needles in carcinoma of the breast. For some years this treatment was applied only in the inoperable stages of the disease. Later, when the efficacy of radium had been established, its use was extended to the earlier stages. Until 1939 I used conservative surgery in combination with radium as the method of choice, and satisfied myself that the results, as reckoned in survival rates, were as good as could be obtained by "radical" surgery, with the advantage of lessened mutilation and the avoidance of oedema of the arm, which so often follows a rigorous dissection of the axilla. After the war ended I did not return to the use of radium needles because high voltage x-ray therapy had made great advances, with certain advantages over radium needles in not causing fibrosis or neuritis. Unlike some other forms of cancer, breast carcinoma shews greater sensitivity in secondary, than in primary, growths, so that the axilla and neighbouring regions can be effectively treated by this means. McWhirter took the principle much further when he persuaded most of the Edinburgh surgeons to allow their patients to be treated systematically by conservative surgery and deep x-ray therapy. The number of patients on whom observations could be made was greatly increased in this way, and

McWhirter's results, which will soon be showing a ten year survival rate, indicated that the radical operation had no advantage over conservative methods. Orthodoxy has been greatly shocked by this subversive tendency, but history cannot be denied, and time will shew whether conservative or radical surgery is to be preferred. My own view is that the use of radiotherapy with surgery will only be limited by the small number of centres where first-rate technicians and the best high-voltage apparatus is available. Apart from this it seems certain that the main advance in improvement of results from treatment will always depend chiefly on the greater frequency of early diagnosis. Even in 1877 Coley, who advocated following

patients for long periods of time and abolition of the three year standard of "cure," asked, "Have you ever imagined what the results would be if all cancers were thoroughly excised when they were no bigger than peas?" Progress may rest, therefore, more in the hands of the patient and the general practitioner than in those of the technical experts who practise the best surgery.

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SOME OBSERVATIONS ON CANCER OF THE BREAST

by I. G. WILLIAMS

If the evidence presented by the great artists of bygone days is true, the female breast was a more rounded and upright organ than the compressed gland we see today. It is, therefore, quite understandable that the first instruments for removal of a diseased breast were various designs of circular clamps, the operation being truly an amputation. The elliptical incision with the nipple as its centre was devised in order to conserve skin, to cover the large raw wound which remained. In 1866, Philip Chilwell Delagarde, an ex-Bart.'s student on the staff

of the Devon and Exeter Hospital, remarked that "the Surgeon of a great Hospital would hardly render justice to his position if he had not sufficient self-reliance so to alter old operations or devise new ones so as to meet each varying contingency of disease or accident." He found that the disease could not always be included in the ordinary elliptical incisions, and describes two cases "in which I removed the contaminated parts, and yet retained integument enough to cover the wound. (Fig. 1.) I had to forbid the hope of absolute cure, but I told the poor

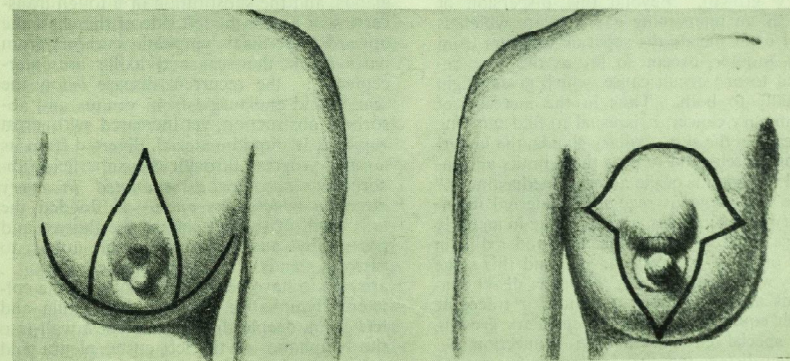


Fig. 1. Alternative lines of excision suggested by Delagarde in 1866.

creatures that life might be prolonged, and that when the disease did return, it might bring them to their end with far less distress than if allowed to take its course. This seems in course of fulfilment."

He describes three further cases of carcinoma of the breast treated by simple mastectomy. One died from metastases a few months later, and one was alive and well three years later. The third patient: "Mary Sweet (of Cullhampton), a mother aged 43. History: 18 months; knotty hard tumour in breast, the size and shape of an egg."

15.11.1847. Tumour, skin and breast together with lymph glands extending up to the artery removed.

16. 9.1848. A large tubercle removed from the scar.

3.11.1856. Removal of a tumour the size of a small orange from the cicatrix.

May, 1867 (last follow-up note). "She is grown into a little, hardy fresh-looking old woman: there is a small tumour below the clavicle near the sternum."

One of the puzzling features of cancer to these surgeons of the past was the method of dissemination away from the local growth. Charles H. Moore, a Bart.'s student, later on the staff of the Middlesex Hospital, reported on a case in 1867, illustrating extensive cancer traceable to dispersion from the primary tumour. "as distinguished from its constitutional reproduction. Under ordinary circumstances a dissemination of cancer is distinctly recognisable in the vicinity of the primary growth. Beyond this dispersion of cancer an intervening gap appears which is held to dissociate the separate tumours from one another, except so far as they are related to one occult cause, which gives origin equally to both. Thus in the increase of mammary cancer, it is usual to find outlying disease in the skin, axillary glands, the underlying muscle, and to pass these limits and invade the glands of the anterior mediastinum." The old surgeons recognised internal mammary gland invasion as happening in an early stage, linking it with the skin and axilla in the order of progression. Beyond this stage they were in difficulties. "Further disseminations are not equally common or traceable with equal certainty to the primary growth. In special circumstances a connection between distant tumours is obvious from some incidental character which they possess.

Melanosis thus carries everywhere the stain of its origin."

He describes the case of Mary S., aged 43, a dressmaker, slender and pale, "who had a carcinoma of the breast with an oily characteristic recognisable macroscopically. The whole of the left breast is enlarged by a firm, elastic tumour, the skin over it being discoloured and in part ulcerated. There is a cluster of enlarged glands in the axilla and a firm globular gland above the clavicle."

May 30, 1865. The tumour, breast and axillary glands were removed, the wound being washed with zinc chloride. By August the wound was healed with a thick transverse scar.

Her further progress is then recorded with the regular observations of a medical Pepys: October, 1865. Nodules just below the scar.

The scar and the armpit above are healthy. November, 1865. A great advance has taken place in the disease. In mass, in ulcers, and in nodules, it extends over half the chest, below the scar, down to the 10th and 11th rib, and round towards the scapula. The supra-clavicular fossa is free, but there are two large glands in the opposite axilla. Later the disease spread to the left groin, the opposite chest, and to the left chest and supra-clavicular region last of all.

The patient died, and a post mortem examination was carried out. Remarks: "However inexplicable the diffusion of cancer usually is, in the case of Mary S. it appears to be traceable. Upon the removal of the primary tumour with the axillary glands, and the substitution of a tough transverse scar across the left side of the chest the upward superficial lymphatic currents from parts below the scar and axilla are intercepted . . . the recurrent disease below the scar, tumid and turgid from venous and absorbent obstruction, yet increased with great rapidity. Its liquid material, diverted from its normal progress through the superficial absorbents, becomes disseminated in every direction which was open. It flooded the lower half of the left side of the thorax, and passed by anastomosing lymph tubes to various glands. The precise course . . . appears to have been superficially by the collateral lymphatics into the right axilla and left groin, deeply through the chest wall into the lymphatics of the left costal pleura and upper glands of the anterior and posterior mediastinum . . . whilst its advance through

the upper glands and scar was impeded an accumulation below these obstructions took place. Presently some of the bronchial glands received the disease which also regurgitated on the lumbar glands. . . . Upon destruction of the scar the abundant material from the primary growth rapidly passed in a normal current through the upper flap and filled the

here and there until ultimately a gap is found, when off they go. Similarly the carcinoma cell drifting in the silent streams in the tissue spaces is impeded by scar tissue, until ultimately a gap is found. It is carried to a remote and bizarre site where it settles down and reproduces itself. If a growth is not totally removed and cells remain in the



Fig. 2 Carcinoma of the Breast. Recent case, showing skin infiltrations stopped by scar tissues and beginning in a few places to extend across it

glands at the left side of the neck. As lastly the diaphragm becomes covered with it, the white matter passed into the suspensory ligament of the liver, and into the liver itself near the ligament."

Experience of post-operative cases confirms the observation on the effect of a scar on the spread of carcinoma of the breast. (Fig. 2.) It raises the question of the effect of surgery, especially radical mastectomy and axillary dissection, on the bizarre spread of carcinoma of the breast. Lymph node metastases in the groin or opposite axilla, skin infiltration below the scar spreading posteriorly and laterally around the chest wall, are not uncommonly seen. The similarity of cancer to a crab is greater than that of a central body with outgrowths. If one watches small sand crabs darting hither and thither, their passage is seen to be blocked

operative field, that patient's only chance is to have a dense wall of scar tissue to impede its travels. Radiotherapy may not destroy every malignant cell, but it may produce fibrosis sufficient to limit the spread of the growth. Thus as far as the patient is concerned, simple removal with radiotherapy may be safer than radical removal if a gap is left in the fibrous wall. Mr. Keynes has long taught that by axillary dissection it is impossible to remove all the involved lymph nodes if the disease has spread that far, whilst if it has not it is unnecessary. Glands removed after full radiotherapy may show what we term viable carcinoma cells, but these cells are confined by the fibrosis induced around them. There is a school of teaching to-day which maintains that, in certain types of growth, radical mastectomy

may do more harm than simple removal together with radiotherapy.

The progress of surgery has been towards more extensive removal. This development occurred some 70 to 80 years ago, and is recorded in the writings of Sir Henry Butlin. His work shows what various types of pure surgery could achieve without radiotherapy. In the first edition of his book, "The Operative Treatment of Malignant Disease," first published in 1887, the leading theme is that an operation should be adapted to the nature and condition of the disease in each part of the body, and should not be dictated by theoretical considerations unless these were founded on the most careful observations. He was criticised as being the advocate of partial operations. Mitchell Banks of Liverpool obtained a cure rate of 15%, Butlin only 10%. Butlin objected to the Banks' operation as being needlessly large and dangerous, and pointed out that their respective operative mortality was 15% and 10%.

In 1898, with the help of his chief assistant, J. Preston Maxwell, Butlin traced 126 out of 129 patients that he had personally operated on at St. Bartholomew's Hospital and in private practice. He records his observations as follows: "My conception of Cancer of the Breast, as I knew it then, was that it consisted in an alteration in a certain part of the breast; that it spread locally from that part as from its centre, and always spread farther than the naked eye or touch could distinguish, that it affected the integument immediately over it, and again spread in all directions from that point; that some juice or material which could not be perceived was carried after a time to the lymphatic glands, and was capable of originating the similar disease in the glands; but that the lymphatics between the primary disease and the glands were in most cases free from the disease, and that the glands might entirely escape infection if the disease was very slow in progress or was removed at a sufficiently early period.

With this in mind I carried out an operation in which the tumour became the centre. . . . The disc and about an inch in every direction was removed; the fascia beneath the tumour and a part of the muscle was taken away . . . and the axilla was cleaned out only if the glands were enlarged.

My attitude in regard to operations for Cancer of the Breast remained much the same until 1894 . . . but towards the end of

1894 I happened on Professor Halsted's paper. He had taken for the scientific basis of his operations the investigations of Heidenheim on "The Causes of Local Recurrence after Amputation of the Breast" (Langenbeck's Archives, Vol. 39, 1889). I had overlooked this paper . . . and had not studied thoroughly another paper on the "Surgical Anatomy of the Breast and Axillary Lymphatic Glands" reprinted from the Edinburgh Medical Journal, 1892, which the author, Mr. Harold Stiles, had been so good as to send me. Heidenheim came to the conclusion that every mammary gland in which a nodule of cancer exists is in very wide extent diseased, and that epithelial cells are carried away over wide areas in the lymph vessels of the mamma. . . . The pectoral fascia is very rich in lymphatics which are early occupied by metastases of cancer, the lymphatics of the breast communicate with those of the skin through the great lymphatic plexus beneath the areola . . . and from this plexus it is conveyed to the inferior axillary glands through two large afferent vessels. Stiles drew out a very different scheme of the anatomy of the breast from that which formerly existed. He fully concurred with Heidenheim in believing that cancer cells are soon and widely conveyed through the lymphatics of the breast, and particularly towards the pectoral fascia. He discovered lymphatics containing cancerous emboli:—

1. In the connective tissue processes radiating from the tumour into the surrounding breast tissue or circum-mammary fat.
2. In the breast tissue remote from, as well as close to, the tumour.
3. In the connective tissue septa separating the lobules of circum-mammary fat.
4. In the so called "ligaments of Cooper," where they often lead to small disseminated cancerous nodules in the corium.
5. In the retro-mammary tissue and pectoral fascia. "Occasionally the glands above the pectoralis minor, in the apex of the axilla and under the clavicle, are diseased, while the pectoral glands are normal. This points to the probability that some of the lymphatics from the mamma pass to join glands at the upper part of the axilla direct, without entering the pectoral group."

"I have never been in the habit of allowing myself to be rashly led into the performance of extensive operations which are based solely on theoretical considerations, even when supported by microscopic inves-

tigations unless the theory was also supported to a reasonable extent by clinical observations. When, then, I had read the papers of Heidenheim and Stiles, I began to consider how far their investigations accorded with what I had actually seen in practice. . . . The number of cases in which there was recurrence in the breast region (not the axilla) was remarkable. Some were in the tissues beneath the skin, and I quickly called to mind several cases in which the recurrent tumour had been in the muscle. For instance, in 1891 I removed the breast of a lady for a small tumour immediately beneath the nipple, which was much retracted. I made a note at the time to say that it was very moveable on the pectoral muscle. The fascia was roughly cleared off the face of the pectoral but none of the muscle was removed. In 1894, and again in 1896, I removed a small recurrence from the substance of the pectoral muscle . . . some distance beneath the middle of the scar.

I therefore come to the conclusion that a few more patients in every hundred might be saved by a more complete removal of the mammary gland, a free removal of the whole thickness of the pectoral muscle beneath the disease and by a more systematic and careful dissection of the axilla. Halsted's operation appeared to me to answer better to these indications than any other, and since 1895 I have made it my routine operation. Two objections have been made against it by some of my colleagues, first, that it is very dangerous to life; second, that the movements of the upper extremity are likely to be greatly crippled by a wholesale removal of the muscle. . . . So far from the movement of the arm being seriously restricted, I have been surprised to find that it is, as a rule, better than when the muscle is left behind. It depends almost entirely on the amount and piece of skin which is removed. In closing the wound, the greatest care should be taken to supply a very good covering of skin to the axilla. If there is no subsequent tension there, the arm can be freely moved."

The Second Exhibition of Painting at Bart.'s

The last receiving day for entries for the Exhibition which is to be held in the last week in September, is Monday, September

BUTLIN'S RESULTS

His "alive" cases are all over three years, and in most tables imply 3-15 years survival.

Group I.—Removal of portion of the breast either with or without removal of the glands.

Total: 23 (glands removed in 18).	
Died of operation	2
Dead or alive with local recurrence	9
Died of cancer without local recurrence	5
Alive and well (26%)	6
Untraced	1

Group II.—Removal of breast only.

Total: 10.	
Died with local recurrence	3
Died of cancer without local recurrence	1
Alive and well (60%)	6

Group III.—Removal of breast and lymphatic glands (not in one continuous mass).

Total: 83.	
Died of operation	4
Untraced	2
Died or alive with recurrence	39
Died of cancer without local recurrence	16
Died of other causes	5
Alive and well (21%)	17

Complete results of these three groups:—

Total	116
Alive and well	29
	(3 to 15 years)
Five years and over	27

Group IV.—Halsted's Operation.

Total: 13.	
Alive and well over 3 years (70%)	9

The operation in all cases was adapted to the apparent requirements of the case, but were procured under very disheartening conditions . . . there were many in which the axilla was full of cancerous glands and several in which the primary tumour was ulcerated, and some had enlarged supra-clavicular glands.

Great advances in the treatment of cancer have occurred since Butlin's day, and our knowledge of the disease is considerably greater. On the other hand some of the questions about carcinoma of the breast

15th. The Exhibition is to be opened on the 19th of that month. Contributions should be left at the Medical College Library.

which worried him still worry us now, not the least of which is the correct treatment to apply in each particular individual. The variability of anatomy of the macroscopic tumours, and of their minute structure pose a problem for which there is no single answer. In deciding upon treatment, surgical skill must be tempered by the consideration of what harm can be done, such as the opening up of pathways to a beast ever eager to migrate through a line of least resistance. Surgery is rational as a method of treatment only in so far as its use ensures total elimination or non-interference with reactions which confine a growth. It is obvious that hope in the future can only lie in methods which will

alter the character of the cells and restore them to normal behaviour so that they obey the rules and orders of physiological control. Meanwhile, in the words of Anatole France: "Let us not lightly cast aside things that belong to the past, for only with the past can we weave the fabric of the future."

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THE OLD AND THE NEW

by GEORGE GRAHAM

IN the last 51 years I have had three operations, and I think the conditions under which they were performed and the anaesthetics used may be of interest. At the age of 18 my adenoids were eradicated, and a large spur removed from my nasal septum. The operation was performed by a surgeon then at the height of his reputation, both in and outside this Hospital. It was carried out in my bedroom on two tables. The instruments were boiled in the room, and when I innocently enquired why this was necessary, I was told that it made them sharper. Unfortunately a tag of adenoids was left behind, and I told my family doctor, who was responsible for sending me later on to become a student of the hospital, and to whom I am, therefore, deeply grateful—that something was moving up and down in my throat. Unfortunately he could not see anything, and it was not till an offensive nasal discharge and nasty taste in my mouth had developed that I was taken to see the surgeon again. He snared the tag of adenoids, but I developed constant trouble with nose bleeding, crusting and a liability to sore throats. On coming to the hospital 3½ years later, I was treated for a severe granular pharyngitis and an ulcer on the septum by various members of the Throat Department. Eight years after the operation I was advised to stop smoking, which was no hardship as

my throat was often too sore to do so. The granular pharyngitis soon ceased to trouble me, but the crusting and discharge continued to cause much minor discomfort until some 15 years ago, when I was advised to avoid using any menthol preparations because they damaged the cilia. Since then a mixture of vaseline and liquid paraffin put up each nostril at night is sufficient to prevent any discomfort. I spent some money, which I could ill afford when I was young, on nasal sprays etc. in the course of 36 years, but I have saved vastly more by not having smoked for 43 years. I am very grateful to those who looked after me, and I am afraid I was often a great nuisance to them.

The second operation was for a congenital hernia, when I was forty-two. I was admitted to Etherington-Smith Ward, which was reserved for Chief Assistants and Residents. The operation, by the late Professor George Gask, was a complete success and my abdominal muscles successfully sustained—some ten years ago at Friern Hospital—the not inconsiderable weight of the heaviest member of the present staff.

The third operation was performed by Sir Archibald McIndoe some five months ago for the removal of my palmar fascia, to prevent a Dupuytren's contraction, and was performed in the London Clinic. It has been successful and I do not anticipate that it will

affect my golf, though as the length of my shots gets less year by year it may be difficult to determine. I am shocked that so very few people recognise the association of Garrod's pads on the knuckles and Dupuytren's contraction. They were first described by Sir Archibald Garrod, and consist of hard masses which may be quite large, but are usually small. They are so hard that they suggest a bony swelling, but Hale White's X-rays and sections showed that they and the palmar nodule were formed of fibrous tissue. They are, I believe, caused by minor knocks on the knuckles. If trauma is avoided the nodule gets smaller. I have never seen a patient with either a hard nodule in the palm or a typical Dupuytren who did not have definite Garrod's pads, though they might be very small. McIndoe, with his much larger experience, has found them in 80% of his cases. I believe that the hard nodule in the palm arises as a result of minor but long continued trauma on the palm in a person who lays down fibrous tissue very easily. Garrod believed that there was a close association between his pads and Dupuytren's contraction and when I first showed him my knuckles 31 years ago he suggested—very unwillingly—that I might develop a Dupuytren later on, which I did 28 years later. Both my father and one brother had Dupuytren's contractions and Garrod's pads. I taught about the association of the two all my time at the hospital but apparently without success.

The type of anaesthetic used in the three operations is of considerable interest. For the first one, there was no premedication and I stood and walked about the room while the tables etc. were being arranged. I think I was given gas and ether and I have no unpleasant recollections. My mother complained that she was left alone to look after me while I was still unconscious, since a nurse was not considered necessary. I was not sick and I have no recollection of any abdominal discomfort. For the second operation I was given morphia and scopolamine and then gas and oxygen and ether. The induction was quite pleasant and I was not sick. But I had considerable abdominal discomfort, with some flatulence and distension, for the next two days. It was impossible to pass any wind and micturition 24 hours after the operation was very difficult to start. All these symptoms disappeared after my

bowels had been opened, but it was an unpleasant two days.

The third operation was not started till 4.30 p.m. as I had work to do in morning, and did not get to bed till 12 noon. I was then given some Bovril and a biscuit, and read for the next four hours. I had talked to Dr. John Hunter about my dislike of morphia or omnopon, and as he never uses them, he arranged for me to have 100 mg. of Pethidine and 1/100 gr. (about 1½ mg.) of atropine sulphate. These were given at 4 p.m. in separate injections, and I tried to go to sleep. At 4.30 p.m. I was asked to move on to the stretcher and I was conscious of the journey up in the lift, of the prick of the pentothal injection in my arm, and saying I had no pain in my fingers. For the next hour I was given gas and oxygen only. I was waked at 8.30 p.m. and told to breathe deeply, which I did a few times only, as I was soon fast asleep. I woke at 2.30 a.m. or so, for a short while, to pass urine and have some milk and a biscuit. I had to be wakened at 8.45 a.m. for a wash, and was mildly scolded about 10 a.m. because I had not done any deep breathing. I did not have the slightest abdominal discomfort or difficulty in micturition, and ate my meals that day with pleasure.

It is of course possible that the abdominal discomfort was due to the hernia operation, but this was a simple condition as I had noticed it for the first time a few weeks before. I think it is much more likely to be due to the morphia I was given. I know that it can sometimes cause vomiting even when no anaesthetic is given, and I have the impression that it and not the anaesthetic is responsible for the vomiting and general discomfort after the operation, which still occurs in some cases. One of my patients was very sick after two abdominal operations and thought it was due to omnopon. When she went into hospital for an operation on her foot, she told the nurse, the sister, the house surgeon, that she was sensitive to omnopon and asked if she could have something else. Perhaps she said too much, or the house surgeon did not know that omnopon was a morphia preparation, but she was given morphia and she vomited much more than she had done after either of the abdominal operations. Recently an old and experienced doctor had to have an operation on his gall bladder. I knew that he was badly upset by tincture of opii and

I suggested to Dr. Frankis Evans—who holds strongly to the opinion that morphia compounds are a frequent cause of vomiting—that pethidine and atropine only should be given as a preparation before the pentothal, gas and oxygen. This was done, and the doctor, who had seen many patients exceedingly uncomfortable after operation, was delighted to find that he had no abdominal distension and that he was able to pass wind soon after recovering consciousness.

The late Dr. Drysdale used to pose his clerks with this question. "How do you think knowledge spreads in this hospital?" To which the wary clerk would reply, "I don't know, sir." "Well, A. knows something which B. doesn't. A. doesn't tell B. either because he doesn't know that B. doesn't know it or doesn't think B. would like to be told. B. doesn't ask A. because he doesn't know that A. knows something he doesn't. But A. teaches his own house physician and he tells B.'s house physician, who tells B." The time which this process takes—rather like a double Knight's move—depends partly on

the receptivity of B.'s house physician and his antagonism to anything coming from A.'s firm, and partly on the awe in which B.'s house physician holds B. and partly on B.'s receptivity to anything proposed by his house physician.

May I, as an elderly physician, want to rush in where angels fear to tread, suggest that the A.'s and B.'s should meet directly on this point and decide to ban morphia and omnopon—not only in pre-operative treatment but in most, if not all cases in which morphia is used as a pain-killer. It may be that pethidine in the usual doses is not such an efficient pain-killer as morphia, but I hope the experiment will be tried. Doubtless some people are upset by pethidine, but the number seems much fewer than those sensitive to opium and something yet better may be discovered.

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Christian Union

The Annual Weekend Houseparty, from May 16th to May 19th, was held at Holmbury St. Mary near Dorking. Twenty-seven students and nurses were there and took part in a series of four Discussion Bible Studies on Christian Discipleship led by Jim Packer, an Ordinand from Wycliffe Hall, Oxford. The Host and Hostess were Dr. and Mrs. D. P. Cocks from Ealing.

On Saturday afternoon there was a cross country ramble to Leith Hill, and on Sunday Abinger and Peaslake were visited. A very enjoyable time of spiritual and mental refreshment resulted in a new insight into the daily practical significance of the Christian Faith. Such opportunities for Christian fellowship are rare and we give thanks to God for this blessing to our Christian Union.

Other activities included the showing of a film entitled "Hidden Treasures" in the Clinical Lecture Theatre. Ranging from the galaxies of outer space to the unicellular denizens of a drop of pond water, the film showed that if the Creator cared in such a way for big and little things alike His concern for the highest of His creatures must be infinitely greater.

Marriage

Dr. W. N. A. Taylor (Bart.'s 1945-1951) son of the Rev. and Mrs. W. R. O. Taylor of Underriver, Sevenoaks, was married to Dr. N. L. Earland, daughter of the late Mr. E. F. Earland and of Mrs. J. Earland of Sidmouth, Devon, on June 7th, 1952, at St. Margaret's Church, Underriver.

Deaths

We regret to record the deaths of the following Bart.'s men:

Maurice Grey Pearson, F.R.C.S., suddenly at his home in Durban on May 13 last, aged 80.

Dr. G. J. R. Lowe at Lincoln on March 31 last, aged 81.

Colonel Douglas Crellin, M.C., R.A.M.C., at Harrogate on May 15 last, aged 62.

Dr. A. M. Amsler at Hawkhurst, Kent on June 11, aged 76.

Dr. John Taylor, recently Lecturer in Forensic Medicine to the Hospital, in London, on June 16th, aged 66.

Sir Percival Horton-Smith Hartley, C.V.O., M.D., F.R.C.P., in London on June 30th, aged 84. An obituary notice will appear in our next issue.

LEONARDO DA VINCI'S ANATOMY OF THE HEART

by K. D. KEELE, M.D., F.R.C.P.

Leonardo da Vinci's amazing power of vision penetrated into a wide range of natural phenomena, from the infinitely large, such as the movements of the sun, moon and stars, to the infinitely small such as the movements of the parts of the valves of the heart—and always these observations were urged on by his persistent desire to understand the laws governing them.

It is only by studying his notebooks that we have come to know how scientific was the mind behind that vision of his. The greater part of their 6,000 pages is devoted to mathematics and mechanics. "Mechanics," says Leonardo, "is the paradise of the mathematical sciences because by means of it one comes to the fruits of mathematics." From this point of view he applied himself to the problems of "local movement" in animal and human bodies.

It is in his studies of the movement of birds in flight that he expresses his grasp of those laws of motion we name after Newton. And it was from his work on the action of the muscles around the hip joint that he expressed the general law regarding relaxation or stretching of antagonist muscles formulated by Sherrington.

The deep obscurity which overlooked Leonardo's anatomical work is illustrated by the fact that as recently as 1907 it was claimed by Roth that Leonardo had never dissected a body, a statement made in ignorance of Leonardo's own description of 12 completed dissections, and of his detailed descriptions of his technical problems, let alone the evidence from his drawings of structures unknown to anyone else in his day.

The difficulties of obtaining bodies for dissection, though obviously great, are never mentioned by Leonardo. Dissection he often carried out in the hospitals in Florence, Milan, or Rome, but in the absence of any method of preserving the body, work had to be completed quickly. Those of us who have attempted dissection under ideal conditions with an accurate manual to guide us, will appreciate Leonardo's remarks about his difficulties:—

"And you who say that it is better to look at an anatomical demonstration than to see these drawings, you would be right if it were possible to observe all the details shown in these drawings in a single figure, in which with all your ability you will not see, nor acquire a knowledge of more than a few veins. While in order to obtain an exact and complete knowledge of these I have dissected more than ten human bodies, destroying all the various members, and removing even the smallest particles of flesh which surround these veins . . . And as one body did not suffice for so long a time, it was necessary to proceed by stages with so many bodies as would render my knowledge complete; and this I repeated twice over in order to discover the differences."

He goes on to point out that, "though possessed of an interest in the subject you may perhaps be deterred by natural repugnance . . . or fear of passing the night hours in the company of these corpses quartered and flayed and horrible to behold."

We recognise these as the words of the authentic pioneer searching out the geography of the "lesser world," as Leonardo called the human body. "There shall be revealed to you in fifteen complete figures the cosmography of the lesser world . . . placing before your eyes the whole figure and capacity of man in so far as it has local movement by means of its parts."

The emphasis on "local movement" will here be noted—for this formed the basis upon which he founded the greater part of his physiological studies. This is the reason that Leonardo achieved his greatest success in the study of the muscles and their action.

It was one of Leonardo's strokes of genius to appreciate that the heart itself is a muscle, a truth that had been concealed for over 1200 years by Galen's repeated statements to the contrary. Leonardo describes the heart as "a vessel made of thick muscle, vivified and nourished by the artery and vein as are the other muscles," and he does not fail to follow up this statement with a drawing of the heart showing with beautiful clarity the origins and course of both coronary arteries (Fig. 1). Several other drawings are devoted to the coronary arteries and veins, and to elucidating the regions supplied by each main branch.

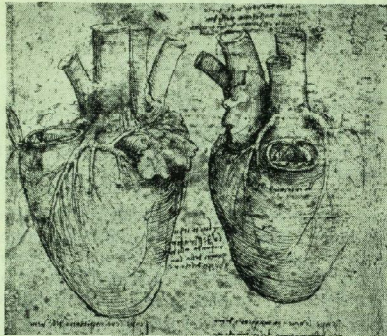


Fig. 1.—Drawings of the heart from two aspects showing the origin of the coronary arteries and a section across the pulmonary valves



Fig. 2.—Diagram of the four chambered heart showing the atria and ventricles of comparable size. The muscle of the auricle is represented by a serrated line and the invisible interventricular pores by transverse lines.

If the heart is a muscle then it should have a nerve supply. Leonardo looked for this particularly whilst he was dissecting out the vagus nerves. He describes the left vagus as "descending to the case of the heart (pericardium) and I believe that this is the nerve that enters the heart."

Having established that the heart is a muscle, Leonardo proceeds to define and draw its structure in great detail. To gain a comprehension of the muscles and valves he draws longitudinal and transverse sections, inflates the cavities with air in order to bring out in relief the fine trabeculae carneae, dissects out each of the valves and their cusps, drawing them also in position from above and below, open and closed, and finally makes a glass cast of the aorta to study the movement of the cusps of the aortic valve.

This work was proceeding for most of his lifetime, and it seems that it was as late as 1513, some six years before his death, that it resulted in his great discovery that the heart consisted essentially of four chambers, and not two only as had been held since the time of Galen. The two new chambers now included in the heart Leonardo called the "upper ventricles or auricles"; they correspond to what we now describe as the atria.

Galen had described the small auricular appendages now termed auricles, attributing to them the function of taking up excess blood or air in emergency. Leonardo realised that these small appendages were only part of a bigger chamber, the atrium, and that this "upper ventricle" contained as much blood as the lower, and that it contracted and pushed its contained blood into the lower ventricle. To make this quite clear he writes pages of emphatic notes with unfortunately only a few drawings of which the clearest is shown here, considerably enlarged (Fig. 2). In it the "upper ventricles" it will be noticed, are of comparable size with the lower. The serrated lining to the atria is inserted to represent the muscle and show the source of the power of contraction of these atrial chambers so that they can discharge their blood into the lower ventricles.

It will be noticed that the interventricular septum is crossed by transverse lines. They represent the invisible pores whose existence Leonardo still accepted from Galenic tradition.

But Galen cannot be blamed for a further error illustrated by this figure. If Leonardo was right in thinking that the blood was ejected from atria to ventricles, he was wrong in believing that when the lower ventricles contracted they returned most of the blood to the atria, so that

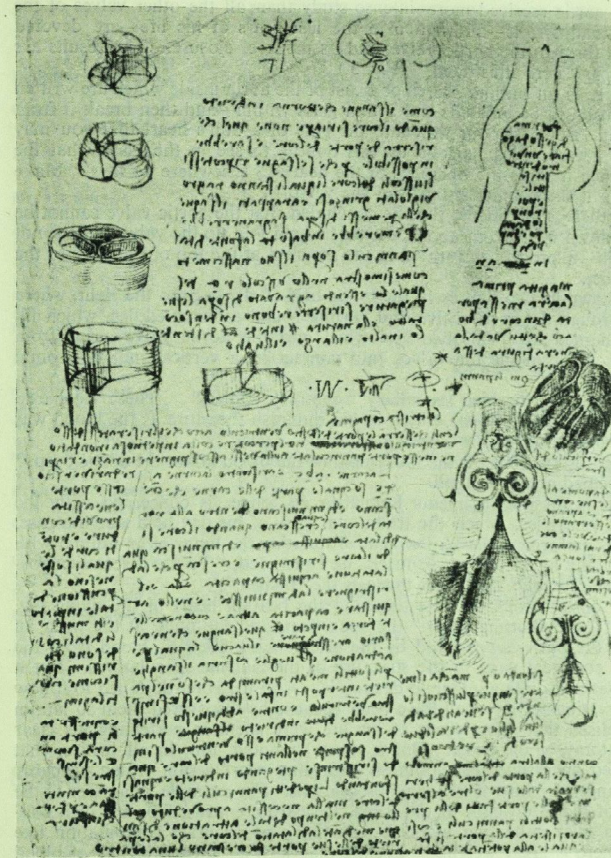


Fig. 3.—The mode of closure of the aortic valves. This page of notes is devoted to details regarding the construction of a cast of the aorta, and studies of the mode of closure of the aortic valves.

discovery, from half the truth, into the pit of error. Perhaps we may read in this a lesson to all those who attempt scientific research! For this conception of heart action and function is incompatible with that of the circulation of the blood as described by Cesalpino and Harvey, who did not seriously challenge Galen's erroneous hypothesis that the heart was the "innate" do rightly questioned.

As a result of this theory of flux and reflux in the heart Leonardo considered that the valves of the heart normally allowed regurgitation before they closed "with perfect shutting." Yet in his studies of the aortic valve his own results repeatedly demonstrate early "perfect shutting."

the main movement of blood in the heart was like a shuttle to and fro "in flux and reflux" as he describes it.

This conception of Leonardo's resulted from his acceptance of Galen's idea of the heart as the chief source of body heat in warm-blooded animals. Leonardo, from his studies in physics had found that heat was created when fluids were put into frictional movement. He thought to have found such a process going on in the heart as would provide a mechanical explanation for its production of heat, an explanation far preferable to that of some mysteriously "innate" quality postulated by Galen. Such friction, according to Leonardo, was produced by the blood being pumped to and fro from upper to lower ventricles "in flux and reflux" so that "the friction it makes within itself, whirling round in diverse eddies, and the friction which it makes against the walls . . . are the cause of the heating of the blood."

It is amazing how swiftly Leonardo stumbles from a great discovery, from half the truth, into the pit of error. Perhaps we may read in this a lesson to all those who attempt scientific research! For this conception of heart action and function is incompatible with that of the circulation of the blood as described by Cesalpino and Harvey, who did not seriously challenge Galen's erroneous hypothesis that the heart was the "innate" do rightly questioned.

For some reason the aortic received more intense study than all the other valves of the heart. Several pages of manuscripts—all written in the last years of his life—are devoted to the movement of blood through the aortic valve, and its mode of closure. The results are well summarised on the page here illustrated. (Fig. 3.)

In the top right corner is an outline sketch of a cast of the aorta inside which are written the words "A form of gypsum to be inflated, and a thin glass within—and then break it from head and foot in a, and n. But first pour wax into the gate of a bull's heart that you may see the true form of this gate." This he tells us was done "to see in the glass what the blood does in the heart when it shuts the openings of the heart." Elsewhere he says, "Make the glass trial and move in it the pannicles (cusps of the valve)".

It was as a result of these experiments that he concluded that the aortic valve cannot be closed by blood pressing down on it from above, for that would fold up the valve leaflets, not bring them into opposition—a process illustrated in the diagram at the top of the page to the left of the sketch of the cast.

What does occur is shown in two figures in the lower half of the page to the right, where blood is shown passing through the aortic valve and curling round to form eddies, which fill the clearly drawn sinuses named after Valsalva, and whirl into the aortic valve cusps from below, so filling them out and bringing the valves into contact in a vertical, not horizontal plane.

Above the main primary may be seen secondary "contrary eddies." These Leonardo thought retarded the velocity of the blood, which would diminish therefore as the blood was propelled through the arteries "until the impetus consumes itself."

How correct are these observations on the movement of the blood about the aortic cusps? Until the experiment is repeated no one can tell.

It will be noticed that in these experiments Leonardo no longer is concerned with the presence of air in the left ventricles, which the traditional view of his day held was the case. To test this hypothesis he performed the experiment of inflating the lungs of an animal with bellows and, failing to find any air in the left ventricle, he concluded, "To me it seems impossible that any air can penetrate into the heart through the trachea."

Leonardo made other observations, such as those on the beating heart of the dying pig, and the synchronisation of "the shutting heart" the apex beat, and the pulse at the wrist, in which he appreciated that the pulse is produced by the artery being filled by blood from the heart—all findings which cut great gaps in the structure of the Galenic speculations. But it is one thing to hit the target and quite another to destroy it. And if Leonardo failed to follow up these penetrating observations it may well have been because he discovered them so late in his life. It should be realised that many years of his life were spent in perfecting his clear and true ideas of the anatomy of the heart. But it must be noted, too, in all justice, that Leonardo himself advanced an erroneous hypothesis regarding heart action which probably obscured the true significance of many of his own observations. For example, in answer to the question of the quantity of blood brought to the heart, Leonardo, confused by his own conception of the heart as a friction-heating machine, can make no accurate computation like Harvey, but only say "There is great weight." Feeling that such a "great weight" of blood could not be consumed by the tissues he postulates the return of "superfluous blood" to the intestines by the mesenteric arteries. A kind of circulation of blood from intestine or liver to the tissues and back is thus suggested—but it is a false one.

Surveying Leonardo's work on the heart one must remember to measure his achievement from a starting point but little above zero—and that little distorted in the mirror of corrupt Galenism. One sees him struggling to correct those distortions, and he finally leaves us with an anatomy of the heart incomparably more true than he found it. And yet with its many loose clues and suggestions, one is left with the sense of sadness which surrounds fragments of a great work unfinished.

Paul Burrows

It is with deep regret that we announce the death, after a short illness, of Paul Burrows. Many here have lost a good friend and the Hospital one of its best students.

A fuller note will be published in our next issue.

HOSPITAL APPOINTMENTS

The following appointments to the Medical Staff have been made:—

Registrar—Ear, Nose & Throat Department (Whole-time)

Mr. R. MacN. Jones (vice Mr. R. G. Boyd and Mr. B. Cohen) as from 1st July, 1952.

Casualty Registrar (Surgical)

Mr. R. D. Nicholson (vice Mr. M. F. Hunt) as from 1st July, 1952.

House Appointments at Smithfield—1st July to

31st December, 1952

Dr. G. Bourne	M. W. Sweet-Escott
Dr. R. Bodley Scott	Miss L. Feldberg
Dr. E. R. Cullinan	D. D. Cracknell
Dr. K. O. Black	B. D. Lascelles
Dr. A. W. Spence	G. Haysey
Dr. N. C. Oswald	H. T. Davies
Dr. E. F. Scowen	G. P. Greenhalgh
Dr. W. E. Gibb	C. W. H. Havard
Prof. R. V. Christie	J. H. Briggs
Dr. G. W. Hayward	M. G. Price
Mr. J. B. Hume	B. R. Whittard
Mr. A. H. Hunt	J. A. Girling
Mr. R. S. Corbett	G. S. Banwell
Mr. A. W. Badenoch	J. D. H. Cave
Mr. J. P. Hosford	R. V. Fiddian
Mr. E. G. Tuckwell	H. B. Ross
Mr. C. Naunton Morgan	P. D. Matthews
Mr. D. F. E. Nash	M. J. A. Davies
Prof. Sir J. Paterson Ross	E. W. Evans
Mr. J. B. Kinmonth	A. S. Blake

Casualty House

Physician: H. I. Lockett

Children's Department:

Dr. C. F. Harris	A. E. Dormer
Dr. A. W. Franklin	Mrs. G. E. M. Tarnoky

E.N.T. Department:

Mr. Capps	Mr. Jory	G. E. M. Thomas
Mr. Hogg	Mr. Cope	

Skin & V.D. Depts.:

Dr. MacKenna	Dr. Nicol	I. A. Horton
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Eye Department:

Mr. Philps	Mr. Stallard	R. F. Jones
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Gyna. & Obs. Depts.:

Mr. Shaw	Mr. Beattie
Mr. Fraser	Mr. Howkins

Interns:

B. St. J. Brown (Midwifery)	
D. K. Williams (Gynaecology)	

Junior H/S:

R. C. Cochrane

Anaesthetists:

N. E. Winstone (S.R.A.)

P. H. Simmons

A. A. Bapty

Mrs. H. S. Hopper

L. C. Dean

Dental Department:

Orthopaedic Dept.:

(Accident Service)

At Hill End Hospital

E.N.T. Department: D. P. Q. Smith

Orthopaedic Dept.: H. A. J. Thomas

G. I. Verney

Thoracic Dept.: R. G. Huntsman

J. A. Williams

Neuro-Surgical Dept.: J. Barnes

Anaesthetists: R. S. Atkinson

F. A. Almond

At Alexandra Hospital

R.M.O.: M. B. Watts

SPORT

*"Better to hunt in fields, for wrath unbought
Than fee the doctor for a nauseous draught.
The wise, for cure, on exercise depend:
God never made His work for man to mend."
—(John Dryden.)*

Sports Day

On May 24th, the Athletic Club held the 69th annual sports at Chislehurst. Mr. White prepared the track as smooth as they would have us believe is Curtis Gin. The fickle English sun decided that she too would have a day out, so that the setting for our sports was as perfect as we had dared to hope.

The Dean, Dr. Harris, presided at the sports, and Mrs. Harris distributed the prizes. Many of the staff shed their formal attire and manner, and came down at their week-end ease to see the students perform. Some of the chiefs gave invaluable assistance in judging and timing the events. To show their versatility the surgeons contrived to hold the watches, whilst the physicians held the tapes.

The tea deserves special comment. For 2s. less than last year the women students provided excellent refreshments. As 2s. will buy more than a pint of other excellent refreshment, we hope this innovation will continue and that the outside catering company will no longer pay their super-tax from the pockets of Bart's students.

The sports were followed by a dance in the pavilion, arranged by Mr. D. Craggs, virtuoso of the gramophone. Many couples, and alas, singles, sat outside on the lawns, whilst others went further afield.

Leslie Pringle, the Club's secretary, worked many days and nights to make this meeting the success that it was. No less untiring was the work of the captain, A. H. Macdonald, and Miss Bott. All who attended agreed what a successful day it was.

CRICKET

2nd XI v. LONDON HOUSE, on Saturday, June 7th at Chislehurst—Match lost.

Bart.'s: 107 (Aubin 29, Gillett 26).

London House: 108 for 3.

"A" XI v. RIDDELL'S ROVERS, on Sunday, June 8th, at Chislehurst—Match drawn.

Riddell's Rovers: 243 for 10 declared (Patterson 3 for 26, Winton 3 for 39).

Bart.'s: 63 for 1 (May 35 n.o., Nicholson 28 n.o.). Rain stopped play.

2nd XI v. OLD GOSFORDIANS, on Saturday, June 14th, at Kidlington, Oxford—Match lost.

Bart.'s: 85 (Kellett 28, Freeman 21).

Old Gosfordians: 86 for 7.

1st XI v. HORLICKS, on Sunday, June 15th, at Chislehurst—Match won.

Bart.'s: 175 (Murley 49, Aubin 42, Ford 35).

Horlicks: 104 (Clappen 5 for 33, Braimbridge 2 for 4, Ford 2 for 16).

2nd XI v. BARKING, on Saturday, June 21st, at Chislehurst—Match lost.

Bart.'s: 115 (Gawne 24).

Barking: 116 for 4.

1st XI v. R.N.V.R., on Saturday, June 21st, at Swakeley's—Match won.

R.N.V.R.: 143 (Ford 5 for 22, Clappen 3 for 31).

Bart.'s: 144 for 7 (Ford 37, Nicholson 30, Aubin 25, Jones (sub.) 20 n.o.).

1st XI v. PUTNEY ECCENTRICS, on Sunday, June 22nd at Chislehurst—Match lost.

Bart.'s: 86 (Ross 29, Ford 25).

Putney Eccentrics: 88 for 5 (Ford 2 for 41).

SWIMMING

The Swimming Club has had a moderately successful season, hindered by a lack of support which has caused the Club to lose the weekly hire of the Murlin St. Public Baths.

The Water Polo team has played well to finish second equal with St. Thomas' Hospital in the Inter-Hospital Polo League. An outstanding success of the year was the winning of the Inter-Club Invitation Relay race held by the Otter S.C. At the United Hospitals Annual Gala the Club gained places in three events.

L. Cohen has been appointed Captain of the United Hospitals Swimming Club. F. Low and P. Bliss have also represented the U.H.S.C. on several occasions.

Honours were awarded to L. Cohen and P. Bliss.

WOMEN'S HOCKEY CLUB

The Annual General Meeting of the Club was held on Thursday, May 15th, with the President, Professor Wormall, in the chair.

The following officers were elected for the season 1952-1953:—

Captain, Miss A. Tressider; vice-captain, Miss M. Bott; secretary, Miss R. Stephenson; match secretary, Miss E. Garrad; treasurer, Miss S. MacVie; committee member, Miss K. Reid.

Honours were awarded to Miss A. Caldwell. Colours were awarded to Miss A. Tressider and Miss P. Lindop.

BOAT CLUB

The Club has been very active throughout the summer, taking part in regattas at Chiswick, Walton, Reading, Marlow and Kingston since our victory in the London University Allom Cup Regatta in May.

At Chiswick Regatta the senior four were the victims of bad luck; heavy wash from a launch pushed us into our opponents, resulting in a bent rigger, which prevented the crew from completing the course. At Walton the same crew were the victims of bad umpiring, being badly fouled by their opponents, who were not disqualified.

Not until Reading regatta, and after a change in the order of the crew, were they able to show their true merit. Although they had only been together in the new order for a short time, they beat the National Provincial Bank, but were just beaten in the semi-final by a good crew from Corpus Christi College, Camb. In this race stroke strained a muscle and was unable to row his best, so that Corpus were just able to take the lead near the finish.

Junior fours at Reading were unsuccessful. At Marlow Regatta our eight drew Lady Margaret B.C., Camb. and St. John's College, Oxford. As the former were disqualified and we beat the latter fairly comfortably, we progressed to the semi-final, where we were beaten by Wallingford Rowing Club.

At Kingston Regatta we were unable to make a serious attempt to defend the Dean Challenge Cup won last year. We entered a scratch four, containing three members who had not rowed before this summer, and a novices' four consisting of four new members. The former, to their great surprise, defeated Kensington R.C. in their first heat, but were insufficiently fit to deal with a four from St. George's Hospital in their next heat. The beginners' four rowed enthusiastically but lacked the experience for success in their first regatta. However, they are potentially good oarsmen, and with further coaching and experience will undoubtedly win a cup for Bart.'s before long.

Another junior four has entered for Exeter Regatta in August.

Thirty-two members of the Club have been actively rowing this summer.

Crews:

Senior Four: Bow, F. R. Spink (steers); 2, G. F. B. Birdwood; 3, J. F. G. Pigott; str., D. H. Black.

1st VIII: Bow, C. J. W. Hunter; 2, R. J. Knight and P. G. Burton; 3, R. I. D. Simpson; 4, J. D. Salmon; 5, P. J. G. Smart; 6, J. M. Jones; 7, R. G. D. Newill; str., R. P. Harrold; cox, F. I. C. Millard.

Kingston Fours. "A" Crew: Bow, J. Randall; 2, I. H. Backhouse; 3, R. Goldsmith, str., R. G. D. Newill, cox, F. J. C. Millard. "B" Crew: Bow, R. P. Doherty; 2, M. A. Bedford; 3, T. P. Ormerod; str., T. W. Bolton; cox, M. G. Kilty.

BOOK REVIEWS

"I never read a book before reviewing it: it prejudices a man so."—(Sidney Smith.)

THE TISSUES OF THE BODY, by W. E. Le Gros Clark. O.U.P. 3rd Edition, 1952, pp. 407, Figures 124. Price 30/-.

Professor Le Gros Clark says in his preface to this edition—"It will be generally accepted that an introductory textbook should be not only informative: it should also endeavour to be intellectually stimulating." This dictum should endear him to all medical students who are bombarded by publishers with textbooks whose length and dullness is exceeded only by their price. Professor Le Gros Clark—an old Bart's man—is one of the most distinguished anatomists alive today, and his book is a work of real scholarship. It is well and interestingly written and is an excellent introduction to anatomy. All Charterhouse students should beg, borrow, buy or steal it.

AIDS TO PHYSIOLOGY, by H. Dryer. Fourth edition 1951, Baillière Tindall and Cox, pp. 325, figs 66. Price 7/6.

This little book is, like the others of the series, a readable one; it is *not*, like others of its type, an unreadable conglomeration of facts. In any condensed version of a large—one might almost say limitless—subject there are bound to be statements with which one could disagree; in this case there is no need for such disagreement for although there are a few such incorrect statements it is difficult to see how they could be avoided. Here is a book that can be confidently recommended to pre-clinical students, and one that will make a useful pocket-book for those in their clinical years.

STATISTICS FOR MEDICAL AND OTHER BIOLOGICAL STUDENTS, by L. Bernstein and M. Weatherall, pp. 180; 18s. London; E. & S. Livingstone, 1952.

The most important thing about this book is that it is based on a course of lectures given by the authors to pre-clinical medical students at the London Hospital Medical School. It therefore raises the whole question of the place of statistics in the medical curriculum. Has it a place at all? Can its relevance be properly grasped unless the subject is integrated with the rest of the course? Is it perhaps best left for post-graduate study? It would be interesting to know how, in the light of their experience, the authors would answer these and other questions.

The book itself is curiously unbalanced; it is only necessary to compare the chapter on the χ^2 -test with that in the Penguin "Facts from Figures" to see what an opportunity has been missed in the treatment of this most versatile of statistical techniques. On the other hand the more discursive chapters on the scientific method are most valuable and the authors deserve credit for bringing to light this apt parody of the inductive method, a "proof" that all odd numbers are prime: "One's a prime, three's a prime, five's a prime, seven's a prime, nine's not but that's experimental error—eleven's a prime, thirteen's a prime; why, the thing's proved!"

COMMENTARY ON AGE, by Kenneth Walker. Jonathan Cape, pp. 192. Price 12s. 6d.

Anyone interested in geriatrics or worried about growing old will enjoy this book. Mr. Walker is determinedly cheerful about the infirmities we usually associate with old age and dwells on the compensations rather than the troubles which come with the years. He paints an encouraging picture of what can be achieved if only one prepares early enough. He particularly enjoins the "quiet mind" as an important factor in growing old gracefully, but unfortunately he does not tell us how to acquire it.

He considers the important problems of work and living accommodation for the aged, outlining the ideal solution for both, and describes the philosophical and theological aspects of old age. Here he is on favourite territory, but in pointing out the advantages those who believe in a life to come have over unbelievers, he comes perilously near recommending religion for an aging body as one does digitalis for a failing heart—for its therapeutic value.

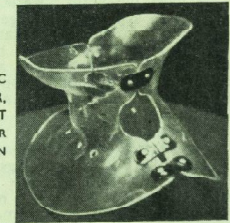
One is rather left with the feeling that to live an ideal old age one must begin to prepare in one's early teens—and never let up.

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THE LIFE AND WORK OF ASTLEY COOPER,
by R. C. Brock, Surgeon to Guy's Hospital.
E. & S. Livingstone, Ltd., 1952, pp. 176.
Price 20s.

Biographies are either long and somewhat tedious volumes intended to be used as works of reference, or shorter and more discriminating accounts which are meant to be read through with pleasure as well as profit. There is no doubt about the category to which Mr. Brock's biography of Astley Cooper belongs, and he deserves our congratulations as well as our gratitude for writing so well that we can see his hero as a man of science in spite of adulation which comes near to idolatry. It is probably quite true to say that Astley Cooper does not get his deserts from medical historians, and that very many of his contributions to medical science have been either forgotten or attributed to others.

Mr. Brock makes it clear that Astley Cooper was not merely an industrious and enthusiastic worker, but that before he undertook any new method of treating patients he made numerous painstaking dissections and the necessary preliminary experiments on animals. Operations previously regarded as the outcome of some sudden inspiration or flash of genius are thus seen in a very different and much clearer light; and we are given a conception of the preliminary trains of thought which enable us to recognise in Astley Cooper a distinguished disciple of John Hunter, and one of the earliest practitioners of the scientific surgery. One of the most interesting and important features of this biography is the stress laid upon Astley Cooper's admiration for Hunter, whose lectures he attended when he was an apprentice, and whose teaching and inspiration he was always ready to praise and to acknowledge when lecturing to his own students.

This book should be warmly recommended to all medical men, but specially to medical students who will find in it not only a stimulus to follow the example of a great man, but also the means of correcting many false impressions about Astley Cooper's contributions to surgery and to anatomy—for certain structures now associated with his name were not in fact those which he described as the most important. Certain it is that any student who accepts this suggestion will not be able to lay the book aside until he has read it through. That it should have been written when the stress of war-time surgery and administration were added to the author's routine duties, shows that the spirit of "the greatest of Guy's surgeons" still survives.

HANDBOOK OF SURGERY, by R. C. Ledlie and M. Harmer. First edition, 1951. Baillière, Tindall & Cox, pp. 536, figs. 56. Price 21s.

In their preface the authors draw attention to the modern student's "need of a book which would enable him to maintain more easily a proper perspective of the vast field of surgery," and they have certainly gone far towards meeting this need with the production of this excellent textbook.

It is, as its name implies, both small and concise, but in 518 pages the whole field of surgery is covered systematically though, of necessity, with considerable brevity. It is well produced and tabulated and contains a number of diagrams. So helpful are these in explaining the subject matter to the beginner in surgery that one feels they could, with advantage, have been more numerous

even at the cost of a slight increase in length.

Every handbook of this type is open to criticism on the grounds of omission, and, bearing in mind that the majority of the readers will be embryo general practitioners, it seems unfortunate that common conditions such as varicose veins and retention of urine should be allocated less space than cerebral tumours and pancreatitis. Nevertheless, this is a book to be recommended to students, among whom it will certainly become popular. It is not intended for armchair reading; it should be read in the wards, the museum and the operating theatre, and those who use it in this way will surely find it an invaluable guide to their surgical studies.

A HISTORY OF MEDICINE in eight volumes (vol. I), by Henry E. Sigerist, 1951. Oxford University Press, New York, pp. 564 and figs. 104. Price 50s.

Hitherto historical research into medicine has been carried out almost entirely by the enthusiastic amateur, where history is his hobby and the writing of his work a labour of love. Dr. Henry E. Sigerist, highly qualified in historical research as well as medicine, is the first man to undertake what has been wanted for very many years—a complete detailed history of medicine, global in scope, from cave man to the present day. Perhaps the reason we have had to wait so long is that only in Dr. Sigerist has Nature combined together the necessary gifts and qualifications—scholar and traveller, the master of fourteen languages, and holder at one time of both the Karl Sudoff Chair at Leipzig and the Professorship of the Institute of History of Medicine at Johns Hopkins University. He has now retired to his villa on Lake Lugano at the early age of 56 so that he may devote his entire energies to completing the eight proposed volumes of the History.

This, the first volume, contains an important introduction on the Historical Approach to Medicine; it continues with a review of Primitive Medicine, and concludes with Egyptian and Mesopotamian Medicine. Only the best printing and lay-out is good enough to support Dr. Sigerist's writings, and the Oxford University Press (New York) have been at much pains to make it spacious and attractive. The type is restful and never monotonous. The illustrations have been collected together in one section, presumably to economise; they are also convenient. The three or four snapshots of African medicine men and some healing deities, apart from their interest, serve to show up the high quality of the other reproductions. The references are very adequate, but (and here a word in the publisher's ear) the introduction of a bold type or some symbol indicating whether we will find some interesting note or just the title and reference of some papyrus in Leipzig would save much needless turning to the end of the chapter. We shall look forward with keen interest and anticipation to the next volume.

AIDS TO ANATOMY, by R. J. Last, F.R.C.S., 11th Edition, Baillière, Tindall & Cox, pp. 380 + viii. Price 7s. 6d.

This is the eleventh edition of a little book which appeared in 1876 as "The Pocket Gray," a book of 64 pages. In its present form it is a summary of the standard texts; a summary however which does not fail to explain and in places even expand on classical descriptions. A stimulating work useful for consolidating and revising.



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CHEMOTHERAPY AND THE ANTIBIOTIC DRUGS, by various authors. Published by the Fellowship of Postgraduate Medicine, pp. 68, Figures 12. Price 5/-.

This begins with a most interesting introductory chapter on the principles of chemotherapy and then discusses in nine further chapters, by experts in their own fields, the use of antibiotics in all the main diseases in which they are effective. This is worth 5/- of any senior clinical student's money.

BIOCHEMISTRY FOR MEDICAL STUDENTS, by W. V. Thorpe, J. and A. Churchill. 5th Edition, 1952, pp. 528. Price 22/6.

The fifth edition of this popular textbook has been brought up-to-date and the chapters on metabolism largely recast to include the Krebs tri-carboxylic acid cycle. It remains one of the standard works and does its job efficiently enough. But it is undoubtedly heavy going in parts and the student who wants to be really interested in biochemistry had better read Baldwin's "Dynamic Aspects" as well.

MIDWIFERY AND OBSTETRIC NURSING, by Michael Bulman, 3rd Edition, Published by Faber & Faber, pp. 369. Price 20s.

The make-up of Mr. Bulman's book is attractive, his material well presented and well illustrated and his style clear. Some of the descriptions, for in-

stance of pyelitis and puerperal fever, have a rather old-fashioned sound, and some notice of antibiotics newer than penicillin is desirable. The administration of acid with the sulphonamides, recommended on page 288, is unusual.

DOCTOR IN THE HOUSE, by Richard Gordon. Michael Joseph. Price 10s. 6d.

Medical students have long been regarded as the lowest form of undergraduate life. "Doctor in the House" will certainly confirm the popular belief that student life in a teaching hospital is a Bacchanalian orgy with brief pre-examination respites. However, the author has produced a very amusing and witty autobiography which for the modest sum of half a guinea will provide you with several hours of first-class amusement.

Rumour suggests that Richard Gordon is a Bart's man. St. Swithin's seems to bear a strong resemblance to the "Royal and Ancient"—"the nurses caps turned up at the back like the tails of white doves . . . the Christmas ward shows and children's party in outpatients," and "the indiscriminate droppings of the London pigeons in the court" are strongly suggestive of Bart's. Moreover, the style of the writer is similar to that of "Alan Tois," a frequent contributor to the Journal in the post-war period.

The dust cover of the book announces that Richard Gordon's next volume will be "Doctor at Sea." May it be as entertaining as "Doctor in the House."

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LV1

SEPTEMBER, 1952

No. 9

A JUST PRIDE

"We receive our training at Bart's; we leave, and then . . . nothing. If an old Bart's man comes to town to revisit the home of his student days what welcome is there? Where is he to sit, where to meet his old friends, where hang his hat?"

(A correspondent: January, 1938.)

This very reasonable complaint is as valid now as when it was made 14 years ago. At that time it elicited a response from Sir Girling Ball, who was then Dean, and suggestions from one or two others, but the correspondence died after three issues, and the problem was left unanswered.

The problem itself has grown in the interval. Briefly it is this. Do Bart's men want to retain any contact with their hospital? And if so, in what way?

There can be very few institutions in this country which can boast an uninterrupted history stretching over more than 800 years. Bart's has everything to excite a feeling of strong loyalty in those it teaches—old and beautiful buildings, a long tradition of public service, a host of names famous in the history of medicine and surgery, close association since its foundation with the ancient City of London. It is the oldest hospital in the Commonwealth—that, alone, should be a source of pride to us all.

But what do we do to perpetuate that pride when we leave? Nothing. At the time our correspondent wrote there were Decennial Clubs, an annual Old Students' Dinner and Rahere Clubs in various parts of the country. There is now no longer an Old Students' Dinner, and to judge from the notices inserted in the *Journal* since the war's end the Clubs, with one or two exceptions, have ceased to exist. There is still nowhere in the Hospital for old Bart's men to collect and meet their friends—not even on View Day. For most old Bart's men there is nothing to bring them back to their old Hospital—nothing but their pride in it. Those who indulge their sentiment find themselves unknown, lonely and disappointed; many more anticipate this disappointment and stay away for years on end.

In what way, then, should we try to keep in touch with Bart's? For many, revival of the Old Students' Dinner would be enough. Others, particularly the large number living in London and the Home Counties (for whom there appears never to have been a Rahere Club) may like a social gathering more often. Some might like the opportunity to attend special ward rounds by certain chiefs. The Refresher Courses for G.P.s envisaged in the National Health Service Act could well be held in Bart's for Bart's men.

A register of old Bart's men could be made and the progress of their careers recorded. Here the example of many Oxford and Cambridge colleges might be followed with profit. Annually they produce a report of the college's activities of the year—its academic and sporting successes, new appointments to and losses from the staff, and general news of old students. Every few years a full address list is sent out. The work entailed should be well worth the effort. These suggestions are but a few of the many that could be made—will, we hope, be made by correspondents.

None of us can have been to a school or college as old as Bart's or with a finer tradition. And where is the school or college that has not a flourishing society of old students? It is very easy, in this matter, to allow sentiment to become sentimentality, but no one need be ashamed or suspicious of a just pride. It is difficult to believe that the present situation is regarded with satisfaction by anyone. Contemporary students, in particular, may care to reflect that when they qualify and leave Bart's, for the vast majority that is the end. It is not a pleasant outlook.

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