Dr. F. E. Reynolds, whose thesis was "A pathological study of the pathways of infection to intracranial structures from the nose and its accessory cavities." After the degrees had been conferred, an address was delivered by the promoter, Professor D. P. D. Wilkie, who recommended the new graduates to seek at first a hospital appointment. Whatever their ambitions might be, he considered that a hospital training should be as wide and varied as possible. He advised them not to be concerned about their ultimate vocation, for a career in medicine was determined by evolution rather than by self-determination. Medicine as a profession offered a limitless field for the exercise and development of their individual gifts and for the development of personality. Referring to research, Professor Wilkie said that some of the most pressing problems must be solved by clinical study in the wards of hospitals; opportunities for research were not confined to laboratories. The most urgent need of this medical school was the adequate endowment of research in clinical work. Most graduates would find that the general practice of medicine constituted their life-work; for this, in his opinion, a knowledge of practical psychology was the most essential equipment. They must love their work; the one thing that most surely defeated growth and development in the art of medicine was the introduction of the commercial spirit into practice. True ambition in medicine should be not so much the making of a living as the making of a life. He thought that each of them should attempt to educate their clientele to regard the services of doctors as primarily for the care of health rather than for the cure of disease. If every patient was examined at intervals of six months after the age of 40, early deviations from health would be detected during the curable stage of many diseases, and a new era in medicine would be inaugurated.

Research in Animal Diseases.

Dr. Henry Dryerre has been appointed physiologieal biochemist to the Animal Diseases Research Institute at Moredun, Edinburgh. For about ten years Dr. Dryerre has been lecturer in physiology at Edinburgh University, and professor of physiology at the Royal (Dick) Veterinary College, a post which he is retaining. He has published important observations dealing with the effect of thyroid extract upon the response to adrenaline, and with the action of thyroid preparations upon the autonomic nerves, and he has recently been engaged upon the elucidation of the problem of milk fever and its relation to the endocrine glands. Mr. W. S. Gordon, M.R.C.V.S., has been appointed senior bacteriologist to the same institution. He has been working for some years at the Wellcome Research Laboratories, and is well known among Scottish agriculturists for his investigations into lamb dysentery and braxy.

England and Wales.

An Outbreak of Enteric Fever near Portsmouth.

DR. A. MEARNS FRASER, medical officer of health for Portsmouth, has issued a report on a localized outbreak of enteric fever in the Landport district in June. Following a Sunday school outing on May 29th, in which 118 children and 10 adults took part, several cases of enteric fever developed. It appears that 99 of the party drank from a stream running through the woods, and 18 of these contracted enteric fever; 29 suffered from severe attacks of abdominal pain, diarrhoea, or vomiting within three days of returning home; and a further 23 had gastro-intestinal symptoms during the next three weeks, in which period no illness that could be attributed to the excursion occurred among the remainder of the party. An investigation was conducted into the circumstances attending this outbreak, and it was shown that, although in a few of the cases the incubation period was rather longer than usual, yet in none was it incompatible with the suggestion that the disease was contracted on May 29th. Five patients, who subsequently developed enteric fever, had an attack of gastro-intestinal disturbance within a day or two of drinking the water, followed by an interval of apparent good health before the graver disease became manifest. The fever was of a moderately severe type, but up to the present no deaths have resulted. In nearly every case the diagnosis was confirmed by the Widal test. At a subsequent examination the bed of the stream showed marked evidence of sewage pollution, and this was confirmed by analysis. It is stated that the stream received the effluent from sewage works, and it is suggested that there may have been insufficient purification. No other recent cases of enteric fever have been notified in the district concerned.

Epsom College.

Founder's Day was celebrated at Epsom College on July 26th, when the prizes were distributed by Lord Burnham, president of the College. The head master, after commenting on the value of past achievements in stimulating progress, mentioned the more prominent distinctions won by past and present members of the school, and referred with gratitude to the new dental scholarship which had been offered by Guy's Hospital, this being, he thought, the first of its kind in history. An open scholarship for natural science had been won at Trinity College, Oxford, and another open scholarship for classics in the same university at Pembroke College. A scholarship had been gained at Jesus College, Cambridge, and also an open exhibition at Faraday House Engineering College, while the top place in the Law Society's final examination had been obtained by an Old Epsomian. School successes last year included thirteen passes in the first medical examination, and seventy-two school certificates, with six honours, forty-three exemptions from matriculation, and six distinctions. The athletic successes included an unbeaten Rugby football team and a cricket team which had not been defeated by any other public school. Although last year it had been announced that the council could not proceed yet with the building of the new sanatorium until considerably more money was forthcoming, it had now been decided that the first steps must be taken without further delay in the late autumn. It was hoped that the new building would be ready by January, 1932; the existing sanatorium would then be converted into a house for forty boys, bringing the total up to 450, the maximum number which the council had decided to admit. With the erection of this new building the scheme of reorganization and enlargement formulated in 1924 by Dr. Raymond Crawfurd, chairman of the council, would be completed, and this in a period of seven years as contrasted with the original estimate of ten. Other additions and improvements included the construction of a new rifle range, and the erection of a large cricket score board. Lord Burnham delivered an address in which he emphasized the value to any school of a practical bias towards one or other of the lines of education. He emphasized the importance of general intellectual training, even though some measure of specialization was inevitable. Dr. Raymond Crawfurd, proposing a vote of thanks to Lord Burnham, gave a few details about his predecessors in the presidential office. A new feature in the Founder's Day programme this year was the inclusion of a first-class assault-at-arms, produced in the open air in spite of inclement weather. In the evening the choral society rendered "The Gondoliers" to a warmly appreciative audience.

Renaming of London Hospitals.

The London County Council is proposing to rename some of the hospitals and institutions under its direction. Some of the present names are unsuitable owing to the situation of the hospital (which is not in the locality suggested by its title) or because they are cumbersome in themselves. Ten of the transferred Poor Law hospitals bear names of saints, and twenty bear geographical names. It was at first intended to give them all saints' names, but after consultation with visiting subcommittees and others the idea of a uniform system of nomenclature was abandoned. Among the hospitals to be renamed are the following (the new name is placed in brackets): Bermondsey and Rotherhithe Hospital (St. Olave's Hospital), Greenwich and Deptford Hospital and Institution (St. Alfege's Hospital), Holborn and Finsbury Hospital (Archway Hospital), Plumstead and District Hospital (St. Nicholas's Hospital), St. Marylebone Hospital (St. Charles's Hospital), Southwark Hospital (Dulwich Hospital), Tooting Home (St. Benedict's Hospital).

Papworth Village Settlement.

Prince George visited the Papworth Village Settlement in Cambridgeshire on July 23rd to open the new cabinet-making workshop, the foundation stone of which was laid twelve months ago by the Duke of York. Expressing his pleasure at being associated with this valuable form of treatment, he commented on the way in which the feeling of helplessness due to the incapacitation of tuberculosis was being overcome by the provision of suitable employment. The health of the children who were brought up in the Settlement seemed to prove that this disease was not hereditary. More financial assistance was urgently needed in order to secure extension of the work, and there should be other similar settlements elsewhere. Sir Frederick Milner emphasized the value of the great interest which members of the Royal Family had taken in the work of Papworth, and added that the present Government, as well as its predecessor, had done all it could in the way of encouragement. Prince George was conducted through the workshops, and spent a considerable amount of time in the trunk-making department.

Correspondence.

OBSERVATION AND EXPERIMENT.

SIR,—To some of the more old-fashioned among your readers it is a pleasure to find an article which is not illustrated by graphs or chemical equations. It is a rare pleasure to come upon an article frankly concerned with the theory of medicine such as the masterly survey of the methods of observation and experiment presented by Mr. Wilfred Trotter in the *Journal* of July 26th (p. 129).

I fancy that it is possible to detect Mr. Trotter hankering after the discredited art of observation, in spite of his impartial survey and the full credit given to the achievements of experiment. Perhaps the time has come when a plea should be entered for observation, before a complete breach with tradition shall have destroyed its continuity as a method. If I remember aright it was Jenner who was given the advice, "Don't think—experiment." This may have been well enough for a Jenner, but I fear it has proved dangerous advice for many of his successors who have obeyed the injunction all too literally.

In considering the results of experiment run riot, I think particularly of the study of tuberculosis. But since tuberculosis may justly be said to be an epitome of medicine, the circumstances of the special case are applicable to medicine as a whole. We have piled up to-day a mass of experimental evidence which no individual is able to cope with. The serious student is bewildered by the spectacle of an ever-increasing mountain of facts and statistics accumulated by the method of experiment. He looks in vain for a guide who will tell him what these things may mean, or even if they mean anything at all. It might be well for us to borrow from the ecclesiastical usages of an earlier day which ordained days of humiliation in times of stress. In tuberculosis, at least, a year of humiliation might not be amiss if it gave us more thought and less experiment, and above all if it gave us, not more facts, but an interpretation of the facts.

Over a century ago Louis, in his *Researches on Phthisis*, spoke of one of the central principles of his study as calling for the "meditation of observers in all countries." I fear that Louis's plea for meditation is little heeded in these days. Will someone point the way?—I am, etc.,

Frimley, July 28th. W. M. MACPHAIL.

DIFFRACTION METHODS IN DIAGNOSIS OF PERNICIOUS ANAEMIA.

SIR,—Recently a number of papers appeared in the *British Medical Journal* advocating the use of diffraction methods in the diagnosis of pernicious anaemia; the most recent is that by Dr. Malloy in the issue of July 19th (p. 96). While I have not used Dr. Malloy's direct comparative diffraction method, Professor Gulland, Dr. Goodall, and I have tried various diffraction instruments which are on sale at present. The principle of the diffraction method depends on the finding that the diffraction halo produced by passing a beam of light through a blood film varies in size inversely with the average diameter of the red blood corpuscles. The size of the halo is generally measured by the size of the red ring in the spectrum.

Dr. Malloy admits that the red ring mingles to a varying degree with the orange and violet. The personal factor accordingly becomes of great importance. This is quickly realized by anyone who has tested various diffraction instruments. Dr. Malloy himself states in regard to Eve's halometer that different observers, even with practice, obtain different results with the same slides. It is obvious that the difference between the size of the halo in a normal blood and that in a case of pernicious anaemia becomes more and more apparent as the degree of megalocytosis becomes greater. In practice it is found that in severe cases of pernicious anaemia, with a colour index well over unity, diffraction methods undoubtedly give an accurate diagnosis of a megalocytic anaemia. Such cases, however, are easily diagnosed by a blood count, or, in the case of experienced haematologists, by a glance at a stained film. In cases in the remission stage of pernicious anaemia, or in chronic cases where the blood corpuscles number between three and four million, great difficulty in diagnosis is presented, no matter what method is used.

Cabot has demonstrated that in a large percentage of such cases the colour index is unity or below unity—that is, between 0.8 and 1; Price-Jones has shown by measurement that the mean diameter of the red cell in such a case varies from normal by a mere fraction of 1 μ. Taking into consideration the personal factor in accurately assessing the edge of the red ring in the halo, it would be unreasonable to expect that such slight alterations in the size of the red cell can be accurately judged by the eye. A profound knowledge and experience of haematology is required in such cases before a diagnosis can be made. This entails an investigation of (1) the white cell picture with reference to the Arneth count, leucopenia, and relative lymphocytosis; (2) the blood platelet picture, to detect thrombocytopenia and any increase in the size of the platelet; (3) the red cell picture—for example, megalocytosis, ovality in shape, and the coefficient of variation; (4) a test meal; and (5) the van den Bergh reaction, etc. My object in writing this letter is to warn the general practitioner against assuming that diffractive methods are a safe short cut to diagnosis, and that any method can dispense with a complete blood examination.

Dr. Malloy, under the heading "Prophylaxis," refers to another point which I have seen in several papers in the *Journal*, which requires comment. He states that, according to Hurst, pernicious anaemia is due to an infection of the duodenum by haemolytic streptococci. I must emphatically maintain that haemolytic streptococci are in no way associated with pernicious anaemia. In a series of nearly fifty cases I found them present in the gastro-intestinal tract in about 5 per cent. of cases. Similar results have been published by Moench, Kahn, Torry, and by van der Reis, who isolated haemolytic streptococci in only one out of thirty samples of duodenal contents of cases of pernicious anaemia. Portal haemolysis is now recognized to have no place in the etiology of pernicious anaemia, and there can be no doubt that no specific organism for this disease exists.

Hurst's work on the importance of achlorhydria as an etiological factor in pernicious anaemia deserves the highest recognition. The achlorhydria, however, must be considered as an indicator of a deficient secretion, not only of hydrochloric acid, but of some secretion necessary for protein metabolism, from which is produced the specific factor necessary for normal blood formation. In the majority of cases Hurst himself showed that the achlorhydria was congenital, and not acquired as the result of sepsis.

For a full discussion of these points the reader is referred to the monograph on *Pernicious Anaemia* by Professor Gulland and myself, published by Henry Kimpton, 1930.—I am, etc.,

STANLEY DAVIDSON, M.D., F.R.C.P.Ed.

Department of Medicine, Edinburgh University, July 25th.