accurately measuring variations of the sense of hearing," and instruments used in the experimental research of blood pressure.

By 1884 a council had been formed and a meeting was held under the chairmanship of Dr Norman Moore at the warden's house of St Bartholomew's Hospital Medical College.

The Holborn Restaurant was the venue of the 1885 dinner. Apparently a political discussion took place, for two speakers made adverse remarks about the proposition then before the medical profession that, "The Royal Colleges of Physicians and Surgeons should be united for the purpose of obtaining the powers to grant degrees." The following year the first dinner was held at Cambridge. As might be expected the college chosen was Gonville and Caius and Sir George Paget was in the chair.

Few things change. In 1919 Herbert Page, then president of the club sent his apologies, "to my very great regret I fear this damnable strike will prevent my being at the meeting."

Through the next two decades there were dinners in both London and Cambridge, but the emphasis has gradually and quite rightly shifted towards the university. Since the end of the second world war all dinners have been in Cambridge, now always on a statutory date on the second Friday in July. The principles as laid down at the first committee meeting in 1883 are still upheld. For many years the president of the club together with representatives of the Council, the regius professor of physic, and the deans from several medical colleges meet under the chairmanship and through the kindness of Dr Woollam for lunch at Emmanuel College on the day of the dinner. At this meeting the many problems which exist in medical education are discussed and though no resolutions are passed many views are exchanged and a deal of understanding generated. Above all the principle to promote good fellowship among the graduates has never been lost.

The Oxford club, though also tending to move its centre of gravity from London to Oxford, has continued to have winter dinners in London. The first to which non-medical guests were

invited was a particularly memorable one in 1965 when the right honourable Harold Macmillan as chancellor was present and gave one of his usual scintillating speeches.

Centenary

Can one assess the real impact that these two clubs have made during their 100 years' existence on the medical schools and on the graduates? There can be no doubt that the annual social occasions have been popular and successful. For individual graduates to return regularly to the university, to meet with old friends and colleagues, to enter into discussions on all manner of subjects, and to share experiences, is in itself immensely worth while. It is not just sentimental nostalgia. That so many of the great men of medicine from both universities have been active participants in the affairs of the clubs and given of their time and interests is in itself an acknowledgment of their value. Times have changed. Both universities now have well established clinical schools and academic departments. Graduates are now spread much more widely around the British Isles and overseas as well as in London. For all that the ties with the alma maters are as strong as ever. The recent magnificent centenary dinner at Trinity College, Cambridge, was attended by over 300 members and guests and no one who was there can doubt the viability of the club. The centenary dinner of the Oxford club will be at Keble College on 6 July 1984.

The end of the first 100 years is not the end of the story. As the clubs enter their second century a regular entry of new young graduates is essential for their future viability. Happily this is taking place, but the more the better. Graduates who have not yet joined the clubs, but are interested, should communicate with the Honorary secretaries: Cambridge—W A B Smellie, MChir, 62 Gough Way, Cambridge CB3 9LN; Oxford—Dr R A Griffiths, FRCP, Long Ridges, The Ridings, Headington, Oxford OX3 8TB.

Leonard Colebrook (1883-1967)

E J L LOWBURY

The centenary this year of Leonard Colebrook's birth calls for celebration, for though he never became a "household name," his contributions to human welfare were outstanding. His classic work on the treatment of puerperal fever with Prontosil was both a major advance in obstetric practice and a pioneering exercise in antimicrobial chemotherapy. The work he undertook after completing that project was hardly less important, and also had both a specific target—improving the treatment of burns—and a more general beneficial influence—awakening an interest in control of hospital infection. Colebrook's endeavours for human health and wellbeing continued after his retirement when, with the collaboration of his wife, he launched an effective campaign to reduce the numbers of burn injuries.

Leonard Colebrook was born in Guildford, Surrey, on 2 March 1883, fifth of the six children of May and Mary Colebrook. May Colebrook was a successful farmer, a non-conformist preacher, and a local worthy. The Colebrooks' home was filled with "an atmosphere of education, religion, social work,

and rigid teetotalism"; exposed to these influences Leonard made up his mind early in life to become a missionary. In 1896 his father died and the family moved to Bournemouth. Leonard was sent to Westbourne High School and spent a year at Christ's College, Blackheath, before starting premedical studies at the London Hospital Medical College in 1900. A few months later he won an entrance scholarship to St Mary's Hospital, where he completed his medical studies, qualifying MB, BS (London) in 1906. One of his fellow students was Alexander Fleming.

While still a student Colebrook came under the spell of Sir Almroth Wright, professor of pathology and founder-director of the inoculation department of St Mary's. Wright was a charismatic figure, the pioneer of typhoid vaccination, whose interests and efforts in bacteriology were focused on the relief of human suffering: he was an independent minded and "savage" controversialist, a friend of Bernard Shaw and the original of Sir Colenso Ridgeon in *A Doctor's Dilemma*. After a period as house surgeon and a trip to the Far East as ship's doctor, Colebrook achieved his ambition of becoming assistant to Wright in the inoculation department. On his travels he discovered that a career in bacteriology was more to his taste now than that of a missionary. For Colebrook "the old man," as they called Wright in his department, was not only a chief whose ideas he admired, but a sort of adoptive father; though

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FIG 1—Colebrook (on right) and colleagues at St Mary's Hospital during the first world war.

he came to disagree with some of Wright's convictions (in particular with his distrust of chemotherapy), Colebrook remained a good friend through life, later becoming Wright's neighbour in the house (Silverwood) at Farnham Royal, Buckinghamshire, to which he eventually retired.

In 1914 Colebrook married Dorothy Scarlett Campbell, a social worker who shared with Leonard an independent spirit and a deep concern for human welfare. When the war broke out Colebrook, who was a captain in the Territorial Army, was released to take charge at St Mary's of vaccine supplies for the army. He also undertook investigations on outbreaks of meningitis and dysentery, on wound infection, and on burns; he collaborated in researches with Alexander Fleming and spent some time with Wright and Fleming at their base hospital in Boulogne. After the war he became a staff member of the Medical Research Council at its institute in Hampstead. The Colebrooks had a varied social life, thanks not least to their interest and Dorothy's active participation in the theatre (she was a governor of the Old Vic). But Leonard pined for more contact with patients and was glad to be seconded in 1922 to work again with Wright at St Mary's. While there he became involved in studies on haemolytic streptococci. Having found that arsenicals and vaccines were ineffective against streptococcal puerperal fever, he focused on the control of cross infection by various methods, including the newly introduced antiseptic, chloroxylenol (Dettol). But his great opportunity came when, as director of the new laboratories at Queen Charlotte's Hospital, he learnt of Domagk's success in treating streptococcal infection of mice and of a few human subjects with the dye, Prontosil. In 1936 he published the results of his famous clinical trial of the compound, which showed its curative and lifesaving power in the treatment of streptococcal puerperal fever. Soon afterwards it was shown that Prontosil breaks down in the patient's body, releasing the active component, p-amino benzene sulphonamide (sulphanilamide). Though arsenicals had been in use against syphilis for many years, the era of antimicrobial chemotherapy was truly launched in 1936.²

During the second world war Colonel Colebrook supervised the use of sulphonamides in the army. He was in France until June 1940 and then with Gillies at the plastic surgery unit in Basingstoke. In 1942, after the death of his wife, he moved to the burns unit at the Royal Infirmary, Glasgow, where he carried out the first stage of his study on the control of infection in burns.³ Colebrook's interest in the failure of skin grafts led him to invite a young Oxford zoologist, P B Medawar, to give his thoughts to the problem, a move that channelled the future Nobel prizewinner's interests in a fruitful direction. The second stage of the study on infection of burns followed when Colebrook transferred his centre to the Birmingham Accident Hospital in 1943. *Streptococcus pyogenes*, which Colebrook had tackled so successfully at Queen Charlotte's Hospital, was still

a common cause of serious clinical infection in burns. Listerian methods had been unsuccessful in burns, but Colebrook aimed at a selective asepsis and antiseptics directed against *S pyogenes* and other burn pathogens. In Glasgow he had studied a range of aseptic measures. In Birmingham he adopted, in addition, the routine use of penicillin cream and of a plenum ventilated dressing station; throughout the studies there were fewer infections with *S pyogenes* than there had been in Glasgow.¹ Colebrook's conclusions were supported by the controlled trials which his successors carried out at the Medical Research Council's burns unit in Birmingham.^{5 6}

While he was in Birmingham Colebrook made the acquaintance of Vera Scovell, a widow and freelance broadcaster whose thoughts and compassions echoed his own. In 1946 they were married, and after Leonard's retirement in 1948 they launched a joint campaign for the prevention of burn injuries, which culminated in the Fireguards Act of 1952, making it illegal to sell a gas or electric heater without an adequate guard. They also worked hard to promote the use of many other measures to prevent domestic burns and scalds.⁷ An important innovation that sprang indirectly from an idea of Colebrook's at that time was the appointment of infection control nurses in hospitals.⁸ During his retirement Colebrook also published a book arguing the case for burns units,⁹ and a biography of Almroth Wright.¹⁰ For a time he championed the cause of euthanasia. He received many honours, including fellowship of the Royal Society, the Jenner and Blair Bell medals of the Royal Society of Medicine, honorary fellowship of the Royal College of Surgeons and of the Royal College of Obstetricians and Gynaecologists, and Doctor of Science (Birmingham).

From 1949, when I took over Colebrook's bacteriology laboratory in the Accident Hospital, I saw him on his frequent visits to the unit; he would discuss our work with us, making many pertinent suggestions. One cold evening the Colebrooks came to dine in our home. "What a nice fire," said Vera to my wife. "Yes, but where is your fireguard?" snapped Coli (as he used to be called, and as he signed his letters to friends); he then added, more gently, "I'll send you a *good* one next week"—and he did. In 1957 he said he would like to have a little bench space in my laboratory, to complete an experiment on which he and the old man had been engaged in 1917; he had noticed from one of our recent publications that we had been working on a related problem. We were happy to welcome him back, and for several months we worked together on factors that influence the survival of bacteria in serum.¹¹ A few years later he invited me to pay him a visit at Silverwood. He greeted me with his habitual warmth, saying, "I have 14 questions to ask you about that last paper of yours, but let's have tea first";

FIG 2—Colebrook having coffee in the library at the Birmingham Accident Hospital in 1950.

he had read the paper critically and his questioning was thorough. Not long after that visit a number of his old collaborators went to a party at his house. We found him in excellent spirits, though he complained, as often before, of "anno domini." When we left he walked with us to our car through the beautiful wooded grounds; after the farewells, I heard him say, "You lucky people, going back to the real world." That was the last time I saw him.

Colebrook has been variously described as "very lovable, warm, and friendly," "modest, with a whimsical sense of humour," "outstandingly honest, sincere, and generous to junior colleagues," "energetic, with great powers of concentration," and "a very good boss; he was demanding and stood no nonsense."¹² Though immensely serious about his work, he never took himself too seriously. Pointing out that I had not referred to some relevant work of his in a paper, he wrote: "You will be hearing from my solicitors, Messrs Kudos and Pique, about this—but now to more serious matters." Oakley, in his memoir for the Royal Society,¹² wrote: "Perhaps he was no great scientist—at least, he never developed any revolutionary theories . . . but his work has been of enormous benefit to his fellow men." Another commentator wrote: "The Colebrooks will never be thanked by those with most reason—the children who will *not* be listed in hospital or coroner's records."¹¹ If not a great scientist, he was certainly a great man.

I have drawn gratefully on Professor W C Noble's biographical

study, *Coli: Great Healer of Men*, and I thank Mrs Vera Colebrook for permission to reproduce two photographs.

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Another exile in Oxford—continued from page 1955

To please his parents, who wanted him to choose a "respectable career," Leonid Pasternak read first medicine then law, graduating in Odessa. He spent a few terms in the Munich Royal Academy of Fine Arts (which at the time was second only to the private Paris Studios of French Artists). In 1889 Leonid Pasternak married the famous pianist Rosa Kauffmann, and they settled in Moscow, where he joined the circle of young avant garde painters around V D Plenov. They tried to liberate painting from the tendentiousness of the realistic approach to art, which dominated the famous Petersburg Fellowship of the Wanderers. In 1903 they formed the Union of Russian Artists in Moscow, which with its annual exhibitions became the focal point of Russian art activities. (They believed in personal freedom, there was no hanging committee, each artist was his own judge.) Diaghilev made sure that the work of Pasternak and other Moscow painters appeared in the exhibitions of the World of Art.

In 1893 Leonid Pasternak met Tolstoy, whom he revered. The writer must also have valued the painter highly: after a long period of devoting himself to philosophical and religious writing, Tolstoy chose Leonid Pasternak as an illustrator of his new novel *Resurrection*.

In 1921 Pasternak took his ailing wife to Berlin, where she had treatment for her heart disease. In that city he was feted as one of the foremost European portrait painters, a master of draughtsmanship, one who was able to retain in his pictures fleeting impressions of movement, colours, and the expressions on human faces. He worked in different media, some experimental, and introduced new techniques. His subject matter too ranged widely; his portraits, apart from their intrinsic value, are of historical importance. As well as his many portraits of "ordinary people" there is a real picture gallery of illustrious men, both Russian and Western, including Einstein, Rilke, Shaliapin, Scriabin, Rachmaninov, Hauptman, Rubinstein, Prokofiev, Gorky, Gordon Craig, Tolstoy, Prince Krapotkin, Lenin, to mention only a few. His works may be found in public and private collections in Russia and in the West—in England in the Tate Gallery and the Victoria and Albert and the British Museums, as well as in provincial galleries and in private

collections. The most extensive collection is owned by the Ashmolean Museum in Oxford.

My mother, Rosa Kauffmann, was a child prodigy, her biography being published in Odessa in 1885, when she was only 18. On many occasions the family tried to persuade her to let them bring this up to date but her modesty as well as the strains of the times prevented this. Most interesting would have been her accounts of meetings and conversations with the composer and pianist Anton Rubinstein, who assessed the girl's musical genius so highly that he considered that the Petersburg Conservatoire was not good enough for putting the final touches to her piano studies. Only one man in the world, he would say, was qualified to round off her musical and artistic education, and he insisted that she should go to Vienna to study with Professor Leschitzky.

In 1936 my father fell in love with Oxford. It was "enchanting." An enthusiastic undergraduate who had become fond of my parents showed him round Oxford—Christ Church, New College (which was "only" some 400-500 years old), Magdalen. The beauty of the last was revealed by the facade when they turned from Long-Wall Street into High Street. With the dreamy smile which appeared on Pasternak's face when he had "caught" his sitter's expression he remarked: "Who knows? . . . One day perhaps Charles (his grandson and my son, then 6 years old and living in Munich) might become an undergraduate here. . . ." His dream came true: his grandson entered the college.

When he settled in Oxford for good in 1939 things were different. He had succumbed to grief at the loss of his wife; appalled by the inhumanity of the war, he was suffering from angina and was frail. Nevertheless, he still worked and did not lose faith in a better future. Nor did his sense of humour desert him. Approached about the arrangement of an exhibition of his work, he commented: "An exhibition in Oxford? But who would be interested in it? Oxford consists of old ladies and young students. They don't care about art; they are interested only in literature." He died on 31 May 1945, and was spared the news of the horror of Hiroshima.