guiled one another with readings from their own poetry or from favourite pieces of literature, a similar "happening" was arranged but this time on a broader basis. The wide range of talent represented, and the receptive and enthusiastic response of fellow participants and audience alike, created a very warm atmosphere, which resulted in a really enjoyable evening. The communal nature of the event, which owed its success to the extraordinary rapport between audience and performers, mitigates against the singling out of individual performances, yet no-one present would dispute that the voices of David Price and John Walker, the songs of Ian Hering and the guitar of Jonathan Arden-Jones provided the "high-spots" of the entertainment. Hugh Epstein and David Price deserve thanks for the idea and the organisation.

Volpone

by

Ben Jonson

Presented June 1969

Volpone, Ian Hering; *Mosca*, John Newbiggin; *Voltore*, Pete Gill; *Corbaccio*, Dave Price; *Corvino*, Rod Caird; *Avocatori*, Keith Hutcheson, Gerry Burridge, Keith Barron, David Pountney; *Notario*, Ram Balani; *Nano*, Hugh Epstein; *Castrone*, Dave Winter; *Androgyno*, Dave McMullen; *Politic Would-Be*, Nick Jones; *Lady Would-Be*, Hilary Craig; *Peregrine*, Steve Stewart; *Bonario*, Rob Buckler; *Celia*, Diane Jones; *Lady-in-Waiting*, Helen Harrison.

Director, Nick Jones; *Set*, Lance Taylor; *Stage Manager*, Trevor Davis; *Publicity*, Henry Binns; *Lighting*, Martin Wallis.

Note: *The Eagle* much regrets that it was unable to review this production.

Obituaries

FRANCIS PURYER WHITE

FRANCIS Puryer White, Fellow, died in Cambridge on 11 July 1969. He was born in London on 26 October 1893, the son of John Francis White, a schoolmaster, and went to the Stanley Higher Elementary School, Medburn Street, N.W., and to Owen's School, Islington. He came up to St John's in 1912 as a mathematical scholar. He was placed in the first class in both parts of the Mathematical Tripos, and in 1916 he was elected to the Isaac Newton Studentship in Astronomy and Optical Physics, which he held for three years. After a short period of war service, he returned to St John's and in 1919 was elected a Fellow. In the following year he was appointed a College Lecturer and he remained a member of the mathematical staff of the College until he reached the statutory age of retirement in 1961. He was Director of Studies in Mathematics from 1945 to 1959.

From about the date of his return to Cambridge at the end of the First World War, White's mathematical interests began to take a different direction, moving from the field of the Isaac Newton Studentship to geometry under the influence of H. F. Baker, with whom he was closely associated in the College and for whom he retained a warm affection. Professor Sir William Hodge writes to me of White's mathematical career:

> "All White's original contributions to mathematics applied the techniques which Baker was using in the early twenties to solve elegant problems in projective geometry, many of them giving a new interpretation of theorems by nineteenth century mathematicians such as Clifford. The papers were elegant, but had no lasting influence on mathematical thought. But he contributed greatly to geometry in other ways. As a teacher, both in the lecture room and in supervision, he broke all the recognised rules, with the result that many derived little benefit from attending his lectures. But he did succeed in communicating his enthusiasm to a significant number of pupils and from these he recruited most of the members of Baker's group of young geometers, who were so active in the twenties and early thirties. Although Baker was himself the centre of this group, White was his able Lieutenant.
>
> "In the late twenties, Baker's interest turned (or rather returned) more to the general theory of surfaces, as created by the Italians Castelnuovo, Enriques and

Severi, and White never really took to this. It did not offer scope to his problem-solving abilities. He gradually ceased to make contributions to the geometrical school in Cambridge.

"But his contributions to mathematics were by no means over. He served on the Council of the London Mathematical Society from 1923 to 1947, and was its Secretary for eighteen years. He played a key role in the affairs of the Society, and in particular saw it through the very difficult war period. He also served the Cambridge Philosophical Society as Secretary (Mathematical) from 1924 to 1936, and held various other offices on the Council. After the Second World War he seemed to feel himself getting more and more out of touch with recent mathematics, and devoted most of his energies to College affairs. The Cambridge Philosophical Society, however, recognised the many services he had rendered to it by making him its President from 1961 to 1963."

White's services to the London Mathematical Society and the Cambridge Philosophical Society were characteristic of his gifts and of the loyalty and care for detail he showed in whatever he undertook. These qualities found other outlets in the University. He was a member of the Financial Board from 1943 to 1948, of the Press Syndicate continuously from 1931 to 1958, and of the Library Syndicate from 1949 to 1960. He also served on the Ely Diocesan Board of Finance. Throughout his career he had keen bibliographical interests and, mainly as a young Fellow, he formed a large collection of early mathematical and scientific books. Towards the end of his life, between 1962 and 1964, he presented more than 1000 volumes on mathematical and scientific subjects, mainly of the 16th, 17th and 18th centuries, to the University Library, greatly enlarging and enriching its collections in the history of science.

But though, as a University Lecturer and in these other ways, he did much outside the College, it was as a Johnian that his special aptitudes found fullest expression. For half a century he served the College, always self-effacingly, but with great devotion, and in certain fields developed exceptional expertise. As a young man, he was active in the affairs of the College Mission in Walworth, afterwards the Lady Margaret Parish. He was at all times a keen supporter of, and a regular worshipper in, the Chapel. He held office as Praelector from 1931 to 1935, and he was Tutorial Bursar from 1935 to 1946. In 1948 he became Librarian in succession to H. P. W. Gatty and held the office until he reached the retiring-age in 1961. On his retirement, he was appointed Keeper of the College Records, an office specially created for him in recognition of his great services to the College by his work on the records in a wide variety of ways, and to this work he was thenceforward free to devote his full time and knowledge.

Long before his appointment as Librarian, he had made himself thoroughly familiar with the Library, with the muniments of the College, and with its other records, above all with the biographies of its members over the whole period of its history. The College has been very fortunate in the students of its records. White is amongst the chief of them. As such, and as a biographer of its members, he stands in succession to J. E. B. Mayor and R. F. Scott. He was too modest to write or publish, but he delighted to catalogue and record; and he did this with exceptional ability. He inherited a great amount of material from Mayor and Scott on the biographies of members of the College, consisting of notes on the entries in the Register of Admissions and on the *Graduati Cantabrigienses*, expanding and continuing the published volumes of *Admissions*, which Mayor and Scott had edited. He in turn greatly expanded this material and continued it to the current date, transferring it to separate sheets on which the biographies of members of the College are individually recorded. An approximate computation suggests that he prepared some 15,000 such sheets, all carefully arranged in cabinets. He was accustomed regularly to scrutinize the columns of *The Times* and other current records, extracting information about Johnians. He had his own annotated copy of Venn's *Alumni Cantabrigienses*. For thirty years, from 1939 until his death, he himself made the entries of admissions in the Admissions Register, and those who have been Tutors over that period know that, like

Scott before him, he had a keen eye for omissions or inaccuracies. Many inquiries about the careers of members of the College, earlier or later, reach the College. White was always able to furnish an answer, whether by reference to printed sources or to material collected by himself. He also inherited from Scott, and himself greatly enlarged, a collection of school and university registers and histories and other publications of value for biographical purposes. This collection, amounting to about 850 volumes, is now in the Library, and it must be one of the best collections of its kind in existence. *The Eagle* too has long been greatly in White's debt; for it was he who compiled the regular features "Obituaries" and "College Notes".

But this biographical work was far from exhausting his work on the records. Continuing work begun by Gatty, he carried out a great range of detailed work on the College muniments, classifying, listing, callendaring, and in many cases transcribing, large sections of the documents and compiling indexes to them. All future students of the muniments will be in White's debt. In the Library too he did much detailed work. To take but one example, he undertook the examination of the volumes in the Upper Library for evidence of provenance, ownership, book plates, book stamps, and other material of interest, and recorded the information as a card index. He had completed the examination of about two-thirds of the volumes.

All this work, carried out methodically over many years, entirely on his own initiative, was conducted in his characteristically self-effacing manner; but he had made himself expert, and in execution his work was quick, accurate, and confident. It was the image of himself. He was also—and this too was typical—always ready to put the information at the disposal of serious inquirers and to devote time and trouble to help them.

In character he was modest, even over-diffident, but charitable, fond of company, and with many friends. A gathering of Johnians was hardly complete without him. The College has had no more devoted son.

White married in 1934 Alice Barbara Dale, Fellow and Tutor, afterwards Bursar of Newnham College, the daughter of Sir Alfred Dale, Vice-Chancellor of Liverpool University and grand-daughter of Dr R. W. Dale, the distinguished Minister of Carr's Lane Congregational Chapel, Birmingham.

J. S. B. S.

CYRIL LENG SMITH

Cyril Leng Smith was born in Lincoln on September 15, 1913. While a boy he decided that he preferred to be called Charles, and increasingly he became known only by this adopted name. He came up to Sidney Sussex in 1932, subsequently obtaining a first in Part I of the Natural Sciences Tripos. By including Physiology in his subjects he showed, even at this early stage, the interest in linking Physics with Biology which characterised his work in post-war years. He followed this up with a first in Part II Physics.

After research under Rutherford in the Cavendish leading to a Ph.D. in 1939, he went to work at Malvern in the Telecommunications Research Establishment and was awarded the M.B.E. at the end of the war. A serious illness and a period in a sanatorium was faced with fortitude, and ever afterwards he took a sympathetic interest in problems of student health. In 1944 he returned to the Cavendish to join the team led by Orowan which became renowned for their work on the deformation of metals. In 1949 his underlying interest in Biophysics led him to join the new Department of Radiotherapeutics, then being formed by J. S. Mitchell, where he remained for the rest of his life. His research lay mainly in studies of the effects of micro-beam irradiation of single mammalian cells and parts of cells. Along with this he managed to do a great deal of teaching and organising work, which was not confined to Cambridge but extended through national societies and committees to the international sphere. He travelled much, especially in Western Europe, and spoke and lectured easily in German. He was a natural choice as Joint Director of N.A.T.O. Advanced Study Institutes on Micro-beam Irradiation of Cells. The number of his interests was astonishing, and he seemed to have the same large amount of energy to devote to each. He enjoyed work with Junior Members, and this was shown in various ways. He will be particularly remembered for his interest in University

skiing and he was for a number of years President of the C.U. Ski Club.

He became a Member of St John's on election to a Fellowship in January, 1960, and from the beginning he made many new friends and showed how much energy he was ready to devote to the College by developing two new lines of activity to add to those that he continued—he never seemed to stop one thing to do another, but simply added new things to his already large field of interest and activity. He soon became an essential member of the College May Ball Committee which in our College has always benefited from good working relations with Senior Members. He had long been knowledgeable on wine and in the May Ball Committee he had an opportunity that comes the way of few amateurs—that of becoming a buyer on a large scale. This job too he tackled in a professional manner, getting to know the wine trade and soon becoming a very astute buyer whom no wine merchant ever tried to fool. In fact it can be said that Charles Smith was one of the very few outside the trade whom the wine merchants regarded with real respect in their professional capacity. It was natural that he soon became a member of the Wine Committee and then Wine Steward of the College, and the care of its Cellar gave him the pleasure that added zest to the work.

In the winter of 1967-68 he was stricken with illness, and he knew that his remaining time would not be long. Nevertheless, as soon as he was able, he returned to carry out his duties and managed to fulfil them all without abatement of his effort for another full year. Indeed he added a new one, for it was his drive that brought about the pre-term course in mathematical methods for freshmen coming up to read Natural Sciences and Engineering. He showed the same courage in danger as during his previous serious illness. He died in Cambridge on July 11, 1969, leaving his wife, two sons and a daughter. Always a good teacher, research worker and organiser, having close contacts with Junior Members, he will be remembered for all his service to St John's, to which he was devoted.

N. F. M. H.

DAVID VAUGHAN DAVIES

D.V., as he was always affectionately called by pupils and friends, was born at Cemmaes in Montgomeryshire on 28 October 1911. He was educated at Towyn County School and taught history by that distinguished Welsh historian, David Williams, who later taught Hrothgar Habakkuk and myself at Barry County School, and has just retired from the Professorship of Welsh History at the University College of Wales, Aberystwyth. David Williams remembered D.V. as "a keen, alert, energetic lad who was obviously going to go far". He went, first, as an Entrance Exhibitioner to University College and University College Hospital, London, where, in 1932 he was awarded the Gold Medal in Physiology. He had been taught by H. A. Harris, and when Harris moved to become Professor of Anatomy in Cambridge he got D.V. to move as well. He was Demonstrator in Anatomy here from 1936 to 39 and Lecturer in Anatomy from 1939 to 1948. He was at first a member of Trinity Hall but became a Fellow of St John's in 1944. He and I and the present Master of Trinity Hall were elected to the College Council together and sat for a while quietly side by side—new boys after the war.

He left us after only four years to become Professor of Anatomy at St Thomas's Hospital Medical School which post he held until his untimely death in July, 1969; when he was also Honorary Consultant to the Hospital and

Director of the Electron Microscopy Unit of the Arthritis and Rheumatism Council. Many distinctions were bestowed on him during his twenty-one year tenure of the Chair at St Thomas's: he wrote *Anatomy for Nurses* as well as many papers in learned journals, and was an editor of Gray's *Anatomy*. He will however be remembered mainly, as was his mentor H. A. Harris, as a great teacher—clear and incisive in lectures and demonstrations, kind and helpful to struggling students, firm and sharp with fools and laggards.

He never lost his love for his native country, was President of the Montgomeryshire Society from 1960 to 1964 and was proud to be pricked High Sheriff of Montgomeryshire for 1961-62. Harris brought with him to Cambridge his Secretary, Ruby Ernest: she and D.V. were married in 1940, and survives him together with his two sons and one daughter.

His mentor and friend died only nine months before he did: D.V. wrote the obituary notice of Harris in the *Journal of Anatomy*. He sent me an offprint of this, and I was filing it when the news of his own death came to me. I read with special care the last few sentences of his obituary of H.A.H. in which he described his old master as a "family man, always upright and honest, sympathetic and helpful . . . a man of character possessed of an unique personality which none who came into contact with him will forget." I gave the funeral oration in Twickenham Parish Church when we were paying our last respects to D.V., and I said then quoting his own words about H.A.H., "those were words written by one man whose funeral we attend today about another whose funeral some of us attended nine months ago. They are equally applicable to the writer who was upright and honest, sympathetic and helpful, a man of character whom no one will forget."

GLYN DANIEL

H.A. by D.V.

This charming and lifelike picture of H. A. Harris arrived too late for inclusion in earlier issues of The Eagle. *It is printed here as a pendant to Harris's obituary* (*see* Eagle 271); *and as a testimony of the friendship of the two men.*

d'etat. Creon sneers at this "woman's law"; but the nature of things (which is part of what the Greeks meant by God) is decisively against him. No State shall truly prosper which does not respect woman's law.

It is this message of mercy and restraint which gives the Sophoclean tragedy its profundity and dignity, and which is missing in Anouilh's play. I found myself inventing arguments for Antigone, and arguments for sparing her (one of them, I was glad to find, Sophocles used first). So I cannot in honesty say I rank the work very high. But I can in honesty say that the Lady Margaret Players have never given me a more interesting evening. This is my thank-you letter.

VERCINGETORIX

Antigone
by
Jean Anouilh
Translated by Lewis Galantiere

Chorus, Dick Francks; *Antigone*, Jill Lewis; *Nurse*, Katy Williams; *Ismene*, Judy Underwood; *Eurydice*, Mary Nex; *Haemon*, Michael Shepherd; *Creon*, Ian Thorpe; *Messenger*, Charles Boyle; *Page*, Jeremy Darby; *First Guard*, Sean Magee; *Second Guard*, Richard Beadle; *Third Guard*, David Quinney.
Director, David Price; *Stage Manager*, Steve Cook; *Design*, Nicholas Reynolds, Henry Binns; *Lighting*, Peter Cunningham, Martin Wallis; *Publicity*, Hugh Epstein and the Players; *Music*, John Walker.

Obituaries

PROFESSOR SIR FREDERIC CHARLES BARTLETT

St John's College has nurtured a greater number of distinguished psychologists, in proportion to its size, than any other educational establishment in Britain. Sir Frederic Bartlett was the most distinguished of them all, and when he died on 30 September 1969 at the age of 82, full of years and honours, the College lost one who had been among its leading fellows, and British psychology the man to whom more than any other it owes its present world stature. He came to St John's with degrees from London and took first class honours in Part II of the Moral Sciences Tripos in 1914. In the same year C. S. Myers, who was then Director of the Cambridge Psychological Laboratory, took him on as Assistant Director, and when Myers went to London in 1922, Bartlett succeeded him. In 1931 he became the first Professor of Experimental Psychology in Cambridge and a Fellow of St John's. The next year he was elected to the Royal Society. The University of Athens made him an Honorary Ph.D. in 1937. After 1940 honours came thick and fast. He was made C.B.E. in 1941, awarded Baly and Huxley Medals in 1943, honorary degrees were conferred on him by Princeton, Louvain, London, Edinburgh, Oxford and Padua, he was elected to honorary membership of the American National Academy of Sciences and of psychological societies in many countries, he was presented with the Longacre Award of the Aero-Medical Association and the Gold Medal of the International Academy of Aviation and Space Medicine, and was invited to give numerous distinguished lectures. His own comment was: "Once one begins, they all do it", followed by a short but pervasive guffaw.

In 1952, the year in which he retired from his Chair, the Royal Society awarded him a Royal Medal. The citation for this included the statement: "The School which he founded at Cambridge on the beginnings made by Rivers[1] and Myers became under his leadership the dominant school in Britain and one of the most famous and respected in the world." Bartlett regarded this medal as the high point of his career. What, we may ask, had brought him to it?

First and foremost was almost certainly his quality of scientific thought. His early training had been in logic and this, combined with a profound intuitive insight into complex problems, enabled him to see quickly what was important in experimental results, and gave his thinking a constructive character and originality which made him an unusually stimulating teacher and research director. In the discussion classes he held for Part II of the Tripos he would talk for a few minutes upon some topic of current research interest, and would then suddenly pick on one member of the class to say what he or she thought. Bartlett would listen carefully, seize upon anything worthwhile in what the student

had said, enlarge on it and take the discussion on from there. Like many original thinkers, his ideas were not always accurate, but, in the light of subsequent events, they almost invariably seemed to have been on the right lines. He himself once remarked: "You will never say anything sensible if you don't risk saying something foolish", and he was not afraid to act on his belief. Anyone who did research in the Cambridge Laboratory during the years just after the war will remember how Bartlett would burst into the room after a brief knock, introduce a visitor and at once plunge into an account of the research one was doing. The account was often surprising as it seemed to bear little relation to what was actually being done, yet on reflection one came to realise that it was not far from the mark, and was in fact what *ought* to be done—an indication of what could be achieved if the problem was viewed aright. It was an enlivening experience which made it seem urgent to think the problem out more thoroughly, and to get to work with the feeling that one had a sporting chance of proving "The Prof." wrong. What a thrill that would have been!

Coupled with this adventurous quality in his thought was a determination not to get caught up in trivialities. As a colleague once put it: "All the problems Bartlett studied were *real*." His research fell into three periods. During the first, between 1914 and 1939, he was concerned to look at perception and memory under controlled conditions, but to see them more as they occur in real life than is possible with the highly artificial situations commonly used in laboratory studies. These researches are described in his best known book *Remembering* published in 1932. When they appeared they were heavily criticised, and they have not been followed up to the extent they deserve. The reason is that they were far ahead of their time: the ideas they set out anticipated by a quarter-century those to which the general run of experimental psychology is now laboriously making its way.

It is for the second period, from the beginning of the war until his retirement, that Bartlett will be remembered best. It was a time of active development for many types of complex equipment such as anti-aircraft and other gun-laying systems, radar, asdic and ground-to-air control. He quickly saw that effective operation of these could not be secured solely by the selection and training of personnel: the equipment and the methods of operating it needed to be designed with due regard for fundamental human capacities and limitations. This meant studying and analysing the operational skills involved. Bartlett's characteristic contribution was his insistence that it is not enough to look at simple sensory and motor requirements and measure these in isolation. On the one hand, the components of the skill have to be studied without destroying the performance as a whole; and on the other, it is necessary to go beyond the study of achievement to an examination of the way in which it is attained. These were difficult tasks which required new methods for the detailed analysis of complex performance, and the erection of a whole new theoretical structure. The tasks appealed strongly to Bartlett, no doubt in part because of his lifelong interest in the skills of cricket and tennis. He and his colleagues at the Laboratory undertook research for all three Services, and its long-term importance was recognised by the Medical Research Council who established their Applied Psychology Research Unit there in 1944 with K. J. W. Craik[2] as Director. The work continued after the war and was extended by a Unit for Research into Problems of Ageing set up by the Nuffield Foundation in 1946. Research on skill was being actively pursued at the same time on a large scale in America, but it is fair to claim that the Cambridge Laboratory under Bartlett led the world to an extent that no British university department of psychology has done before or since. His best known statement emanating from this period is his Royal Society Ferrier Lecture "Fatigue following highly skilled work" published in 1943[3].

Bartlett's third period of research overlapped the second and continued after his retirement. Both the previous periods had shown the need for studies of thinking and it is therefore not surprising that Bartlett turned his attention in this direction. In 1950 he published a paper outlining a programme of experiments on thinking[4], and in 1956 a book *Thinking: an Experimental and Social Study*. The experiments which were reported examined the processes of thinking as analogous to the skilled sensory-motor performances that he and his colleagues had studied earlier. It opened up an entirely new and promising approach to an area which has hitherto been one of those most elusive of scientific study.

Bartlett's ideas would not, however, have brought him to the position he occupied in British psychology if they had not been backed by the personal qualities needed to make them effective. He was an able negotiator, he fought hard for the kind of psychology he regarded as right, he was a severe but constructive critic, and he had a facility for expressing complex ideas elegantly in simple language without losing their force or talking down to his audience. This last shows especially in his book *The Mind at Work and Play* based on the Royal Institution 1948 Christmas Lectures for Children. He had something of a flair for committee meetings which he treated as though they were cricket matches, disposing his forces to outwit the other side and win the day, although always strictly by fair means—he could be formidable but never devious. In closer view, he was a complex person who combined great kindness with occasional ruthlessness, sensitivity with robust attitudes to life, a rapid mind with the deliberate speech of the west-country, loyalty and trust with difficulty in distinguishing some enemies from friends, a cheerful ease of manner with a touch of sadness. He worked hard, but believed in keeping his work in perspective: each Wednesday morning he claimed that he could accept no engagements because of an important meeting—it was for golf.

Looking back, what was Bartlett's essential achievement? It is, surely, that he guided the main stream of British psychology away from the speculations of the psychoanalysts, and from the assessment of differences between individuals by means of mental tests, towards the task of understanding the broad principles of human capacity and behaviour. Further, he severed the links that had in the earlier years of the century held psychology to philosophy, and established it clearly as one of the biological sciences, close to physiology. Perhaps most important of all in the long run, he suffused those who worked under him at Cambridge with the characteristic outlook of British biology: an outlook which is not concerned with grand theories or panacea principles, but which tries to view things as they are, and to answer in the most direct and simple terms possible the fundamental questions of "What is it?" and of "How does it work, and why?"

A. T. W.

1 W. H. R. Rivers, Fellow, 1902-1922.

2 Fellow 1941-1945.

3 Proceedings of the Royal Society, Series B, Vol. 131, pp. 247-257.

4 Quarterly Journal of Experimental Psychology, Vol. 2, pp. 145-152.

DR W. G. PALMER

William George Palmer, the only son of a Surrey schoolmaster who himself came from Devonshire, was born in Godalming on October 24, 1892. Surrey County Council Scholarships took him to the Royal Grammar School, Guildford, in 1905, and in 1910 to University College London, where the thrilling lectures of Sir William Ramsay, then in his prime, awoke his interest in chemistry and where he also developed the strong liking for field botany which endured throughout his life. His father's friendship with T. E. Page, a former Fellow of St John's but then a housemaster at Charterhouse, caused him to enter St John's in 1910, and in the next year he became a Foundation Scholar, was elected to a Fellowship in 1916 and to a College Lectureship in 1946. In 1916 he was also awarded an Allen Research Scholarship by the University.

The first chemical laboratory in Cambridge was built by St John's for Professor Liveing, in 1853, and at this time was still used for the instruction of candidates for Part I of the Natural Sciences Tripos. R. H. Adie, the lecturer in charge, being in poor health, the students were left largely to their own devices, which suited W.G.'s taste for independent work, and he spent long hours in the laboratory laying the foundation of his superb technical skill. His First in Part I of the Tripos in 1913 was of such even quality that he found it

difficult to decide upon his subject for Part II, but eventually chose Chemistry. Towards the end of the year Adie had to retire finally, and W.G. was asked to complete the lecture course to the Part I students. A still surviving member of that class (F. H. Holden) writes that:—

> "One of my most vivid memories is of attending his debut as a lecturer . . . At that first effort he displayed a style equal to Fenton or Heycock at their best."

These words are true of his long subsequent career as a university teacher, for he had a supreme gift for transmitting to his audience his own intense interest in his subject.

A First in Part II chemistry in 1914 was followed a few weeks later by the same class in the London Final B.Sc. Professor Sir W. J. Pope suggested a stereochemical problem for his initiation into research, but the First Great War had begun. W.G.'s health had never been robust, and he was much perturbed as to his proper course of action; but the Professor, who could see ahead, advised patience, and in a short time the Ministry of Munitions set all available chemists to work. During the war years the University Chemical Laboratory was engaged at high pressure in many fields—among others were high explosives, dyes and mustard gas—but unquestionably the most important contribution made by the Department was the examination of the oils then being imported from Borneo for the first time. It was the success of this investigation which subsequently led to a large gift from the oil companies to the University for the extension of its chemical laboratories and their staff.

In addition to the wartime tasks there was still some college teaching and examining, as well as demonstrating in the University laboratory, and in 1919, W.G. was appointed Additional University Demonstrator, his Lectureship coming in 1926. During this period he organized and ran one of the first courses of practical organic chemistry to be given in the Chemical Laboratory for Part I students, although his personal taste was now for physical chemistry, which had always attracted him.

The phenomena of catalysis, theoretically and technically of great importance, but whose action was still mysterious, demanded elucidation, and Palmer was among the pioneers who laid the foundations of our present views on heterogeneous catalysis. His fourteen papers published in the Proceedings of the Royal Society between 1919 and 1938 are outstanding. For the most part he worked alone, but in two important papers he was assisted by F. H. Constable, in one by R. E. D. Clark, and by his wife in one of the earliest. These papers secured him a London D.Sc. in 1925 and the Cambridge Sc.D. in 1937.

The Second World War again brought directed research, this time into corrosion problems, but after that an increasing proportion of his activities was given to devising and checking experiments for teaching undergraduate classes. Some research was done however, notably on the lower oxyacids of phosphorus, the last paper on this subject appearing in 1968. He came regularly to the laboratory almost until the time of his death, always to work at the bench.

Over twenty years of experience of teaching the subject went into "Experimental Physical Chemistry", published by the C.U. Press in 1941, with its companion "Experimental Inorganic Chemistry" following in 1954. These two books continue to have a major influence on the teaching of these subjects in many countries, as they were translated into several other languages. The pattern of them was unique, practical work being carefully planned with well chosen experiments to illustrate principles, with simple and inexpensive apparatus easy to store and to assemble, so that the whole of a large class could work simultaneously on the same problem. The instructions were so clear and foolproof that demonstrators were scarcely needed, and every step had been carefully checked to ensure that it really "worked"—for in these as in all his undertakings, W.G. was a perfectionist.

Two non-experimental books were produced. "Valency, Chemical and Modern" was written as if by inspiration during the alarming summer of 1942, diverting his thoughts from Rommel's final sweep across North Africa. This was published in 1944 and met with an enthusiastic reception, its author being skilful at expounding difficult ideas with a minimum of mathematical detail. After several reprintings an expanded edition was produced in 1969, to include accounts of

the latest work and theories. "A History of the Concept of Valency to 1930" was the result of a short series of lectures given after his retirement, at the request of the Committee for the History and Philosophy of Science. He also collaborated with E. J. Holmyard of Clifton in revision and rewriting of his well known text books for schools.

Palmer was not gregarious nor anxious to take part in public affairs, but enjoyed two periods on the College Council and was always a keen supporter of full admission of women to the University. His childhood and youth were solitary, his relaxations being cycling, walking and swimming and in Cambridge he became an expert with a punt pole. He also spent much time at his piano and was very friendly with Dr C. B. Rootham, sparring with him over current developments in music. In later years gardening occupied all his leisure but stiffened his fingers, and the piano was neglected for the production of fruit, vegetables, and especially of magnificent sweet peas.

Many generations of Cambridge students will remember him with affection and gratitude, for behind his outward reserve there was much kindliness and willingness to help others. Unquestionably his greatest contribution to Cambridge life was as a teacher, but those of us who also knew him as a close friend know that he had much else to give, and gave it freely throughout his long connection with College and University.

In the summer of 1919 he married Dorothy Muriel King of Girton, also a research chemist, who survives him with a son, daughter and five grandchildren. It was to his great grief that in the last two years of his life he could no longer attend Hall regularly, and his last intelligible words, a few days before his death on November 29, 1969, were a question about the dinner to the Foundation, which was planned for that date and which he had hoped to attend.

H. J. E.

* * *

Professor Constable writes: Palmer was very human as a laboratory worker, and his appreciation of the situation, when an apparatus which he had taken some weeks to make cracked up before the critical observations could be made, was really heartwarming.

College Chronicle

ASSOCIATION FOOTBALL CLUB

President: DR R. E. ROBINSON
Captain: D. M. NICHOLSON
Match Secretary: B. J. SINGLETON
Fixtures Secretary: T. P. MCGING

This term saw the completion of the best season the Club has enjoyed since 1941-42. On the field the 1st XI won both the League Competition and the Cup; the 2nd XI once again retained the Plate. As a social institution the Club's success would be testified to by thirty-five happy souls who were to be seen lurching from the Wordsworth Room to the J.C.R. Bar on Monday, March 9th.

Sadly neither the 3rd nor the 4th XI's progressed beyond their groups in the Plate, although when the 4th XI reduced one set of opponents to nine men by seemingly fair though unfortunate means there was hope but no fulfilment.

The 2nd XI fared better. After defeating both of their group opponents 3-1, they faced up to Fitzwilliam II, some people's favourites. A mighty struggle which often appeared to be going against us eventually produced a 4-3 victory for St John's. Perhaps our pitch and our referee were of use. In the semi-final Emmanuel II proved unworthy opponents losing 2-7. In the final however the team made hard work of beating Queen's II 2-1, needing a penalty which was saved, but not well enough, to send their supporters away happy, though perhaps not contented.

Oh the 1st XI! Who could forget the final? To get there the team, strengthened by the return of Tom McGing and iron-man Steve Desborough, had to play a few other matches. In the first round they exposed to Caius the dangers of the off-side trap, defeating them 7-1. Then they struggled against Churchill needing the last ten minutes to gain a 2-1 victory and passage to the semi-final. Here Queens' were shown the art of the counter attack; for although they had nine-tenths of the play they lost 2-0.

Without much bother and certainly no planning the 1st XI's tactics had evolved. They would concede possession, but no

Obituaries

CLAUDE GUILLEBAUD

CLAUDE WILLIAM GUILLEBAUD, Fellow, who died on 23 August 1971 in his 82nd year, was born on 2 July 1890 at the Rectory, Yatesbury, near Calne in Wiltshire, one of twin sons of the Reverend E. D. Guillebaud and his wife Mabel Louisa Marshall, and nephew of Alfred Marshall, the economist.

He was at Repton School, of which he was afterwards for many years a Governor, and after two years at Hulme Hall, Manchester, entered St John's in 1909. He was in the First Class in the Economics Tripos Part I in 1911 and again in Part II in 1913, and he won the Adam Smith Prize in 1915. He was elected into a Foundress Fellowship in 1915. During the First World War he worked in several departments of the Civil Service, and in 1919 he was on the staff of the Supreme Economic Council in Paris. After the war he returned to Cambridge and was appointed Supervisor in Economics in 1921; he continued to teach Economics in the College until he reached the retiring-age in 1957, becoming Director of Studies in 1935 and College Lecturer in 1946. He was re-elected a Fellow under the new Statutes of 1926 and remained a Fellow until his death. He was appointed an Assistant Tutor in 1926 and a Tutor in 1929, and he continued to hold a Tutorship until 1956, becoming also Senior Tutor in 1952 in succession to Mr Wordie. He was Praelector from 1926 to 1929.

In the University, he was appointed a University Lecturer in Economics in 1926, Girdlers Lecturer in 1945, and Reader in Economics in 1956, holding this last office for one year until his retirement. He was Senior Proctor for the year 1933–34.

Claude Guillebaud rendered great services to the College, both in the offices he held, and in the life of the College more generally by his personality, his wide interests and contacts with the world beyond the College, and by his gift for friendship. He was Supervisor and Director of Studies to many generations of undergraduates reading Economics and as a teacher was at his best in such individual guidance and discussion. As a Tutor for thirty years, and for the last four as Senior Tutor, he played a prominent part in the wider educational policy of the College and formed many permanent friendships amongst his pupils. How well he understood the tasks and opportunities of a Tutor is shown by the remarkable report, written in 1969 at the invitation of the Council, on 'The Tutorial System in St John's', the greater part of which was printed as a Supplement to *The Eagle*, No. 273 (January 1970). Most written references to the work of a Cambridge Tutor have been in the later reminiscences of pupils. Guillebaud's report is a comprehensive account and discussion by a Tutor himself. It is by far the best description ever written of the Cambridge Tutorial system and as such is an important contribution to College and University history. It also reveals Claude Guillebaud's own personality: his natural courtesy, his keen observation, his sympathy, his patient impartiality, and his characteristic fairness and strong sense of justice.

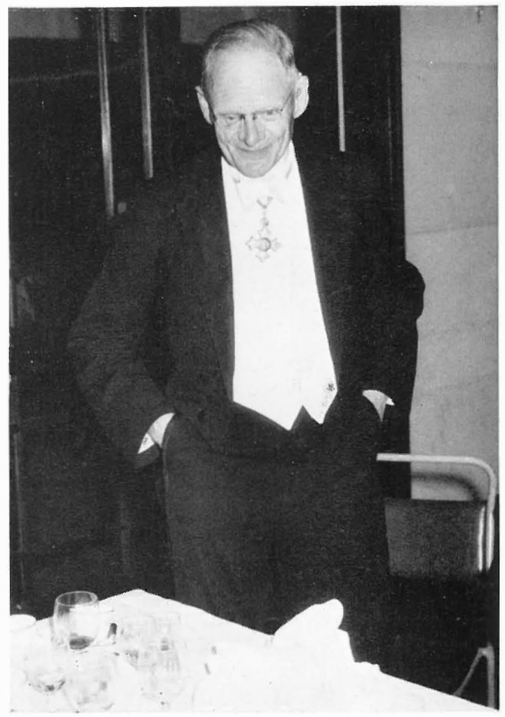
It was these qualities that made him also an outstanding chairman of wage-negotiating bodies, the sphere in which he rendered his most important public services. His qualities in this field are well displayed in his little book published at the end of his life, *The Role of the Arbitrator in Industrial Wage Disputes* (1970), based on his long and varied experience, from 1946 onwards, as Arbitrator in wage disputes in a wide range of industries, as chairman of Courts of Inquiry or special committees, and as member or chairman of Wages Boards. Two examples of his work in this field, which received much publicity (though publicity was a thing he never sought), were the Committee to investigate the cost of the National Health Service, set up by the Minister of Health in 1953, and the Committee of Inquiry on Railway Pay, appointed by the Transport Commission and the Railway Unions in 1958, of both of which he was the chairman. His work as an Arbitrator was not confined to this country. In 1953 he was appointed Arbitrator, by agreement of both the parties, in a dispute between the Northern Rhodesian Coppermining Companies and the African Mineworkers Union. The reputation he gained for fairness and objectivity, together with his qualifications as an economist. led to further demands for his services. In 1957, immediately after his retirement from his academic posts, he was invited to undertake a survey of the Tanganyika sisal industry, which resulted in his book *An Economic Survey of the Sisal Industry of Tanganyika* (1958), and for the following ten years, until the plantations were nationalised, he served as economic adviser to the Sisal Growers Association. In 1967, when he was already in his 77th year, he spent seven months in the Falkland Islands at the invitation of the British Government to make a complete survey of the economy of the islands; and almost immediately afterwards he spent three months in Chile carrying out a survey for the Chilean Government of wages structure and industrial relations in Chile. Meanwhile, at home, he served as vice-chairman of the East Anglian Regional Hospital Board and on the Board of the Cambridge United Hospitals.

His writings, in addition to those on industrial relations, included *The Economic Recovery of Germany* (1939), a book that by the misfortune of its date of publication gave rise to some misunderstanding of his own position, in spite of a clear disclaimer in the preface of sympathy with the political tenets of National Socialism, and the smaller *The Social Policy of Nazi Germany* (1941). But his major contribution to economics, which had occupied him over a period of twenty-five years, was his great variorum edition, published in 1961, of Alfred Marshall's *Principles of Economics*. It traced the development, from the first edition to the last, of the text of the work which Keynes, writing of Marshall, described as 'the greatest economic treatise of his generation'. This scholarly edition was both a contribution to economics and a tribute to his own uncle and to an outstanding thinker of St John's.

But to think of Claude Guillebaud only as an economist of ability with a wide understanding of industrial relations would be to miss an essential side of his personality. He was a man too of sensitive culture, speaking French and German, interested in music, and with a keen appreciation of pictures, of the ballet, and of all things artistic. And these sides to his nature seemed to be happily integrated. He was too a great reader of biographies and novels, always ready with a book to recommend. It was all this, helped by a natural gift of conversation, which made Claude such a valued member of the society of a College. He preserved a lively interest in persons younger than himself, and this made him a friend of all members of the society. It was natural, if there was a visitor to be entertained, to ask Claude to talk to him. The visitor was assured of an interesting evening, and Claude would draw the best out of him. If by ill-fortune the visitor had been uninteresting, and still more if he had been pompous, there might afterwards be a sardonic comment from Claude, but never a comment that was cynical or sarcastic: the wish to expose or to wound another was wholly foreign to his nature.

In 1918 he married Marie-Therese Prunner, known as 'Pauline' to the wide circle who enjoyed their friendship and the hospitality of their home, and there were two daughters.

J.S.B.S.



Claude Guillebaud as an Economist

Perhaps the first thing to be said about Claude Guillebaud as an economist is that he was Alfred Marshall's nephew. To have been born in the shadow of so great an economist must have been daunting, and may have helped to account for the genuine modesty and lack of egotism in everything that Guillebaud wrote. A more direct consequence of his relationship to Marshall was his keen interest in Marshall's works. This culminated in his great variorum edition of Marshall's *Principles of Economics*, which was published in 1961. This was the result of work which started in 1934, at the suggestion of Keynes. In his Editorial Introduction Guillebaud refers to his many years of study of the text of the eight editions of the *Principles*, but it is characteristic of him that this is almost the only personal statement that he allows himself in a long introduction.

Guillebaud's own interests as an economist followed Marshall's in that he was mainly a micro-economist. His keenest interest was in problems of industrial relations and wages, and another important interest—especially in his earlier years—was in German economic and social problems. His first book, *The Works Council: A German Experiment in Industrial Democracy*, published in 1929, combined both these interests. His next book, *The Economic Recovery of Germany*, published in 1939, dealt with the period 1933–38, and covered a wider canvas. In his preface to it, Guillebaud was unusually personal in explicitly disavowing support for the political tenets of National Socialism, but very much himself in stressing his attempt to be as objective as possible. This was an important work, which is still of great interest: one of Guillebaud's keenest pleasures during the last years of his life was that a distinguished young Cambridge historian wanted to collaborate with him in bringing out a new and fuller edition. It was sad that Guillebaud's health never permitted him to undertake this.

A great deal of Guillebaud's time after the Second World War was occupied in public work. He was chairman of many Wages Councils, a frequent arbitrator, and chairman of several important committees of enquiry. These preoccupations were reflected in his pamphlets on *The Wages Council System in Great Britain* (1958), *Wage Determination and Wages Policy* (1967), and *The Role of the Arbitrator in Industrial Wage Disputes* (1970). All these reflect his many years of experience, and are admirable for their clarity, fair-mindedness and good sense. The same qualities are evident in the reports of the two major enquiries that he headed, those into the cost of the National Health Service and railwaymen's pay. The latter attracted a good deal of criticism, much of it superficial, but the principle of comparability enshrined in it has been viewed more favourably in recent years than when it was published in 1960. The report on the Cost of the National Health Service (1956) was of great importance in providing careful comparisons of the resources used in the health services before and after the war, and put paid to any serious attempt to overthrow the basic principles of the post-war health service.

Guillebaud was editor of the Cambridge Economic Handbooks, following Keynes, from 1946. His interest in the teaching of economics was reflected in a report on this subject that he prepared at the request of the International Economic Association in 1954. In his retirement he travelled widely, and gained new interests in Tanzania (he was economic adviser to the sisal growers' association for several years), and other Commonwealth countries. He was actively engaged in his subject until the last months of his life.

As an economist, Guillebaud never attempted to do what he could not do well. The clarity and directness of his writing is its most striking feature, but his analytical ability, as well as his wisdom and experience, are always manifest. He was not particularly interested in the development of economic theory. 'It's all in Marshall', was what Cambridge economists were taught to believe in the 1920s and before, and Guillebaud really continued to hold this view (quite a defensible one) all his life. He thought the theoretical framework of economics was well enough established and that the main job for economists was to get on with applying it. Partly for this reason, and partly because of his dislike of anything that smacked of the doctrinaire, he was not involved in the fierce debates on theoretical issues that divided Cambridge economists in their views and, too often also, in their personal relationships, in the 1930s and again after the War. He remained well-liked and respected by members of the Faculty of all shades of opinion—and, it may be added, a remarkedly shrewd judge of their individual talents and limitations. He was Chairman of the Faculty Board for a time in the 1950s.

In his public reputation outside Cambridge, Guillebaud suffered unfairly on several occasions when his intellectual honesty caused him to say things which were not popular. It was not popular in 1939 to say that German economic policy had been more successful in bringing about recovery from the slump than policy in most other countries. The governments that appointed him did not want to be told in 1956 that the cost of the National Health Service was very reasonable, nor in 1960 that railwaymen had genuine grounds for complaint about their wages.

Guillebaud had a story of how before he became a Wages Council chairman an official in the Ministry of Labour asked him, 'Are you a man of principle?' and then, without waiting for a reply, went on 'Because if so, you're no good for this job'. Guillebaud *was* a man of principle, but he did not like general principles. He was not attracted by broad propositions or doctrines. He enjoyed recounting how a certain economist, whose notion of principal embraced only one dimension—that running from left to right—had said to his daughter, Philomena: 'Your father is a reactionary scoundrel and in writing a report praising the National Health Service, he is being untrue to his own principles'. Guillebaud's principles were not of that sort. His principles were fairness, impartiality, and scrupulous attention to the evidence before him.

Z.A.S., R.C.O.M.

LT-COL. FREDERICK SPENCER CHAPMAN, D.S.O.

The Times of 10 August 1971 carried a full obituary notice of Freddie Chapman (Joh. B.A. 1929) whose untimely death at the age of sixty-four took place at Reading on 8 August 1971. That notice details his life of activity, starting so shortly after he graduated from the College—first as explorer in East Greenland with Watkins' two expeditions, then as Himalayan climber, as member of this country's Diplomatic Mission in Thibet, as first conqueror of Chomolhari, as housemaster at Gordonstoun, and then as an Army Officer when World War II began. In 1941 he was in charge of a small school of guerilla warfare in Singapore, and then for three years worked behind and among the advancing Japanese. As *The Times* says 'it was recorded that in one fortnight in 1942 with two companions he wrecked seven trains, cut the railway in about sixty places including the demolition of fifteen bridges, destroyed or damaged some forty motor vehicles, and killed or wounded some hundreds of Japanese'. He was then captured by inadvertence, but promptly escaped by a subterfuge, a fascinating story splendidly told in his *The Jungle is Neutral*. After the War he was organiser of the Outward Bound Trust, then Headmaster of an Army School in Germany, Headmaster of St Andrew's College, Grahamstown, South Africa, Warden of the Pestalozzi Village Settlement in Sussex where he cared for refugee children from his beloved Thibet, and finally he became the extremely popular Warden of Wantage Hall in the University of Reading.

Freddie was a man of enduring optimism, as indeed he needed to be to survive in his life of physical striving and war-time activity. But besides his great bodily vigour, he was untiringly helpful to younger people, encouraging them to make the best of themselves. His survival so to serve was the product of his immense personal courage and daring and resilience of spirit.

Freddie Chapman was Sir James Wordie's pupil in the College and to him he (like many others) owed much in the beginning of his career in exploration and climbing. He took a Class III in Part I of the English Tripos in 1928 and a Class III in the Historical Tripos Part II in 1929, but he was at heart a naturalist and lover of country. He married in early 1946 Faith Mary Townson, the Flight Officer who by radio had been his link with the outside world from the depths of the Malayan jungle. They had three sons, two of whom are recent graduates of the College.

G.C.L.B.

and the publication of Jack's *The Myth of the Bagre* which he had dedicated to his two supervisors, Hugh Sykes Davies, and myself. Dring and my wife and I got together—and it is a saddening thought to me that this is the last College meal I shall plan with Sid. I went to wish him farewell a few days before he and I went away on holiday in August and we talked about the Kitchens in the early thirties when I came up as an undergraduate, of kitchen-porters with baize-covered trays balanced on their heads carrying meals out to lodgings well away from the College, and of the great Sunday breakfast parties of the twenties and thirties—and none of us, living Stewards or Kitchen Managers, can remember the origin of the *croustades St. Jean* that were for so long a standard part of those breakfast parties. It is good to remember what a great and generous service has been given to the College in the last half-century by men like Sadler and Dring who worked their way from bottom to top, from kitchen-boy and apprentice to Manager. They represent a rare and dedicated type of men, and we as a College remember gratefully our debt to them.

G.E.D.

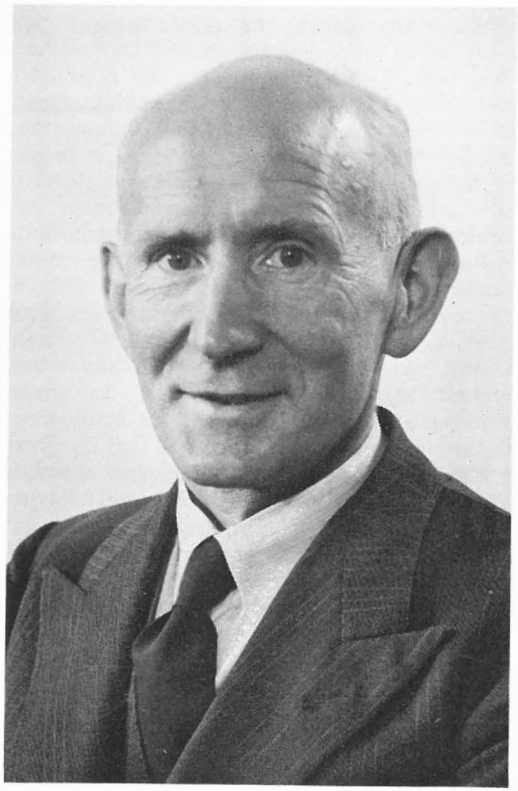
Obituary

Mr. H. G. RHODEN

Harry George Rhoden "came up the hard way". He was born in Wigan, in 1906, and was educated there at the local state school and later at Wigan Technical College. He served an apprenticeship at the Wigan Coal & Iron Company, and was awarded a Whitworth Scholarship in 1927 which enabled him to return to the college full time and work for a London B.Sc. external, which he obtained with first class honours.

The Whitworth Senior Scholarship which he won in 1928 enabled him to enter St.John's and his long, loyal association with the College began from that date. From John's he obtained a first class in the Mechanical Sciences Tripos in 1930, achieving the criterion of success which he valued so much and which he encouraged his students to value similarly. To become a Johnian engineer in the forties, fifties and sixties was to be taught by the best supervisors then in Cambridge personally selected by Rhoden. To become a "Johnian, first class" was to receive the unique seal of approval in Rhoden's eyes, and indeed in the eyes of a wide section of the engineering community. The peak of Harry Rhoden's teaching career was probably achieved in 1947, when the names of seven Johnians appeared in the first class list in the new Part II of the Mechanical Sciences Tripos. This achievement emphasised the strength of engineering in the college and reflected the care exercised by Rhoden and his colleagues in selecting students, together with their devotion to teaching.

Rhoden's teaching was soundly based on his long experience in industry, as an apprentice and later as a graduate engineer with Metropolitan Vickers in Manchester, where he worked from 1930 to 1938 on the design and development of turbines and compressors. He returned to Cambridge shortly before the war, first as a demonstrator, then lecturer, and was elected into a fellowship in 1941. His subsequent promotion to reader in 1955 reflected not only his teaching and administrative ability but also his sustained careful research on the effect of Reynolds' number on the flow through axial-flow compressors. This work, published in final



form in 1956, is a most substantial piece of experimental aerodynamic research, internationally recognised as the most authoritative record of Reynolds' number effects in compressor cascades.

Rhoden loved his life in Cambridge, his home and family, his college and his department, and was as a result a happy man. He was proud of his Lancastrian origin, listening with pleasure each year at the Commemoration Service for the reference to the benefactor from Wigan. He maintained several close friendships with former colleagues in Manchester, with whom he holidayed in the Lake District at Easter, for many years. He was a soccer player of no mean ability in his younger days and followed several sports—soccer, rugby league and cricket—in later years, taking delight in appearing with his elder daughter in a photograph in the Times as appreciative spectators when England finally regained the Ashes at the Oval after the war.

In the late fifties he took great pleasure in planning a new house and garden in Clarkson Close. Devoted to his family, the inner happiness he achieved after a hard early life and after losing his first wife in 1949 was reflected in his dealings with all those with whom he came into contact. His advice, frequently sought and freely given, was considered and to the point, and his influence on academic and industrial engineering through his many pupils, was immense. The Commonwealth Year Book lists upwards of a dozen Johnian professors of engineering in U.K. universities, most of whom passed through Rhoden's hands. His kindness, tact and humour were a great help in any difficult situation arising in the Engineering Department, and his solidity and wisdom made him a valuable member of the College Council for many years.

In the last few years he was not fully fit, but few realised this for he continued to give his all in the Department, taking a full teaching load and maintaining the unity of the thermodynamics group, to which he attached great importance.

Cambridge is a great university and St. John's a great college because of the calibre of men like Harry Rhoden. His achievements lie not so much in published work but in the shaping of the careers of the hundreds of young men who came to John's because it offered the best in engineering teaching, under the quiet influence of one of the kindest of men.

J.H.H.

Obituary

Louis Seymour Bazett LEAKEY

Louis Leakey was born at Kabete, Kenya on the 7 August 1903, the son of Canon Leakey of the Church Missionary Society in Kenya. He died in London on the 1st October, 1972. He was brought up with the native Kikuyu, as he records in the first volume of his autobiography, *White African* (1937). After school at Weymouth College he came up to St. Johns, first reading Part I of the Modern and Mediaeval Languages Tripos (in French and Kikuyu), and then the Archaeological and Anthropological Tripos. He took his Ph.D in African prehistory, became a Research Fellow of the College, and in 1966 was made an Honorary Fellow. He spent the greater part of his working life working in Kenya, first as Curator of the Coryndon Memorial Museum in Nairobi and later as Honorary Director of the National Centre of Prehistory and Palaeontology in Nairobi. He founded the Pan-African Congress on Prehistory of which he was general secretary from 1947–51 and President from 1955–59.

His work revolutionised our knowledge of African prehistory and his discoveries of early hominids completely changed the picture of the evolution of early man. Charles Darwin had speculated that Africa might be the continent where man had come into existence; and Leakey's fieldwork seems to have shown this guess to have been very sound.

His early discoveries are published in *The Stone Age Cultures of Kenya* (1931), *The Stone-Age Races of Kenya* (1935) and *Stone-Age Africa* (1936). From 1959 onwards he and his wife Mary and their sons worked on the now famous site of Olduvai where were found the first remains of a hominid named *Homo habilis* dated by the potassium/argon method to 1.7 million years ago, and the skull of one of the makers of the Acheulian culture which he named *Homo erectus*. It is true to say that no man has hitherto made more contributions to the direct discovery of early man and his ancient culture.

Honours were showered on him: the Cuthbert Peek prize of the Royal Geographical Society, the Rivers Memorial Medal of the Royal Anthropological Institute, the Viking Medal of the Wenner-Gren Foundation and the Prestwich Medal of the Geological Society of London. He received honorary degrees in the Universities of Oxford, California, East Africa and Guelph. He was an Honorary Life member of the New York Academy of Science, and was made a Fellow of the British Academy in 1958. The Kenya authorities are setting up at Nairobi a special museum and research institute and it is to be called 'The Louis Leakey Memorial Institute for African Prehistory'. The decision to call it this was described in 1972 by Professor T. R. Odhiambo, Chairman of the Museum Trustees, as 'a humble tribute to a person who was undoubtedly one of the great men of this century'.

Louis Leakey was a man of very wide interests and a great lover of animals, both domestic and wild. He was an enthusiastic and inspiring teacher and himself a most accomplished flint-knapper. His three-volume anthropological study of the Kikuyu is being printed now. A controversialist working in so many fields, he attracted many enemies as he did many friends. He never paused to regard his own remarkable career with its astonishing discoveries: he never thought of himself as a great man. He was always modest and sensible regarding his work as a matter of perserverance and luck. But it was the result of complete dedication, great hard work, unflagging energy and the highest sense of purpose.

GLYN DANIEL

Obituary

PROFESSOR E A WALKER

Eric Anderson Walker was a Londoner by birth; an Oxonian by academic origin; a South African by academic calling and interests - he was appointed to the Chair of Modern History at Cape Town at the age of 24 - and a Cantabridgian with distinguished tenure of the Vere Harmsworth professorship of Imperial and Naval History 1936-51 and Fellowship of the College from 1936 till his return in 1968 to South Africa, where he died in February this year.

Eric Walker had two dominant interests, rowing and South Africa. He was a Leander oarsman, a familiar figure coaching on the towpath and at Henley, expecting from crews the full rigour of traditional training and not concealing his chagrin when he detected lapses from it! The LMBC have had few more loyal supporters.

In middle age, with his fair hair and tall, athletic build, Walker was a veritable Adonis, as I found well remembered in Cape Town thirty years after he had left. He carried this air of fine, scholarly distinction into his later years and, to my thinking, though not altogether to his, it was captured in Rupert Shephard's portrait of him against the background of books in his study at The End House, Selwyn Gardens. He was friendly and welcoming to newcomers, very much at home in Combination Room conversation, but played comparatively little part in the deliberations of Boards and Committees for which, indeed, a touch of impatience in his make-up left him temperamentally not altogether well-fitted.

It is for his writings on South African history, however, that Eric Walker will be remembered. Here he was a pioneer, his specialist studies, part biographical on Lord de Villiers and W P Schreiner and his epic on the Great Trek, now in its 4th edition, opening up new fields in terms of scholarly and balanced presentation of a controversial past. His more general histories proved deservedly popular and he also edited the South African volume in the Cambridge History of the British Empire for which there was a continuing demand. All of Walker's South African historical work was founded upon mastery of detail woven into a closely constructed narrative. Where a younger generation were apt to look for more critical probings, socio-economic insights and Africanist perspectives, Walker kept to his own approach, his own style and his own interpretation. That interpretation drew sustenance from the Cape tradition which he absorbed in his most productive years. 'I'm a liberal!' was the phrase, triumphantly delivered, with which he was apt to conclude discussions on South African affairs. What is more, he said it in South Africa as well as in the seclusion of the Combination Room, as some records before me, dating from the early fifties, testify. A last academic flavour of the man, his mind, and the range of his interests and experience, is to be found in his Review Article on Keith Hancock's biography of General Smuts in *The Historical Journal* 1968 (Vol II, No. 3).

Nothing more befitted Walker's closing years than the Honorary Degrees conferred upon him by the Universities of Cape Town, Witwatersrand and, posthumously, of Natal. In South African historical writing he had opened a way: it was for others, taking advantage of it, to make their acknowledgement and to hew out their own.

N Mansergh

Obituary

MR EBENEZER CUNNINGHAM

Ebenezer Cunningham (1881-1977) was born in Hackney. His father was a cabinet maker. He went to Owen's School, Islington, and in 1898 won a scholarship in Mathematics at St. John's College. He was probably taught by R R Webb, the last of the great coaches. He was Senior Wrangler in 1902 and a Smith's Prizeman in 1904, when he was elected to a Fellowship. He was the last Johnian Senior Wrangler and the last surviving unbracketed one from any College. He also rowed in the second Lent boat in 1903, the first Lent and second May boats in 1904.

After holding lectureships at Liverpool and University College, London, he returned to St. John's as a College Lecturer for the May Term of 1911. The unusual month needs some explanation. Coaching for prospective wranglers had disappeared, and Webb had become a college lecturer, but had a breakdown in the Lent Term and was unable to continue; Cunningham replaced him.

The other college lecturers were Drs H F Baker and T J I'A Bromwich. The three taught for the whole of Mathematics Part I and Schedule A of Part II, besides giving advanced lectures for Schedule B and a terrific load of examining: about twenty papers for the College and regularly two or more for the Triposes. St. John's at that time was the only college that provided lectures for the whole of Part I and Schedule A; even Trinity men came to Baker's Theory of Functions. Cunningham included a course on Spherical Astronomy (since regrettably abandoned), and a Schedule B one on advanced Dynamics. This had been in the list of subjects for some years, but there had been no lectures. Several men in my year offered it, and Cunningham gave one at short notice.

Colleges had their own examinations yearly (known as Mays) but the trouble in setting papers was greatly reduced after 1918 by the introduction of a joint Intercollegiate Examination in the second year, largely on Cunningham's initiative; this became the Preliminary Examination of the University later.

With the transference of most lecturers to the University Cunningham became a University Lecturer in 1926 and held the post till his retirement in 1946. For many years he lectured on Electricity and Magnetism and other subjects in Applied Mathematics for the Mathematical Tripos and the clarity of his lectures was much appreciated. He was an excellent supervisor; one former pupil, who put a question to him about the Tripos, remembers the reply: "You're not interested in exams, you're interested in mathematics". Another says, "It was seeing the Senior Wrangler in action".

He was a pioneer (I think *the* pioneer) in introducing the Theory of Relativity to England. He gave lectures on it for several years (outside the Tripos courses) and published two books, "The Principle of Relativity" (C U P, 1914) and "Relativity and the Electron Theory" (Longmans, 1915, 1921). He had 5 papers on this before the books; one of these was a deep study of the transformation properties of Maxwell's equations. Also he invented an aether where everything

moved with the velocity of light, he made an important correction to the interpretation of Fizeau's experiment on the velocity of light in a moving medium, and contributed to the discussion of the mass of a moving electron.

The lectures, the first book and the first edition of the second dealt entirely with the "special theory' of Einstein, stated originally in 1905. The last one has a chapter of Einstein's later theory, which includes gravitation. The books differ from most accounts in the emphasis on comparison of theory with experiment at every stage. It is hard to see in most accounts just how much of the theory is directly required by experimental evidence and how much, apparently, by pure thought.

His other papers deal with many subjects: theory of differential equations, asymptotic expansions, and the viscous resistance to a cloud of particles in a fluid.

In the 1920's he gave another course on work done on the Continent: Max Born's theory of the dynamics of crystals, taking account of their lattice structure. This, like Einstein's before 1915, or even before 1919, was little known in this country, but is now part of a widely studied branch of physics. (In 1933 after Hitler's rise to power Born came to Cambridge and was given rights at both St. John's and Caius.)

Besides his scientific work, he took a great part in College affairs. He was Tutorial Bursar from 1921 to 1935. About 1923 the auditors noted a loss of about £3000 in a year's working of the College Kitchen. As Glover said at the annual meeting of the Governing Body, this was equivalent to a loss of 15 Fellowships (at the value of money then). The main complaint was about extravagance. A new Kitchen Manager, Mrs Masters, was appointed and Cunningham became Steward until 1935. The Kitchens were also reconstructed. Somehow they pulled through. The Kitchens had been noted for the abundance of a rare species of cockroach, which disappeared in the process. He was also a Tutor for two years and he was Junior Bursar from 1945 to 1947. Many Fellows will remember his wonderful Chairmanship at the time of the election of the present Master.

He was an active member of Emmanuel Congregational Church (now United Reformed) and was Chairman of the Congregational Union of England and Wales in 1953 when his friends enjoyed seeing him in court dress in the Coronation procession at Westminster Abbey.

From the time of the Boer War he was a convinced pacifist and during the 1914-1918 war he worked on the land.

He married Ada Collins in 1908; she died in 1969. They welcomed many generations of Johnians with warm hospitality to Wayside, Storey's Way; they will remember the hand-loom on which Ada made beautiful textiles. Nearly to the end of his life Ebenezer continued to make fine rugs. He retained his hearing and mental acuity to the end. He bore increasing blindness courageously and was helped in this by his lifelong interest in music. His brother, G D Cunningham was a well known organist and conductor.

His daughter Barbara became qualified in Medicine (Girton 1931-4; she is married to Professor Richard Browne, University of Newcastle upon Tyne). His son Morris, also a Johnian, (Moral Sciences 1935-8) is the Principal Clinical Child Psychologist at the Crichton Royal Hospital, Dumfries. There are seven grandchildren.

In 1975, after the death of his devoted housekeeper, Ebenezer divided his time between his daughter and son. He died at Corbridge, Northumberland, after breaking a thigh on February 12.

A list of his published work is in the College Library.

H J

Obituary

P.H.G.H-S. Hartley

Percival Hubert Graham Horton-Smith Hartley, the 'Grand Old Man' of the Lady Margaret Boat Club, died in January 1977 at the age of 80. He was not only one of the finest oarsmen to have rowed for our club but also a constant and kind-hearted friend to oarsmen young and old. Hubert came from a Johnian family: his father, a distinguished physician, was a sometime Fellow of the College. He began his rowing at Eton and had a place in the College VIII in 1915. The same year he was elected to an Entrance Scholarship at St. John's, but like so many of his contemporaries he put aside his scholastic career to serve in the Great War and he came to the College following the Armistice as a Captain in the Reserve of the Coldstream Guards. For four years, 1919-22, he stroked both the Lady Margaret May Boat and the University VIII. He was elected Captain of LMBC for 1919-20 and the following year President of the University Club. Although Lady Margaret during these years did not meet with the overwhelming success we have perhaps come today to expect of the club - they were never higher than third on the river - his outstanding abilities as a racing stroke cannot be gainsaid. He led Cambridge crews to victory at both Henley and the Inter-Allied Peace Regatta on the Seine in 1919. After the resumption of the Boat Race in 1920, he stroked Cambridge to three successive victories over Oxford. Exactly half a century earlier another great Lady Margaret stroke, J.H.D. Goldie, had achieved the same feat. Hubert Hartley's greatest race was perhaps that of 1921 when Cambridge gained the rare distinction of winning from behind. 'Their victory', records the LMBC history, 'was due to Hartley's spurt and his fine judgment'. Curiously, however, he won the most coveted prize in rowing - the Grand Challenge Cup at Henley - rowing in the bow seat of a Leander Club VIII in 1922. The previous year he had been elected Captain of Leander, thus having become successively Captain of the three most prestigious rowing clubs in the world. It would be pleasing to think that his success in the bows of the Leander crew stemmed from the experience he gained at bow in the LMBC Light Four in 1920 - the only time he rowed other than at stroke for the club.

In 1922 he graduated with honours, having taken both parts of the Modern and Medieval Languages Tripos, and returned to his old school to teach French. For the next forty-four years - broken only by war service - he taught at Eton and was a housemaster from 1933 until 1951. During the Second World War he served in a variety of staff appointments and later with the Allied Military Government in Italy, where in 1945 he was granted the Freedom of the City of Bologna, surely an honour never bestowed on any other Lady Margaret man! The same year he was appointed an OBE and in 1946 he was released from the army with the rank of Colonel. Further honours were to fall to his lot following the war. In 1949 he became a Steward of Henley Royal Regatta, in which capacity he served conscientiously for the rest of his life, and in 1953-54 he was Master of the Worshipful Company of Ironmongers, one of the twelve 'Great' London Companies.

Those of us who were privileged to know Hubert Hartley will remember him with the warmest affection. He will be especially missed at the high points of the rowing year. One of the delights of Henley for a junior member of Lady Margaret such as myself was Hubert's invariably cheery greeting and his lively interest in the fortunes of the club. He was no casual supporter of Lady Margaret, moreover, and he made a particular point of not wearing his venerable scarlet blazer to the regatta unless an LMBC crew was good enough still to be racing on at least the third of Henley's four days. In recent years, of course, he was delighted to give his blazer frequent airings. Hubert was also, until the very end, a regular attender at the May Bump Supper. He had no old man's dislike of high spirits and he took the keenest pleasure in the vigour and success which the club displayed fifty years after he had ceased active rowing. After the Bump Supper in 1974, when we had regained the Headship of the River, he came out on to the Backs with the rest of us and he too, a mere 77 years old, jumped over the burning boat. It is said that old soldiers 'fade away'. Hubert did nothing of the sort. Lady Margaret men do not 'fade'.

Keith Jeffery

CORRESPONDENCE

Sir,

In her most interesting and informative article (in *Eagle* Easter 1977) 'St John's and *Yule*' Miss Sandra Billington mentions one property listed as a 'bottom of pakthrede'. She suggests this may have been 'protection for some actor playing one of the many servant characters who are frequently beaten in early comedies'.

'Bottom' as a euphemism for the buttocks was not however in use in Shakespeare's (or Chaucer's) day - a much more explicit, coarser, and an easily-imagined word was used for that part of the anatomy.

As a note to the name of Nick Bottom in any Arden or Cambridge Shakespeare *Midsummer Night's Dream* will tell one, a 'bottom' was the end, or the spindle to which the end was attached, of a length of twine or weaver's thread, and was therefore as appropriate a name for a weaver as Snug for a joiner or Flute for a bellowsmender.

'Bottom' therefore in the St. John's inventory must mean simply a 'spool' of packthread.

This does not detract in the least from the value of Miss Billington's essay which I for one greatly enjoyed.

Yours truly,

John Sibly
Birmingham Polytechnic