

ROBERT WILLIAM PRINGLE
OBE, BSc, PhD(Edin), FInstP, FRS(Canada)

With the death of Dr Robert W Pringle on 10 June 1996, Scotland lost a talented research physicist turned industrial entrepreneur. He made a notable contribution to the growth of the Scottish electronics industry. His Company, Nuclear Enterprises(GB)Ltd, which he founded in Edinburgh in 1956, had within about twenty years grown to become one of the largest specialised companies of its kind in the world, outside the USA. In its field of nucleonics and ultrasonic diagnostic equipment it found its markets in universities, high energy physics, medicine, industry, agriculture, geophysics and space research. It gave employment to some eight hundred total staff, and over sixty percent of its products were being exported to over sixty countries through a worldwide network of its agents. Subsidiary companies had been established in California, Germany and Switzerland.

Robert Pringle was born in Edinburgh on 2 May 1920, the elder son of Robert and Lillias Pringle. He was educated at George Heriot's School and Edinburgh University. At Heriot's he was a star pupil, gaining prizes, medals and scholarships. His favourite subjects were physics and mathematics. It was at school that he formed his lasting passion for rugby, a game in which he developed a special skill as hooker. During his last two years at school he was in the 1st XV and immediately on leaving was picked for the Heriot's FP team. He had the distinction of playing for Edinburgh and for the combined Edinburgh-Glasgow side against the 1947 Wallabies. In the trials that followed he was picked for the Rest-of-Scotland side to play against Scotland and scored a brilliant try. He was in the running for a cap, though never quite achieved that ultimate rugby honour.

At Edinburgh University, because of his taste for physics and mathematics, he chose Natural Philosophy for his degree course. It was a fortunate choice, for at that time his teachers included such eminent men as Professors Aitken, Barkla, Born and Whittaker. During the four-year honours course he performed with distinction and was awarded the prestigious Vans Dunlop Scholarship. He graduated in 1942 with first class honours, placed top of his final year. With such an academic record there was no problem for him gaining a senior award to proceed to PhD. For this study he chose to be supervised by Max Born, his assigned topic being associated with Fourier Transforms. Although sounding an entirely theoretical area it in fact gave scope for experimentation, which he preferred. The theory of these transforms was well known, but at that time their calculation was a long and tedious undertaking. In collaboration with Born and Reinhold Furth, Robert devised an analogue computer for their derivation, based on the modulation of a beam of light by a mechanically operated optical system. Their first model was constructed in the Mathematical Physics Department at Edinburgh. It was described in a joint paper in *Nature* in 1945, and in a subsequent patent application. An engineered version was built by Ferranti in 1946-47 and demonstrated to various scientific bodies, generating considerable interest.

Throughout the War years 1942-45, he carried a heavy load. Immediately on graduating he was given an Assistant appointment which involved him in tutorial and laboratory supervision. At the same time he was working for his PhD, and also holding an additional appointment to give lectures to groups of potential officers attending the Department as part of the United Services Training Scheme. It is remarkable that he nevertheless gained his PhD (1944) within the prescribed minimum time.

In 1945, when Professor Feather came to Edinburgh as the new Head of the Department of Natural Philosophy, Pringle was offered a Lecturer appointment and it gave him his opportunity for an entrée into the new field of nuclear physics by doing post-doctoral research under Professor Feather. Feather had brought with him, from the Cavendish, apparatus that he had constructed for his beta-ray spectroscopy research there. It used Geiger counters for both its spectrum analyser and its coincidence detection. It fell to Pringle to develop the use of scintillators for coincidence counting and then to apply their use to gamma-ray spectroscopy. His research went well and by 1948 he felt the time had come for him to move on and strike out on his own. He applied for an Assistant Professorship in the University of Manitoba in Winnipeg and was successful. He took up his new appointment in December 1948.

What he found on arrival was disappointing, but he took it as a challenge. The Department of Physics there had only a small staff, rather poor facilities, and there was no research. With characteristic enthusiasm, and virtually single-handed despite a very heavy teaching load, he established nuclear spectroscopy as a principal field of research in Manitoba. Specially significant for what followed were the collaborative research links he initiated with Chemistry and Geology, for out of this joint research grew spin-off applications. His value to the University had been quickly recognised for within a year he was promoted to full professor and two years later was made Chairman of the Physics Department. By the end of his seven-year stay in Manitoba the University had become a leading centre for nuclear spectroscopy and its applications. Deservedly, in 1955 Robert Pringle was made a Fellow of the Royal Society of Canada.

It is interesting that in 1950, with the University's permission, a small Company was formed in Winnipeg, with Pringle and two University colleagues as directors. *One was from Chemistry, the other from Geology. The company was set up to develop and produce the scintillators and electronic instruments needed by the University in the first place and then for specialised applications in hospitals and the oil industry. It developed the first portable scintillation spectrometer and the first airborne scintillation spectrometer, both for geophysical prospecting. The company was given the name Nuclear Enterprises, and it thrived.

Recognising that there could be a huge world market for this radiation-detecting equipment that the company had developed, Pringle soon would have to decide how deeply he should become involved. The attraction of remaining part of this expanding spin-off company was too great for him to resist. In 1956 he decided to leave academia and go full time into Nuclear Enterprises - but he would return to Scotland and set up another company which he would call Nuclear Enterprises(GB) Ltd. He would base it in Edinburgh with himself as Chairman and Managing Director, his father as Company Secretary, and he would be joined later by his physicist brother Dr Derek Pringle as its Technical Director. It was a bold move, but he was capable of handling challenges. He had succeeded with his first, that of developing a strong research school in the University of Manitoba. Time has shown that he certainly succeeded again with his second, that of building a successful 'Pringle family' nucleonics company, back home in Scotland. The Company produced liquid and plastic

scintillators and the associated electronic instrumentation. Customers included university and hospital research departments, also government research establishments at home and abroad. Robert Pringle became a leading international figure in this new field of nucleonics. Over the years his Company's achievements had been rewarded by such coveted awards as the Queen's Award to Industry, given for technological innovation, which it received twice, and the Design Council Award for their widely used diagnostic ultrasonic scanner instrument. Pringle himself was awarded the OBE in 1967.

Committed as he was to expanding the Company he nevertheless made time for serving on various public bodies. He was a committee member of the Scottish CBI, a Board member of the Scottish School of Business Studies, a member of the Edinburgh University Court for eight years and of the SRC Boards and Council for four. Possibly it was from his personal experience in Manitoba of the pay-off that came from interdisciplinary research that when he came back to Edinburgh he was a great campaigner for collaboration between industry and the universities. Doubtless he would have brought that persuasion to these business and academic committees on which he served. It was a persuasion he certainly brought to the Court of Edinburgh University, for he was one of the founder members of that University's Centre for Industrial Consultancy and Liaison (CICL) and was a co-opted member of the Scottish Universities Industrial Liaison Committee. He gave valued encouragement to individuals and groups in the University who put forward proposals for joint projects with industrial organisations, including his own Company.

It might have been thought that Robert Pringle, who had led such an active life in business and public service, would not take kindly to retirement, which he took early, after EMI took over the Company in 1976. In fact, he and his wife spent many happy and fulfilling years in the South of France. He maintained links with Scotland, becoming a trustee of two charitable Trusts in Edinburgh, and still served on a small number of committees. He also undertook some consulting for Canada in nuclear geophysics. In the warmer, more relaxed environment of Monte Carlo he was able to concentrate on improving his golf and to pursue his former side-line interests. His continuing interest in rugby found expression in his founding of the Glenlivet Monte Carlo Sevens, repeating what he had done in Manitoba where he had introduced the Canadians to Sevens also. There he had become President of the Manitoba Rugby Union. In retirement it was not unusual for his occasional return visits to Edinburgh to coincide with the playing of important rugby matches at either Murrayfield or his beloved Goldenacre ground! He was a collector of rare coins and of old books. He wrote a book, with James Douglas (1986) on the wide variety of twentieth century Scottish banknotes.

His contributions to nuclear physics appear in some thirty papers published in leading scientific journals between 1948 and 1957. These were his research years in Manitoba, before he switched to industry. Of special interest was the paper in which was reported the discovery and measurement of the natural radioactivity of lanthanum.

He will be missed by a large circle of friends, who remember him as a lively, sociable, friendly person, a man with a sharp mind, a keen business sense, immense enthusiasm and a wide range of interests. It was a privilege to have been associated with him. He is survived by his wife Carol, whom he married in 1948, their daughter and three sons and five grandchildren.

Dr Robert Pringle was elected to Fellowship of the Royal Society of Edinburgh in 1964.

I am indebted to Professor C W Davidson, Mr R M Sillitto and Mr J B Smith for their information and advice.

W E J FARVIS

*Kenneth Roulston, one of the Canadian colleagues referred to above, was in fact a physicist, not a chemist. Source. Daughter of K Roulston.

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