

OBITUARY

Sir William Paton, CBE DM FRCP FRS

Bill Paton (sometimes addressed as Sir William but never to my knowledge as William), was a member of the Society for 45 years, joining in 1948, and being elected an Honorary Member in 1981. He served both as Chairman of the Editorial Board (1965–74) and as Chairman of the Committee (1978–81).

He was one of the relatively small band of those who worked during what I think of as the transition phase of pharmacology. The early years, the era of smoked drums, string and sealing wax pharmacology, personified in Britain by the towering figures of Dale, Brown, Feldberg and Gaddum, were coming to an end with the advent of the more sophisticated recording apparatus made possible by electronics, the age of pharmacology based on molecular biology and computer simulation had not yet dawned. The challenges of the transition were special. New technology allowed exploration at the cellular level but still without the advantages of micro-electrodes reading from inside the cell. During this transition phase Bill Paton was at his best, and a very good best it was. I worked at a desk facing his in F4, the physiology-pharmacology lab at the NIMR in Hampstead for several years, during which time we did a number of studies together. Bill was the most brilliant analyst of the results of an experiment I ever came across. At the end of a long day when I was ready only for a drink, a meal and bed he would set off home with the notes of the experiment and come back in the morning with a complete analysis, what it all meant and precisely what we should do in the next one. It was wholly logical and crystal clear. I realised later when working with Feldberg that Bill had none of the intuition, the mysticism, that led Feldberg sometimes to do wholly irrational things which occasionally bore fruit. Bill never did anything irrational.

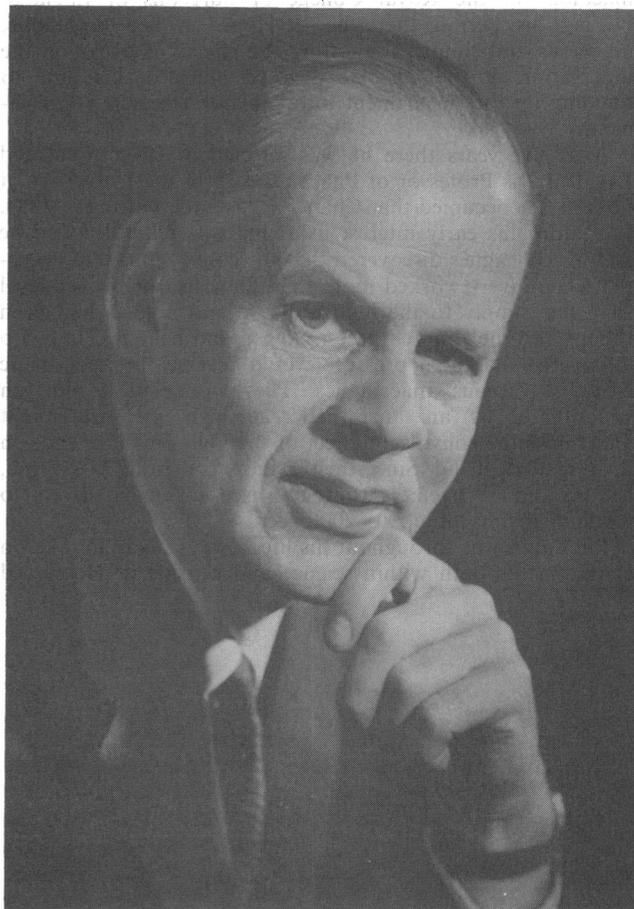
He was a son of the manse, born on May 5th, 1917 to the Rev William Paton and his wife, Grace MacKenzie Paton. He was a natural scholar. After schooling at Winchester House, Brackley and at Repton, he entered New College, Oxford. He won the Theodore Williams, Christopher Welch and Jesse Therese Rowden scholarships and completed a first-class honours degree in physiology in 1938. He then went to University College Hospital in London, won the Goldsmid exhibition there in 1939 and the Gold Medal in clinical medicine in 1941 and qualified BM BCh (Oxon) in 1942.

Bill was never wholly fit. He had chronic trouble with his lungs which kept him out of the services and which prevented his active participation in games.

It was probably another factor that intensified his natural scholarly bent. In 1942 he married Phoebe Margaret Rooke and began work as a pathologist in the King Edward VII sanatorium; but two years later took the decisive step in his career when he was recruited by G.L. Brown who had succeeded Dale as Head of Physiology and Pharmacology in F4 at the NIMR in Hampstead. There he was to spend eight of his most productive research years.

His first interest was in the physiological problems of diving which was the wartime activity of the department. There was a decompression chamber at Hampstead where G.L. Brown, aided by J.B.S. Haldane, K.W. Donald, and others were already working, and Bill's attention was fairly caught, but his contribution to that field was to come later.

After the war Bill had, as his main colleagues in F4, G.L. Brown, F.C. McIntosh, John Gray, Nora Zaimis and myself. F4 was a sort of Mecca for physiologists, including the most distinguished of them, so that there was a constant stream of



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visitors from all over the world. Working in that atmosphere there was nothing to blame except oneself if research did not go well. Bill Paton's went very well; Paton and Zaimis on the methonium drugs (1951) and on the different type of neuromuscular block (1952), McIntosh and Paton on the histamine liberators (1952) and Paton and Perry on different types of ganglion block (1953) were all seminal papers. They were all to have profound effects in clinical medicine. Although tubocurarine was already in use as a muscle relaxant in surgery, the advent of decamethonium with a wholly different mode of action, sparked off a series of studies on other muscle relaxants which have been of great value both in surgery and in intensive care to allow artificial ventilation. Hexamethonium, a ganglion blocking agent was the very first drug that reduced blood pressure specifically and safely. Since then the search for other and better drugs with this action has been intense and successful.

Life in F4 in those days was very hard work tempered with quite a bit of play. There were lots of excuses for evening parties when the experiments were finished. We produced a film (now in the BPS archives) called 'Let's get an effect' which lampooned each of the staff; and we produced spoof papers for meetings, Bill playing a major part in several, one on 'perfusion of the isolated Id with a solution of ectoplasm.' Bill had a very pretty wit and wrote extremely amusing minutes when he was Secretary of the Physiological Society. He was kind and sympathetic but reserved and sometimes

withdrawn. Although he took a full part in all the activities in F4 he was never quite 'one of the boys' and I suspect that stemmed as much from his lack of complete physical fitness as from a distaste for the more plebian activities.

In 1952 he became Reader in Pharmacology and Therapeutics at University College, London but after only two years there he was appointed to a new Chair of Pharmacology at the Royal College of Surgeons of England. During his period there he developed a new technique, ingenious and simple, for testing the effects of drugs on the innervation of the gut. He devoted much of his time to building up the department into a major research establishment.

After five years there he was selected in 1959 to succeed J.H. Burn as Professor of Pharmacology in the University of Oxford. He occupied that Chair for 25 years, retiring in 1984. In Oxford his early interest in diving was rekindled and he and his colleagues discovered that the convulsions that occurred when divers worked more than 2000 feet below sea level were due simply to the high pressure and not, as had been thought, to the respired gases, oxygen and helium. They also discovered that high pressure would reverse the anaesthetic effect of gaseous anaesthetics. They wondered if nitrogen which acts as an anaesthetic at high pressure might antagonise the convulsant effect of the high pressure, and, on investigation, it did. Since then Trimix, consisting of oxygen, helium and nitrogen, is routinely used to enable divers to work at depths of up to 2000 feet.

Bill Paton was throughout his life, always ready to take on commitments both within science and outside it. He served

on the Medical Research Council, the Wellcome Trust, the Research Defence Society and as Director of the Wellcome Institute for the History of Medicine and the Chairman of the Rhodes Trust. He was a JP from 1956, the same year that he was elected FRS, and was Chairman of the Committee for the Suppression of Doping set up by the Joint Racing Board.

I would especially mention his services to the Research Defence Society. He was Chairman of the Council from 1972 to 1978 and, in 1978, delivered a memorable Paget Lecture. He developed his thoughtful ideas about the ethics of animal experimentation over the next few years and, in 1984, published them in his book 'Man & Mouse' which is remarkable for its clarity, its humanity and its total lack of prejudice.

His work in all these fields brought many honours, a CBE in 1968 and a knighthood in 1979; the Cameron Prize (jointly with E Zaimis) in 1956, the Gold Medal of the Society of Apothecaries in 1976, the Baly medal of the Royal College of Physicians in 1983 and the British Pharmacological Society's Wellcome Gold Medal in 1991.

He was only 42 when he went to Oxford. He had become, all too early, one of the father figures of pharmacology. Holding as he did the premier Chair in England he was as we have seen almost immediately in demand to undertake public duties of many different kinds. His natural reserve emphasised a gravitas that led some to consider him pompous. Those who knew him saw that his gravitas merely concealed his kindness, his humour and his wisdom.

Walter Perry, Edinburgh