displacement of the filaments exceeds a few nanometres. Almost all of his papers up to 1971 were under his authorship alone.

From 1971 until 1977, David collaborated with RHT Edwards and his group in studies on human muscle, measuring force, heat production and chemical changes, the latter research requiring samples taken from their own muscles by needle biopsy. From 1977, he continued his work on muscle with PA Merton, activating their own muscles by heroic procedures such as stimulating them with electric shocks through the skin and by strong magnetic fields applied to the brain.

In 1949, David had married Stella, sister of the immunologist John Humphrey, and they had three daughters. Following his retirement in 1982, David experimented in photography, and, after he and his wife made their final move to Yorkshire, he made himself extremely skilled in woodwork. He died after a long illness in which he became progressively less mobile, though he retained his faculties and remained cheerful until the end.

I got to know David Hill well as an undergraduate: my own career followed his closely from my arrival at Trinity College one year after him. After he left Cambridge in 1948 we kept in touch until his death. His friendship was of great importance to me, especially when I first arrived at Trinity, younger than most of my contemporaries and very shy. He was exceptionally kind, gentle, modest and generous. He will be greatly missed.

Andrew Huxley
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Mary Pickford started her career when there were few women doctors and considerable prejudice against women scientists; she went on to make her mark on medicine and physiological science. She became determined when told by Sir Cooper Perry, superintendent of Guy’s Hospital and later Principal of London University, that ‘women are no good at that sort of thing’.

Lilian Mary Pickford was born on 14 August, 1902 in Jabalpur, in the centre of India, where her father was a successful planter of indigo and tobacco. In the 17th century her forebears had started the Pickford transport service. Her father's cousin, William Pickford, was Master of the Rolls, created Baron Sterndale in 1918. His younger daughter, Mary Ada Pickford, became one of the first women members of Parliament. The Marquis of Bristol was a great-grandfather.

At the age of six, Mary Pickford was left ‘at home’ in England with her aunt. The aunt’s husband was an engineer who specialized in work for hospitals, especially for Guy’s. As a child Mary was forever asking questions and her relations were tireless at finding appropriate responses. At first she wanted to be a doctor, later to do research; she ended up being both, a renowned medical teacher and research worker. When she arrived in England she was at first taught privately, sharing a governess with a cousin. In 1914 she was sent to Hamilton House, Tunbridge Wells, and in 1916 to Wycombe Abbey School. She enjoyed school and was impressed by the person who taught her the rudiments of playing the cello, but her school record was unremarkable. In 1921 she went to Bedford College, London University, where she read science, obtaining a first class general honours in 1924.

In 1925 she went to University College London and began part-time work in pharmacology with the famous scientist AJ Clarke and then with EB Verney, with support from a Medical Research Council grant; she enjoyed working on the kidney and the heart-lung preparation. While working part-time, she started clinical studies, this having become practicable as her godmother had left her an income of £120 a year.

Verney became ill and for a while Pickford held the fort in the Pharmacology Department, keeping one page ahead of the students. She gained a ‘conjoint’ medical qualification in 1933 and at University College Hospital met some of the great medical figures of that era – TR Elliot, Sir Thomas Lewis, Wilfrid Trotter and Sir Francis Walsh – whilst amongst her contemporaries were George (later Sir George) Pickering, and Harry (later Sir Harold) Himsworth, who became Secretary of the Medical Research Council. The medical school had only 60 entries annually and so, said Pickford, ‘One could know everyone and feel the influence of great men. This was an untold blessing and the place could be enjoyed.’ Is the present, politically driven, passion for numbers, rather than standards, not a retrogressive step’

After qualification Pickford undertook some junior hospital jobs but Verney moved to Cambridge University
and she soon joined him there, becoming a Beit Memorial Research Fellow. In 1939 she became a lecturer in the Physiology Department of Edinburgh University. During the Second World War, staffing levels were minimal, and in some departments the arrangements were wholly unsatisfactory. An Egyptian medical student with a wife and a number of children to support, who repeatedly failed his clinical examinations, saw ‘a gap in the market’. He ran cram courses for the students en masse, in the Odd Fellows Hall, a stone’s throw away from the medical school; there they learnt, it appears, by chanting strings of facts.

Mary Pickford kept the flag flying for physiology in this difficult period. She also helped in outpatients at the Royal Hospital for Sick Children. She spent one Christmas in London during the Blitz, saw the city burning, did locums for hard-pressed general practitioners and inspected the vast underground shelters. On returning to Edinburgh, on occasions she sang in the Usher Hall to entertain the troops.

Pickford published extensively; her work was endocrinological and related to the hypothalamus and pituitary. She made observations on dogs; some needed substantial surgery, many only trivial procedures. Some she trained to urinate on command. The dogs enjoyed her company and she was very concerned with their welfare so that the observations would be as physiological as possible. If, on some mornings, a dog was not taken up to the lab the animal would bark to draw attention to himself and to register his disappointment. On her door there was sometimes the notice Go Away! Do Not Even Knock. The knock would upset the dog and hormone levels would vary unpredictably. The picture so widely portrayed of terrified animals in research could not have been further from the mark. Much of Pickford’s work was concerned with the relationship of two hormones, the anti-diuretic hormone that controls water balance by its action on the kidney, and oxytocin that acts on the uterus.

She gained a DSc in 1951 in Edinburgh and later was given an Honorary DSc by the Heriot-Watt University. In 1954 she became a Fellow of the Royal Society of Edinburgh, in 1977 of the Royal College of Physicians of Edinburgh, in 1966 of the Royal Society of London and in 1966 was the first woman to hold a chair in the Edinburgh Medical Faculty.

She was always utterly straightforward in her dealings; this was alas not true of everyone in high places. She was especially concerned about the welfare of the women students; at the end of a class in physiology she would sometimes ask the women to stay behind after the men had left; she would then give them some advice about, for instance, the advisability of learning ju-jitsu to protect themselves should the need arise.

At one time there was a ‘Regency’ scheme for the students; as a regent Pickford would have had five students allotted to her. She would invite them individually to her house for a sumptuous tea and was interested in their lives; she was motherly and protective, a very caring person. The regent system collapsed and now that the university is swamped with numbers, this civilized arrangement could not be revived.

In 1963 and 1964 she attended the ‘Two Way Traffic in Ideas Seminars’ organised in Edinburgh by Tam Dalyell MP for Dick Crossman, then Shadow Cabinet Secretary of State for Education and Science, and contributed in her gentle and authoritative manner valuable and constructive ideas about medical education. At meetings of learned societies, she sometimes asked questions. If a paper had been given by a young, nervous person or by someone from abroad, the questions were couched in the gentlest manner and might contain helpful advice for further studies. If, however, an experienced person had blundered, and should have known better, she would start the question in the most polite manner but a few sentences later, using perhaps the phrase ‘you did not say… did you?’, the flaw in the argument would be exposed.

Pickford made a number of lecture tours in both North and South America. She had wit and a sense of fun. She enjoyed being mistaken for her namesake, the star of the silent screen, when checking into American hotels, especially when this meant receiving bouquets of flowers or baskets of fruit. This happened when she attended a Physiological in Boston Congress in 1929; she had sailed across with other scientists on the liner Minnekahda.

After a day’s work in the lab she sometimes gave a dinner party in her home. In 1951 she drove a 1933 Rover saloon car, the shock absorbers of which had become non-functional; she found that travel over the Edinburgh cobbles was more comfortable when the car was full of passengers. The increased mass would lower the resonant frequency of the vehicle and tune it away from the rhythmic percussive drive from the impact of the seats.

After she attended an evening class run by a most stimulating artist, George Garson, in a cellar in the Royal Mile, painting became an important pastime for her. One year she went high up in the Andes and painted some of the indigenous people. She exhibited annually with The Edinburgh Women Artists, a group that she had started. In retirement she went annually to a painting school in Mull and painted elephants from her childhood memo-
Laurence Malcolm
1913 – 2001

Laurence Malcolm was the son of Professor John Malcolm, who held the Chair in Physiology at the University of Otago, New Zealand from 1905 – 1943. He studied medicine at Otago from 1931, with a break in 1932 for a family sabbatical in Britain, during which time he attended classes at St Andrews and Edinburgh universities. After completing his preclinical studies in 1934, back at Otago, he took the opportunity to enter a science-based course and achieved B Med Sci in 1935, probably a substantial contributor to his interest in fundamental physiological research. Following his graduation with MB ChB in 1938, Laurence Malcolm completed his house jobs in clinical medicine and then joined the Department of Physiology at Otago, where JC Eccles arrived in 1944.

In 1944 Dr Malcolm came to work as an exchange lecturer at St Thomas’s Medical School and subsequently was appointed as Reader in Physiology at St Mary’s Medical School. After a year spent working with Professor Chandler Brooks in New York, he was appointed to a post working with Professor W Feldberg at the National Institute for Medical Research, Mill Hill in 1953. During his time at Mill Hill he published many neurophysiological papers in collaboration with Sydney Hilton, W Feldberg and many others; his particular field was that of evoked potentials and their basis in spinal cord and brain. His mastery of experimental technique was so precise that it was an exquisite ‘art form’ to watch and learn by.

In 1959 Laurence Malcolm was awarded the Regius Chair in Physiology at Marischal College of the University of Aberdeen, where he introduced many innovative projects. One was the intercalated science degree for medical students, which continues today as BSc Med Sci, based on his own experience in Otago. He was also instrumental in building a well-respected BSc degree in physiology, the first graduates coming in 1963, and incorporated in the final year an original research project – this has given many students a ‘launch’ into research careers over the years.

In Aberdeen, Professor Malcolm was concerned for the welfare and enhancement of both staff and students. He believed that colleagues sharing their coffee break could also share ideas and solve problems in both teaching and research. His hospitality at parties at his home, House of Minmundy, was generous and warm, providing for good relations between staff and postgraduates in the department.

Professor Malcolm served as Dean of the science faculty at Aberdeen in the early 1970s, and was instrumental in developing more ‘modular’ course structures to increase the range of possibilities for students. The foundation course in physiology was designed on the basis ‘What do we expect them to know?’ for detailed analytical study in more senior years. During his time in Aberdeen