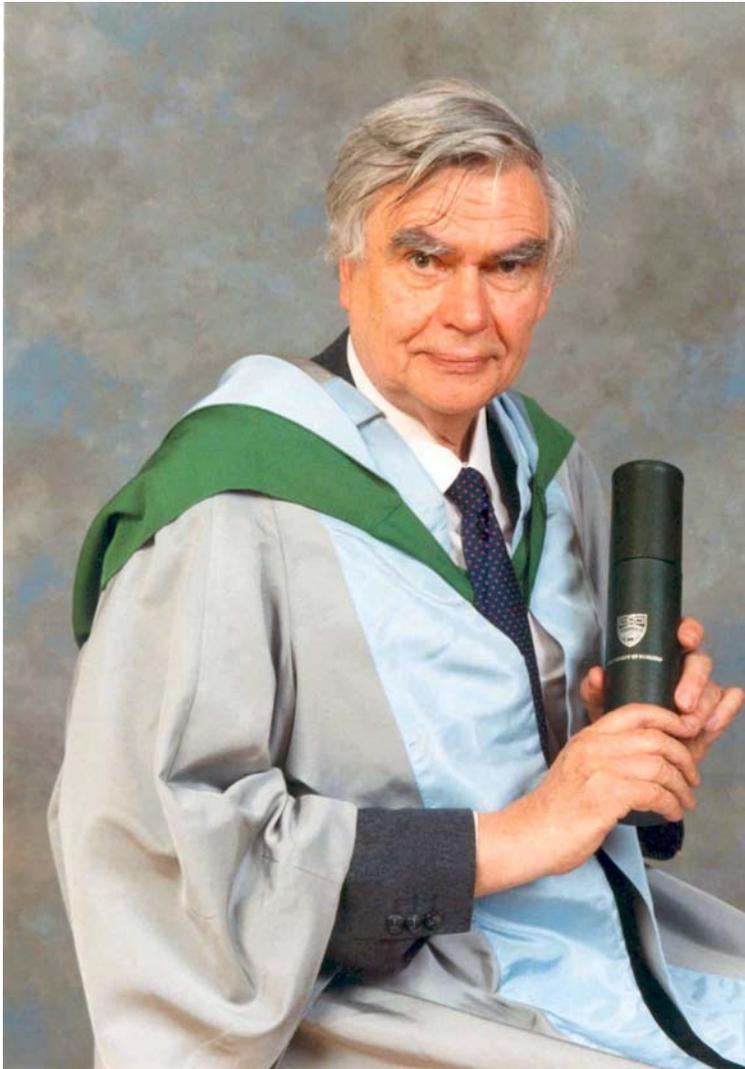


RICHARD LANGTON GREGORY
24 July 1923 - 17 May 2010



Richard Gregory receiving an honorary degree from Stirling University in 1990. (Tempest Photography)

Richard Langton Gregory was descended from a long line of academic Gregories. The first was the illustrious James Gregory of Aberdeen (1638-1675), who invented the Gregorian reflecting telescope and developed the calculus. Richard's father, Christopher Clive Langton Gregory, was Director of the University of London Observatory at Mill Hill, and Richard retained the family interest in astronomy.

It is, of course, not enough to inherit good blood - one must also show achievements in one's own lifetime. This Richard Gregory certainly did, making significant contributions over such diverse fields as the philosophy and psychology of perception, the design of instruments, and the popularisation of science for the general public. He was perhaps one of the last great Gentlemen of Science.

Richard showed his inventive talents from an early age. As a boy he went to the King Alfred School in London, where he received every encouragement to explore - and accidentally reinvented Pythagoras' theorem. He served in the RAF (Signals) during the Second World War, which provided further training

in radio communications and radar. His talent for explaining science to the public had already been spotted by the Air Ministry, and in the summer of 1945 he was posted to a very popular exhibition at the John Lewis bomb site in London, where he had the job of showing factory workers and other visitors how military devices worked.

He won an RAF scholarship to study philosophy and experimental psychology at Downing College, Cambridge (1947-50). After a period of research at the MRC Applied Psychology Unit (1950-53) he became a lecturer in the Psychology Department of Cambridge University (1953-67), and a Fellow of Corpus Christi College (1962-67). He was also the Director of the Special Senses Laboratory, and it was at this stage that I became his research assistant on a US Air

Force grant in 1961. The Special Senses was (as I soon discovered) a historical term for the well-known five senses of Vision, Hearing, Taste, Smell and Touch - as opposed to the general or common sense and other less understood senses. The title in no way restricted his enterprises: at this period he was working on the interaction between vision and the vestibular sense; weight perception; the visual system of the copepod *Copilia*; a general theory of the visual illusions; the development of a scanning electron microscope and a telescope camera that removed atmospheric turbulence; and on his first major book *Eye and Brain* (1966), which went into five editions. His laboratory contained a large parallel swing, a motorised sled on railway lines, and a plethora of fascinating objects. It was a golden age. At this time Richard was married to his first wife, Margaret Muir (divorced 1966). They had two bright children, Mark and Romilly. They were a very hospitable couple, often entertaining students and colleagues in their home.

Richard believed that life should be fun, and that research should be fun. Why spend time on boring research, when there were so many interesting topics to investigate. Richard was happiest with phenomena that could be demonstrated in an afternoon, and he did not want to get involved in lengthy experiments and statistical analyses. This caused difficulties for some of his students and research assistants, including myself. We needed to conduct publishable experiments to establish our careers, and could not afford to change tack along with his shifting enthusiasms. There was also the problem of interpreting his wishes. Richard never liked to say No, so he always said Yes. One eventually learned that 'Yes' meant 'No', 'Yes, yes' meant 'Perhaps', and 'Yes, yes, yes' really did mean 'Yes'. This behaviour produced some interesting social situations. Richard used to take his research team to conferences, and introduce us to other psychologists at receptions; each person we met would suggest that we should eat together later that evening, and Richard would agree to three or four such commitments before finally leaving with another group. Richard could get away with behaviour, and with research strategies, that less talented people cannot – so he was not an ideal role model for aspiring academics. Nevertheless he was very concerned to promote the careers of all those who worked with him, and he inspired many people to follow up his ideas. One of his most successful research assistants and co-inventors was Stephen Salter, an engineer who later became famous for his nodding ducks – an early version of wave power technology.

Richard revered many earlier scientists, but had a special regard for Hermann von Helmholtz. He expounded Helmholtz' idea that much of perception was like an 'unconscious inference', and he maintained that 'perceptions are hypotheses'. He explained certain geometrical illusions as automatic 'bottom-up' processes that were nevertheless similar to 'top-down' distance-scaling processes. This was not a new idea, but Richard had the gift of publicising it. He gave these illusions a new lease of life, with many researchers conducting experiments and entering the controversy. Richard also admired Kenneth Craik, the first director of the MRC Applied Psychology Unit in Cambridge, who died tragically young. Craik developed the idea of a cerebral model, or inner representation of the world, which allows us to perceive and interact with the world. Richard followed this idea with enthusiasm, and believed that computers and robotics could give us insight into the workings of the brain.

Richard was always a little larger than life, and inevitably his laboratory began to run out of space. In 1967 he followed the ancestral call and went to Edinburgh University as one of the three founding professors of the Department of Machine Intelligence and Perception, the other two being Donald Michie and Christopher Longuet-Higgins. It was the first of its kind in Europe, and he helped to develop the pioneering robot 'Freddie'. He was elected a Fellow of the Royal Society of Edinburgh in 1969. I caught up with him again in 1969 when I moved to Stirling University. By this time he was married to Freja Balchin (divorced 1977), and again they were

very hospitable in their beautiful New Town flat. However, Richard did not enjoy Edinburgh. The weather was bad, the city was lacking in buzz, and it was a long way to London and Cambridge. But much worse were the difficulties of the new department. The three founding professors were all brilliant scientists, but prima donnas. They could not sort out a common direction for their research, and they did not get on with each other. The group broke up when Richard left for Bristol in 1970, and Longuet-Higgins for Sussex in 1974. Nevertheless, their work had laid the foundation for modern artificial intelligence (AI) research. The infamous Lighthill Report of 1973 caused the Science Research Council to restrict funding for AI in the UK for a decade, though work continued elsewhere. Richard himself had an ambivalent attitude to computers. He did not like using them to conduct perceptual experiments, preferring the clever and elegant pieces of apparatus that he designed himself. But he remained enthusiastic about robotics and AI, and was deeply disappointed by the Lighthill Report.

Richard moved to Bristol in 1970 to become Professor of Neuropsychology and Director of the Brain and Perception Laboratory. This was perhaps the most fruitful period of his life. He founded the international journal *Perception* (1972), published several books including *The Intelligent Eye* (1970), edited *The Oxford Companion to the Mind* (1985, revised edition 2004), established a hands-on science centre in Bristol called 'The Exploratory' (later to become 'Explore@Bristol'), and continued to give many radio and television broadcasts. He officially retired from his Personal Chair in 1988, and was made a CBE in 1989. He was elected an FRS in 1992 for the Improving of Natural Knowledge. He was showered with honorary degrees – D.Univ. from the Open University, Stirling and York; D.Sc. from Bristol, Exeter, East Anglia, UMIST, Keele and Edinburgh; and an LL.D. from Bristol. He was awarded countless other honours, prizes and fellowships.

Richard continued to find time for travel and fun. He often visited Scotland for meetings of the society for Scotch Perspectives in the History of Perception – an irregular society that requires aspiring members to submit a bottle of malt whisky that no other members have submitted. Richard presented a brand that he pronounced No Can Do – an example of one his appalling puns, and quite inappropriate. If anyone ever had a Can Do approach, it was Richard.

People like Richard Gregory never truly retire. As an Emeritus Professor he established the Perceptual Systems Research Centre in Bristol University Psychology Department. He worked with the Engineering Department on a snooker-playing robot, and retained his childlike enthusiasm for new inventions. In his later years he lived with his long-term partner and collaborator, Priscilla Heard. He began to slow down after he suffered a minor stroke in 2008, and he died a few days after a massive stroke in May 2010.

He will be remembered as an inventor and communicator; as an inspirer of ideas; as a generous and forgiving man, lacking in malice and guile; and as the little boy who never grew up.

He is survived by his two previous wives, his long-term partner Priscilla Heard, his children, and two grandchildren.

Helen E. Ross

Richard Langton Gregory CBE, MA (Cantab), DSc, LID (Brist), FRS, FRSA,FBPsS; Elected FRSE 3rd March 1969;Died 17 May 2010.