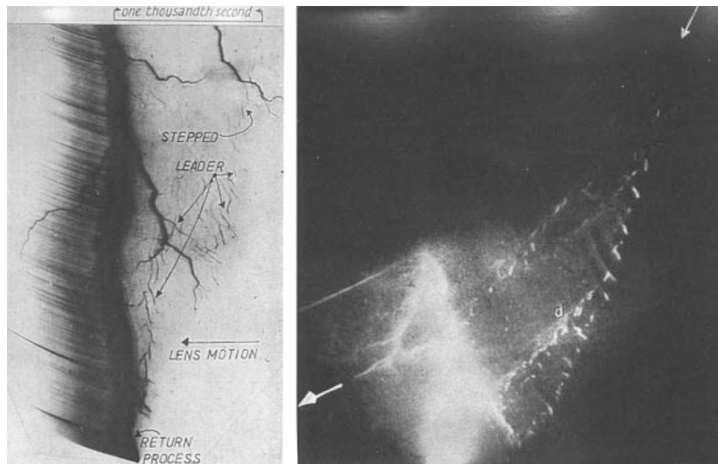


M. DAVIDSON/OU/UP



With his photographs of lightning taken on the South African veld (see inset), Basil Schonland established a reputation as a world leader in lightning research.



Schonland contributed to both military and scientific developments through a mastery of physics, learned initially in the university town of Grahamstown in the Cape, South Africa, but perfected at the Cavendish Laboratory during the 'golden age' of Sir Ernest Rutherford.

A product of the English type of public school, young Basil's career combined brilliant scholastic triumphs with sturdy character development. He acquired from early youth a belief in the ideals of service to King and Country, and also qualities of leadership, which guided this intellectual brilliance to the benefit of all who later came under his authority.

Austin develops the multi-faceted tale of his achievements in vivid detail. We encounter Schonland as scholar and student, officer and communications specialist in the Royal Engineers, wireless research officer and chief instructor of the British Expeditionary Force, recipient of the OBE (1919), and postgraduate student at Cambridge (1919–1922). Here he grappled with an intriguing scientific puzzle: why the scattering of β -particles (energetic electrons) by thin metal sheets appeared to contradict the Rutherford atomic model. Meticulous experimental work was supported by the theoretical analysis of Charles G. Darwin.

Awarded his PhD in 1924, Schonland

which the huge natural laboratory of the open veld offered untapped opportunities. Schonland established a reputation as a world leader in lightning research and in 1938 was elected FRS; he was by then director of the newly established Bernard Price Institute (BPI) of Geophysical Research in Johannesburg.

Considerable experience in radio work by Schonland and his team at the BPI by 1939 and three days' tuition in radar by Ernest Marsden, fortuitously en route to New Zealand, facilitated the successful construction of portable radar sets in Johannesburg from locally available components. These proved invaluable to the war effort in East Africa and the Middle East, when British sets were in short supply, and provided the stepping-stone for Schonland's re-entry into active military service. His major contribution here was the practical implementation of operations research, in his capacity as scientific adviser to Field Marshal Montgomery, an appointment facilitated

by impeccable military credentials.

Brian Austin, an expert on research into 'wireless', radio and radar development, succeeds well in covering these aspects of his vast canvas. The text is well referenced and sources include records of interviews with the Schonland family, and former colleagues and students, who themselves played important parts in the story. The book also provides unique insight into the Cavendish at the zenith of the 'old' (Bohr–Sommerfeld) quantum theory. The text and group photographs, including several present and future Nobel laureates, remind us vividly that this period (1919–1928) was a golden age for the Cavendish. Two Nobel laureates (Edward Appleton and Charles Wilson) also played significant roles in Schonland's lightning research, while two others, close contemporaries (Patrick Blackett and John Cockroft), were vitally important to his military activities in the Second World War, to some of his geophysical investigations, to his successful planning and founding of the South African CSIR (1945–1950), and, especially, to his entry (1954) into the troubled fields of nuclear fission and fusion. Contemporary researchers in controlled thermonuclear fusion are provided with a salutary lesson on the dangers of prematurely publicized over-optimism and resource-consuming mammoth experiments, both problems that Schonland encountered in 1958.

The picture of Schonland the man emerges slowly, and is revealed only in the closing pages of the book. Clearly, public service of the highest order, without self-interest, remained pre-eminent throughout, even when the call of duty meant partly sacrificing a promising research career. Thus, ideals acquired in youth remained his lodestone right up to the point at which Schonland, "aged beyond his years", retired from management of the fractious world of large-scale British nuclear science (1954–1961).

Minor blemishes aside, this historical biography is a fine tribute to a legendary and inspiring figure in South African science. It may also serve to inform the reader of different aspects of a country, long under its own thundercloud, and eschewed, even in scientific circles, like the lepers of old — yet, as Thomas Hardy wrote of Egdon Heath, "perfectly accordant with man's nature, but like man, slighted and enduring".

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Edwin Black *Nature* published a correction (*Nature* **415**, 370; 2002) citing two errors in a review by Professor Howard Segal of the book *IBM and The Holocaust: The Strategic Alliance Between Nazi Germany and America's Most Powerful Corporation* by Edwin Black (*Nature* **411**, 993–994; 2001). In addition, Professor Segal, in his review, asserted that the book's author exaggerated the importance of punch-card machines. *Nature* has been made aware that the reviewer has retracted this assertion, stating: "In fact, I know of no evidence or documentation that the book included any exaggeration at all."