

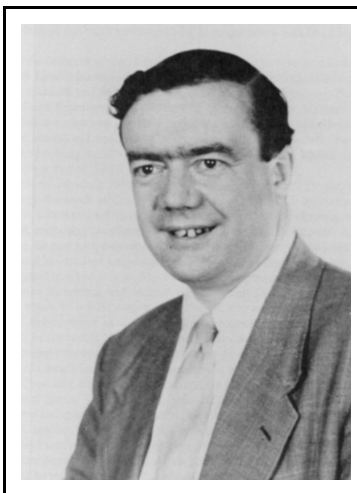
WILFRED BENNETT LEWIS, 1908 - 1987

In the past century of Canadian science no leader was more Napoleonic than W.B. Lewis, with his grand visions and major projects, with his single-mindedness in achieving his objectives, and with his enormous capacity for work and his great technical ability. In his twenty-seven years at Chalk River, Lewis was the leader who accomplished the development of CANDU which many of us regard as Canada's greatest scientific achievement of the century.

Lewis was born in Cumberland in northern England, on June 24, 1908, to a family with strong engineering traditions. He entered Cambridge university as an undergraduate student in 1927 and became a graduate student in Rutherford's Cavendish laboratory in 1930. His forte in graduate work was his great knowledge of electronic circuit theory. This equipped him well for his outstanding work in WWII as a leader of radar development at the Telecommunications Research Establishment in Malvern in the Midlands of England.

The appointment of Lewis, in September 1946, to replace Sir John Cockcroft as the scientific head of Chalk River was an inspired choice. The outstanding scientific staff had recently moved from Montreal (see Wallace's article on the Montreal Laboratory in this issue). Critical choices had to be made immediately about the direction of the reactor research. The ambitious CANDU plan emerged. It was technically challenging and required outstanding leadership. Lewis was that leader. During the following 27 years, he dominated CANDU and Chalk River.

Lewis had fine scientific sensibilities and wonderful technical skills and intuition. He built the finest electronics group anywhere and he appreciated that the solution of CANDU's metallurgical problems required the combined skills of the world-class scientific team which he led. He nurtured the team's fundamental research, but brought their brains to bear on CANDU's problems.



Wilfred B. Lewis

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Lewis, in search of the solution to a technical problem, was, to the observer, a magnificent natural phenomenon. He assembled the necessary team. He aggressively led the probing of the pertinent questions. A speaker with wishy-washy responses could be led to tears. However, suggested improvements or clear proofs that Lewis' intuition was wrong were gratefully acknowledged. Progress came. CANDU prospered.

Lewis always rushed around carrying two full briefcases and personally became involved with almost every scientific pursuit or paper at Chalk River. He shuffled along like a dishevelled English schoolboy. Apart from minor digressions - into determining the selection of books for the Deep River library and in racing, unsuccessfully, his Y-flyer sailboat - his whole life was devoted to his work at Chalk River. For Lewis, only one gender existed for professional appointments at CRNL: he never married and counted on his mother and then his sister to make his personal life comfortable.

Like Napoleon, he rarely failed. In his last decade at Chalk River he promoted electric breeding (the ING project) as a new major undertaking for Chalk River. It was not to be. Ernest Lawrence's exceptional efforts in the 1950's were not sufficient to overcome the ferocious technical problems for the accelerator and the target of an electric breeding system. It is not clear that Lewis could have succeeded in building ING in the late 1960's, even if Canada had funded it. (Recently Carlo Rubbia has devoted his exceptional skill to this dream and even now it may be too big a challenge).

Lewis received many awards and distinctions, commensurate with his accomplishments. It is sad that this great man was afflicted, at the end of his life, with Alzheimer's disease and that, after his retirement, Chalk River did not continue to have the great scientific leadership which Lewis provided.

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