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Records Series Title	Scientist's Papers - JOHN LAWRENCE
Accession No.	434-90-20168
File Code No.	9-14-6
Carton No.	(15)
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Notes	E.O. Lawrence Bio
Found By	Karen Helms
Dates	c. 1968

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AN AMERICAN GENIUS
THE STORY OF ERNEST
ORLANDO LAWRENCE
FATHER OF THE CYCLOTRON

By Herbert Childs
E.P. Dutton & Co.
576 pp; \$12.95

Reviewed by
Daniel Wilkes

This very personal biography will interest anyone who has been associated either with the science or the politics of the Atomic Age, students interested in science, historians, and general readers with a taste for Americana flavored with a powerful personality moving across a massive canvas.

The late Ernest Orlando Lawrence, a familiar Bay Area figure, is the Paul Bunyan of science. His career smacks of Horatio Alger and of the great tycoons - out of the mold of a Henry Ford but in the improbable setting of the laboratory. He was, perhaps, the first and the last of his species.

A tall, blond-thatched Viking, he was born in a teacher's family on the Great Plains of South Dakota in 1901, near in time and place to the last gasp of the geographical frontier at the Little Big Horn - a proper beginning for great voyages into a new unknown.

Tinkering with wireless and Model T's, together with inspiration by a professor in his native state, led him to physics, a Ph.D. at Yale, and to the University of California, Berkeley, in the fall of 1928. Six months later, in a flash of genius, he invented the cyclotron.

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A visionary, he foresaw great and still greater "atom-smashers" for plumbing the nucleus. Peers scoffed at his brashness. But Lawrence, possessed of genius with people and the uses of power, as well as technical mastery, performed "the impossible" time and again.

Equipped with some personal demon that drove him beyond the pace of ordinary mortals, he streaked like a meteor across the skies of science in the 1930s. Before the decade had ended, he had won the Nobel Prize, set the pattern for the large-scale science we know today, thrown wide the door to the Atomic Age, and become a living legend larger than life.

Still, Lawrence was only beginning. The emerging record shows that more than any man he was the driving force in the United States' adoption of the crash program to make an atomic bomb during World War II. Later he was a major influence in the 1951 decision to go all-out for the "super" - the hydrogen bomb.

In "An American Genius" Childs has done a masterful job of portraying the life of this imposing figure, the laboratories he built (the Lawrence Radiation Laboratory, Berkeley and Livermore), and the intricate human travail of the Atomic Age.

Intimately and startlingly personal, profusely illustrated, filled with anecdotes and painstakingly researched, this biography will become a major, authentic reference on Lawrence and the nuclear epoch. The treatment is chronological, from Lawrence's Norwegian ancestry to his premature death in a Palo Alto hospital in 1958. Enough science, handled in a non-technical way, is included to measure Lawrence's work; but it does not intrude on the personal narration.

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Scientist's Papers -	
Records Series Title	JOHN LAWRENCE
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Childs shows keen insight into the complex and paradoxical Lawrence character. Although sympathetic to Lawrence, the thrust of the book is to "tell it as it happened," not to grind an axe. The author manages consistent understatement - difficult, since Lawrence almost commands hyperbole.

Lawrence aficionados - and critics - will recognize the bouncing, generous, effervescent, optimistic, inspirational, almost overpowering personality; the engaging country boy naivete that never quite wore off; the compulsive action and zest for life outside as well as in the laboratory. Not omitted, either, is what some saw as arrogance and an imperial air - inevitable fallout when a steel-willed captain drives hell-for-leather toward great objectives.

Through the book flows a stream of vignettes of the makers of the nuclear age - Bohr, Rutherford, Fermi, Cockroft, Oppenheimer, Teller, the Comptons, Conant, Bush, Seaborg, McMillan, Alvarez, Segre, General Groves and others. There, too, are the names, places and events that are the familiar fabric of Bay Area life.

General readers may find, in places, a surfeit of specialized anecdote, but they will be rewarded as they press on to new, broad episodes in Lawrence's career.

Everyone who knew Lawrence, personally or by reputation, will find new and surprising information and insights into the man. For example, although the story is not large in the book, Childs reveals the full poignancy, known only to a few, of the postwar conflict between Lawrence and Robert Oppenheimer. In Childs' hands, it reads like a Greek tragedy.

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DOCUMENT SOURCE	
Lawrence Berkeley Laboratory Archives and Records Office Scientists' Papers -	
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The closeness of the personal relationship between the two in the 1930's stands surprising and stark against the bitter differences over how to achieve lasting peace in a world of atomic bombs.

Time did some healing, and a couple of years before his own death, Oppenheimer volunteered to Childs this benign epitaph for his old friend: ". . . a man who is a great friend of mine- someone that I saw . . . when the cyclotron began to upheave - it sort of mushroomed - said to me, 'Is Ernest an ambitious man?' I remember never having a satisfactory answer to that question. It seemed to me that action, movement, ambition were quite harmoniously matched, and when you say ambitious you mean someone who wants a prize. Ernest liked getting it; he liked working for it more than he wanted the prize."