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# William F. Friedman Dies, Foremost Code Breaker, 78

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William Frederick Friedman, 78, generally recognized as the world's pre-eminent code breaker, died early yesterday in his Southeast Washington home after a long illness.

Frequently described as "the grandfather of cryptology," Col. Friedman, as director of the Signal Intelligence Service headed the successful American effort to break Japan's top secret, diplomatic "purple code" prior to World War II.

His contributions to the country were recognized in 1946 by President Truman who presented the introverted cryptologist with the Medal of Merit, the highest civilian award the government offers, for "exceptionally meritorious conduct in the performance of outstanding service, conspicuously above the usual."

He was further honored upon his retirement as special assistant to the director of the National Security Agency in 1955 when the late Allen W. Dulles, director of the CIA, presented him the National Security Medal, only the sixth such award made to that time.

The following year, President Eisenhower signed a congressional bill authorizing the payment to Col. Friedman of $100,000 for cryptological inventions which, because of their secret nature, he was never able to patent.

Col. Friedman's contributions, however, were not limited to the application of code breaking techniques. He is generally given major credit for developing cryptology into a complex science.

In 1922, at the age of 28, he published a pamphlet entitled, "The Index of Coincidence and Its Applications to Cryptography."

In his exhaustive book, "The Codebreakers," David Kahn says of Col. Friedman's pamphlet: "The results can only be described as Promethean, for Friedman's stroke of genius inspired the numerous, varied and vital statistical tools that are indispensible to the cryptology of today."

Summing up Col. Friedman's contribution to the field, Kahn wrote:

"His theoretical studies, which revolutionized the science, were matched by his actual solutions, which astounded it. Both are complemented by his peripheral contributions. He straightened out the tangled web of cipher systems . . .

"His textbooks have trained thousands. Singlehandedly, he made his country pre-eminent in his field. And finally, the vast American cryptologic establishment of today, with its thousands of employees, its far flung stations, its sprawling headquarters—this gigantic enterprise is a direct lineal descendant of the little office in the War Department that Friedman started (in 1921), all by himself.

"This life's work, as extensive as it is intensive, confers upon William Frederick Friedman the mantel of the greatest cryptologist."

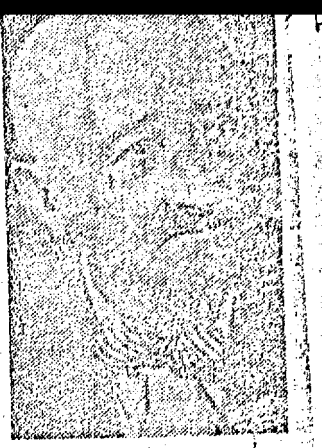
Col. Friedman was born on Sept. 24, 1891, in Kishinev, Russia, the son of an interpreter in the Russian postal service. In 1892, his family migrated to Pittsburgh, where he grew up.

In 1911, after a term at Michigan Agriculture College, Col. Friedman transferred to Cornell where he studied genetics until his graduation in 1914.

The next year, he took a job at the research laboratories of Col. George Fabyan, a wealthy textile merchant, who maintained extensive laboratories at a 500-acre estate, Riverbank, at Geneva, Ill.

Col. Friedman was hired as a geneticist but soon became interested in one of Col. Fabyan's pet projects—to determine whether Francis Bacon left cryptologic clues that he was the actual author of works attributed to Shakespeare.

It was while engaged in investigating this puzzle that he met Elizabeth Smith. They were married in 1917. Forty years later they were to return to their initial common interest and coauthored a book in which they argued that there are no crytographic clues in Shakespeare's works.



WILLIAM F. FRIEDMAN

In 1917, Col. Friedman left Riverbank, joined the Army as a lieutenant and went to France where he designed devices that helped the Allies break German codes.

After the war, he returned to Riverbank, but in 1920 left to join the U.S. Army Signal Corps.

Col. Friedman remained in government service—in various positions of authority over government code breaking activities—until ill health forced his retirement from NSA in 1955.

Survivors include his wife, for many years in charge of cryptography for the Treasury Department, of the home, 310 2nd St. SE; a son, John R., of Boston; a daughter, Barbara Atchison, traveling in Europe; a brother, Max, of Wilkes Barre, Pa.; a sister, Elizabeth Schein, of Long Island, and three grandchildren.

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