The Man Who Picked the Lock

Story of How an Unknown American Linguist Broke Soviet Wartime Spy Code Finally Emerges From Shadows

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By Michael Dobbs
Washington Post Staff Writer

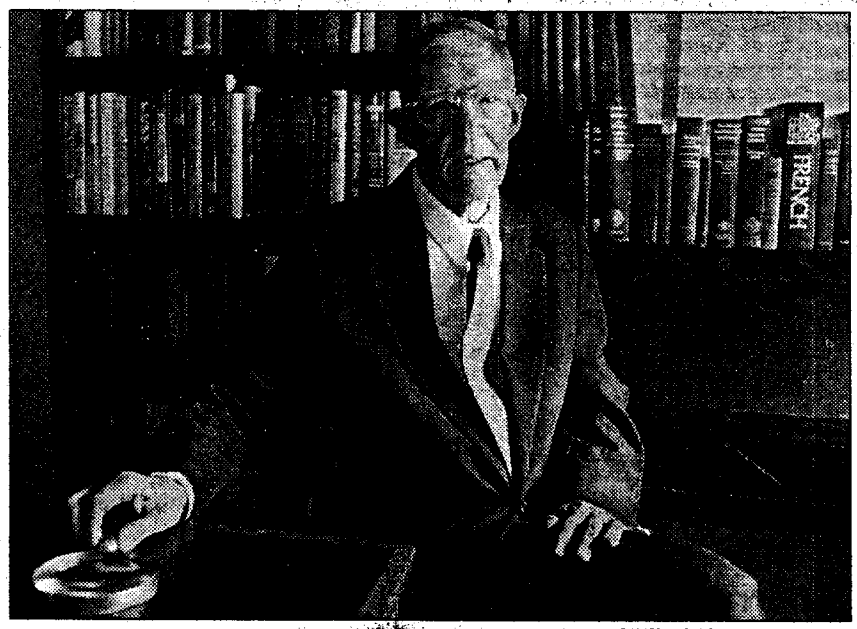
Outside the intelligence community, where he is regarded as a living legend, few people have heard of Meredith Knox Gardner. Now 84, he lives with his wife of 53 years in a modest condominium on Connecticut Avenue. When neighbors ask what he once did for a living, he replies vaguely that he worked in the office of the "chief signal officer."

Yet the history of the Cold War might have been very different had it not been for Gardner. His pioneering, often mind-numbing work breaking Soviet wartime codes enabled the United States to achieve one of its greatest counterintelligence coups of the past half-century.

Without the cryptological discoveries of Gardner, and others like him, dozens of Soviet spies in the United States and Western Europe, including the atom spy Klaus Fuchs and the British intelligence officer Kim Philby, might never have been unmasked. The FBI would not have received the original tip-off that led to the espionage convictions of Julius and Ethel Rosenberg, whose double execution in 1953 still troubles Gardner.

Today, in frail health, Gardner spends much of his time tracing his genealogical roots back to the kings and queens of Scotland and visiting his two children and 11 grandchildren. The one clue to his former line of business is his daily battle to solve the crossword puzzle in The Times of London,

See CODE, A11, Col. 1



BY LARRY MORRIS—THE WASHINGTON POST

Meredith Knox Gardner spent decades decoding "Venona," producing spy leads for the FBI.

CODE, From A1

which has the reputation of being the most difficult in the world.

"You have to remember that the puzzles are designed by Englishmen," says Gardner, a shy, slight man with spectacles, who speaks in halting, sometimes disjointed sentences, interspersed with ironic laughter. "You have to know a little bit about. . . ."

Here he pauses and drops his voice, as if imparting a professional secret. "Cricket. Cricket terms, and so on."

Earlier this month, Gardner emerged from a lifetime of anonymity to tell his story at a conference devoted to the "Venona" code break. After being introduced to the audience by Sen. Daniel Patrick Moynihan (D-N.Y.) as an unsung hero of the Cold War, Gardner described how he broke into lists of code names in telegrams sent by the Soviet Consulate in New York to Moscow between 1943 and 1945.

"That smelled of espionage," Gardner told the audience at the National War College. "Otherwise, why would you go to the trouble of using something other than someone's real name?"

Although the Venona code break was confined to a very small percentage of Soviet cable traffic during World War II, it laid the basis for decades of counterintelligence work. It was during this period, immediately after the Nazi invasion of the Soviet Union, that Americans were most disposed to cooperate with the Kremlin. Soviet prestige was particularly high among left-wing intellectuals, many of whom questioned why the United States would want to keep secrets from its wartime ally.

The Venona cables proved that Moscow had recruited dozens of agents in the White House, the State Department, the Office of Strategic Services (a predecessor of the Central Intelligence Agency), the Treasury Department and the Justice Department. The revelations triggered a massive manhunt for Soviet spies in the late '40s and '50s that turned the government upside down and contributed to the excesses of the McCarthy era. Work on Venona continued up until 1980. ("Venona" is a purely invented code word.)

Apart from the Rosenbergs, Soviet agents mentioned in the Venona documents include Harry Dexter White of the Treasury Department, Judith Coplon of the Justice Department, Duncan Lee of the OSS, and the atomic spies Fuchs, Theodore Hall and David Greenglass. In Britain, Venona was key to the unmasking of the group of Cambridge University spies who were nicknamed "The Fabulous Five" by their grateful Soviet controllers. It took the British more than three decades to match the actual spies to the code names provided by Venona.

The Venona trail eventually led back to the code-breakers themselves. At the Venona conference, the National Security Agency released documents showing that one of its own operatives, a linguist named William Weisband, had also been working for Soviet intelligence. By peering over Gardner's shoulder, Weisband was able to alert the Soviets to Gardner's discoveries at a time when even President Harry S. Truman was kept in the dark.

Dozens of spies who appear in the Venona documents under code names were never identified by Western counterintelligence, including an aide to President Franklin D. Roosevelt and another atomic scientist. These unsolved mysteries helped to feed an atmosphere of paranoia in the CIA and the British secret counterintelligence service MI5, as spy hunters like James Jesus Angleton and Peter Wright attempted to track down presumed Soviet moles from the ranks of their own colleagues.

It was Wright, a former assistant director of MI5, who first referred to Gardner's work in public in his 1987 book "Spycatcher," which sought to prove that a former head of British intelligence had been a Soviet spy. Wright described Gardner as "a quiet, scholarly man, entirely unaware of the awe in which he was held by other cryptanalysts." Alarmed, NSA officials alerted Gardner and warned him not to reveal anything more about Venona. For weeks afterward, Gardner had visions of mobs of journalists besieging his condominium and trying to "break the door down."

"There was not a tinkle. You would have thought that someone who reviewed the book in the paper would have thought, 'I wonder if this man Gardner is still in Washington.' But no. . . ." He sighs and chuckles softly. "Oh dear."

Flaw in the Code

It is hard to imagine a drier, more abstract subject than cryptography. Analysts spend years scrutinizing pages full of numbers, living for the moment when real words emerge from a seemingly senseless jumble of figures. In cryptographic jargon, projects like Venona are known as "problems." During World War II, there was a "German problem," a "Japanese problem," and so on.

Meredith Gardner spent 27 years searching for a solution to the "Russian problem."

A former language teacher at the universities of Texas and Wisconsin, Gardner was recruited by the Army Security Agency (a forerunner of the NSA) shortly after the Japanese attack on Pearl Harbor in 1941. The agency was looking for people fluent in languages. Gardner spoke not just German, but Old High German and Middle High German. He also knew Sanskrit and Lithuanian, not to mention Spanish, French and Russian.

"You skipped over my Japanese," he said reproachfully when the list was read out at the Venona conference, sponsored by the NSA, the CIA, and the Center for Democracy, an independent Washington-based think tank..

Gardner's facility at languages quickly turned him into a legend at Arlington Hall, a former girl's school across the Potomac from Washington, where the ASA had its headquarters. (It now houses the Foreign Service Institute.) "They had two workers there who were regarded as real geniuses," recalls his wife, Blanche, herself a former ASA employee. "One was just a walking brain with legs, and the other was very human. I married the human."

Gardner originally was hired to work on the Japanese and German problems. When the war ended, he transferred to the Russian problem, which had become a top priority for the ASA. Two years earlier, a cryptanalyst named Richard Hallock had discovered a flaw in the Soviet encipherment technique.

The task of deciphering 35,000 pages of coded messages, which were sent through commercial telegraph companies like RCA radio between 1943 and 1945, was tedious and repetitive. Today's supercomputers could dispose of the chore in an instant. But in the 1940s, teams of government analysts, most of them women, would sit for days hunched over work sheets, searching for familiar patterns. As the work progressed, more and more people were hired. By 1946, between 500 and 600 people were poring over Venona decrypts.

As a senior linguist, Gardner had the job of recreating a Russian code book, and translating the Russian messages into English. He attributes

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Michael Meeropol, one of the Rosenberg sons, at conference on the Venona code breaking.

his success to logic, a gift for languages, and "a sort of magpie attitude to facts, the habit of storing things away that did not seem to have any connection at all."

In December 1946, he decoded a message containing the names of leading scientists working on the atomic bomb project, America's greatest wartime secret. A few months later, he came across a passage about an agent code-named LIBERAL with a 29-year-old wife named ETHEL. This turned out to be references to Julius and Ethel Rosenberg.

When the scale of the Soviet espionage network became apparent, the government ordered the FBI to follow up the leads uncovered by Venona. An FBI agent, Robert Lamphere, was appointed liaison officer to Arlington Hall. Gardner would supply Lamphere with lists of Soviet agents. Lamphere reciprocated by providing Gardner with information about FBI investigations that could help him crack open the Soviet code.

"I would bring Meredith some material, and he would print in a new word over a group of numbers. Then he would give a little smile of satisfaction," recalled Lamphere. "He was a brilliant cryptanalyst. Very dogged. He was obviously obsessed with his work."

Most of the time, working on the Russian problem was like working on a gigantic crossword puzzle. Venona was almost mathematical in its abstract beauty. It was not until March 1949, with the arrest of Judith Coplon, a Justice Department analyst mentioned in Venona under the code name SIMA, that Gardner felt real life intruding into Arlington Hall.

"Politically, I knew I was having an impact," he recalled. "But it came to me as reality, not theory, when I passed a newsstand and saw a headline about Judith Coplon. Before that, it was all in the office, as it were. Now it was out in real life. That encouraged me. It made me feel that I might be helping in the defense of the country."

Reality intruded rather more unpleasantly on June 19, 1953, when the Rosenbergs were electrocuted for espionage. They had two young sons. Gardner had provided the FBI with the original tip-off that led to their arrest and conviction. Although there was no doubt in his mind that Julius was a Soviet agent, he questions the extent of Ethel's guilt. The Venona decrypts had only spoken of Ethel's "knowledge" of her husband's work.

"I thought it a great tragedy, it depressed me greatly," said Gardner, who still speaks in the soft drawl of his native Mississippi. "I was very much downcast. It was a very unpleasant thing to feel that I was a link in the chain of events that got them there. Of course, my will had nothing to do with it. I had no choice but to let the judicial system take its course. I would have been fired immediately, I might even have been given a jail sentence, had I violated my oath of secrecy."

He waves in the direction of an entire bookcase of literature devoted to the subject of Soviet espionage in the United States, including a dozen or so books about the Rosenbergs. "The books about it later made it sound even more ghastly. It took so long for the actual deaths to occur."

The issue of the double executions provided the most emotional moment of the recent Venona conference. The older Rosenberg son, Michael Meeropol, an invited partici-

pant, challenged the FBI's Lamphere about the reasons for executing both his parents. Lamphere replied that he had recommended clemency for Ethel on the grounds that the evidence against her was relatively slight and she would be leaving behind two orphans. He said his recommendation was endorsed by FBI Director J. Edgar Hoover, but overruled by President Dwight D. Eisenhower.

Another Mole

In the winter of 1946, Gardner sensed someone reading over his shoulder as he worked on deciphering a list of scientists working on the Manhattan Project. The "prowler" turned out to be Bill Weisband, a gregarious Russian émigré who had been hired to help out on Venona as a linguistic adviser. Gardner would occasionally consult him on obscure points of Russian grammar.

Counterintelligence officials are now convinced that Weisband, who died in 1967, was a Soviet spy. At the Venona conference, the NSA declassified the 1950 confession of a Los Angeles aircraft industry worker, Jones Orin York, who named Weisband as his KGB handler. Weisband was fired from the Venona project and served a one-year sentence for contempt of court after refusing to testify about his Communist connections. He was never prosecuted for espionage, perhaps because the case was too embarrassing.

"There is no doubt in my mind that he was spying on us the whole time," said Cecil Phillips, another cryptanalyst who knew Weisband well. "He managed to roam around with great ease. He cultivated people who had access to sensitive information. He used to sit near the boss's secretary, who typed everything we did of any importance." The Venona documents contain a reference to a Soviet agent code-named ZVENO ("link" in Russian), whose profile closely resembles that of Weisband.

The Soviets had another impeccable source: the mole Kim Philby. As an MI6 British intelligence liaison officer posted to Washington in 1949, Philby would occasionally drop by Arlington Hall to check on what was going on.

News of Gardner's discoveries devastated the Soviets. "I knew instinctively that the game would soon be up, and I prepared myself psychologically to save what I could from the ruins," wrote Yuri Modin, the Soviet case officer for "The Fabulous Five." "We were at a loss to know how to handle this development. We could have closed down our networks, of course, but that was well-nigh impossible, given the sheer size of the spider's web we had woven since the war."

But while the Soviets were grappling with the Venona revelation, NSA historians have been unable to come up with any evidence that President Truman was ever informed of the project. Mystery also continues to surround the government's failure to prosecute Theodore Alvin Hall, a Harvard physicist working at Los Alamos, N.M., whom the Venona documents identify as the Soviet agent MLAD (Russian for "youngster"). Hall has been living in Cambridge, England, since 1962, but makes frequent trips to the United States.

The FBI and the Justice Department have refused to comment on their handling of the Hall and Weisband cases. The most likely explanation for the failure to prosecute, in the view of independent experts and former officials, is the unwillingness of the intelligence agencies to reveal anything about their sources and methods. The government did not want to talk about the code-breaking operation in open court.

Moynihan, who, as chairman of a congressional commission on government secrecy, played a key role in getting the Venona decrypts declassified, believes Truman would not have been so quick to dismiss allegations of Soviet penetration in the early '50s had he known about the Venona revelations. At the conference, Moynihan accused portions of the American government of "beginning to get a bit like the KGB."

Gardner, who retired in 1972, believes that the intelligence chiefs withheld the information from Truman because they were afraid that he would "give away the secret."

"You can't imagine," said the man who kept silent for half a century, "how the intelligence agencies guard secrecy."

Inside the Unbreakable Code

By Michael Dobbs
Washington Post Staff Writer

Soviet spy chiefs thought they had devised an unbreakable code for communicating with agents in World War II. The system consisted of several layers, each of which had to be systematically "stripped away" by cryptanalysts:

■ Cover names concealed identities and places. For example, Lt. Gen. Pavel M. Fitin, the head of foreign intelligence in Moscow, was code-named VIKTOR. Washington was known as CARTHAGE, Julius Rosenberg as ANTENNA (later changed to LIBERAL), and President Franklin D. Roosevelt as CAPTAIN.

■ Soviet cipher clerks used a code book to translate a message into numbers, expressed in four-digit groups. Using this system, the group 0956 stood for VIKTOR, the group 1653 signified a period, and so on.

■ In order to further disguise the codes, the Soviets added to them numbers from previously distributed cipher pads. A code clerk in New York took digits from the pad and added them to the code, without carrying numbers forward. If the next digits were 0359, for example, VIKTOR (0956) would become 0205. Each word in the cable was assigned its own cipher, so even if the word VIKTOR was repeated in a telegram, it would look different.

The code clerk in Moscow performed the same operation in reverse, using an identical cipher pad as the encoder. Had the Soviets consistently used each pad only once, the system would have been impregnable. In 1942, however, they began duplicating some of the pads, probably in order to accommodate a large increase in cable traffic. This turned out to be the fatal flaw that made the American code break possible.

In the fall of 1943, an American cryptanalyst, Richard Hallock, found evidence of the use of duplicate key pads by searching through the cable traffic for repetition of the same number. A colleague, Cecil Phillips, made statistical observations that enabled the codebreakers to break into the cipher system used by Soviet intelligence.

Hallock, Phillips, and their colleagues eventually discovered 35,000 pages of duplicates in traffic between Moscow, New York, Washington, San Francisco, London, Montevideo, and Canberra. By looking for repetitive phrases, American cryptanalysts were gradually able to "strip" away the cipher.

The key pads had been randomly distributed to Soviet intelligence, trade, and diplomatic missions. So it was that the repetitive, fairly predictable nature of the trade messages that helped the cryptanalysts break into the intelligence messages.

Workers, mostly women recruited direct from civilian life, tested millions of different permutations with the help of IBM punch cards. Once the additive key had been stripped away, cryptlinguists like Meredith Knox Gardner were able to slowly compile a Russian code book.

Gardner broke the special subcode for individual English letters in late 1946, which enabled him to read a list of scientists associated with the Manhattan Project on Dec. 20. The following year, he translated the first references to Julius and Ethel Rosenberg.