

friends of either sex. He drove himself at work, substituting for normal human contacts a life of fantasy, peopled by relatives and friends that existed only in his imagination.

The devious trail of his treachery over a period of more than a decade can be traced quickly. He described it many times, both in his own confessions and in court proceedings involving other defendants. What is less well known is the story of the FBI investigations that nailed Gold, Fuchs, and fellow traitors.

Gold was no bemused puppet of Moscow who hadn't realized the enormity of his crime. As he told the FBI at the end:

"I began the work of industrial spying for the Soviet Union in 1936 with the full realization of what I was doing. I felt that as an ally I was only helping the Soviet Union obtain information that I thought it was entitled to."

A character referred to by the FBI as "Troy Niles" steered Gold into communism and introduced him to his first contact in the Soviet espionage apparatus, a "Paul Smith," an agent of the NKVD secret police masquerading as an employe of the Amtorg Trading Corp., a Russian business agency in the United States. He was the first of Gold's Soviet superiors in a series that ended with Anatoli Antonovich Yakovlev, a graduate of the Moscow Engineering Economic Institute.

Gold was working at the time for the Pennsylvania Sugar Co. and "Smith," in his domineering manner, demanded that he obtain the secrets of a new process for manufacturing ethyl alcohol. He never was able to deliver that information, but he did pass along valuable data on lanolin, the manufacture of soap, a carbon-dioxide recovery process, and a number of processes involving commercial solvents.

To improve his qualifications, Moscow helped pay for Gold's belated training in chemistry at Xavier University in Cincinnati. He made an excellent record there in all but one course: His lowest grade was in "Principles of Ethics."

Having demonstrated his dependability and trustworthiness, Gold received his supremely important assignment. He was to drop all other work and make contact with the pale stranger with the tennis ball.

Fuchs at the time was attached to a British scientific mission, his loyalty certified by British authorities, and during the next 6 months he met Gold half a dozen times or so, passing along various technical data on atomic research. Gold, in turn, passed them into the pipeline to Moscow. Their meetings were strictly business, allowing no time for small talk, with one exception. Fuchs did mention that he planned to entertain his sister, Mrs. Kristel Heinemann, of Cambridge, Mass., at his New York apartment.

Suddenly, without warning, Fuchs dropped out of Gold's world. He had been assigned to the A-bomb project at Los Alamos, N. Mex., and it was almost a year before Gold met him again, by prearrangement, on the Castillo Street Bridge in Santa Fe, on the first Sunday in June 1945.

Gold had traveled by train from Chicago to Albuquerque, thence by bus to Santa Fe. To avoid asking directions of passers-by, he obtained a city map from the chamber of commerce and on it marked the route to the Castillo Street Bridge. Fuchs, at the wheel of a dilapidated car, showed up on the dot of 4 p. m.

The Los Alamos project, Fuchs reported, was proceeding nicely but he gave his personal estimate that the bomb would never be finished in time for use against Japan. He and Gold arranged to meet 3 months later and just before parting—a standard practice for spies—Fuchs handed Gold a package containing highly secret information. Within a matter of days it was en route to Russia.

They met again, as planned, on September 19, 1945. The scientist had proved a poor prophet: By then the test A-bomb had been exploded successfully and two more had eliminated Japanese cities. The war was over.

Fuchs was feeling talkative. He rambled on about his father, who had never approved his Communist associations. He speculated at length on the vast new force for good or evil that man had at his disposal in the controlled atom. As he took leave of Gold, he handed him another envelope. His car disappeared down a dark street. Gold never saw him again.

Russia, it was learned many years later, hoped to explode its first atomic bomb by October 1952, more than 7 years behind America. Actually, President Truman was forced to announce, in August 1949, that Russia had achieved the "impossible," ending America's peace-enforcing monopoly of the weapon.

Long before that, the American Government learned that its basic secrets of nuclear fission had been stolen; just when the sickening discovery was made is a closely guarded FBI secret.

Eventually, however, the FBI learned there had been definite, serious, and continual leaks of information from the British scientists in America during and after the war. Fuchs, by this time, was conducting atomic research in England and the British counterintelligence service, MI5, took up the hunt because of his earlier Communist record.

By January 1950 his guilt was established beyond doubt and on January 24 he made his first confession. His conscience, he insisted, was clear; his only concern was what close friends in England might think of him.

Whether Fuchs ever made a complete confession is still doubtful. Certainly he was vague enough in his first description of his American contact—a man he described as about 40; 5 feet 10 inches tall; stocky build with a round face. It might fit millions of men but it was all the FBI had to start with.

No case in FBI history, according to Director Hoover, has been more important and none has subjected its agents to greater pressure. It may never be possible to tell the entire story but some facts can be told.

Agents started with Fuchs' sister in Cambridge, Mrs. Heinemann. She knew of no spies in her brother's background but did recall a visitor—a stocky man who was a chemist and had mentioned a wife and children in Philadelphia.

In Washington and in 52 field offices, G-men tracked down chemists meeting the unknown's specifications. Some 1,500 photographs were shown the Heinemanns and were flown to Fuchs in England. In some, the Heinemanns noted familiar details; in others Fuchs did the same. But there was no positive identification.

Agents questioned neighbors who lived near Fuchs' New York apartment on West 77th Street. They questioned his British and