a real war, Soviet journalists were forbidden to report the fighting or the casualties. The bodies of the fallen were flown home secretly in zinc coffins and buried without ceremony in their home towns and villages. The secrecy could not last indefinitely, however. Gossip spread. As one man wrote to the newspaper Komsomolskaya Pravda, “A soldier comes home, and the whole village knows. A coffin comes home, and the whole province knows.” When Mikhail Gorbachev relaxed the reporting restrictions, journalists such as Artem Borovik and Vladimir Snegirev, and some of the veterans themselves, wrote with increasing freedom and truthfulness about what they had seen for themselves of the soldiers and combat in Afghanistan.

In Zinky Boys Alexievich writes about the actuality of the war in Afghanistan, not the 40-year-old memory of the war against Nazi Germany. But her method is the same: the accumulation of powerful sketches, interviews with the men and women who were there. Unlike their predecessors, these young soldiers had little idea what they were fighting for. Many were disillusioned, and some were cynical. Zinky Boys was widely praised in Russia for its artistry and truthfulness. But it also provoked a furious reaction—not only from veterans but from their families as well. A group of soldiers’ mothers in Belarus sued Alexievich for misrepresenting the heroism of their sons. “My only son was killed there,” one mother wrote. “The only comfort I had was that I had raised a hero, but according to you he wasn’t a hero at all, but a murderer and aggressor.” Others wrote: “You wanted to demonstrate the futility and wickedness of war, but you don’t realize that in doing so you insult those who took part in it, including a lot of innocent boys. How could you? How dare you cover our boys’ graves with such dirt? . . . They were heroes, heroes, heroes!”

The Soviet Union no longer exists. Alexievich deeply disapproves of its legacy, which still weighs heavily on the present. But she writes with elegiac nostalgia. Those whose voices she recorded were Soviet people, she notes in U voiny ne zhenskoe litso, “Russians and Belorussians and Ukrainians and Tajiks . . . I love them. I admire them. They had Stalin and the Gulag. But they had the Victory as well. And they know it.”


Reviewed by John Earl Haynes, U.S. Library of Congress (ret.)

Half-Life is a biography of the two sides of Bruno Pontecorvo’s life. One part is his work as a significant nuclear physicist of the 20th century. Trained as the youngest member of Enrico Fermi’s pioneering research team in Rome, the “Via Panisperna Boys,” Pontecorvo was one of the authors of Fermi’s ground-breaking paper on slow neutrons. He went on to work at the Joliot-Curies’ Radium Laboratory in Paris to design and build neutron-emitting apparatuses for the prospecting of oil and other minerals. He then helped to build the first uranium heavy water nuclear reactor at
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Chalk River in Canada, subsequently went to work for the United Kingdom’s Atomic Energy Research Establishment at Harwell, and finally became a senior figure at the USSR’s secret nuclear research center at Dubna north of Moscow.

Frank Close, a physicist himself, makes an impressive case for Pontecorvo’s major contributions to nuclear physics as a creative experimentalist, particularly with atomic particle detection, and for his major contributions to understanding the nature of the long elusive neutrino. It is a tribute to Close’s skill as a science writer that he leads the reader through the complex evolution of physicists’ understanding of subatomic particles in such a way that the layman is not left baffled.

Although Pontecorvo’s contributions to nuclear physics are known within the physics community, members of the general public, if they know anything of him, know him only in regard to the other part of his life: namely, as a defector to the USSR and possible Soviet spy. This is the part of Pontecorvo’s life to which Close addresses his biography.

In mid-1950, Pontecorvo, then a naturalized British subject and a senior scientist at Harwell, took his family on a vacation to his native Italy to visit his extended family there. After visiting family members in and around Rome but before seeing his parents in northern Italy, he, his wife, and their three children all disappeared. It quickly emerged that he had been a secret Communist since the 1930s and had been under security review at Harwell, facts that led to speculation that he had, at the very least, defected to the USSR and, further, had been a Soviet spy at Chalk River and Harwell. His defection was confirmed in 1955, after five years of secrecy, when Pontecorvo appeared publicly in Moscow to announce that he had moved to the Soviet Union in 1950 and was continuing his work on nuclear physics at a leading Soviet research facility. However, he denied any involvement in espionage.

Close meticulously examines the available evidence to address the question of Pontecorvo’s involvement in espionage. Principally, Close makes use of MI-5 files as well as statements over the years by Pontecorvo’s family and associates. Although the collapse of the Soviet Union has led to the release of significant primary documentation about Soviet espionage, the breadth of the material disclosed thus far is only a tiny fraction of the total holdings of the former Soviet foreign intelligence service. The new documentation has allowed some contested issues to be settled, but on other cases and controversies nothing has appeared that allows a firm conclusion. Pontecorvo is in the latter category.

Close, however, presents a well-reasoned and thorough review of what evidence is available. Despite lacking direct evidence, he makes a persuasive case that the circumstantial and indirect evidence points to Pontecorvo having become a Soviet source while at Chalk River during World War II. Close shows that Pontecorvo’s trip to Italy looks entirely like a planned visit to his family with an anticipated return. But after Klaus Fuchs’s arrest and confession (Fuchs, like Pontecorvo, worked at Harwell) and MI-5’s and the U.S. Federal Bureau of Investigation’s dawning realization that Pontecorvo had long hidden his Communist loyalties, Pontecorvo met with Soviet foreign intelligence officers in Rome who urged him to flee and provided a well-planned
extraction to the USSR for him and his family: commercial air via Germany to Sweden and Finland and finally Soviet-supplied automobiles for a covert crossing of the border to the USSR (with Pontecorvo hidden in the trunk of one of the cars). The family was in Moscow within days. No spur-of-the-moment self-initiated defection this!

Once in the USSR, Pontecorvo received what can only be described as extraordinarily generous treatment. He immediately received (and kept for the rest of his life) a luxury three-bedroom apartment in Moscow, an elegant large country house in Dubna, and access to special stores with luxury goods denied to ordinary Soviet citizens. As Close shows, however, Pontecorvo was “in a gilded cage” (p. 238). He was under close security scrutiny for years with Soviet minders accompanying him everywhere. He could not travel to the West or even correspond with his family until the 1970s. Even in the secret science city of Dubna, the oppressive security of the Soviet state blighted his family’s social life and restricted the range of his scientific work.

Close also shows that despite the restrictions of Soviet society, Pontecorvo’s Communist allegiance remained rigid and unquestioning for many decades. Pontecorvo regarded loyalty to the Soviet Union as a fundamental principle and, in describing his arrival in the USSR, said, “I felt like the Jew who found the Promised Land” (p. 215). When he arrived at Dubna, Gulag slave laborers were building new research facilities, and Pontecorvo simply assumed that the prisoners were guilty and deserved their fate. He also arrived just as Iosif Stalin’s anti-Semitic “doctors’ plot” was reaching its crescendo and, again, automatically assumed that the Jewish doctors were guilty as charged. Similarly, the Soviet intervention to quell the 1956 Hungarian revolution met with Pontecorvo’s unquestioning approval. When his brother, Gillo, hitherto an active Italian Communist, left the party in protest, Pontecorvo told a journalist he could “not understand how Gillo can challenge the analysis of events as taken by Moscow and the leadership of the USSR. Gillo seems to have forgotten that loyalty to the USSR is one of the fundamental principles of the Communist conscience” (p. 310). Not until 1968, after the Soviet invasion of Czechoslovakia to crush the Prague Spring, did Pontecorvo begin to question his unstinting belief in the rightness of every Soviet action. Eventually these doubts led to Pontecorvo’s confession in 1991 that “for many years I thought communism a science, but now I see it is not a science but a religion.” As for his own long, unquestioning loyalty, he said, “I was a cretin” (p. 280).

Half-Life is a thoroughly researched and well-reasoned biography that will benefit students of both physics and espionage. The failings of this otherwise excellent book are Close’s sophomoric interpretation of U.S. politics in the late 1940s and early 1950s and his inattention to historical detail. He likens the United States to both Nazi Germany and Stalin’s Soviet Union, and describes the Korean War as when “the US invaded Korea” (p. 203). He periodically invokes Joseph McCarthy as an ogre who created the conditions that spurred Pontecorvo’s flight to the USSR. But the actual chronology undercuts this. Pontecorvo defected in July 1950. McCarthy’s speech in Wheeling, West Virginia, which began his demagogic career, was delivered in February 1950, and he and his charges did not become a major sensation until well after Pontecorvo had
secretly fled to Moscow. Emilio Serini, a close associate of Pontecorvo in Paris in the late 1930s, emerged after World War II as a major figure in the Italian Communist Party. Close comments that after 1945 Serini “soon became an influential member of the Comintern” (p. 65). But in reality the Comintern (Communist International) had been dissolved in 1943. Close is likely referring to Serini’s role in the Communist Information Bureau (Cominform), a different organization formed in 1947.

In discussing Soviet nuclear espionage, Close refers to “another Los Alamos spy, Arthur Adams” (p. 311). Adams, a covert Soviet military intelligence officer, made unsuccessful attempts to recruit sources at the Manhattan Project’s Chicago facility, but he was never anywhere near Los Alamos or anyone who worked there. Close says the idea that “a communist fifth column was at work in the United States” was “paranoia” (p. 198). However, the release of the Venona decrypts in the mid–1990s, Vasili Mitrokhin’s Soviet intelligence archival notes in 2014 (after excerpts were released fifteen years earlier), and Alexander Vassiliev’s Soviet intelligence archival notebooks in 2009 has conclusively shown that in the 1930s and 1940s Soviet intelligence developed upward of 500 cooperating contacts in the United States—including an Assistant Secretary of the Treasury (Harry Dexter White); an influential White House aide (Lauchlin Currie); two senior State Department officials (Laurence Duggan and Alger Hiss); the chief adviser to the director of the Office of Strategic Services (Duncan Lee); and several dozen midlevel personnel in the War Department, the Bureau of Economic Warfare, the Office of Strategic Services, the Justice and Treasury Departments, and dozens of military technology and industrial companies. Clearly the “communist fifth column” was not the “fantasy” (p. xiv) that Close thinks it was.


Reviewed by Alla Kassianova, Tomsk State University (Russia)

On 4 July 1974, the giant deep-sea mining vessel Hughes Glomar Explorer arrived at a location a few nautical miles from the intersection of 40°N and 180°E in the Pacific Ocean to spend the next few weeks ostentatiously engaged in “deep-ocean mining tests.” What was actually taking place 16,400 feet below the surface was the final stage of a six-year top-secret operation by the U.S. Central Intelligence Agency (CIA) to recover the sunken nuclear-armed Soviet Golf-class submarine K-129. Code-named “Project Azorian,” the operation required expenditures roughly equal to the cost of the moon landing (around $500 million, the precise cost still undisclosed by the CIA). This carefully researched and well-documented account by Norman Polmar and Michael White in Project Azorian: The CIA and the Raising of K-129 reconstructs the remarkable technical and political aspects of the Azorian operation, as well as the Cold War ambiance surrounding it.