PHYSICISTS REFUTE CHARGES THAT ICONS HELPED SOVIETS BUILD NUCLEAR BOMB

He who would distinguish the true from the false must have an adequate idea of what is true and false.
—Baruch Spinoza

No Alfred Hitchcock film or John LeCarre novel could match the sensational tales recollected by Pavel Sudoplatov. In his "autobiography," *Special Tasks: The Memoirs of an Unwanted Witness—a Soviet Spymaster* (Little, Brown, Boston, 1994), Sudoplatov boasts that in his four decades with the NKVD and KGB, he personally carried out one murder (of a Ukranian nationalist in a restaurant in Rotterdam), plotted hundreds of others (including the assassination of Leon Trotsky in Mexico City) and ran spy networks in Europe and North America that at their peak numbered more than 20 000 operatives. Even now he admires his mentor, Lavrenti Beria, and Beria's boss, Joseph Stalin, while acknowledging that they "played tragic and criminal roles in our history," along with "a constructive one—turning the Soviet Union into an atomic superpower." His closeness to Beria, Stalin's longtime security chief, enabled Sudoplatov to become the head of a special group of the State Committee of Problem Number 1, the code name for the Soviet nuclear bomb project. Sudoplatov was chosen director of the state committee's Department S, named after him by Beria, to organize spy rings for gathering technical information on US and British efforts to produce nuclear bombs. In the course of this, Sudoplatov alleges in his book, his network got some of the mythic figures in 20th-century physics to knowingly pass nuclear secrets to agents of the Soviet Union.

Sudoplatov puts it precisely: "I set up a network of illegals who convinced Robert Oppenheimer, Enrico Fermi, Leo Szilard, Bruno Pontecorvo, Alan Nunn May, Klaus Fuchs and other scientists in America and Great Britain to share atomic secrets with us." By listing Oppenheimer, Fermi and Szilard with two convicted espionage agents for the KGB—Nunn May, who worked at Chalk River as part of the Anglo–Canadian team, and Fuchs, who was at Los Alamos with the British—as well as Pontecorvo, who took refuge in the USSR after being fingered at Harwell as a spy in 1950, Sudoplatov tars the icons.

"Oppenheimer, together with Fermi and Szilard, helped us place moles in Tennessee, Los Alamos and Chicago as assistants in those three labs," asserts Sudoplatov. The moles transmitted secret information from the labs to Soviet operatives. By July 1943, Sudoplatov claims, "our agents in the US had already provided us with 289 classified publications on scientific research in nuclear energy." He alleges that Oppenheimer and the others leaked information "in oral form, through comments and asides, and from documents transferred through clandestine methods, with their full knowledge that the information they were sharing would be passed on." The technical data acquired from Oppenheimer, Fermi and Szilard, states Sudoplatov, was "vital . . . for developing the first Soviet atomic bomb."

Sudoplatov as head of atomic spies.

What motivated Oppenheimer and the others to do this, says Sudoplatov, was the belief that advancing nuclear research in the USSR, then a wartime ally, would help to ensure that Nazi Germany would not develop such bombs first, and the conviction that an open exchange of information about making nuclear bombs would contribute to world peace. "I was pleased that the worldview of the Western scientists was strikingly similar to that of our own leading scientists—[Peter] Kapitsa, [Vladimir] Vernadsky, [Abram] Ioffe—who were quite sincere in suggesting that our government approach the British and Americans to share with us information about atomic research. They suggested a joint team of Soviet, American and British scientists to build the bomb," Sudoplatov states. Niels Bohr, who was "in no way our agent," Sudoplatov says, also held this view. After one meeting with Bohr at Los Alamos in 1944, Oppenheimer suggested that he call on President Roosevelt to make the case for collaboration with Soviet scientists to speed up work on nuclear bombs. When Bohr met Roosevelt, the President proposed that on his return to England he present the idea to Prime Minister Churchill. "Churchill, we were told, was horrified and urged that all efforts be taken to prevent Bohr from contacting us. If the development of atomic weapons had been left totally to the scientists, they might have changed the course of history," asserts Sudoplatov in a philosophical moment, perhaps in an effort to appear transformed from Stalin's hatchet man.

Sudoplatov's memoirs were assembled from 20 hours of "videotaped reminiscences" of the aged spymaster (born in 1907) by an American journalist, Jerrold L. Schecter, a former Moscow bureau chief for *Time* magazine in the 1960s, and his wife, Leona

P. Schecter, and from memos, notes and documents from KGB archives opened under *glasnost*. Jerrold Schechter was approached to write Sudoplatov's autobiography because he had acquired Nikita Khrushchev's diaries, which were denounced as fake when published in the West in 1970 but later declared to be authentic.

Although the claims that American nuclear scientists were passing secret information to Russian agents are certainly melodramatic, Sudoplatov fails to prove the allegations with details and documents. The allegations appear in a single chapter of 48 pages labeled "Atomic Spies," and the "evidence" is contained in several appendices totaling 40 pages. Almost all the documents, letters and memos in the appendices had come to public view previously in an issue of *Voprossi Istorii Estestvoznania Techniki*, a periodical published in Russian at the end of 1992 and circulated in the West in English translations last year. None of the documents mentions Oppenheimer, Fermi, Szilard or Bohr.

Tales of the '50s

Sudoplatov's narrative, according to Roald Sagdeev, the former director of the Soviet Space Research Institute and science adviser to Mikhail Gorbachev who now teaches at the University of Maryland, "leaves the strong impression that he has hastily recounted stories which were published in the '50s after the arrest of Klaus Fuchs. With the collapse of the Soviet Union, there was another flood of testimonies of former KGB officers, driven by the desire to restore their rightful place in history as the 'true' heroes of the Soviet nuclear miracle."

Soviet links to Oppenheimer are described in some detail. Approaches to the others are hardly mentioned at all. The first contact with Oppenheimer is said to have been through Gregory Kheifitz, a Soviet agent who led a double life as "Mr. Brown" in San Francisco. Sudoplatov says Kheifitz told him he met Oppenheimer first at a party on 6 December 1941 (a day before the attack on Pearl Harbor) to raise funds for refugees of the Spanish Civil War. Later that month at a lunch with Kheifitz, Oppenheimer was said to have mentioned Einstein's letter to President Roosevelt urging him to initiate research on a nuclear bomb, and then Oppenheimer was reported to have "expressed his concern" that the Nazis might succeed in building atomic weapons before the allies. In the circles in which Kheifitz was likely to mingle in San Francisco, Oppenheimer's leftist connections were undoubtedly well known. Oppenheimer had been engaged to an active Communist and married a former one, whose first husband, his brother and sister-in-law were party members.

Sudoplatov's account of clandestine relationships of Soviet operatives with Oppenheimer reads like a spicy thriller. As Sudoplatov tells it, Kheifitz introduced Oppenheimer to the Zarubins, a husband-and-wife spy team based in the Soviet embassy in Washington. Before long Elizabeth Zarubin was said to have journeyed frequently to San Francisco and Berkeley, where she infiltrated Oppenheimer's circle. Among other things, Oppenheimer was said to have taken her advice not to advertise his leftist sympathies so as "not to call attention to himself," to have agreed to "share information" with "anti-Fascists of German origin" and to have promised to bring Fuchs to Los Alamos.

Sudoplatov's story is contradicted in part by other events, which became public knowledge after the US Atomic Energy Commission charged Oppenheimer in 1953 with being a security risk for having associated with American Communists and their sympathizers both before and after the development of the bomb. Based on a major FBI investigation, the AEC, on a 4-to-1 vote, decided to cancel Oppenheimer's access to classified information. One of the critical elements in the case involved Haakon Chevalier, one of Oppenheimer's few close friends at the University of California in Berkeley, where Oppenheimer taught. In late 1942 or early 1943 Chevalier, a lecturer in French literature at Berkeley, mentioned to Oppenheimer that an English chemical engineer in San Francisco felt that since the US and USSR were now "brothers in arms," exchanges of strategic information with the Russians would be "highly desirable." The implication was that Oppenheimer would pass along data on nuclear bomb developments. As Chevalier recounted it later in a book about his friend, Oppenheimer was shocked at the suggestion and considered it "frightful if not treasonable." When this episode occurred, Oppenheimer had already been chosen by General Leslie R. Groves, military head of the Manhattan Project, to set up a central laboratory, called Site Y. Oppenheimer selected the location for Site Y—Los Alamos. From that point on, Oppenheimer was constantly tailed by US security agents.

Fermi's "treason" is much less clearly detailed by Sudoplatov. Kheifitz, who had moved to San Francisco from Rome, had supposedly targeted both Fermi and Pontecorvo during the earlier posting. This seems wholly fictitious since Fermi left Rome with his family in 1938 to pick up his Nobel Prize in Stockholm, just as Otto Hahn and Fritz Strassmann were reporting their neutron bombardment of uranium nuclei and before the implications of their experiment for weapons development were clearly understood.

Within hours of the book's release, historians and scientists challenged Sudoplatov's astonishing account. Excerpts of the spying chapter had appeared first in London's *Sunday Telegraph* on 17 April and the next day in *Time*, but it was videotape from the interviews with Sudoplatov shown on the "MacNeil/Lehrer Newshour" on 18 April that set off the furor. The initial reaction came in an acerbic letter to Jim Lehrer signed by Hans Bethe and Robert R. Wilson, both of Cornell, and Victor F. Weisskopf of MIT. All were at Los Alamos for most of the period covered by Sudoplatov's tale. Bethe headed the theoretical division, Wilson led the research division, and Weisskopf was Bethe's deputy in the theory group.

'Shocked by the program'

"We were shocked by the program you aired . . . on the allegations by the man who orchestrated assassinations for Joseph Stalin," they wrote. "As longtime admirers of your program, we were amazed that you would broadcast such shattering claims without having made even the most reasonable checks . . . . For quite aside from the stream of undocumented allegations, the program had blatant errors. Thus George Gamow, who is alleged to have been blackmailed into giving atomic secrets to the Soviets [to protect his relatives in Russia], never worked on the Manhattan Project; and Klaus Fuchs [convicted of espionage in Britain in 1950 after being a member of the British party that worked at Los Alamos from 1943 to 1949] was not hired by Oppenheimer but came to Los Alamos as part of a team chosen entirely by the British. Just a few phone calls would have brought such errors to your attention and should have led you to air the allegations with far more circumspection . . . . As a result, you helped a criminal, who has mounted a highly skilled effort to make himself rich, to slander some of the greatest scientists of this century."

Aware that by dishonoring several heroic figures in physics, Sudoplatov's charges, if left undefended, could damage the confidence and moral authority of the entire field, the council of the American Physical Society prepared a statement on 23 April expressing "its profound dismay" at

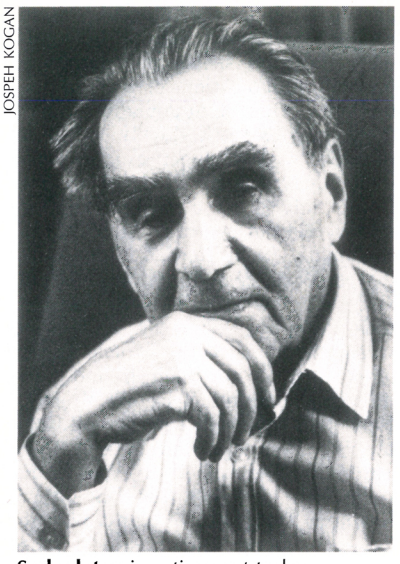
Sudoplatov's "unsubstantiated allegations." The APS council noted that Sudoplatov characterizes himself "as a master of deception and deceit" and that none of the accused scientists are alive to answer his charges. "The cloud of suspicion created by these allegations is injurious to the trust that must exist between the public and the scientific community and painful to the families and colleagues of these scientists," the statement continues. "We therefore call on the US government to undertake a prompt and thorough investigation to determine whether these claims have any basis in fact."

The APS statement was disseminated at a press conference in Washington on 28 April by Donald Langenberg, chancellor of the University of Maryland system and the society's immediate past president. The news media heard from Norman F. Ramsey of Harvard, another group leader at Los Alamos in the war years. Ramsey noted that while Sudoplatov's allegations against the physicists appeared to be supported by documents, in fact none "reveals or even implies any misdeeds on the part of Fermi, Bohr or Oppenheimer. They merely confirm . . . that many US atomic secrets were conveyed to the USSR by Klaus Fuchs and others."

Other speakers were William Lanouette, a biographer of Leo Szilard; Stanley Goldberg, a consultant to the Smithsonian Institution who is completing a biography of General Groves, and Sagdeev. All disputed Sudoplatov's accusations as maddingly vague, inconsistent and uncorroborated.

Philip Morrison of MIT, a research physicist in wartime Los Alamos, has made a careful analysis of the documents in the book's appendices. He concludes that those dated September and October 1941 derived from a meeting of the UK Uranium Committee and an account of it to the War Cabinet. The reports summarized in nontechnical language the need for uranium-235 and gaseous diffusion of uranium hexafluoride for isotope enrichment, and provided a critical mass estimate and calculations of plant size and production rate. Morrison believes the source of this information was almost certainly Donald McLean, a prominent British civil servant who became known as one of the "Cambridge Five," and his Soviet controller, Anatoli Gorsky—not any UK or US physicist. A physicist surely would have been able to provide more factual data. Other 1942 documents referred to DuPont becoming involved in the Manhattan Project and to Britain's Imperial Chemical Industries building a diffusion plant. Reports in 1943 by Igor Kurchatov, director of the Soviet nuclear weapons program, suggested that the Americans might produce the first self-sustaining chain reaction "in the near future"—a somewhat surprising entry because the event had taken place in December 1942 under Fermi's leadership at the University of Chicago. Kurchatov's knowledge of US work seemed to be based on reports in the *Physical Review* published before Pearl Harbor and certainly before APS imposed self-censorship on any papers dealing with nuclear physics (done at the urging of Szilard). A report by Kurchatov in 1943 revealed, at last, Soviet moles in the US had conveyed 286 titles, though 39 had "no contents" and 10 more had data the Russians considered inchoate.

JOSPEH KOGAN



Sudoplatov in retirement today.

'Delivery by opportunity'

After reviewing all the documents and memos, Morrison concludes that "Kurchatov now [had] good reason to believe that the Americans [were] making a uranium–graphite pile. He still [did] not know about plutonium, though he [was] expecting to learn." Where did this strange assortment of terse reports come from? Morrison believes the main source was likely to be an experienced Soviet agent with contacts among Met Lab employees in Chicago. "But an expert physicist willing and able to copy or to write his own reports would hardly transfer a batch of mixed matter by the hundreds," says Morrison. "This is mere delivery by opportunity. Fermi and Szilard do not fit this bill at all, and Oppenheimer was far away [in Berkeley], with Los Alamos not even formed, and little if anything [in Kurchatov's memo] on bombs."

Morrison finds Sudoplatov's collection of documents from 1944 to be filled with false trails and offbeat ideas. The 1945 documents, by contrast, are much more accurate, though still nontechnical, even when discussing a study of implosion techniques, existence of sites X, Y and Hanford and sources of uranium ore. Finally, in April 1945 Kurchatov wrote about information "of great value" on fission cross sections and bomb implosion design. The source, Morrison thinks, was probably Fuchs, though the report might have originated in Canada. Another document indicated Beria was informed about the Trinity Test near Alamogordo, New Mexico, on 10 July 1945. The origin of the information is said to be "several agent sources"—possibly Fuchs and maybe Pontecorvo or even some nonscientist agent.

The supporting documents have little bearing on Sudoplatov's recollections. Kurchatov's memos indicate that a clear understanding of the US bomb program came no earlier than spring 1945, when Fuchs passed along his technical treasures. But after the bombing of Hiroshima and Nagasaki, all became known: graphite–metal reactor designs, plutonium production details and implosion techniques. In August 1945, with the appearance of *Atomic Energy for Military Purposes*, a slim paperback prepared by Henry DeWolf Smyth of Princeton, the Soviet bomb builders became enlightened on approaches to isotope separation. Yet as late as November 1945, Kapitsa, certainly one of the most knowledgeable Soviet physicists on the status of nuclear research in his country, informed Stalin: "The secret of the A-bomb is [still] not known to us. . . . Its key problems are tightly guarded by America. The information we have received up to now is insufficient to make the A-bomb."

Sudoplatov alleges that Oppenheimer, Fermi and Szilard would leave secret papers around their labs for knowing moles to read or copy. Edward Teller, one of the central figures at Los Alamos when Oppenheimer and Fermi were there, calls Sudoplatov's assertions "scandalous accusations." Teller scoffs at the notion that Fermi would ever cooperate with the Soviets, because Fermi "clearly opposed the Stalinist nightmare even more than he opposed Mussolini." While Teller has "no reason to doubt that the NKVD had a few moles placed in Los Alamos," he thinks it

"clearly wrong" that Fermi would leave documents lying around for the moles to see. "Security at Los Alamos was far from perfect," writes Teller in *The Wall Street Journal*, noting that Richard Feynman joked about opening other people's safes at the lab. "I am sure that Soviet moles are as good at cracking safes as a Nobel Prize winning theoretical physicist," says Teller. "They may well have boasted about getting information on the work of the great Fermi." Teller believes Sudoplatov's motivation is easy to understand: He seeks "to justify himself as an outstanding intelligence officer who could extract information . . . of the greatest scientists."

Beria's fall within months of Stalin's death in 1953 brought an end to Sudoplatov's career. Sudoplatov was accused of mass murders by Khrushchev and imprisoned for 15 years. He was eventually released in 1982 after addressing a plea to Yuri Andropov, then premier and a former KGB chief. In the plea, Sudoplatov asked to be freed because of his exploits in obtaining information from Oppenheimer, Fermi, Bohr and others for the Soviet nuclear program. The Schecters say Andropov and the Communist Party Central Committee could easily have checked Suduplatov's story and not rehabilitated him had they found it false.

Still, Sudoplatov's memory at the age of 85, when the interviews were conducted, is very likely to be muddled. Both physicists and historians have identified serious errors and distortions. One of Sudoplatov's anecdotes had Yakov Terletsky, a Soviet physicist and intelligence agent, visiting Copenhagen in 1945 to get Bohr's advice on a nuclear reactor that would not operate. According to Sudoplatov, Bohr pointed to the problem spot on the diagram and told Terletsky how to fix it. The meeting took place, but Bohr's son, Aage, who was present, insists his father was not shown any reactor diagram and gave no technical data to Terletsky. In fact, Bohr had informed security officials of both Denmark and Britain that Terletsky had asked to visit him. Aage Bohr recalled that his father handed Terletsky a copy of the Smyth report, and Sagdeev, who read an account of the meeting that Terletsky wrote before he died, says Terletsky characterized the meeting a failure.

In Moscow the Russian Foreign Intelligence Service—the pale successor to the agency Beria once led and Sudoplatov served—issued a rare disclaimer. Sudoplatov's allegations about Fermi, Szilard and Oppenheimer, it declared, "do not correspond to reality." In fact, Oleg Tsarev of the Russian agency, has stated: "Having seen the summary file [on nuclear espionage], I can tell you there is no such names as Sudoplatov mentions in it."

For their part, the Schecters insist that Sudoplatov "is the surviving institutional memory of the Russian intelligence service's covert operations from the 1920s to 1953" and that "he's telling it the way he remembers it." The call by APS to open the secret archives on nuclear intelligence may be admirable, but even if this happens, it may be impossible to ever prove or disprove Sudoplatov's allegations conclusively. As Robert Conquest, a Russian historian at the Hoover Institution of War, Revolution and Peace in Stanford, California, says in his introduction to Sudoplatov's memoirs: "Individual reminiscences must, indeed, be treated critically—but so must most documents. Both are simply historical evidence, none of which is perfect, and none of which is complete. Even in the spate of documentation now emerging from Russia, Sudoplatov's evidence is vastly informative in major but (as yet, at least) undocumented areas."

On balance, it appears that the judgments of those who knew Oppenheimer, Fermi, Bohr and Szilard outweigh the recollections of a Soviet intelligence officer who rose to the rank of lieutenant general in the KGB for his crimes and deceptions and now asks that his statements should be accepted as historical events.

—IRWIN GOODWIN

WASHINGTON INS & OUTS

NEW FACES APPEAR AT URA AND NSF; OLD ORDER CHANGES AT SCIENCE BOARD

After a six-month search, Universities Research Association, the consortium of 80 research universities in the US, Canada and Japan that operates as a board of directors for Fermilab and what remains of the ill-fated Superconducting Super Collider, has filled its top job. On 7 May URA announced that **Frederick M. Bernthal**, deputy director of the National Science Foundation, will be its next president. Bernthal was appointed by President Bush in 1990 to NSF's second highest position and served as acting director for two periods of about a year each while **Walter Massey** and later **Neal Lane** were awaiting Presidential nomination and Senate confirmation.

Bernthal succeeds **John S. Toll**, who resigned after Congress canceled the SSC last October. Toll will return to the University of Maryland as chancellor emeritus and professor of physics. Bernthal received a PhD in nuclear chemistry from the University of California at Berkeley in 1969, and then worked as a postdoc at Yale's Heavy Ion Accelerator Laboratory for a year. From 1970 to 1977 he taught chemistry and physics at Michigan State University and spent a year as a visiting NATO scientist at the Niels Bohr Institute in Copenhagen. On his return to the US in 1978 he became an American Physical Society Congressional Fellow and joined the office of Howard Baker Jr, the Tennessee Republican who was then Senate minority leader. When the fellowship ended a year later, Bernthal remained on Baker's staff and became chief legislative assistant when the senator became majority leader in 1980. In 1983 Baker got President Reagan to appoint Bernthal to a five-year term as a member of the Nuclear Regulatory Commission. In the aftermath of the Chernobyl nuclear plant disaster in 1986, Bernthal led a 12-member interagency delegation to the Soviet Union to negotiate the first US–USSR nuclear safety protocol. He subsequently headed NRC teams on examinations of nuclear reactors in Czechoslovakia, Hungary and Bulgaria. In 1988 Reagan appointed Bernthal to the post of Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs. As such, he negotiated the US–USSR Agreement for Cooperation in the Basic Sciences and led several delegations to international meetings on environmental, science and technology issues, including those