The gadfly

Gregg Herken

Genius in the Shadows: A Biography of Leo Szilard — The Man Behind the Bomb. By William Lanouette with Bela Silard. Scribner's: 1993. Pp. 587. \$35.

LEO Szilard was one of a remarkable group of Hungarian physicists who emigrated to the United States in the 1930s and played a pivotal role in the making of the atomic bomb. "If the uranium project could have been run on ideas alone, no one but Leo Szilard would have been needed", observed Eugene Wigner, Szilard's countryman and colleague. A difficult child, Szilard grew up to become an impossible adult; one whose preferred activity was creative daydreaming — "botching", he called it — during long baths and in more unlikely settings. It was on one such occasion, while crossing a London street in 1933, that he saw how an atomic chain reaction might happen. He filed the first patent for an atomic reactor with the British Admiralty several months later.

Characteristically, however, Szilard himself refused to do the experiments necessary to discover which element or elements could undergo fission, preferring, instead, to importune colleagues into carrying out the work. His lassitude had not prevented him from escaping from Germany just one day before the Nazis closed the border, but it did keep him from being the first to find out that uranium was the element he was after. Years later, he joked that he and his fellow procrastinators should have received the Nobel prize — for peace, not physics.

Readers of William Lanouette's sympathetic but not hagiographic account of Szilard's life, researched with the assistance of Leo's brother, may find themselves wondering why the author is so obviously fond of his subject. "I've always been a great man", Szilard once sneered to a would-be admirer who was trying to pay him a compliment.

In truth, Szilard's greatness stemmed from the fact that he was a catalyst rather than a prime mover; a facilitator who acted as an academic matchmaker at critical times to bring competing ideas, or scientists, together. Most famously, in the summer of 1939, he persuaded Albert Einstein to sign a letter, which he himself had drafted, warning President Franklin Roosevelt about the danger of atomic energy. Successful in this endeavour, Szilard imagined himself becoming the high priest of a scientific association, or *Bund*, that would not only build the bomb but advise, and perhaps even decide, on its use.

The fate of Szilard's atomic *Bund* was emblematic of the problem with his approach. Having put the process in motion, he sat back to criticize those doing the work. Unfortunately for him, this tendency towards high-handedness — and his self-professed delight in "baiting brass hats" — cast his subsequent career, and influence, permanently into the shadows. So irked was the director of the Manhattan Project, General Leslie Groves, with Szilard's interference, that Groves tried to have him interned for the duration of the Second World War. Failing that, Groves had Szilard

Leo Szilard (1898–1964).

tailed by a phalanx of counter-intelligence agents, whom the physicist took a perverse joy in leading around in circles.

Had Szilard been content simply to remain a critic on the sidelines, he might have been ignored by Groves. But what Szilard described as his lifelong commitment "to save the world" inevitably brought the two men into conflict. Szilard provoked Groves first by organizing a petition of atomic scientists to oppose the atomic bombing of Japan, and then by an irregular intercession with James Byrnes, President Truman's secretary of state designate, in an equally futile effort to keep the bomb from being used as a diplomatic club against the Russians after the war. Using security as a pretext, Groves effectively derailed Szilard's hopes of becoming the spokesman for the atomic scientists as well as their postwar agent provocateur.

While Lanouette does not make the case explicitly, Groves may have been doing Szilard a favour. Szilard was always more an artist than an architect, and it is difficult to imagine what useful role he could have played once atomic energy became the subject of national legislation and the responsibility of a burgeoning bureaucracy. Frustrated, at least temporarily, in his mission to save

the world, he instead turned his efforts to understanding it better, taking up the study of biology, both experimental (molecular and microbiology) and theoretical (problems of ageing and memory). His contributions in these fields were never as great as those in physics, although once again he played the part of facilitator by encouraging young biologists and attempting to find scientific answers to social questions.

But in 1962, unable to stay away indefinitely from saving the world, he created the Council for a Liveable World, the first political action committee for arms control, which played a decisive role in the election that year of Senator George McGovern and which remains an active lobby today. Reverting to type, Szilard angered the Kennedy administration when he insisted on conducting his own personal diplomacy with the Soviet leader Nikita Khrushchev. Similarly, he alienated many even among his supporters in the council by his decision to flee the United States for Switzerland at the height of the Cuban missile crisis — he was the first refugee of the Third World War, he grandly if mistakenly declared. Back home, finding that his petitions now went unsigned and his urgent entreaties were ignored, he turned, wisely, to a new form of expression: fiction. But, although no longer delivered in broadsides, his message was essentially unchanged from his crusading days in the Manhattan Project.

Szilard's lifelong mission to save the world ended short of attainment. After a near-miraculous recovery from bladder cancer, he died in his sleep of a heart attack at the age of 66 in 1964. One of the ironies of the man is that he will probably be best remembered by the public neither as a physicist nor biologist but as an inadvertent futurologist. His blunder during the missile crisis notwithstanding, Szilard's was a remarkably prescient vision — predicting not only the start of the Soviet-American nuclear arms race almost a year before the first atomic bomb was tested, but also, more than a generation ago, the end of that race in an exhausted stalemate by the late 1980s.

While protesting throughout his life that he "would rather have roots than wings", Szilard's own choice as well as his destiny cast him as an intellectual gadfly. Lanouette's exhaustively researched and artfully written account of one of the most underrated figures of the atomic age establishes Szilard as both a curmudgeon and a posthumously honoured prophet. □

Gregg Herken is in the Department of Space History, National Air and Space Museum, Smithsonian Institution, Washington DC 20560, USA.