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**The Many Worlds of Leo Szilard: Physicist, Peacemaker, Provocateur**

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Best known for being the first to conceive and patent the nuclear chain reaction in the 1930s, Leo Szilard should also be remembered for other insights in both physics and biology, and for historical initiatives to control the A-bomb he helped create. In physics, Szilard applied entropy to data in a seminal 1929 paper that laid the basis for “information theory.” Szilard co-designed an electromagnetic refrigerator pump with Einstein in the 1920s, in 1939 he co-designed the first nuclear reactor with Enrico Fermi, and he later thought up and named the nuclear “breeder” reactor. Biologist Francois Jacob called Szilard an “intellectual bumblebee” for the many novel ideas he shared, including one that earned Jacob and others the Nobel Prize. James D. Watson said that for intellectual stimulation he liked being around Szilard because “Leo got excited about something before it was true.” A political activist, Szilard proposed and drafted the 1939 letter Einstein sent to President Franklin Roosevelt that warned of German A-bomb work and led to the Manhattan Project - where Szilard was “Chief Physicist.” Yet Szilard then worked tirelessly to curb nuclear weapons, organizing a scientists’ petition to President Truman and lobbying Congress for civilian control of the atom. Szilard loved dreaming up new institutions. He helped to create the Pugwash Conferences on Science and World Affairs, and founded the Council for a Livable World – the first political action committee for arms control. In biology, Szilard proposed the European Molecular Biology Organization modeled on CERN, and helped create the Salk Institute for Biological Studies, where he was one of the first fellows. Shy, witty, and eccentric, Szilard wrote a political satire in 1960 that predicted when the US-Soviet nuclear arms race would end in the late 1980s. Another satire, “My Trial as a War Criminal” about scientists’ responsibilities for weapons of mass destruction, is credited with prompting Andrei Sakharov to the heroic political activism that earned him the Nobel Peace Prize. This year marks the 50th anniversary of Szilard’s death, and the 75th anniversary of the Einstein letter. This talk will discuss other notable events in Szilard’s life as well.