



Albert Einstein (1879–1955) by Lucien Aigner (1901–1999).
Photograph, 1940

Portraits of Character from the National Portrait Gallery

Albert Einstein: Physicist and Pacifist

Universally recognized as the physicist whose radical theories proposed completely new ways of thinking about space, time, and gravitation, Albert Einstein is perhaps lesser known for another important role he served during his lifetime as a pacifist (a person opposed to war). By the time the German-born physicist was thirty, his theory of relativity and work in quantum mechanics had set off a revolution in physics, marking the beginning of the Nuclear Age. Scientists working in the 1930s confirmed his energy-mass equation, $E=mc^2$, by building large machines that could break apart the nuclear core of atoms, resulting in a release of tremendous energy. Nuclear physicists soon realized the potential for this technology to be used for the construction of powerful bombs. After the outbreak of World War II, some of these scientists were afraid

that Adolf Hitler might be developing such weapons using uranium as the source material. In 1939, a group of nuclear physicists approached Einstein—who had fled Nazi Germany for the United States in 1933—to enlist his political help. As someone with a passionate sense of social responsibility, Einstein responded by signing a letter to President Franklin D. Roosevelt, in which he warned that Germany was moving toward developing nuclear weaponry and urged that this country do the same. His words gave impetus to the Manhattan Project, which ultimately produced the atomic bomb. Opposed to violence as a means of settling disputes, but yet having paved the way for this new weapon both with his warning and his own discoveries, Einstein devoted much of his time in later years to advocacy efforts for nuclear arms control.

Taking a Closer Look

A native of Hungary, Lucien Aigner was also a recent refugee from Nazism when he made this portrait of Albert Einstein during a 1940 interview at the Institute for Advanced Study in Princeton, New Jersey. Look carefully at Aigner's portrait of Einstein. Does the portrait match your mental image of the man you have just read about? Give the reasons for your answer.

Listen to Einstein explain $E=mc^2$, read his letter to President Roosevelt, learn more about the Nuclear Age, and click on other related sites at the following exhibition Web site:

<http://www.aip.org/history/exhibit.htm>

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