Private giving extends even into national defense

A 15-year-old boy opens a newspaper and starts reading a science-fiction story about travel between Mars and Earth. The next thing you know, he’s spending all his time thinking about flying through space, and filling notebooks with scribbled ideas about how to make that happen.

Today, that’s not an unusual story. But when the teenaged Robert Goddard began to have his high-altitude dreams, it was 1899, and space travel was only a fantasy. But Goddard was passionate, serious, and stubborn—the ingredients of invention.

As a student at Worcester Polytechnic Institute in Massachusetts, Goddard set out to make his imagined outcomes real, using science. He wrote speculative papers about high-speed travel in a vacuum. In 1907 he fired a cylinder filled with gunpowder in the basement of the college physics department. The resultant roar and cloud of smoke nearly got him expelled. Goddard was living acknowledged, after his death, the nation’s debt to him and his private backers—by awarding to his widow and family for building a mining fortune and founding a prominent art museum. But they also had a deep interest in flight and aerospace. Daniel’s son Harry volunteered in World War I as one of the first U.S. Navy pilots. Starting in the 1920s, the family became America’s patron saints of flight.

Nearly all of our nation’s schools of aeronautical engineering on college campuses were set up by the Guggenheims—at MIT, Caltech, Stanford, Harvard, Syracuse, Georgia Tech, Michigan, and elsewhere. The Guggenheims also donated much of the money needed to make commercial flight practical. They gave large cash prizes for solutions to problems like bad weather and night landings. They paid for wind tunnels, and gyroscopes, and planes. They bankrolled weather-tracking services serving pilots, and gave loans for the purchase of the first commercial airliners.

And the Guggenheims adopted Robert Goddard. At the very moment the government and academic establishments were ignoring or mocking him, the Guggenheims provided the salary, materials, and research expenses that allowed the shy genius to prove out his theories.

Without Guggenheim funding for the academic labs that got the U.S. into the air, and the Guggenheim sponsorship of Robert Goddard, it’s quite possible the U.S. could have been an also-ran in aerospace. And if the pioneering discoveries in rocketry had been made in Germany or Russia instead of the sands of New Mexico, world history would have taken a different turn.

One lonely scientist and the far-seeing philanthropic family that gifted him resources made all the difference.