

The Soviet Union's launch of *Sputnik 50* years ago this month shocked America. How did it come about that the United States failed to beat the Soviets, and what is the legacy of *Sputnik* for us today?

by Michael E. Telzrow

Georg Hegel, the German philosopher, once remarked that the owl of Minerva flies only at dusk. The owl, in this case a symbol of knowledge that accompanied the Roman goddess of wisdom, represented the understanding that we learn the true meaning of an event only after sufficient time has passed. Such is the case with the launching of the world's first man-made orbital satellite. When the Soviets launched *Sputnik* on October 4, 1957, the United States was plunged into a state of fear and panic which effected profound changes in American society.

To the American public, and the politicians who would later prey upon their fears, the launch of *Sputnik* was a national defeat, a serious defense setback, and a rebuke of our public-school systems. How could the Soviets have beaten the Americans to the punch? Americans were convinced that they were the leaders in aerospace technology and a lot more. To learn otherwise was a devastating blow to national prestige and confidence.

For the communists, it was a propaganda victory. They achieved a measure of prestige in the scientific world; their educational system was admired as a result; and their military capabilities were magnified beyond proportion. All of this had a profound effect upon American public opinion. At the time, when asked what

SPUTNIK

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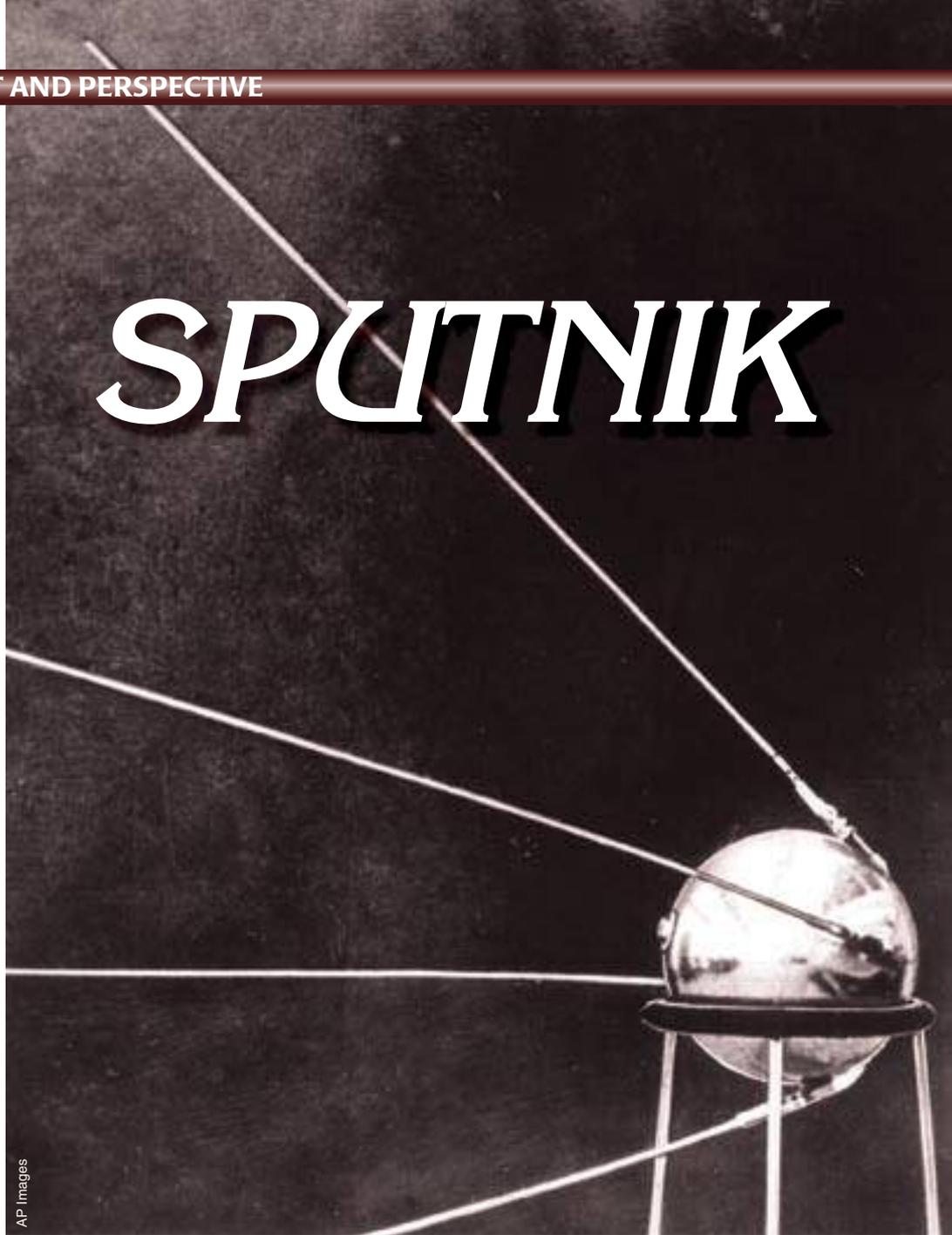
Sputnik meant, Democrat Senator Henry "Scoop" Jackson described the launch as a "devastating blow" and asked President Eisenhower to declare "a week of shame and danger."

Public reaction was predictable given the emerging Soviet potential to launch intercontinental missiles capable of delivering nuclear warheads. A sort of atomic anxiety gripped the nation, and the realization that the Soviets had launched a successful artificial orbital satellite only heightened the tension. But what was the true meaning of the launch? What could have accounted for America's seeming in-

ability to launch a successful orbital satellite in advance of the Soviets? And what is the legacy of *Sputnik* in relation to our own history? Fifty years later Hegel's owl has since flown, and the passage of time affords us a clearer picture of the impact of *Sputnik*.

Sputnik

On October 4, 1957, Moscow revealed to the world the news that the Soviets had successfully launched a 184-pound man-made satellite into a 96-minute geocentric orbit. Tass, the Soviet news agency, dubbed the spherical satellite *Sputnik*, a



Russian term loosely translated as fellow traveler or satellite. Equipped with four whip antennas, the 22-inch sphere carried transmitters capable of sending continuous signals from an orbit apogee of 588 miles.

Whatever it was called, the launching of the satellite caused an immediate reaction in America. *New York Times* headlines screamed: SOVIET FIRES EARTH SATELLITE INTO SPACE; IT IS CIRCLING THE GLOBE AT 18,000 M.P.H.; SPHERE TRACKED IN 4 CROSSINGS OVER U.S. *Washington Post* readers were met with a headline that only increased American anxiety: SATELLITE FLASHES PAST D.C. SIX TIMES — RUSSIANS MAY HAVE ULTIMATE WEAPON. The message was clear — the Soviets had scored an alarming victory, albeit several hundred miles above the

country, that threatened our nation's survival.

As the Soviet satellite circled the Earth, Americans wondered openly about the nation's failure to launch first, but for some American scientists and military specialists, the Soviet "victory" was particularly galling. Prior to *Sputnik*, American civilian scientists had been working on launching their own version of an orbital satellite during the International Geophysical Year (IGY) between July 1957 and December 1958, and they might have been successful had not the Eisenhower administration prevented them.

Under political and public pressure, Eisenhower met with his staff on October 7, just days after the *Sputnik* launch,

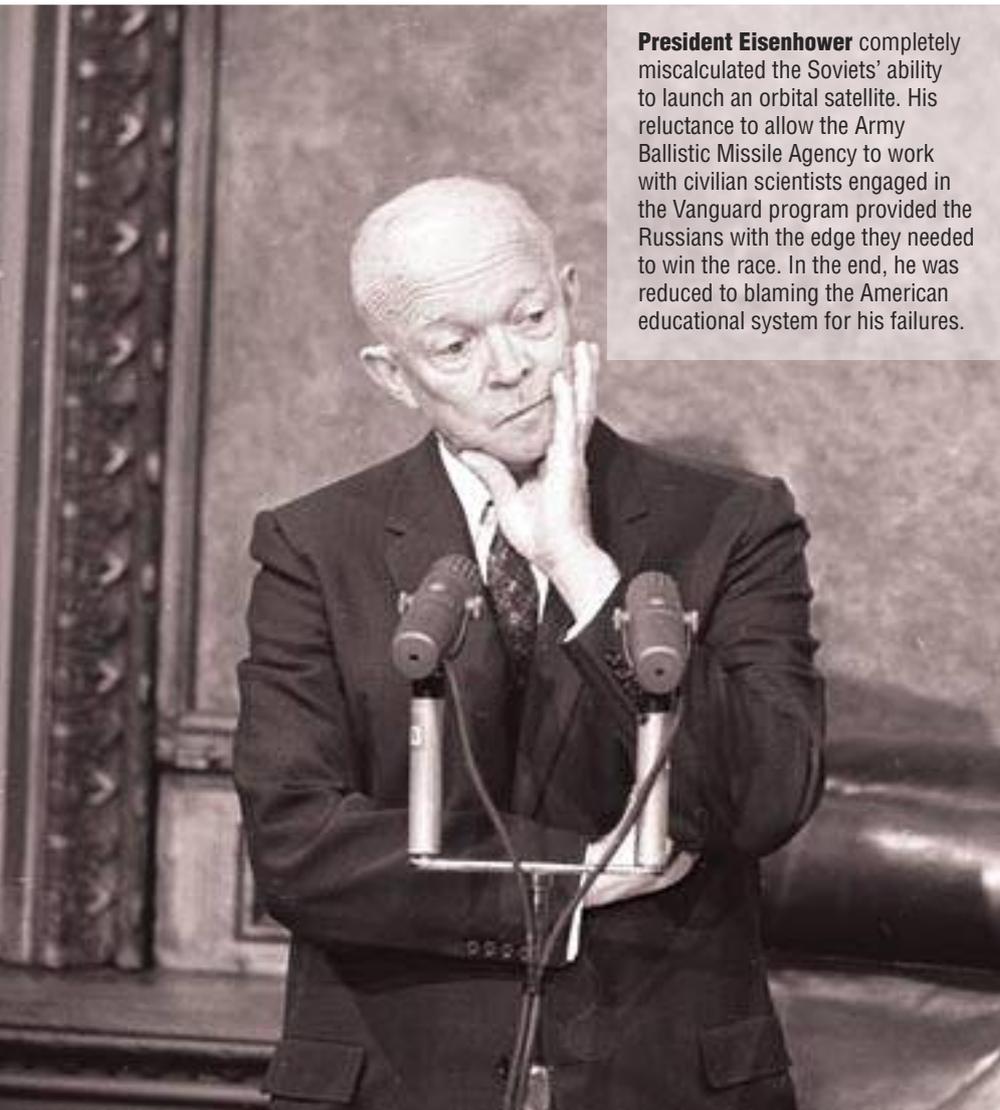
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to discuss a series of published reports asserting that the United States might have orbited a satellite in advance of the Soviets. When asked about that possibility, Deputy Secretary of Defense Donald A. Quarles acknowledged that the United States could have beaten the Russians. But he also reminded the president of the administration's decision to conceal the military's technological advancements from civilian scientists working on the IGY project. Eisenhower maintained the policy of separation and concealment even in the face of intense pressure.

But the story was deeper than a mere prohibition on sharing mutual advances between American civilian and military scientists. Years later, retired Army General James M. Gavin, who headed the Army's research and development programs, publicly asserted that he had been ordered not to develop an orbital satellite. In 1966, Gavin addressed members of the American Institute of Aeronautics and Astronautics, telling them, "We believed then that we had the capability of orbiting a satellite. On the basis of this, I made several entreaties to the Department of Defense seeking authority to launch a satellite, and shortly thereafter I was given a written order forbidding me to do so. This admonition was passed on to [Wernher] Von Braun," the German scientist who became an American citizen after World War II and is regarded as the father of the U.S. space program.

Moreover, Gavin and his associates knew that the Soviets were ready to launch a satellite, but their assertions were met with ridicule. For his part, Von Braun begged authorities to let the Army take part in the satellite program. Upon hearing of the news of *Sputnik* at a party attended by the new Secretary of Defense Neil H. McElroy, Von Braun exclaimed,

President Eisenhower completely miscalculated the Soviets' ability to launch an orbital satellite. His reluctance to allow the Army Ballistic Missile Agency to work with civilian scientists engaged in the Vanguard program provided the Russians with the edge they needed to win the race. In the end, he was reduced to blaming the American educational system for his failures.



After Sputnik II was launched, a Defense Department press release announced that the Army was “to proceed with launching an earth satellite using a modified Jupiter C.” This was clear evidence that our military possessed the means to launch a satellite well before the Soviets.

“We knew they were going to do it. Vanguard [the civilian satellite program] will never make it. We have the hardware on the shelf for God’s sake; give us a green light and sixty days.”

But Eisenhower and others had ignored Russian claims made the preceding August that they had successfully tested an intercon-

tinental ballistic missile. In words that would come back to haunt him, Eisenhower dismissed Russia’s ICBM claim as “less than completely reliable.”

Astronomic Heat

After *Sputnik*’s launch, Eisenhower immediately took action to reassure a shaken nation. The second-term president was battling a series of crises including a fierce budget battle over proposed cuts, and a looming recession. On October 9, five days after the launch, Eisenhower held a press conference to reassure the nation that we were not lagging behind the Soviets in the development of missiles and satellites. In fact, he denied that the United States was even involved in a race with the Soviets — which in a sense was true, considering Von Braun and his team were held back. He also defended his decision to prohibit the collaboration between military and civilian scientists involved in the development of missiles and spacecraft despite the fact that many “rocket men” viewed it as inadvisable.

But the U.S. failure to put a satellite in space first was unacceptable to the American people, who, after all, had been told, truthfully, that the United States possessed superior technology.

The level of domestic anxiety was intense, and the politicians responded accordingly. Members of both parties attacked Eisenhower for not adequately funding Project Vanguard, the American effort to launch a satellite into orbit. They accused him of complacency. Former President Truman blamed it on an imagined McCarthy-era “persecution” of scientists. Eisenhower received criticism from all quarters, much of it warranted.

Responding to the pressure, Eisenhower demanded a briefing from Vanguard officials in order to ascertain the probability of launching a missile with an orbital payload. He had to do something, and he apparently decided the answer lie in accelerating the missile program. On or about October 9, he met with John P. Hagen, director of the Vanguard project, and William M. Holaday, director of guided missiles for the department of defense. During a short presentation, both Holaday and Hagen emphasized the experimental nature of the Vanguard program. TV-2, the Vanguard missile housed at Cape Canav-

Dr. Wernher von Braun headed the team that developed the Nazi V-2 rocket during World War II. After the war, the United States employed von Braun and hundreds of other German rocket scientists in its own military rocket program. The Soviets also employed former Nazi scientists in their program, prompting comparative education expert George Z.F. Bereday to remark, “They have their Germans, and we have our Germans, and our Germans are behind their Germans.”



eral in Florida, consisted of only one stage, and TV-3, the complete missile scheduled for a December launch, was still being built. In any case, TV-3 was not expected to be able to put a satellite in orbit.

No matter, despite the frank and honest briefing from Holaday and Hagen, Eisenhower instructed his press secretary, James Hagerty, to announce that the United States would launch a test rocket with a satellite payload in December 1957. Vanguard project managers were stunned. On December 6, 1957, Americans watched in

horror as Vanguard's TV-3 exploded and burned on its Cape Canaveral launch pad.

After the Soviets launched *Sputnik II* on November 3, 1957, Eisenhower removed the restrictions between military and civilian scientific satellite development. The Army Ballistic Missile Agency was given authority to participate in the satellite program. A Defense Department press release announced that the Army was "to proceed with launching an earth satellite using a modified Jupiter C." This was clear evidence that the military pos-

sessed the means to launch a satellite well before the Soviets. Gavin was correct when nine years later he claimed that the Army had the means to launch a satellite before *Sputnik I*.

Blaming Schools

But the Eisenhower administration's response to *Sputnik* was not limited to the space race — not by a long shot. Using *Sputnik* as an excuse for expanding the federal government, while also assuaging his detractors and allaying public fears,

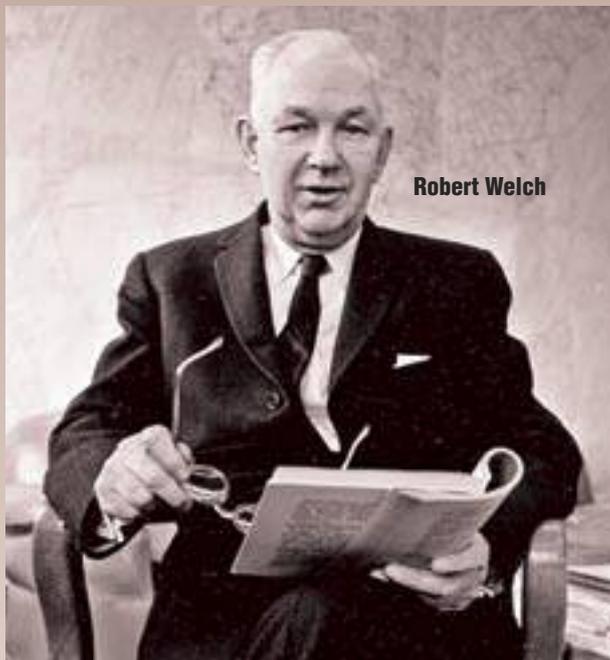
The Effects of Sputnik

by Robert Welch

John Birch Society founder Robert Welch made the following observations about Sputnik's effects on U.S. policy at the society's founding meeting in December 1958. Much the same could be said today regarding our government's response to external threats, though the nation is now much farther down the road to total government than it was in 1958.

Although our danger remains almost entirely internal, from Communist influences right in our midst and treason right in our government, the American people are being persuaded that our danger is from the outside, is from Russian military superiority. And under the excuse of preparing to match that military might, of defending ourselves from this threat of outside force; in other words, under the guise of fighting Communism, we are being stampeded into the biggest jump ever towards, and perhaps the final jump right into, socialism and then the Communist camp.

Of course *Sputnik* did many things for the Soviets. It gave them, no matter how undeserved, a whole new level of prestige in the scientific world. It put very valuable ammunition into the hands of the worldwide Communist-sponsored groups.... But we are talking at this point about the usefulness of *Sputnik* to the Communists and their socialist allies, through its impact on the psychology of the American people with regard to their domestic affairs. This, in my opinion, was the most important ultimate effect of *Sputnik*, as planned by the Soviets, and as now gradually being realized by them. Here are the Communists' aims for the United States — to be achieved, they hope,



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through the leftward momentum of the attitude induced by *Sputnik* and all of its auxiliary propaganda.

(1) Greatly expanded government spending, for missiles, for so-called defense generally, for foreign aid, for every conceivable means of getting rid of ever larger sums of American money — as wastefully as possible. (2) Higher and then much higher taxes. (3) An increasingly unbalanced budget, despite the higher taxes.... (4) Wild inflation of our currency, leading rapidly towards its ultimate repudiation. (5) Government controls of prices, wages, and materials, supposedly to combat inflation. (6) Greatly increased socialistic controls over every operation of our economy and every activity of our daily lives. This is to be accompanied, naturally and automatically, by a correspondingly huge increase in the size of our bureaucracy, and in both the cost and reach of our domestic government. (7) Far more centralization of power in Washington, and the practical elimination of our state lines. There is a many-faceted drive at work to have our state lines eventually mean no more within the nation than our county lines do now within the states. (8) The steady advance of Federal aid to and control over our educational system, leading to complete federalization of our public education. (9) A constant hammering into the American consciousness of the horror of "modern warfare," the beauties and the absolute necessity of "peace" — peace always on Communist terms, of course. And (10) the consequent willingness of the American people to allow the steps of appeasement by our government which amount to a piecemeal surrender of the rest of the free world and of the United States itself to the Kremlin-ruled tyranny. ■

There was plenty of blame to go around, but it was simpler to blame the educational system for America's failure to launch a satellite before the Soviets. Eisenhower was happy to shift blame to the public schools, thereby creating a "need" for the federal government to intervene.

Eisenhower embarked on a number of comprehensive initiatives to give the appearance that the United States was taking steps to ensure that the country would never again take a backseat to the Soviets. Those initiatives would greatly expand government spending in general and accelerate the growing federalization of public

schools. To this end, the embattled president sought the advice of prominent scientists in particular.

As early as October 15, he met with the Science Advisory Committee of the Office of Defense Mobilization. In addition to persuading him to appoint a full-time scientific adviser to the White House staff, these scientists convinced him that the nation must act quickly to bolster its future supply of scientific manpower. The answer was an emphasis on education — particularly math and science. Almost simultaneously, the American Council on Education was meeting to discuss the Soviet victory and what they perceived as the government's failure to adequately support American education. Educators looking for increased funding quickly realized that they could better their lot by linking education to the Cold War strategy. Sympathetic politicians joined forces with educators who clamored for a national educational policy and more funding. They were helped by the enormous megaphone of media and public opinion. After all, had not the Russian successes illustrated the "deficiencies" in the American system? There was no doubt but that the nation needed to restructure its educational system. Opportunity had arisen, and the educators, bureaucrats, and politicians eagerly seized upon it.

There was plenty of blame to go around, but it was simpler to blame the educational system for America's failure to launch a satellite before the Soviets. Eisenhower was more than happy to shift blame to the public schools, thereby creating a "need" for the federal government to intervene. At an October 30 press conference, he remarked that he had been "shocked" to find out that the cause was educational, not technological. He vowed to take action to ensure that future levels of scientific manpower would be adequate to meet the demands, and "if necessary, helping where it became the proper function of the Federal Government to bring about this thing."

Eisenhower was supported by Cold Warrior heavyweights like Dr. Edward Teller, the father of the hydrogen bomb, and Admiral Hyman J. Rickover. Each bemoaned the sorry state of American education and called for greater government involvement. The establishment media,

The United States finally launched a successful artificial satellite with a Vanguard rocket on March 17, 1958, five months after the first *Sputnik* orbit.



too, gave increasing support to the idea of educational reform. The *Saturday Review* breathlessly declared, “Without mathematics, democracy cannot hope to survive.” Americans were convinced; something needed to be done. The Department of Health, Education and Welfare (HEW) moved to create a report on the Russian education system.

But if their plan was to calm fears, it backfired. The HEW report entitled “Education in Russia” caused controversy when the author accused HEW of suppressing her report. Arkansas Senator and Stalin-apologist J. William Fulbright then attacked HEW Secretary Marion B. Folsom, accusing him of deprecating “Russian ability and accomplishments.” The verdict was in. The American educational system was lagging behind Russia’s, and Eisenhower would move to correct it.

Incremental Takeover

In September 1958, Eisenhower signed into law the National Defense Education Act providing aid to schools, both public and private, at all levels in order to ensure the “fullest development of the mental resources and technical skills of its young men and women.” Important elements of this piece of legislation included a student-loan program to colleges and universities to foster an increase of talent in the sciences and a bevy of programs to increase math and science understanding. The act provided \$887 million over four years. It was extended through June 30, 1964, with an estimated additional cost of \$500.2 million. What Eisenhower referred to as “short-term, emergency legislation” is still on the books 50 years after *Sputnik* orbited the Earth.

The National Defense Education Act spurred an increase in additional federal aid to schools, further accelerating federal control over what once had been local. In a prescient moment, John Birch Society founder Robert Welch predicted the legacy of *Sputnik* well before Minerva’s owl had taken flight. Sensing the inevitable, he correctly noted that along with an increase in educational spending and control, government largesse would expand on several levels, particularly in foreign aid; and Washington would seize upon the moment to centralize even more power (see the sidebar on page 35). ■