

JUST FLIPPING THE SWITCH

Von Braun: Dreamer of Space, Engineer of War, by Michael J. Neufeld
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Reviewed by Maureen Callahan

At the beginning of Michael Neufeld's exhaustively researched biography of Wernher von Braun, the author explains why he decided to describe his subject as a "rocket engineer" rather than a "rocket scientist":

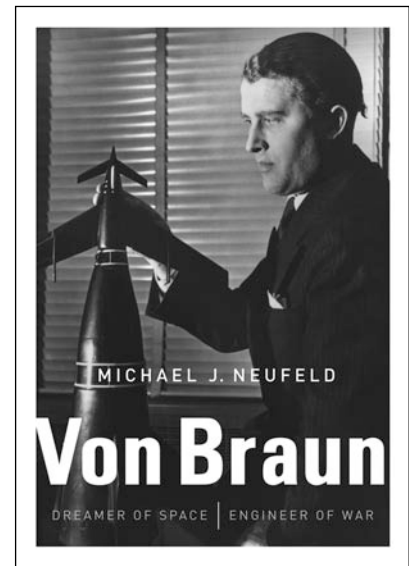
Although the boundaries [between science and engineering] are fuzzy . . . I still find it useful to think of a spectrum. On one end is basic science, which aims at achieving an understanding of the laws of nature without regard for their practical application, and at the other is engineering, which is about creating technological devices to shape the world to human purposes.

In *Von Braun: Dreamer of Space, Engineer of War*, Neufeld presents the story of an engineer who claimed disregard for the practical applications of his creations. As noted by many critics—perhaps never in a more entertaining manner than Tom Lehrer—von Braun surfed the waves of twentieth-century history, all but ignoring the ethical and geopolitical ramifications of his ride.

Although Wernher von Braun was a household name to anyone alive during the height of the U.S. space program in the 1960s and early 1970s

(and to anyone who may have seen him on Walt Disney's *Tomorrowland* television program during the 1950s), he is now, as Neufeld notes, all but unrecognized among those of us under the age of forty. Von Braun was the man behind Nazi Germany's V-1 and V-2 rocket weapons programs and, later, the United States' postwar rocket program. After the Soviets successfully launched the satellites *Sputnik 1* and *Sputnik 2* into orbit in 1957, von Braun engineered America's first satellite launch the following year. For this achievement, von Braun was celebrated on the covers of both *Time* and *Life*. He would later develop the *Saturn V* rocket that sent Apollo astronauts to the moon.

Biography often aims to tell, in microcosm, the course of larger histories and ideologies, and von Braun provides fertile soil for such a treatment. Neufeld traces the von Braun family genealogy from Prussian Junkers to bureaucrats in the Weimar Republic, and later his astonishing transformation from a high-ranking Nazi in Hitler's Third Reich to American space cowboy. But considering the scope of this individual's life, Neufeld errs—too far, perhaps—on



the side of historical positivism, laying out the life chronology without providing an explicit sense of the influences that governed von Braun's motivations. The result is a narrative crowded with facts but in desperate need of some analytical curiosity.

Neufeld has a deep understanding of the technical and human challenges von Braun faced in leading the U.S. space program, and lucidly explains his role in navigating the personal and public politics, management challenges, and engineering problems that had to be solved before people could land on the moon. The work is full of detailed descriptions of rocket specifications, analyses of internal NASA politics, and associated engineering nerd porn that leaves the reader convinced that

Neufeld did his homework. However, Neufeld is far less proficient in making sense of the myriad ethical dilemmas presented by this figure, who is so pivotal to any understanding of twentieth-century history.

Neufeld doesn't discount von Braun's past as an SS member and Nazi scientist (a fact always downplayed by NASA), but nonjudgmentally concludes that von Braun's lifelong obsession with becoming the Christopher Columbus of space—and not his Nazi sympathies—led him to his Faustian bargain: He willingly accepted Nazi resources to build rockets with no regard to source or purpose.

The degree to which Neufeld gives von Braun the benefit of the doubt about whether he was aware of the use of slave labor at Mittelbau-Dora (the camp at which the Nazi Peenemünde rocket engineering program was executed) is astonishing. Considering that a great deal of information has emerged in the last 30 years about how much ordinary Germans, German soldiers, and midlevel officials knew about Nazi atrocities (and what this means about modernity and the German state), it seems odd that Neufeld approaches this question strictly in terms of what the scant archival evidence can support. So Neufeld's von Braun becomes a romantic figure, someone entranced by the promise of human travel to distant stars—a man far too enamored with this dream to pay much attention to details of project funding or the eventual uses of his technology. And isn't this the same kind of thinking that allows the machine of science to roll forward in the first place?

Nor does he say anything about what it means that the United States scooped up Nazi rocket engineers after the war, or about the enormous scientific shortcuts that NASA took

for the sake of beating the Soviet Union to a manned spaceflight to the moon. Demonstrating scientific and technological dominance over the Soviet Union was not just a catalyst by which space science could progress—it was NASA's de facto charter and a central element of the cold war.

It was John F. Kennedy who asked, "Do we have a chance of beating the Soviets by putting a laboratory in space, or by a trip around the moon, or by a rocket to land on the moon, or by a rocket to go to the moon and back with a man? Is there any other space program which promises dramatic results in which we could win?" Von Braun's reply to the president's question was that while the United States could not beat the Soviet Union to a manned laboratory in space or to orbiting the moon, "We have an excellent chance of beating the Soviets to the first landing of a crew on the moon (including return capability, of course)."

Why, one wonders, is Neufeld so reticent regarding the ethical considerations of von Braun's work? The short answer to Neufeld's missed opportunity is that the author was once bitten and now twice shy. Neufeld is currently the chair of the Space History Division at the Smithsonian's National Air and Space Museum. In the early 1990s, at the height of the so-called "history wars" and Lynne Cheney's leadership of the National Endowment for the Humanities, Neufeld helped curate an exhibit about the Enola Gay and the devastating effects of the atomic bomb on Hiroshima. The exhibit drew the ire of veterans' groups, conservative pundits, and members of Congress, and was subject to sustained (and sloppy) attention from the media. Perhaps this accounts for Neufeld's odd statement that "few engineers or scientists [fit the role

of a twentieth-century Faust so well as von Braun]—he actually got his resources and power from a devilish regime, unlike the Allied scientists who developed the atomic bomb."

The most prominent of the opposition groups to the Enola Gay exhibition, and the one most responsible for eventually changing the exhibit script, was the Air Force Association. The AFA could be described as the air wing of what Dwight Eisenhower called "the military-industrial complex." It was founded in 1946 to lobby for creation of an independent Air Force and to fight postwar budget cutbacks. This organization "educates the public about the critical role of aerospace power in the defense of our nation [and] advocates aerospace power and a strong national defense." It has been the semiofficial lobbying arm of the United States Air Force ever since.

The nature of the complaints from this group came down to a sense that the presentation of the consequences of incineration and radiation by the atomic bomb was irrelevant, because, according to the AFA, the exhibition should be about the plane and the soldiers who flew it. The complaints led to months of heritage versus history debate, several rewrites of the exhibition script, and a distrust of—and disregard for—the work of the professional historical and museum communities that continues to this day. Unfortunately, the primary lesson—that objects, sources, and facts do not speak for themselves and are always accompanied by some degree of cultural, social, or, in the best case, careful professional analysis—never rose above the static of the controversy.

When all was said and done, the exhibition, originally an effort to understand the Enola Gay's mission, read as a justification for it. It bulldozed decades of historical debate

about the decision to drop the bomb, assumed as fact that the only alternative to dropping the atomic bomb would be a land invasion, and failed to adequately explain the nature and consequences of atomic warfare. As the script now summarized the story:

Japan, although weakened, was not willing to surrender. The atomic bomb offered a way to change that. A bloody invasion loomed if atomic bombs did not force Japan to surrender. . . . For Truman, even the lowest of the estimates was abhorrent. To prevent an invasion he feared would become “an Okinawa from one end of Japan to the other,” and to try and save as many American lives as possible, Truman chose to use the atomic bomb.

Neufeld’s hands-off approach to the sticky stuff of history in *Von Braun* is understandable, if regrettable. But the historian’s responsibility is to explain the

consequences of war, especially today when Americans seem amnesic about what war means.

The 2008 budget estimates a \$161 billion cost for the wars in Iraq and Afghanistan, military expenditures consume 51 percent of the federal budget, and military presence in the Middle East is expanding. In the words of political philosopher Herbert Marcuse in 1964, at the height of the cold war:

Does not the threat of an atomic catastrophe which could wipe out the human race also serve to protect the very forces which perpetuate this danger? . . . We submit to the peaceful production of the means of destruction, to the production of waste, to being educated for a defense which deforms the defenders and that which they defend.

Perhaps the clearest message in Neufeld’s biography, then, is how tightly woven the interests of space

scientists, rocket engineers, and the military establishment have been and continue to be. Von Braun’s early successes resulted directly from Nazi military patronage, and he approached this association without concern for the inevitable products of his labor.

I had no illusions whatsoever as to the tremendous amount of money necessary to convert the liquid-fuel rocket from the exciting toy—which in my eyes the Mirak [prototype] was—to a serious machine that could blaze the trail for the space ship of the future. . . . To me, the Army’s money was the only hope for big progress toward space travel. . . . In these discussions the moral aspect of building rockets for military purposes was never touched.

Or, to quote Tom Lehrer’s impersonation, “Once rockets go up, who cares where they come down? / That’s not my department’ says Wernher von Braun.” •