

**BRAUN, WERNHER VON** (1912–1977), German scientist.

Wernher von Braun was the famous German constructor of the liquid fuel rocket A-4 (Aggregat 4), which took off for the first time on 3 October 1942. Being relabeled by the Nazis as *Vergeltungswaffe* (retaliation weapon) V-2, it was the first missile in history to be used in warfare, when hundreds of missiles hit large towns such as Antwerp and London in late 1944.

Von Braun was born on 23 March 1912 as the second son of an aristocratic family. Protected by his good-natured mother, he developed even in his youth a characteristic style of playing risky games. Inspired by a book by the rocket pioneer Hermann Oberth, von Braun decided to construct the rockets needed to fly to the moon when he was a teenager. After a series of experiments conducted by Oberth, Rudolf Nebel (1894–1978), von Braun, and others with small rockets on the Rakettenflugplatz Berlin (Rocket Port) in 1930, the Army Ordnance offered von Braun the opportunity to continue his experiments with the military, which meant better equipment and payment, but also the obligation of secrecy. The twenty-year-old von Braun couldn't resist this offer and joined the military in December 1932. He may have thought that he could play games with the military.

The legends, produced by von Braun and others after 1945, say that the rocket engineers did not think of war and were not affected by the Nazi regime until 1942. Serious historical research conducted by Michael Neufeld and others, however, reveals that there had been a close relationship of Nazi politics and rocket technology since 1933. Von Braun, member of the Nazi Party since 1937 and member of the SS since 1940, had been appointed technical director of the army rocket center in Peenemünde in 1937 with a staff of ninety employees, later numbering up to five thousand. The task of this center, which had been constructed according to his plans, was to construct a military missile and not a space rocket.

It was an enormous achievement to build the world's first liquid fuel missile—able to transport a warhead of one metric ton over a distance of 250

kilometers—within a period of only five years. The reasons for this success were, according to Neufeld, the integration of all research and testing within one plant (a novelty in history, later called “big science”), the generous support of these efforts by the Nazi regime (although raw materials and qualified personnel generally were short, especially after war had begun), and, finally, the charismatic leadership of von Braun, who was able to integrate and to motivate the team even in hard times.

However, the rocket engineers paid a high price for this success. Thousands of prisoners of the concentration camp Mittelbau-Dora, who were forced to work in the underground production plant of the V-2 missile, died of starvation or were killed by brutal SS warders. Von Braun constantly denied having been informed about this, but records reveal several signs that he was much more involved in the program than the legends suggest. He was the top manager and the top promoter of the missile project, and he even visited Adolf Hitler several times in order to secure support from the very top of the Nazi regime.

The moral failure of von Braun during the Nazi era may be explained by his youth and the constraints and the momentum, which arose step-by-step out of the specific constellation of politics and technology. However, it is hard to conceive why von Braun continued this kind of work after 1945 without any scruple. After being captured by the U.S. army in 1945 and transferred to the United States, in 1949 he even proposed to construct a gigantic rocket to contribute to the assembly of a Strategic Defense Initiative (SDI)-like battlestation in orbit. In 1953 he completed his work on the world's first nuclear missile, the Redstone rocket, which was equipped with terminal guidance systems and thus could also hit small military targets and not only large cities (unlike the militarily useless V-2). In the 1950s, von Braun showed himself as an advocate of the arms race, and he heavily resisted his transfer to the civilian U.S. space agency NASA, which had been founded in 1958. However, the launch of the Soviet Sputnik, the first man-made object in space, in 1957 again created an emergency situation in which the United States needed a rescuer. Von Braun helped to recover the self-confidence of the American



One of von Braun's V-2 rockets is launched in Germany during World War II. GETTY IMAGES

nation by launching Explorer, the first U.S. satellite, on 31 January 1958. Within a period of only eight years on the project, in July 1969 von Braun and his team managed to bring a man to the moon and safely back again—another remarkable success, but a very costly and risky endeavor as well. However, after the Apollo mission, neither another emergency situation nor a new risky game to play arose. Frustrated, von Braun withdrew from NASA in 1972. He died from cancer on 16 June 1977.

See also **Space Programs; Sputnik.**

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**BRECHT, BERTOLT** (1898–1956), German author of plays, poetry, and novels.

Bertolt Brecht was born into a well-to-do middle class family in the Bavarian city of Augsburg where he grew up comfortably, like most children of his class. He had nearly finished secondary school, at the Königliches Realgymnasium, when World War I began. Brecht had been writing as well as publishing poetry for two years, and also a one-act drama, *The Bible*. Confident of becoming a German classic—as he assured his friends—he used to sing his rhymes for them, accompanying himself on his guitar. Though in a few poems he first celebrated the war, he soon turned against it and was nearly kicked out of school for an essay mocking Horace’s famous praise of dying for the fatherland. After graduating in 1917, Brecht enrolled at Munich University to study medicine and philosophy, but preferred to attend drama courses and performances in the city’s theaters. In early summer of 1918, Brecht finished his first major work for the stage, *Baal*.

Drafted into the army six weeks before Germany’s capitulation, he served with a medical unit at Augsburg military hospital. During the brief revolutionary period that ended the war, he was elected to the Augsburg Workers and Soldiers Soviet, or so he claimed later. In 1918 he also wrote his famous anti-war poem, “Legend of the Dead Soldier,” which the Nazis cited as evidence when they deprived him of German citizenship in 1935. At the age of twenty, Brecht had created his first dramatic masterpiece and a good deal of the poetry that would earn him his place among the greatest of German poets. Young Brecht was a charismatic performer of his poems, inventing melodies for them or singing them to popular tunes. Had he been born fifty years later, he might

well have been tempted to make a career as a folk or rock singer.

#### EARLY SUCCESS AND ADOPTION OF MARXISM

During the Roaring Twenties, Brecht became an award-winning, if controversial, playwright and an acclaimed poet and lyricist. His first-ever produced play, *Drums in the Night*, at Munich in 1922, received the coveted Kleist Prize for Drama. A second play, *In the Jungle*, premiered in Munich the next year, causing a scandal, as did *Baal* at its premiere in Leipzig. Nevertheless, Brecht’s adaptation of Christopher Marlowe’s *Edward II* opened in Munich in early 1924, staged by Brecht himself, his first stab at the art that eventually would make him world famous. In 1924 he moved to Berlin, and though there were not that many productions of his plays, he was recognized as a major dramatist. Studying the texts of Karl Marx in the later 1920s, he adopted Marxist ideology as a basis and guide for his literary production. The musical *The Threepenny Opera*, written with the composer Kurt Weill, premiered in Berlin in 1928, to become the most popular German play of its time and, eventually, a most popular play worldwide.

By 1930, Brecht had developed a method of collective work; he fashioned his plays with teams of collaborators in an effort to break with the traditional concept of authorship; this has since been criticized as an indirect exploitation of his coworkers. He also evolved his concept of “Epic Theater,” citing his and Weill’s opera *Rise and Fall of the City of Mahagonny* (1931) as a case in point. The Great Depression and the concomitant rise of the Nazi movement led by Adolf Hitler motivated Brecht’s alignment with the Communist Party, whose program corresponded, of course, to his Marxism. Consequently, he experimented with a sequence of *Lehrstücke*, plays that were supposed to not merely teach audiences but foremost their performers, who learn by enacting narratives of social and political conflict, *The Measures Taken* being a prominent and vehemently disputed example.

#### THE LONG EXILE

When Hitler took power in 1933, Brecht had to fear for his life and quickly left with his family, settling in Denmark where he spent six years before