



# WILLY LEY

## Prophet of the Space Age

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## Youthful Horizons

In a later autobiographical note to readers, Willy Ley recalled a defining event of his childhood in Berlin, circa 1917. Standing before his teacher and peers, he had been given the task of an essay assignment and class presentation on the question of “What Do I Want to Be When I Am Grown and Why?” The question could not have been an easy one for many of his classmates. Some had probably lost their fathers in the ongoing Great War, which killed (on average) 1,300 Germans per day. This loss of life eventually created over 350,000 widows and left over 730,000 children fatherless. Other students may have been more fortunate, because their fathers survived. In the postwar years these children-turned-young-adults witnessed the familial effects of war neurosis and shell shock as veterans struggled to readjust to civilian life. This generation of fathers was defined by trauma, death, and modern, industrialized warfare.<sup>1</sup>

The children experienced the trauma, death, and indifference of the home front. They watched their mothers struggle to provide sustenance amid bread and potato shortages, food riots, and strikes. They endured a blockade, which indirectly killed a million people during the war. The everyday realities of wartime urban life had also, in the words of historian Belinda J. Davis, “shattered the illusion of upholding the ideal family and the role of its members.” Life centered less on an ideal

nuclear family and a stable home. Instead, families experienced hardships in public streets. Poorer women struggled most, as they fought for potatoes after waiting in long lines. In this harsh battle for the basic necessities of life, these women and their families barely survived.<sup>2</sup>

Young Willy had an easier childhood than some of his classmates. He was born Willy Otto Oskar Ley on October 2, 1906, in Berlin. He was the son of Julius Otto Ley, a traveling wine merchant, and Frida (May) Ley, the daughter of a Lutheran church official. Ley saw little of his parents after age seven. In a 1955 autobiographical note, Ley recalled, "It so happened that my parents were in London when that war broke out. I was in Berlin all the time, living with relatives." British authorities interned Julius on the Isle of Man until the end of the war. They allowed Frida to return to Germany, carrying her newborn baby Hildegard. According to some accounts, she did not remain in Berlin. After leaving the newborn with her sisters, she may have left to work as a milliner in a different city. Ley's aunts took care of him and his sibling, with the support of other relatives tied to the German Lutheran Church.<sup>3</sup>

These were the two sides of Ley's background: business and the church. These two sides represented his safe career paths. However, he had little regard for family traditions. He later described his family in uninspiring ways: "A possible future biographer will have a hard time finding family background for either the scientific or the literary side of my inclinations and activities." Unlike his family and many of his peers, Ley had a creative spirit. As a gifted student, he questioned his teachers. He eagerly read morning newspapers. Ley was intellectually curious and often self-taught. For example, his Realschule may not have required traditional courses, such as Latin and Greek classics. Nevertheless, Ley learned Latin and read many of the Greek classics. His fascination with Greek mythology lasted a lifetime. Ley loved reading the books in their original languages. He remembered: "Like every future author or scientist I ever heard of, I was an omnivorous reader, first in German only and then, as schooling progressed, in Latin, French, and English too." It is tempting to imagine Ley as a teenager, absorbing himself in Latin texts, as if they offered overlooked gems, waiting to be discovered by someone who did not simply rely

on translations or later books. This distrust of secondary sources also lasted a lifetime. In Ley's perspective, a good student not only questioned his teachers but also investigated the sources. If the evidence did not support old myths, legends, or superstitions, an intelligent student questioned antiquated beliefs. Often a freethinker destroyed bad systems, while speaking truth to power.<sup>4</sup>

## The Heroic Scientist

Given Ley's perspective on learning, a certain genre of literature excited his imagination: tales of exploration, both true and imaginary. He enjoyed books that glorified fearless explorers who discovered amazing things. He consumed books that narrated marvelous quests, mysterious places, ancient secrets, and hidden worlds of wonder. For something to be an interesting story in either science or fiction, it usually included something "amazing," "astounding," or "marvelous." Explorer travelogues probably occupied the same shelf as futuristic tales of imagination.

By far his favorite writer of fiction was scientist/philosopher Kurd Lasswitz whose book, *Auf Zwei Planeten* (*On Two Planets*, 1897), occupied a special place in Ley's collection. As a literary fantasy about first contact with intelligent Martians, the book made a lasting impression on Ley. He even described it as "one of the best and most interesting novels of German literature." The novel's critique of European imperialism did not impress Ley. He summarized the morality tale crudely: "It was . . . basic psychology to show that the highly ethical Martians, when confronted with terrestrial stubbornness, quickly revert to war." However, the author's "solution to the problem of space travel" impressed Ley greatly. The novel included Lasswitz's mathematical calculations of trajectories, orbits, and rocket launches. Additionally, Ley admired the book's representation of scientists as explorers who fearlessly sought out the unknown. The book glorified scientific adventures, new discoveries, and breathtaking landscapes.<sup>5</sup>

Ley also read the works of nineteenth-century author Jules Verne. In Ley's judgment, Verne's novels "expressed confidence in the powers of science and discovery, a confidence well fortified." Verne's adventures

were also “romantic,” since they recounted “explorations of the unknown.” Men of science crossed political boundaries to traverse the earth in the air. These adventurers also discovered especially weird things in the depths of the ocean. Rarely did they get wrapped up in political limitations. Instead, politics got out of the way in favor of marvelous inventions, wondrous machines, and daring adventurers. Fearless scientists journeyed to the center of the earth and the surface of the moon. Exploration and science were identical quests.<sup>6</sup>

Through Verne’s novels Ley consumed an image of the “scientist as adventurer.” Scholar Roselyn Haynes described the common tropes surrounding the modern version of a traditional Romantic hero, “now allied with science rather than opposed to it.” These characters served as “humanity’s advance guard,” by expanding the frontiers of both space and time and “transcending mankind’s former limitations.” These “technological knights” boldly expressed their right to dominate nature, the universe, or “whatever alien societies they encountered.” Most likely, Ley dreamed of being among the ranks of these new explorers, who daringly crossed frontiers.<sup>7</sup>

In these fictional stories the scientist was a swashbuckling adventurer who embodied fearlessness in the quest for new worlds. Additionally, the explorer expressed anti-authoritarian tendencies. The scientist interrogated and tested conventional knowledge. He doubted the reliability of established thought. He would hatchet his way through thick jungle bush to discover the truth about the world. For Ley, Verne’s heroes exemplified “a new attitude.” Ley wrote: “Consistently his heroes . . . do things for themselves. They do them in a novel way. They don’t do things in a traditional and poor and inefficient manner for the sake of tradition. Nor do they look for ‘lost arts.’” He continued:

Instead of yielding to the traditional modesty of being “insignificant sons of great ancestors,” they act with the full knowledge that their time has surpassed any preceding time. They know that they know more than their ancestors. . . . They don’t hesitate to cruise under the seas or fly through the air. And to them the problem of reaching the moon is what it really is: a question of attaining a sufficiently large velocity in the right direction at the proper time.<sup>8</sup>

According to Ley, Jules Verne's extraordinary voyages stimulated the imaginations of young readers and interested them in "the connection between the past and the future, between the real and the possible." Verne also expressed a deep fascination with the United States as a land of daring explorers and brave engineers. As noted by a literary scholar, American society was often portrayed as "one in which scientific and technical problems are of concern to the man on the street corner. They belong to the people, rather than being set apart as they are in the Old World, in the dusty studies of the Academies and scholarly societies." The United States possessed a great scientific and industrial frontier, which was open and democratic.<sup>9</sup>

Verne's stories impressed Ley. He consumed representations of scientists as bold explorers, who bravely set out to face the unknown and conquer new frontiers. New explorers would act accordingly. Nature would yield its spoils. The scientists would penetrate its secret realms to dominate, reorder, and repurpose the spoils for the benefit of humankind. The riches of the frontier would be marvelous. Most likely, as Ley and his family struggled for basic sustenance like bread and potatoes, he dreamed of those distant frontiers.

### The Heroic Engineer

Many historians have argued that the First World War served as a "technological maelstrom" that diminished or destroyed hopes and dreams. Machine guns, tanks, mortars, poison gas, and other innovations of the era transformed war from an honorable and noble enterprise into an assembly line of human carnage. In this regard, the Great War facilitated a crisis of Western Civilization as well as a crisis of masculinity. Scholar Michael Adas argued: "Little that was glorious or noble could be found cowering in ditches in the midst of a wasteland glutted with the bloated bodies of dead men and animals." In the perspective of famous German soldier Ernst Jünger, science and technology had converged to create "a cosmic, soulless force before which man almost disappeared." Historians have analyzed similar perceptions of the loss of chivalry due to industrialized warfare. Accordingly, the Great War was a watershed moment that caused many European intellectuals not

only to question their faith in machines as the “measure of man” but also to reevaluate their very notions of civilization, progress, manliness, and chivalry. Consequently, according to many historians, public interest in science declined due to associations with poison gas and industrialized warfare.<sup>10</sup>

Ley and his fellow students viewed these events in less critical ways. Although they had endured the civilian effects of total war, there was no moment of great disillusionment with technology and science. It is doubtful that Ley or his fellow students thought in terms of the ideologies of Western dominance or the “measure of man.” Instead, Ley belonged to a generation who would continue to celebrate technologies and other modern marvels, especially aircraft. In fact, Ley recalled, “One of my earliest memories is seeing one of the airships built by Count Ferdinand von Zeppelin circling over Berlin.” Ley celebrated new heroes, embodied in the image of the aviator. As summarized by historians, the war ace became a symbol for the continuity of chivalry. He was both a noble warrior and a skilled engineer. In the words of soldier Ernst Jünger, aviation represented “a fiery marriage of the spirit of ancient chivalry and the chilling bleakness of our forms of labor.” The sky warriors retained control over their tools. Their skill and daring still mattered. Jünger further commented: “In them one finds the highest workerly and soldierly virtue stamped in fine metal, combined with intellect applied to the tasks in hand, and not without a certain freedom of style and an aristocratic delicacy.” As described by historian Eric Leed, their aircraft enabled them to rise to an altitude “where, once again, war was a unified human project.” Fire and steel joined forces in the conquest of the sky, as a new breed of heroic engineers took center stage.<sup>11</sup>

Ley recalled his adoration of the “Captain Future” stories, which narrated the adventures of pilot Captain Mors, who led thrilling adventures around the world and even into space. According to Ley, these stories were “outright science fiction that showed evidence of wide reading and even research on the part of their author.” Ley particularly enjoyed the pilot’s aerial adventures to Tibet as well as his attempts to divulge the secrets of Martian solar energy weapons and Venusian “heat-beams.” Despite the odds, Captain Mors always prevailed, saving