

BUILDERS *Of* AMERICA



I WAS A STEEL
INDUSTRY
ENTREPRENEUR WHO
BUILT BETHLEHEM
STEEL INTO THE
SECOND LARGEST
STEELMAKER IN THE
UNITED STATES.

CHARLES M. SCHWAB



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Meet Charles M. Schwab

Charles M. Schwab (also known as “Charlie”) emerged from a modest upbringing to become the foremost production expert in the U.S. steel industry. A natural entertainer, young Schwab delighted family and friends with his musical talent and outgoing personality.

From a young age, Schwab desired to make a favorable impression. He never wanted to admit when he didn’t know the answer, often pretending that he did. Then, he worked really hard to figure it out quickly.

At 17, Schwab entered the steel industry as a day laborer in Andrew Carnegie’s mill. He pleased his supervisor through hard work and initiative. Soon, he became the mill’s assistant manager and continued his ascent to the top of the steel trade. He eventually served as president of the Carnegie Steel Company and later, of the United States Steel Corporation.

When Schwab and U.S. Steel’s directors disagreed about how to run the company, he resigned and devoted himself to building Bethlehem Steel into a highly profitable enterprise. During World War I, the company aided the Allied forces by building ships and **munitions**.



At-a-Glance

- ★ Born on February 18, 1862, in Williamsburg, PA.
- ★ Revolutionized the steel industry with his innovative business practices.
- ★ Worked with J.P. Morgan to consolidate competing steel companies into the United States Steel Corporation in 1901.
- ★ Established Bethlehem Steel Corporation, which became the second largest steel-producing firm in the world.
- ★ Known for his genius in dealing with people.
- ★ By the time of his death, he depleted his entire fortune, estimated at \$200 million (nearly \$4 billion in today’s dollars).
- ★ Died at 77 years old on September 18, 1939, in New York City.



Humble Beginnings

Charles Michael Schwab was the eldest of Pauline and John Schwab's eight children, three of whom died in infancy. Born in Williamsburg, Pennsylvania on February 18, 1862, Schwab and his family later moved to the small Catholic village of Loretto, Pennsylvania.

His father and grandfather worked as weavers and traded wool products. During the Civil War, they produced blankets and overcoats for the Union Army.

Although the Schwabs earned enough money to cover the basic necessities, **frugality** was emphasized at home. His mother made all of the family's clothing. The Schwab children did not own many toys, nor did they receive many

gifts. Later in life, Schwab recalled that there was even one Christmas where his stocking contained only a single marble.

The family's primary source of entertainment was music. On Saturday evenings, Schwab's grandfather would borrow a small church organ and lead his children and grandchildren in song.

From an early age, Schwab felt comfortable in front of an audience and exhibited a natural talent for singing. He liked to entertain relatives and guests with songs, jokes, and magic tricks. Schwab usually played the starring role in his school's recitals and pageants.



A STAR IS BORN

Schwab was a star student at St. Francis College, where he studied Christian doctrine, literature, history, and math. He also took courses in public speaking, perspective drawing, bookkeeping, surveying, and engineering.

Schwab was fiercely competitive and driven to excel. One of his teachers later reflected that Schwab was a boy who never said, "I don't know." He operated under the principle of "pretend that you know, and if you don't, find out mighty quick." Thus, some of his success was due to bluffing.

When he wasn't at school, he delivered mail to neighboring villages. Occasionally, he also carried passengers in his mail wagon. He earned a reputation as the "singing cabby" for entertaining them with ballads.

One passenger gave him a travel book that opened his eyes to the world outside of small-town Loretto. An ambitious young man, Schwab longed to begin a career in the theater. Instead, his parents arranged a position for him as a grocery clerk in Braddock, a suburb of Pittsburgh.

At age 17 and a year before high school graduation, Schwab left home.



Steel Town

In Braddock, Schwab rose at dawn each day to work 14-hour shifts as a grocery clerk and bookkeeper, earning 10 dollars a month. He did not find the work rewarding, but enjoyed interacting with the customers, whom he impressed with his good looks, charm, and wit.

One man, William “Captain Bill” Jones, mill superintendent of the Edgar Thomson Steel Works, took an immediate liking to Schwab. They discovered a mutual interest in music and became friends. Captain Bill asked if Schwab might be qualified for a position at the steel mill.

Although he hadn’t graduated from high school, Schwab presented his certificates for completed coursework in surveying and engineering. Captain Bill offered him a position at Edgar Thomson Steel Works, and he began work in September 1879. Initially, he worked as a laborer for the engineering corps that designed plans for building furnaces.

Schwab relied on his basic knowledge of engineering to give the impression that he was skilled in surveying and engineering. He then learned on the job, asking questions whenever they would not reveal his lack of experience. At night, he increased his knowledge by reading books about the steel industry.

Schwab worked overtime to master his craft, and within months, he had become Jones’s right-hand man. In this role, he often delivered messages to mill owner Andrew Carnegie.

Standout Worker

Thankfully for Schwab, Carnegie promoted workers based on merit, not based on wealth or family standing. He sought employees who could help make the best possible steel at the lowest price and rewarded those who excelled through bonus payments and partnerships.

Capable and competent, Schwab advanced through the organization, soon becoming Andrew Carnegie’s chief problem solver. As he completed small assignments successfully, he was given greater responsibility. Schwab installed meters in the factories and reduced natural gas waste. He redesigned a rail-finishing department, resulting in reduced manufacturing costs. He helped calm angry workers during a violent strike in the Homestead plant. When Captain Bill died in a blast furnace explosion in 1889, Schwab became the superintendent at Braddock.

Schwab greatly admired Carnegie’s efficiency and thorough knowledge of the business, watching and learning as Carnegie rose to the top of the American steel industry. At 35, Schwab became president of Carnegie Steel, and the two men ran the company together. The company’s profits soared as they made further innovations, increasing efficiency and reducing production cost.



U.S. Steel

When Carnegie retired, he sold Carnegie Steel to J.P. Morgan for \$480 million (nearly \$10 billion in today's dollars). Schwab served as his **emissary** and worked with Morgan to combine Carnegie Steel with other companies to establish U.S. Steel, the first billion-dollar company in American history. At Morgan's insistence, Schwab served as its first president, earning an annual salary of over \$2 million.

Schwab's role as president was short-lived. Morgan had organized the new company to be run by an executive committee that set company policies and relied on Schwab to implement them. The board valued stability over riskier strategies such as price-cutting, technology development, and profit-sharing. This management structure inhibited Schwab's ability to innovate at U.S. Steel in the same ways he had at Carnegie Steel, and he soon found himself at odds with the company's board of directors.



Personal Struggles

Under Carnegie's **tutelage** and influence, Schwab kept his extravagant tastes and tendencies in check. However, after Carnegie's retirement, Schwab's life took a different direction. He built a massive New York City mansion that consumed an entire city block and cost a fortune to maintain.

He began gambling in the casinos of Monte Carlo and was frequently absent from home, straining his marriage. The combined stress of work-related demands, gambling pressures, and high home expenses took a toll on Schwab's physical and mental health; and in 1904, he resigned from U.S. Steel.

While employed at U.S. Steel, Schwab made a private investment in a much smaller steel company known as Bethlehem Steel. Founded in 1857 as Bethlehem Iron, the company had successfully manufactured wrought-iron railroad rails, but after the Panic of 1893, it had survived mostly on government contracts.

Bethlehem's future was in doubt when Schwab arrived in 1904 and boldly announced that he would make it "the greatest armor plate and gun factory in the world."

"The fellow who sits still and does what he is told will never be told to do big things."

Charles M. Schwab



“I love to appeal to the American spirit of conquest in my men, the spirit of doing things better than anyone has ever done them before. There is nothing to which men respond more quickly.”

Charles M. Schwab

The “Bethlehem Beam”

Schwab wanted to challenge U.S. Steel through a multi-pronged approach. First, he began to move Bethlehem Steel away from its reliance on government contracts. Then, he shifted to the **open-hearth process** for steel production, as opposed to the older technology that U.S. Steel employed.

He clashed with the conservative Bethlehem staff, who viewed him as an outsider. So, he reorganized the staff from the top down, offering 15 young men out of the mill the opportunity to be his partners.

Finally, Schwab also looked to technology to challenge his former employer. He took advice from inventor Edward Grey, who had developed a way to make steel beams differently. Grey claimed that beams could be made directly from an **ingot** as a single section instead of riveting small beams together, offering stronger beams at a lower cost. Other steelmakers rejected Grey’s theory, but Schwab took a chance.

He invested his own fortune and persuaded other wealthy investors, raising \$5 million to design the plant, build the mill, and pay Grey’s **royalties**. Bethlehem Steel soon began manufacturing steel **girders** for skyscrapers. Schwab aggressively recruited big contracts for his “Bethlehem beams,” making it his greatest innovation.

By the 1920s, the Bethlehem beam had become such a powerful product that U.S. Steel began secretly making Bethlehem beams to keep up with the competition.



Innovation Through Incentives

U.S. Steel offered bonuses based on the overall profitability of the company, not on individual performance. By contrast, Bethlehem Steel offered an elaborate profit-sharing system based on Schwab's belief that every man should get exactly what he makes himself worth. In *Succeeding with What You Have*, Schwab wrote: "This is the only plan I know of which is equally fair to the employers and every class of employee."

Schwab rewarded workers with bonus pay based on the time allotted for each task. Therefore, any shortcuts the worker could devise to complete it faster, or any unusual energy he may have shown, were turned into profit for him.

In the case of specialized tasks, Schwab was more concerned with the quality of work rather than the quantity turned out in a given time. If workers rushed too much, a lot of steel would have to be thrown out. In the case of efficiencies, Schwab took into account every element that depended on the initiative, originality, energy, or manual dexterity of a worker.

To manage the system, Schwab created a costly department of statisticians to measure operational productivity, arguing that "it paid for itself a hundred times over."

The incentives were aligned such that Bethlehem Steel's workers were motivated to give their best efforts to their work, and **per capita** output in some departments almost doubled. Schwab's employees were the best-paid men in the American steel industry.

Through his unique approach to profit-sharing, Schwab made Bethlehem Steel even more competitive, doubling its workforce every five years from 1905 to 1920. During the same period, U.S. Steel's workforce stagnated.

The result? Bethlehem Steel's sales increased 2,200% from \$10 million in 1904 to \$230 million in 1916.



The Schwab residence, known as "Riverside."

ADAPTING THE SYSTEM

Schwab believed that his profit-sharing system could be adapted to any industry. He used it in his own home. When expenses soared, he offered his steward ten percent of the first thousand dollars he could save in house expenses, twenty-five percent of the second thousand, and one-half of the third thousand. The expense of operating the house was cut in half.



Government Tensions

The federal government sought to build a large navy, so it urged steel companies to diversify into the **ordnance** business from their primary business of making rails. However, military equipment was complicated and costly, and the steel industry was reluctant to make the shift with the government as its only customer.

With such limited demand, companies like Bethlehem Steel faced high upfront costs to build a production factory. As a result, the government threatened to go build its own factory using federal funds.

Schwab challenged this notion, leading the effort to defeat the bill being proposed in Congress. Eventually, the bill passed in the House and Senate, and the federal plant was built in South Charleston, West Virginia. By 1921 it was making guns, projectiles, and armor, all at much higher prices than that of Bethlehem Steel. Within one year, the entire federally funded plant had to be shut down.

World War I

When the U.S. entered World War I, victory was uncertain. More ships were needed, resulting in delays in shipping cargo and sending troops to Europe. To find a solution, President Woodrow Wilson appointed Schwab Director General of the Emergency Fleet Corporation for the U.S. government. Schwab investigated the shipping industry and found inefficiencies, including laziness, incompetence, and poor coordination.

He approached the problem by rearranging incentives, tying profits to cost-cutting, and rewarding workers. He often paid productive shipbuilders out of his own profit. By the fall of 1918, ships were being completed on time or ahead of schedule.

Schwab's success with the shipbuilding industry soon resulted in more government contracts, and Bethlehem Steel began making military equipment including armor plating for ships, gun forgings, and shrapnel.



Later Life

In the 1920s and 1930s, Schwab seemed to lose his entrepreneurial drive. He had accomplished much in his life. Before his death, Andrew Carnegie acknowledged the greatness of Schwab's career by writing, "I have never doubted your ability to triumph in anything you undertook."

In 1927, Schwab urged the American Iron and Steel Institute members to "live and let live," urging them to fix prices instead of cutting them. He urged the steel men to use their existing plant capacity and not expand.

In 1930, America began charging high taxes on many items following the **Smoot-Hawley Tariff**, which Schwab supported. Many countries responded by closing their borders to American-made exports, including steel products.

When Schwab retired, he ran through his fortune by gambling in Monte Carlo casinos, as well as on Wall Street. Even as the Great Depression loomed, he continued to spend. His enormous mansion featured a swimming pool, gymnasium, bowling alley, six elevators, and 90 bedrooms and required a staff of 20 servants to maintain it.

Near the end of his life, Schwab suffered from poor health. He had to move into a small apartment when creditors seized his mansion. When he died on September 18, 1939 at age 77, his debts exceeded his **assets** by more than \$300,000.



Fascinating Facts about Schwab

- At age seven, Schwab won first prize in a poetry recital.
- When he was eight, Schwab solicited his neighbors who wanted their pathways cleared of snow. He earned just five cents per driveway and earned a reputation as a "good boy."
- Schwab married Emma Eurania Dinkey, known as "Rana," on May 1, 1883. The couple never had children.
- Schwab took organ and singing lessons from Reverend Horace S. Bowen, a pupil of composer Franz Liszt.

How to Solve Big Problems



Writing Exercise

Schwab believed that “the best place to succeed is where you are with what you have.”

1. What do you think he meant by this statement?

2. What special talents or skills do you possess that might help you succeed at school? At a job? In your life?

3. How can you make the most with what you have every day?



What Do You Know?

1. Charles M. Schwab is best known for:

- a. His ability as a performer
- b. Revolutionizing the American steel industry
- c. Serving as president of U.S. Steel

2. Schwab learned about the steel industry by:

- a. Learning on the job
- b. Reading books about it at night
- c. Asking questions
- d. All of the above

3. Schwab greatly learned from and admired his longtime employer:

- a. J.P. Morgan
- b. Andrew Carnegie
- c. William "Captain Bill" Jones

4. Schwab transformed Bethlehem Steel by:

- a. Investing in a new manufacturing technology for steel beams
- b. Offering employee bonuses based on overall profits
- c. Actively seeking government contracts

5. Schwab's profit-sharing plan resulted in:

- a. Lower quality of work
- b. Increased production and sales
- c. Poorly paid employees

6. During World War I, Bethlehem Steel focused on:

- a. Steel beams for skyscrapers
- b. Wrought-iron railroad rails
- c. Shipbuilding, guns, projectiles, and armor

Detect the Difference

Find the five differences in these nearly identical images of Bethlehem Steel's towers and machinery (as it appears today).



Answer key on page 11

Glossary

- **Munitions:** Military weapons, ammunition, equipment, and stores.
- **Frugality:** Careful management of material resources and money.
- **Emissary:** An agent sent on a mission to represent the interests of another.
- **Tutelage:** Protection of or authority over someone or something.
- **Open-Hearth Process:** A 19th-century steel making technique invented by William Siemens that uses the wasted heat given off by a furnace. The process redirects those fumes through a brick checkerwork and back into the furnace, increasing the flame temperature and resulting in a superior product. Although the process has now mostly been replaced by newer technologies, it is still used in about one-sixth of worldwide steel production.
- **Ingot:** A block of steel, gold, silver, or other metal, typically oblong in shape.
- **Royalties:** A share in the proceeds paid to an inventor or proprietor for the right to use their invention or services.
- **Girders:** Beams used as main horizontal supports in a building or bridge.
- **Per Capita:** Per unit of population; per person.
- **Ordnance:** Military supplies, including weapons, ammunition, combat vehicles, and equipment.
- **Smoot-Hawley Tariff:** The 1930 Smoot-Hawley Tariff Act raised the United States's already high tariff rates to protect American businesses and farmers. The tariff added strain to the international economic climate of the Great Depression.
- **Assets:** The entire property owned by a person, association, corporation, or estate, including cash, accounts receivable, securities, inventories, goodwill, fixtures, machinery, or real estate.

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WHAT DO YOU KNOW? KEY: 1-B. 2-D. 3-B. 4-A. 5-B. 6-C.



Take some notes!

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