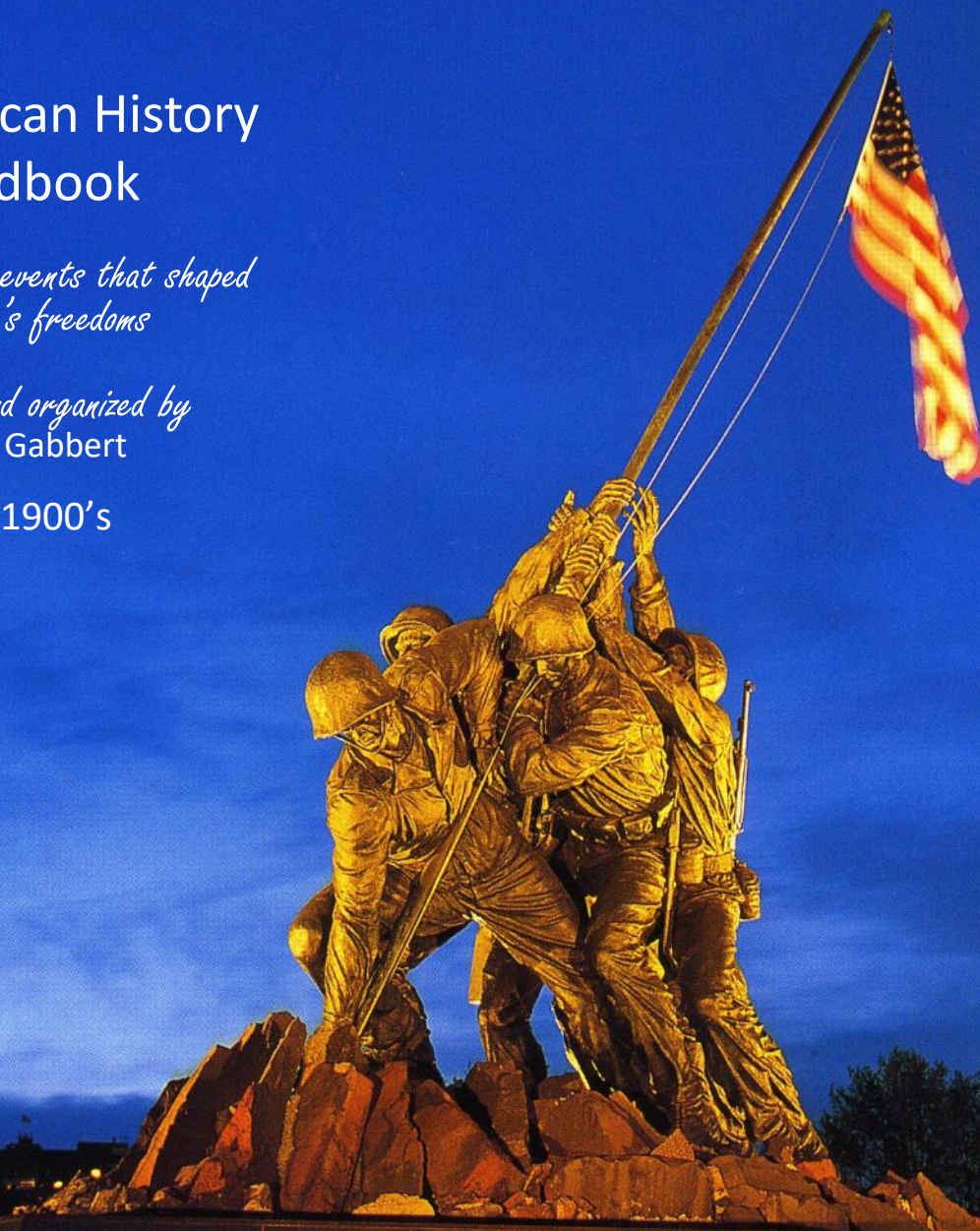


# An American History Handbook

*The people and events that shaped  
America's freedoms*

*Selected and organized by  
David Gabbert*

The 1900's



MEXICO 1846-1848 • WAR BETWEEN THE STATES 1861-1865 • SPANISH WAR 1898 • PHILIPPINE INSURRECTION 1898-1902 • BOXER REBELLION 1900 • NICARAGUA 1912 • VERA CRUZ 1914 • HAITI 1915 • SAIGON 1954 • DOMINICAN REPUBLIC 1965 • LEBANON 1981-1984 • GRENADA 1983 • PERSIAN GULF 1987-1991 • PANAMA 1988-1990 • LEBANON 1955 • VIETNAM 1962-1975



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The Capitol, White House, and presidential monuments shine bright in the night of Washington D.C.





The Washington Monument rises 555 feet making it the world's tallest free standing piece of masonry. Construction was begun in 1848, completed after the Civil War in 1880, and dedicated in 1885.





The Jefferson Memorial, with its 19 foot bronze statue of Thomas Jefferson, was dedicated in 1943. Inscribed into the interior walls are excerpts from the Declaration of Independence.



The Lincoln Monument, with its limestone classic Greek temple structure is surrounded by 36 fluted Doric columns, one for each state at the time of Lincoln's death; the monument was dedicated in 1922. The 19 foot marble sculpture of Lincoln was sculpted by Daniel French. The walls contain carved inscriptions of Lincoln's Gettysburg address and his second inaugural address.







The first family, Quentin, T.R., Ted, Archie, Alice, Kermit, Edith, Ethel.

## Theodore Roosevelt (1901-1909)

Theodore Roosevelt (1858-1919) was an American statesman, author, explorer, soldier, naturalist, and reformer who served as the 26th President of the United States from 1901 to 1909. As a leader of the Republican Party, he became a driving force for the Progressive Era in the early 20th century. Theodore was the second of four children born to socialite Martha Bulloch and glass businessman and philanthropist Theodore Roosevelt, Sr. Born a sickly child with debilitating asthma, Theodore Jr. successfully overcame his health problems by embracing a strenuous life style. He became a life-long naturalist, obtaining an interest in zoology at age seven. Theodore was mostly home schooled by tutors, as well as his parents, and traveled extensively including trips abroad to Europe in 1869 and 1870 and to Egypt in 1872. After recovering from devastation over his father's death in 1878, Roosevelt doubled his studies at Harvard while participating in rowing and boxing. After graduating Phi Beta Kappa from Harvard in 1880, he entered Columbia Law School, and was an able student, but found law to be irrational; consequently, he spent much of his time writing a book on the War of 1812. When members encouraged him to run for public office, he agreed and dropped out of law school. On his 22nd birthday, Roosevelt married socialite Alice Lee and had their first daughter, Alice, born in 1884. As was common in the nineteenth century, Roosevelt's wife died two days after giving birth due to kidney failure. Tragically, his mother, Mittie, had died of typhoid fever eleven hours earlier.

Roosevelt was soon put forth as the Republican Party's candidate for the District's House seat in Albany. He was successful and a member of the New York State Assembly in 1882, 1883, and 1884; he immediately began making his mark, specifically in corporate corruption issues. On December 2, 1886, Roosevelt married his childhood and family friend, Edith Carow and they would have five children together. During the 1888 presidential election, Roosevelt successfully campaigned for Benjamin Harrison. In return, President Harrison appointed Roosevelt to the United States Civil Service Commission, where he served until 1895. The position paid off when President McKinley appointed Roosevelt as the Assistant Secretary of Navy in 1897. When the United States and Spain declared war against each other in April, 1898, Roosevelt resigned from his civilian leadership job with the Navy and formed the First Volunteer Cavalry Regiment. Referred to by the press as the "Rough Riders", the regiment was one of many temporary units active during the duration of the war.

After leaving the Army, Roosevelt discovered that New York Republicans needed him, because their current governor was tainted by scandal. He campaigned vigorously on his war record, winning the 1898 state election by a margin of one percent. As governor he was exposed to the problems of trusts, monopolies, labor relations, and conservation. By holding twice - daily press conferences - which was an innovation - Roosevelt remained connected with his middle-class political base. As governor Roosevelt developed the principles that shaped his presidency: insistence upon public responsibility of large corporations, regulation of railroad rates, mediation of the conflict of capital and labor, conservation of natural resources, and protecting the less fortunate members of society.

As Roosevelt had anticipated a second term as governor, President McKinley's Vice President Hohart died of heart failure in November 1899. Consequently, members of the GOP pressured Roosevelt to accept the nomination for Vice President; Roosevelt accepted the unanimous nomination, however the office of Vice President was powerless and did not suit Roosevelt's aggressive temperament. Nevertheless, he threw himself into McKinley's presidential campaign with his accustomed energy, crisscrossing the nation. With the nation basking in peace and prosperity, the voters gave McKinley a landslide victory. On September 6, 1901, President

McKinley was shot by an anarchist acting alone while in Buffalo, New York; McKinley died on September 14, and at the age of 42, Roosevelt was sworn in as President of the United States. In the November, 1904 presidential election, Roosevelt won the presidency in his own right in a landslide victory.

Leading his party and country into the Progressive Era, he championed his "Square Deal" domestic policies, promising the average citizen fairness, breaking of trusts, regulation of railroads, and pure food and drugs. Making conservation a top priority, he established a myriad of new national parks and forests to preserve the nation's natural resources. He responded to public anger in abuses in the food packaging industry by pushing Congress to pass the Meat Inspection Act of 1906, and the Pure Food and Drug Act. These laws banned misleading labels and preservatives that contained harmful chemicals. In foreign policy, he focused on Central America, where he began construction of the Panama Canal. He greatly expanded the United States Navy, and sent the Great White Fleet, on a world tour to project the United States global naval power.

One of Roosevelt's first notable acts as president was to deliver a 20,000-word address to Congress asking to curb the power of large corporations called "trusts". He believed corporations must recognize their responsibility not merely to their shareholders, but to the community at large. He stated, "Corporations engaged in interstate commerce should be regulated if they are found to exercise a license working to public injury." He continued by saying, "railroads must be regulated; the railways a public servant, its rates should be just and open to all shippers alike". Although Roosevelt endorsed protective tariffs and lower taxes to stimulate business, he became known for his aggressive use of the Sherman anti-trust act of 1890. Roosevelt, known as the "trust - buster", brought forty anti-trust suits, and broke up major companies, such as the largest railroad and Standard Oil, the largest oil company. Roosevelt thought it was particularly important for the government to supervise the workings of the railway to avoid corruption in interstate commerce related to the shipment of coal and other commodities. The result was enactment of the Hepburn Act in 1906, establishing Federal control over railroad rates.

During his address to Congress he also embraced organized labor saying, "With the sole exception of the farming interest, no one matter is of such vital interest to our whole people as the welfare of the wage - workers. Wage - workers must be protected from overweening corporations, from cheap imports by protective tariffs, and from unfair competition by curbs on immigration. Women and children of the working class must be further safeguarded by special legislation forbidding excessive hours or unhealthy conditions".

Addressing foreign policy Roosevelt said, "The United States must defend and strengthen the Monroe Doctrine, making certain and unchallengeable the American position in the western Hemisphere against European interlopers. To this end the United States must continue to build up its navy and must arrange to construct a canal across Central America". A treaty with the new Panama government for construction of the canal was reached in 1903.

Elected in 1904 to a full term, Roosevelt continued to lay the ground work for future presidents to promote progressive social reform for the common man. He supported a series of social reforms such as a national incorporation law (at a time when all corporations had state charters). He called for a federal income tax, as well as an inheritance tax. He called for labor legislation to limit court injunctions against labor unions during strikes. He also called for an eight hour workday for federal employees as well as a liability law to protect industrial work injuries. During the financial panic of 1907, there was also considerable debate concerning federal control of the money supply.



Sagamore  
Hill,  
Theodore  
Roosevelt's  
home in  
Oyster Bay,  
New York

## Henry Ford The American Automobile



Henry Ford (1863 to 1947)

Henry Ford was an American industrialist, the founder of the Ford Motor Company, and sponsor of the development of the assembly line technique of mass production. Although Ford did not invent the automobile or the assembly line, he developed and manufactured the first automobile that many middle class Americans could afford. In so doing, Ford profoundly impacted the landscape of the twentieth century America. There is no doubt his introduction of the Model T automobile revolutionized transportation and American industry. As owner of the Ford Motor Company, he became one of the richest and best-known people in the world.

Henry Ford was born on a farm in Greenfield Township, Michigan and was the oldest of five children. His mother, Mary, died during delivery of her sixth child in 1876 when Henry was thirteen. With Mary gone, his father always assumed Henry would lead the family and take over the farm, which was very prosperous. However Henry cared very little for the dignity of land ownership and was not inspired by the routines of farm life. But he was fascinated with mechanical tinkering, mastering efficiencies of time and energy, and leading projects but letting others implement them; he also had a disregard for manual labor. By the age of fifteen, his fascination with mechanics produced a hobby that became an obsession: repairing watches. |

In 1879 Henry Ford made a key decision in his life that he later defined as a revolt against paternal abuse; at age sixteen, he left the farm to find a future in Detroit. Without informing anyone of his plans, he walked the nine miles to Detroit, rented a sleeping room, and began to look for employment in a machine shop. He began to work for Flower Brothers for \$2.50 a week on a milling machine shaping brass and iron castings. He quickly passed his apprenticeship as a machinist doing machine work in a variety of power plants. After putting in ten hour days, he labored six nights a week cleaning and repairing clocks and watches for another fifty cents a week. From 1883 to 1885 he traveled from farm to farm in southern Michigan as a mechanical troubleshooter repairing Westinghouse steam engines. At this same time he also entered a Detroit business school to study mechanical drawing, bookkeeping, and business practices. In 1886 his father lured him back by offering him eighty acres of land in exchange for giving up being a machinist. The imaginative Ford purchased a large

circular saw, rented a steam engine, and set himself up in the lumber business rather than farming. In 1888, after two years of hard work and saving, Ford married Clara, who would become his life-long partner.

Increasingly, Ford was bringing up the topic of building a horseless carriage that could transport people with its own power; the problem was developing an engine that was light weight yet powerful. Drawn to the unique potential of gasoline engines as an alternative to heavy steam engines, he became obsessed with his dream. The current Otto model gasoline engine was a one-cylinder, four cycle internal-combustion engine which required a big, heavy flywheel. In 1890 Ford developed a two cylinder engine which was much lighter. In 1891, eager to develop his horseless carriage, Ford decided he required a greater knowledge in electricity. He looked about among his connections in Detroit for employment and was delighted to be offered a position with the Edison Illuminating Company for \$45.00 a month. Ford would be employed by Edison for much of the next decade supervising the operation of the generators. Working in his spare time at home and at Edison during slack time, Ford had become consumed with building a crude internal - combustion engine. Such a motor, he had become convinced, eventually could be connected to a moving vehicle and fulfill his dream of a horseless carriage. After several weeks of tinkering, Ford finally got the engine to run on Christmas Eve, 1893. A number of Fords Cronies, all with a variety of skills, gathered around Ford to develop a working carriage and engine every evening and Saturdays; Ford was like a magnet in the way in which he could draw people to him.

By the spring of 1896, Ford was nearing completion of his Quadricycle. The engine was a four- cycle motor with two cylinders of two-and-a-half inch bore and six-inch stroke that generated between 3-4 horsepower. The carriage seat sat above and in front of the engine, flywheel, and transmission belt; the vehicles front housed the steering bar, connected to the front twenty-eight inch wire bicycle tires. The transmission system featured two speeds- a low of ten miles per hour and a high of twenty miles per hour - and a neutral gear. A clutch lever tightened and released a belt that dictated among the three choices. The power was transferred by the belt from the motor to a countershaft and from the countershaft to the rear wheels by a chain. A crude brake could stop the vehicle when placed in neutral. There was no reverse gear. The Quadricycle weighed around five hundred pounds, with a three gallon gasoline tank. In a historic moment, Ford took the Quadricycle out on the cobblestone streets of Detroit for its first successful test drive on June 4, 1896.

Though Fords motorized adventures were certainly unusual, they were not unique. In the early 1890's, European engineers had developed reliable vehicles with ever-larger, more powerful engines. In the United States, mechanically minded individuals were also tinkering with horse-less carriage models all over the country. In 1895 alone, over five-hundred applications for patents related to motor vehicles were filed in the U.S. Patents office. Unlike the others, Ford began work on a second vehicle with his eye toward manufacture for a mass audience. As Ford directed his team and supplied the brainpower, the second car was ready for public inspection by 1898. They designed a key electrical part - the magneto - that made the car superior to competition. They utilized sturdier metal parts, wheel spokes, a steering rod, iron pipe in the undercarriage, and handrails on the seat. The design was larger, and more elongated with elevated rear tires, a large stuffed seat big enough for two, which sat above a more powerful, sophisticated engine. The vehicle received excellent reviews claiming the carriage should be equal to any that has been built in this country. But one important move remained to be made - even minor manufacturing required both an organization and an extensive amount of capital.

In the fall of 1898, a trio of businessmen became the first investors in Ford's automobile enterprise; they were the elite of Detroit's financial community who stepped forward to put their capital behind Ford. But Murphy, one of the investors, was the linchpin as his towering reputation granted Ford instant credibility. Papers for the corporation were filed on August 5, 1899 and the company was capitalized at \$150,000 with 1,500 shares of stock and \$15,000 in cash. Ford contributed no money and was assigned stock for his mechanical contribution. Once the company was financed, Ford left a supervisory position with the Edison Company to pursue his dream of an affordable automobile. He immediately assembled a construction team of thirteen workers, but problems emerged; Ford had to set aside his second, affordable car meant for the masses while he was working on developing a larger, more expensive third car being demanded by his investors. Simply stated, the prototype was not a very good vehicle; rather than a lightweight, sturdy, efficient automobile, this new "delivery wagon" appeared big, heavy, even clunky. Many identified the real problem to be Ford, who refused to freeze the design and instead strove to constantly improve the design; he constantly discarded what was just finished, making changes, and building something else. The board eventually decided to lay off the work force, gave up the shop space, and dissolved the Detroit Automobile Company.

All was not lost, however. Some of Ford's financial backers, including Murphy remained hopeful. On November 30, 1901, articles of incorporation were filed for the Henry Ford Company. Capitalization stood at \$60,000, while Ford was given a thousand shares, or one-sixth interest. But once again his conduct scuttled a promising enterprise. A familiar problem set in as Ford failed to get a commercial model ready for manufacture; this time he had become interested in automobile racing, and began pouring his energy into developing a race car. But the result was identical; the Henry Ford Company never manufactured a single car. Moreover, Ford harbored a growing resentment over his financial share, which he considered to be paltry. Ford received \$900 upon his departure with the assurance the board would discontinue using his name for their company. The investors reorganized as the Cadillac Automobile Company and in 1909 it was purchased by the young General Motors Company.

Ford resented and resisted any attempt by wealthy business elites to direct his course of action. Ford had grasped the essence of a new mass culture beginning to emerge by the early 1900's and sensed an enormous power in terms of advertising and celebrity. Within a short time, as he anticipated, the winning formula associated with the image of racing victories and speed records generated substantial publicity for the Ford name. The publicity gave him the leverage to return to his real quest - the production of an inexpensive, sturdy, lightweight motor car for the average American. Ford secured new financial support in the form of a partnership with Alex Malcolmson, and created the Ford Motor Company in 1903. Ford hired a dozen men at \$1.50 per day to assemble engine and body parts manufactured at the Dodge Brothers plant. Manufacturing methods were crude and vehicles were assembled on the spot. The first car, a Model A, was light, simple, and durable as embodied by Ford's principles. Sales failed to materialize quickly, however the Ford Company did show a profit of \$37,000 the first three months. Over the next nine months they realized \$100,000, and by August of 1904 they were averaging \$60,000 a month in sales. Gross sales for the year ending September 30, 1905, were \$2 million.

Two important events happened during this early growth period. First, Malcolmson, wishing to hide his overextended credit from other business interests, moved his young chief clerk, James Couzens, to be in charge of operations at the Ford Motor Company. Henry Ford oversaw the entire production process and no important decisions were made without his approval. But Couzens grappled with the firm's problems on the business front: purchasing, paying bills, meeting the payroll, and particularly sales. He attended automobile shows searching for sales agents and soon he had 450 agencies to sell Ford automobiles from coast to coast. He handpicked dealers and salesmen, using incentives and bonuses to reward sales success. A successful Ford-Couzens alliance quickly emerged. Second, the Ford - Malcolmson relationship became strained around the vision for the automobile -



what kind of car the company would develop, manufacture, and market. Malcolmsom wanted to make an expensive, luxury, automobile promising larger profit margins. Henry Ford's vision was for an inexpensive, simple, lightweight car that could be sold to the masses. He believed the best way to make such a car was to simplify and standardize the manufacturing process. For a period of time they manufactured and sold both a lightweight runabout, Model N, that weighed 1,050 pounds and sold for \$600, as well as a luxury Model K that weighed 1,800 pounds and sold for \$2,800. As tensions built over the vision of the company, Malcolmsom founded his own company to manufacture luxury automobiles and In May, 1906, the board of directors of the Ford Company voted to remove Malcolmsom; the bitter partner agreed to sell his shares for \$175,000. After the Malcolmsom buyout, Ford ended up controlling close to 60 percent of the stock while Couzen owned close to 10 percent. Finally, Ford stood in a position to realize his dream. Ironically, Malcolmsom's shares would have been worth hundreds of millions of dollars only ten years later.

By the fall of 1906, Ford introduced his new, lightweight Model N, with a price tag of \$500 that he claimed would change the face of America. The Model N resulted from many months of development work by Ford and his engineers. Throughout the year of 1905 and 1906, Ford had directed his effort toward developing a four-cylinder car that would sell for \$500. By Year-end 1907, the Model N had soared to sales of some 8,423 cars. In August of 1906, Ford took the important step of hiring Walter, E. Flanders, who took over as production manager. He instituted a system whereby the workmen were given specific tasks to perform in assembling the Model N while runners were assigned to keep the materials and tools on hand; he made Ford's factory the most efficient in Detroit. Ford continued to spend his time in the development room where he and a cadre of engineers put in long hours working on the newest model innovations. There was never any doubt Ford's energy and vision clearly provided the driving force of the company. By 1908, Ford had clarified his vision of the automobile he wanted to make.

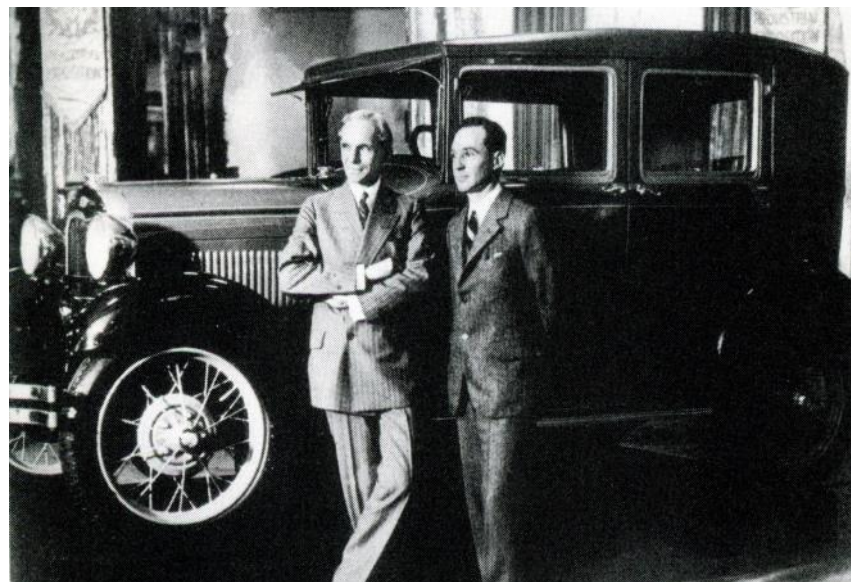
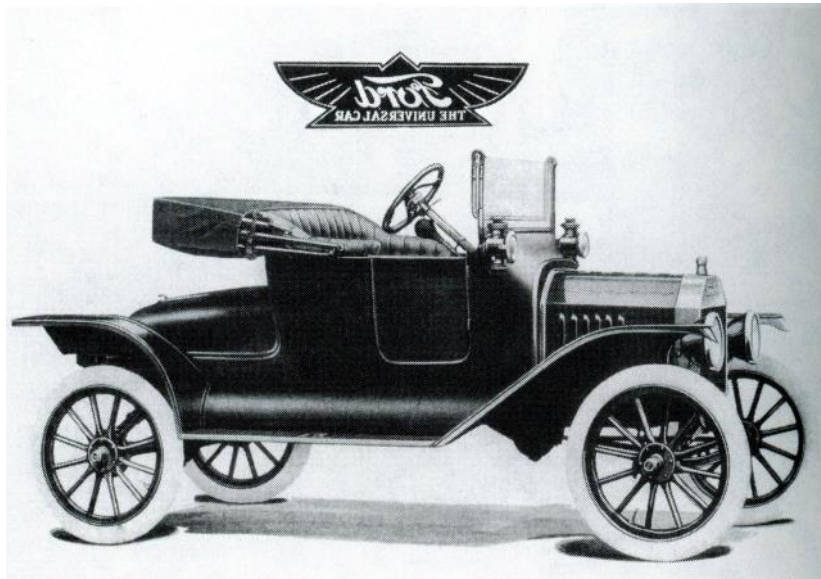
After two years of development and stringent testing, the car that emerged from the brain of Henry Ford and the hands of his engineers was the Model T - it was utilitarian, inexpensive, lightweight, and durable. Weighing in at only twelve hundred pounds, it was propelled by a four-cylinder, 20-horsepower engine that was crank started. The car could achieve a maximum speed of forty-five miles per hour. The engine, transmission, flywheel, and universal joint were all enclosed within one case, which was lubricated by a splash-and-gravity oil system. A three-point suspension system gave the car greater flexibility. The Model T presented three pedals to the driver- one for forward, one for reverse, and one to brake. A multi-use hand lever released the clutch, put the car into a higher speed, and served as an emergency brake. The earliest model sold for \$850, and the price fell steadily in succeeding years. Year-ending September 30, 1908, the company manufactured 10,660 cars; production swelled to 20,700 Model-T's in 1910, 53,500 in 1911, 82,400 in 1912. The explosion of consumer approval indicated that a connection between Ford and the public had been established.

In 1913, Ford put into place a novel manufacturing technique called the "assembly line." The first step forward in assembly came when we began taking the work to the men instead of the men to the work. Rather than having teams of men doing different jobs as they built the car, this new process placed workers, each performing a minuscule task, at stationary positions along a conveyor belt that moved the developing vehicle along. The result was a completed Model-T coming off the assembly line every few seconds, allowing the price to be reduced to \$500. By 1913, this single plant was responsible for half of the entire automobile output of the United States. In the assembly line's first year of operation, output of Model-T's shot up to 189,000 cars. By 1916, it stood at 585,000 and in 1921, Ford produced one million automobiles; by 1923, two million. Eventually, some fifteen million of these vehicles would be manufactured, and by 1920 they would constitute almost half the vehicles on the roads of the United States. Within fifteen years of the Model T's appearance, car manufacturing emerged as the leading American industry. Auto manufacturing became the lifeblood of the petroleum industry, as well as the leading consumer for steel, rubber, and glass. The automobile inspired road construction, suburban real estate development, gas stations, tourism, and roadside lodging. Ford not only changed how people lived, he changed how they thought about what was important.

Top right—Henry Ford with his first automobile on the streets of Detroit in 1896

Bottom left—Ford's 1914 Model T runabout

Bottom right—Ford's new Model A in 1928 (pictured with his son Edsel)



## The Wright Brothers Invent Powered Flight

The Wright brothers, Orville (1871 - 1948) and Wilbur, (1867 - 1912), were two American brothers, inventors, and aviation pioneers who are credited with inventing and building the world's first successful airplane and making the first controlled, powered and sustained heavier-than-air human flight, on December 17, 1903. From 1905 to 1907, the brothers developed their flying machine into the first practical fixed-wing aircraft. The brother's fundamental breakthrough was their invention of three-axis control, which enabled the pilot to steer the aircraft effectively and to maintain equilibrium. This method became and remains the standard on fixed-wing aircraft of all kinds.

The two brothers were bachelors who lived at home with their father in Dayton, Ohio, who was an itinerant clergyman often away on church work. The brothers worked together six days a week, ate their meals together, kept their money in joint bank accounts, and even thought together. Their mother, Susan, died of tuberculosis in 1889. With a population of forty thousand, Dayton was growing steadily after the railroad arrived. It had a new hospital, a new courthouse, electric streetlights, and a new public library. The Wright house, on Hawthorn street, was on a narrow city lot, had an open well and wooden pump, an outhouse, and a carriage shed in the back. Weekly baths were accomplished sitting in a tub of hot water in the kitchen. There was no electricity and meals were cooked on a wood stove. Heat and light were powered by natural gas

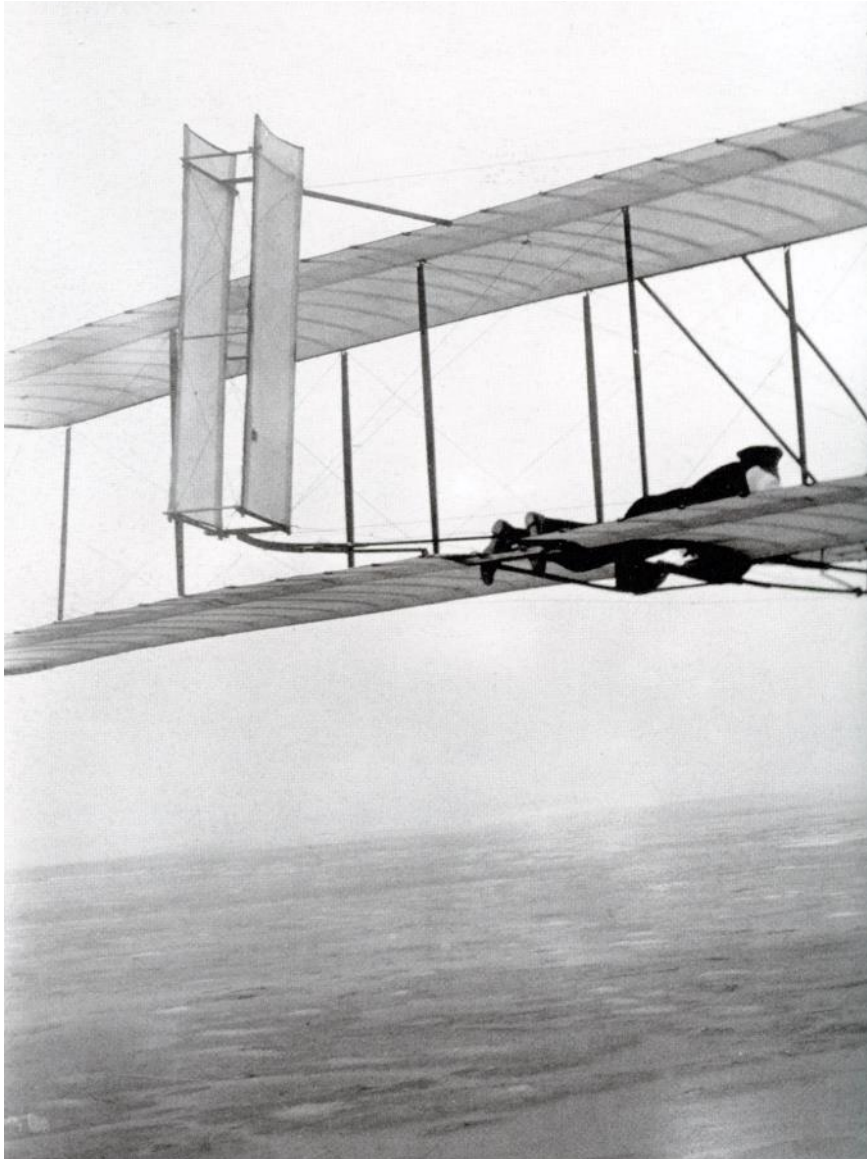
Importantly, like much of the country, they had also taken up bicycling. Bicycles had become the sensation of the time, a craze everywhere. In the spring of 1893, Wilbur and Orville opened their own small bicycle business, selling and repairing bicycles only a short walk from the house. During the summer of 1896, twenty-five year-old Orville was struck with the dreaded typhoid. For days he laid in delirium, close to death, his fever at 105 degrees; it was a month before he could sit up in bed. During this time Wilbur began reading about the German glider enthusiast Otto Lilienthal, who had recently been killed in a flying accident. When Wilbur learned Lilienthal believed the secret to flight was to be found in the arched or vaulted wings of birds, his reading on the flight of birds became intense. Then, on May 30, 1899, Wilbur wrote a letter to The Smithsonian Institution in Washington requesting any printed material available on aviation. For Wilbur and Orville the dream had taken hold. The works of Lilienthal and Mouillard had infected them with their own unquenchable enthusiasm. They would design and build their own experimental glider-kite, drawing on much they had read, observed about birds in flight, and from considerable time thinking.

The brothers understood equilibrium was the all-important factor. They became familiar with the language of obtaining equilibrium - *Lift* came from air moving faster over the arched top of a wing; *pitch* was the lateral tilt of a flying machine, nose down, nose up; *Roll* applied to the rotation of the wing, up or down on one side or the other; *yaw* applied to the turning of the nose left or right. From studying birds, Wilbur grasped the concept of "wing warping" - twisting the wing to present the wing surface to the air at different angles, giving greater lift on that side so the glider could bank and turn. To find the perfect location to test their glider, Wilbur sent an inquiry to the United States Weather Bureau in Washington for records on wind velocities at more than a hundred weather bureau locations. From the extensive records provided to them they selected the Outer Banks of North Carolina called Kitty Hawk, seven hundred miles from Dayton. In the final weeks of August, 1900, the brothers had built a two wing glider with a wing span of 18 feet. The total cost of all the necessary parts was \$15.00.

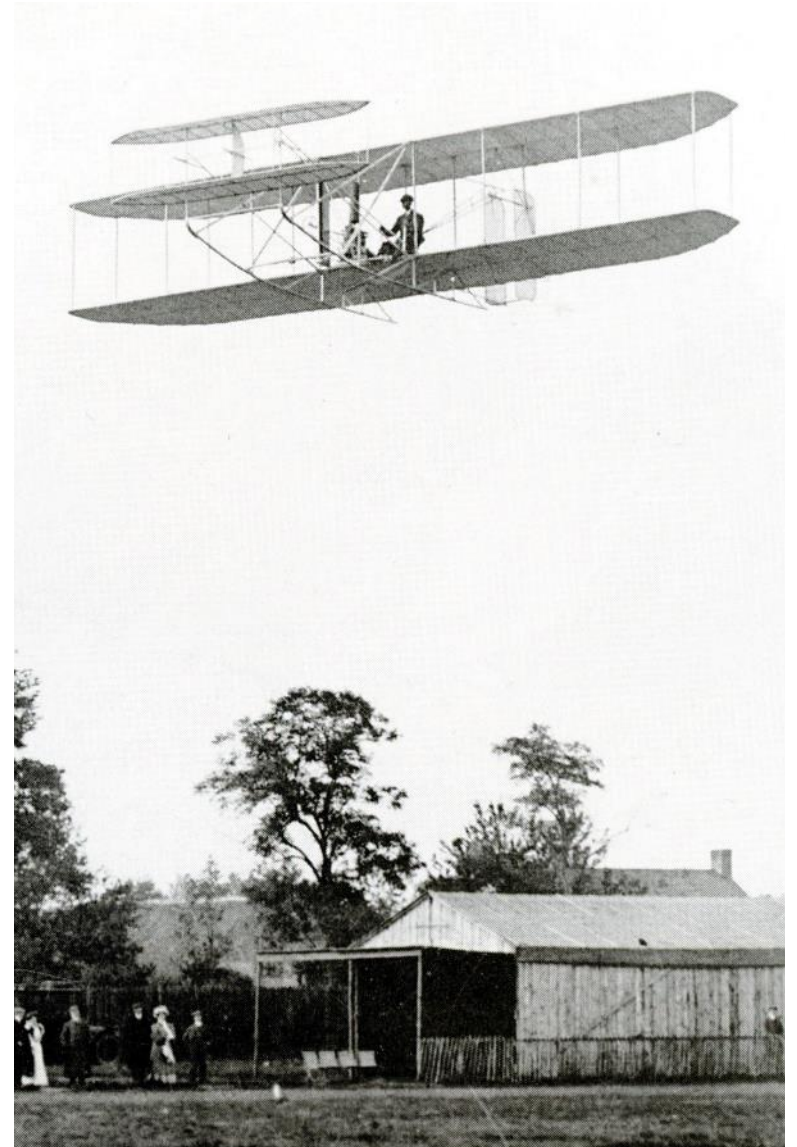
They arrived in Kitty Hawk in September and proceeded to assemble their glider. With everything in place, it consisted of two fixed wings, one above the other, each measuring 5x17 feet. In addition it had warping controls and a movable forward horizontal rudder or elevator - of 12 square feet. Wilbur, as the operator, would lay flat in the middle of the lower wing to maintain the pitch (nose up or down) with the forward rudder. The whole apparatus weighed 50 pounds plus the 140 pound Wilbur. The glider land-

Wilbur and  
Orville  
Wright in  
1906





Wilbur flying the glider in 1902 at  
Kitty Hawk



Wilbur on his first demonstration  
flight in France on May 8, 1908

ed on wooden skids, far better suited for sand than wheels. By mid-October, after several test flights, they needed to return to the bicycle shop. No count was kept as to the number of flights taken that fall but Wilbur did record flights of 300 to 400 feet in length and speeds on landing of 30 miles per hour.

During the next eight months work at the bicycle shop and the routines of daily life continued, but nothing so occupied their free time and thoughts as the preparation for Glider number 2. The main difference on glider 2 was the curve of the wings would be greater, based on measurements calculated by Otto Lilienthal. They were far enough along with their new machine to depart for Kitty Hawk by July, 1901. To all present but Wilbur and Orville, this flight seemed a huge success. The curvature, or camber, of the wings was too great and had to be changed back to a camber closer to what it had been in 1900. Their wing warping system, of which the brothers were so proud, was not responding as expected. When the left wing dipped low, Wilbur would pull hard on the elevator with no effect. It was not just that their machine had performed so poorly, but so many of the, supposedly reliable calculations and tables prepared by Lilienthal, Langley, and Chanute - data the brothers had taken as gospel - had proven to be wrong.

With their former trust in the calculations of Lilienthal and Chanute shattered, the brothers set out in the fall of 1901 to crack the code of aeronautics themselves. They devised and built a small-scale wind tunnel powered by an extremely noisy gasoline engine. For nearly two months the brothers tested some thirty-eight wing surfaces. Not until the spring of 1902 were they able to begin building a new glider based upon all they had learned from the wind tunnel tests. By late August they had reached the final stage in building glider 3. Once everything was packed and crated for shipment, the brothers departed for their third expedition to Kitty Hawk, leaving the management of the bicycle shop to their sister, Katharine, and their single employee, Charlie Taylor. They began flying on September 19. The wing span on their new glider measured 32 by 5, it was by far the largest glider yet built. By early October, Orville would lay awake thinking about ways to achieve an even better system of control. His idea was to change the rudder from the current fixed position to become a hinged movable rudder. Wilbur liked the idea and suggested connecting the control of the movable rudder to the wing warping system. By the time the brothers broke camp on October 28, they had made close to one thousand flights, and increased their distance to 600 feet. All the time invested into the wind tunnel tests, the latest modifications, the final improvement to the rudder, had all proven entirely successful; they knew they had solved the problem of flight and had acquired the knowledge and skill to fly; they could soar, they could rise, circle, glide, and land. Now they had only to build a motor.

The Wright brothers sent out letters to manufacturers of automobile engines asking for an engine light enough in weight, yet with sufficient power, but none were available that would be light enough. Fortunately, there one employee in the bicycle shop, Charlie Taylor, was a brilliant mechanic. He went to work and six weeks later had finished a four cylinder motor with a 4-inch bore and a 4-inch stroke. It was intended to deliver 8 horsepower, weigh only 152 pounds, and designed to carry a total weight of 675 pounds, which included the operator. The engine block was made of cast aluminum to satisfy the weight limitations. The fuel system was simple: a one gallon fuel tank suspended from a wing strut, and the gasoline fed by gravity down a tube to the engine....there was no carburetor. The engine was started by priming each cylinder with a few drops of raw gas since there were no spark plugs. The spark was made by the opening and closing of two contact points inside the combustion chamber.

Meantime, the design of the propellers had become a still bigger challenge. They had assumed they could go by whatever rule-of-thumb engineers used for marine propellers. That assumption proved wrong and again they were left no choice but to solve the problem themselves. As Orville would explain, it is hard to find even a point to start. The thrust depends upon the speed and the angle at which the blade strikes the air; the angle at which the blade strikes the air depends on the speed at which the propeller is turning, the speed the machine is traveling forward, and the speed at which the air is slipping backward; the slip of the air back-

ward depends on the thrust exerted by the propeller. When any one of these changes, it changes all the rest. After several months of study they built two propellers 8 feet in diameter that were made of three spruce laminations glued together and shaped by hand. The new flyer would have two propellers positioned between the two wings with one would turning clockwise, the other counter-clockwise. In March of 1903, the brothers applied for a patent on their flying machine, its wing warping system, and the rudder controls.

By September 18, all was crated and on a train for Kitty hawk. After problems with the gasoline engine, the propellers, and crash dives into the sand due to pilot error, they believed they were finally ready to fly. The flyer was launched from a 60 - foot launching pad positioned on the face of a slope. Only five men showed up on the morning of December 17 as the cold winds were blowing a gale force of 20-27 miles per hour. It was Orville's turn to fly; Wilbur steadied the wing as the flyer came down the launcher. At the end of the track the flyer lifted into the air and Daniels, who had never operated a camera, snapped the shutter to take what would be one of the most historic photographs of the century. The first flight lasted for 12 seconds and covered a distance of 120 feet. Wilbur flew second flight for 175 feet. Then Orville went again, flying 200 feet. Then near noon, on the fourth test, Wilbur flew a little over 852 feet in 59 seconds. There was talk of flying again but a sudden gust of wind caught the flyer and destroyed it. There is no doubt what happened that day in the cold winds of the outer banks was one of the turning points in history. Variations of the account appeared in the Washington Post, the Chicago Tribune, and the New York Times, but little happened as a consequence. The Langley project to build a successful flyer funded by the U.S. government cost nearly \$70,000, whereas, the Wright brothers total expenses from 1900 to 1903, including materials and travel to and from Kitty Hawk, came to less than \$1,000, of which the entire sum was paid from profits from their bicycle business.

During the first several months of 1904, bike repairs were numbering a steady twenty per week, necessary to cover expenses for the shop and at home. The intention now was to build a heavier version of the Flyer with a more powerful and different engine. The bothers knew they must master launching the plane, banking and turning, and landing safely. They selected a new flying field called Huffman Prairie, an eighty acre cow pasture eight miles outside of Dayton. On August 13, to their utter amazement, Wilbur flew the new Flyer 2 over one thousand feet even though the plane flew low, never rising more than 25 feet above the ground. On September 15, Wilbur not only flew a full half mile, but for the first time succeeded in turning a half circle, a major achievement; by September 20, they were turning full circles. They landed the flyer by shutting off the engine and gliding it to the ground very quietly.

Even though there appeared to be no government interest, work went on to build an improved Flyer 3 in 1905. It would be more sturdily built than its predecessors, its motor more powerful, producing as much as 25 horsepower. The double rudder had been enlarged, the wing area slightly reduced, the leading edges of the wing made more effective. The forward rudder was moved further forward to improve nose to tail control and additional changes were made to improve balance and steering. On September 28th of that same year, both Orville and Wilbur had flown the improved Flyer 11 and 12 miles. On the afternoon of October 5, before a dozen spectators, Wilbur circled the pasture 29 times, landing only when he ran out of gas. Wilbur later flew twenty-four miles in thirty-eight minutes and in the following days continued to make routine flights of 25 miles and more. The brothers had made a total of 105 starts at Hoffman Prairie and thought it time to put Flyer 3 on the market.

On May 22, 1906, the patent applied for in 1903 was at last issued on the Wright Flying Machine. During 1906 and 1907 the Germans, the French, and American business brokers were tendering offers to the Wright brothers, but nothing came to a conclusion; the business talks seemed endless. On February 8, 1908, their bid of \$25,000 for a Flyer was at last accepted by the U.S. War Department. Less than a month later, they also signed an agreement with a French company, with the understanding that pub-

lic demonstrations of the Flyer would follow by summer in France.

In the spring of 1908 a decision was made to proceed for the first time with large public demonstrations of their Flyer even though neither had flown a plane since the fall of 1905. Test flights began in May with a stream of reporters arriving. The modified Flyer now flew two passengers sitting side by side and they were flying at speeds of over 50 miles per hour. During a little more than one week of test flights, the brothers had been the subjects of far more attention and press than they had ever known; they had become a popular sensation. It was agreed Orville would proceed to France with the required demonstrations, and Orville would do the same in Washington.

In Paris, they came by the thousands to see Wilbur fly during the month of August; there was headline news throughout Europe about the amazing Wright Flyer. The crowds came by special trains and grew larger every day. Meanwhile, Orville began his public demonstrations in Washington in September. It would be the first full-scale public performance of a Wright plane in the United States. The crowd at first was small, but as word spread of the sensational performances they came by the thousands by automobile and trolleys. Orville set one world flying record after another, staying in the air for an hour and ten minutes, flying 100 feet above the ground, and circling in figure eights. On September 12, there were five thousand people in attendance plus the U.S. Secretary of War. In the meantime, Wilbur was performing in Paris for ten thousand spectators; on December 31, he would fly for 2 hours, 20 minutes, and cover a distance of 77 miles. Over 200,000 people would see Wilbur fly over the six months of performances in France. During the balance of their year in Europe, they traveled to Germany and Italy, attracting large crowds where ever they performed. At home and throughout Europe, newspapers and magazines gave the Wright story continual attention. The time in Europe had resulted in accumulated compensation of some \$200,000.

Until now both of the Wright brothers had close scrapes with death; Wilbur had crashed two times with slight injuries, Orville four times. On September 17 during a Washington performance, Orville flying at 125 feet above the ground with a passenger heard a fragment of the propeller come off. Orville shut down the engine hoping to glide to a safe landing however, quick as a flash, the machine turned down straight for the ground; Orville pulled hard on the steering levers but to no effect and tragically the passenger was killed. Orville lived but suffered a fractured leg and hip, and four broken ribs.

At long last, on July 30, 1909, the U.S War department entered into contract with the Wright brothers for \$30,000. The Wright Company, for the manufacture of airplanes, was incorporated in 2010. That same year Orville attained a speed of 80 miles per hour and a height of 2,720 feet. Wilbur suddenly died from Typhoid fever in May of 1912. By 1918 Orville decided to sell the Wright Company to devote his time to research. Orville's wealth at the time of his death in 1948 was \$1 million.



## Events of 1900 and 1901

The Gold Standard Act is ratified, placing the United States currency on the gold standard.

The Galveston, Texas hurricane, with winds of 135 miles an hour, kills 8,000 people. It remains the most deadly natural disaster in American history.

In the first census of the 20th century, the population of the United States rose to 76,212,168, a 21% increase since 1890.

President William McKinley wins his second term as President, this time with Theodore Roosevelt as his Vice President.

On September 6, 1901, President William McKinley is shot at the Pan-American Exposition in Buffalo, New York while shaking hands with fair visitors. Vice President Theodore Roosevelt is inaugurated as President one week later upon William McKinley's death.

The first major oil discovery in Texas occurs.

## Events of 1902 and 1903

The first movie theatre in the United States is opened in Los Angeles, California.

The first two-way wireless communication between Europe and the United States is accomplished by Guglielmo Marconi when he transmits a message from President Theodore Roosevelt to the King of England from Wellfleet, Massachusetts.

The first modern World series of Major League baseball is held between the American and National leagues. Pittsburg beat Boston in a nine game series 5 games to 3.

On December 17, 1903, inventors Wilbur and Orville Wright succeed in the first sustained and manned plane flight in North Carolina. The plane, mechanically propelled with a petroleum engine, flew 120 feet in 12 seconds, and later that same day, flew 852 feet in 59 seconds.

## Events of 1905, 1906, and 1907

Republican Theodore Roosevelt becomes the twenty-sixth President after serving three years in the office due to the death of William McKinley.

The San Francisco earthquake was estimated at 7.8 on the Richter scale. The quake and subsequent fire killed an estimated 3,000 people. \$350-\$400 million in damages were sustained.

The Pure Food and Drug Act and the Meat Inspection Act is passed.

The financial panic and depression of 1907 begins. Oklahoma is admitted to the union as the 46th state.

## Events of 1908 and 1909

The tradition of dropping the ball in New York's Times Square to signal the beginning of the New Year is inaugurated.

The first passenger flight occurs when Wilbur Wright escorts Charles Furnas in the Wright Flyer-2 in Dayton, Ohio.

The first production Model T was built at the Ford plant in Detroit, Michigan.

The U.S Bureau of Public Roads completes an initial two mile hard surface road through the Cumberland Gap.

Republican William Howard Taft becomes the twenty-seventh President of the United States.

Admiral Robert Peary, a Pennsylvania native, accompanied by four Eskimos, arrives at the North Pole on their sixth attempt.

## The Tens and twenties

**The decade of the tens** began with America's efforts to reform itself and ended with its efforts to reform the world. At home, "Progressives" of both parties agreed that it was time for government to actively intervene against industrial and financial monopolies controlled by J.P. Morgan, Andrew Carnegie in U.S. Steel, and Rockefeller syndicates. Presidents Teddy Roosevelt and Woodrow Wilson had set out to control and regulate abuses to the common working man and woman.

The population at the beginning of the decade stood at 92, 407,000 with 35 percent of the population living on farms and slightly less than half the population achieving only a grade school education. Life expectancy for a male was 48 years, a female 52 years. GNP of the United States was \$35 billion, the federal budget \$675 million, and the national debt \$1.15 billion. In 1910 the Dow was stood at 98. The average salary was \$750 per year with an average work week of 58 hours. Child labor was prevalent with 40 percent of children working 12 - hour days, seven day weeks, for subsistence wages.

The newest mass medium - movies - came to maturity while over thirty million people attended the movies weekly. Film started with a humble beginning, an entertainment essentially for the poor. Some twenty-five to fifty percent of the working class went weekly for five to ten cents to nickeldeons - bare storefronts clustered in lower class neighborhoods. As movies became to enthrall the middle and upper classes, lavish new theaters opened in fine downtown neighborhoods. In popular music, sheet music sold in the billions, and rag, blues, and Irving Berlin's new songs decorated the pianos. The new phonograph brought classical and popular music into the homes and provided the means for people of all classes to join in the dance craze. Another new art form was being born - Jass; and the greatest literary revolution occurred in poetry; the architecture feat of the decade was the 55 story Woolworth building in New York City.

While most citizens condemned the not infrequent lynching's and burning of blacks, few actively worked to reverse segregated practices in the South or to mitigate the plight of hundreds of thousands who began migrating to the North. So, too, while immigration from Europe continued at record levels until WWI, anti-immigrant sentiment increased from labor unions which feared competition for jobs. The same job fears plagued the California governor as 23,000 Japanese settled in California.

This was an age of promising new technologies. The harnessing of a gasoline motor engine to a tractor greatly increased productivity of the farmers. Electric power found widespread use by the twenties - from urban trolleys connecting places, to improved lighting, electric ranges, vacuum cleaners, and hair dryers. Wireless communication bridged Paris and New York with Morse code while the telephone connected New York to San Francisco. Although early in the decade, airplanes were novelties of

stunt shows, by the end of the decade their practical uses were well documented: planes delivered mail as well as reconnaissance reports and bombs during the war. Above all, America's romance with the automobile was blossoming. Improvements like self-starters in closed cars, with more powerful engines promised the wealthy something better every year. By 1913, \$2 to \$6 could purchase a Kodak camera, enabling millions to record their lives and the world.

The end of the decade was to be dominated by WWI, where thousands in trenches in Europe were dying over inches of territory; President Wilson's neutrality toward the war had gained him reelection. However, when Germany declared a policy of unrestricted submarine warfare, and German efforts to push Mexico into war with the United States were revealed, Wilson abandoned his neutrality position. It was 1918 before American soldier's were prepared to fight, but their effectiveness was decisive in repulsing the final German offensive. As the decade closed, two constitutional amendments on issues that had long excited passionate interest were finally enacted - prohibition and woman suffrage.

## Events of 1910 and 1911

The Boy Scouts of America was founded.

Harry Atwood flies a Wright Type B airplane from St. Louis to New York in eleven days, six hours.

The Indianapolis 500 auto race is run for the first time.

## Events of 1912

New Mexico and Arizona become the 47th and 48th states.

Over fifteen hundred people die after the Titanic collides with an iceberg on its maiden voyage across the Atlantic.

New York State passes a 54 hour work week law while the federal government extends an eight-hour day to Federal employees.

Teddy Roosevelt survives an assassin's bullet while campaigning in Milwaukee, Wisconsin.

Woodrow Wilson becomes the first Democratic president since 1892 by overcoming a three-way race for the presidency when former President Teddy Roosevelt donned the nomination of the Progressive party. The three-way split with Republican incumbent President Taft and Roosevelt caused the election win of Wilson.

## Events of 1913

Wilson continued to pursue Roosevelt's progressive era policies to end big business monopolies.

The sixteenth amendment to the constitution permitting personal and corporate income taxes is adopted. A tax is imposed on personal incomes over \$3,000 to offset lost federal revenue from lower tariff taxes on trade.

California passes an alien land-holding law targeted against Japanese from owning land.

The seventeenth amendment is passed providing for the direct election of U.S. Senators.

The Panama Canal is completed.

The Federal Reserve Bank Act is passed by the U.S. Congress creating major reforms of the American financial and banking system.

U.S. industrial output rises to forty percent of the world's total production.

## Events of 1914

President Wilson declares the United States will remain neutral in the European conflict as Germany invades Belgium and declares war on France and Russia; Britain declares war on Germany; Japan invades the Asian colonies.

With virtually unrestricted drug traffic in the United States, 4.5 percent of the population is estimated to be addicts, the highest rate in the world. Hence, the Harrison Drug Act is passed to restrict narcotic sales.

The three largest cities in the U.S. are New York with 5.3 million in population, Chicago 2.4 million, and Philadelphia 1.7 million.

## Events of 1915

Alexander Graham Bell and Thomas Watson conduct the first telephone conversation between New York and San Francisco.

The San Francisco World's fair remains one of the most spectacular events in world expo history, lasting 288 days, and hosting over 13 million visitors.

Wilson Warns Germany that attacks on U.S. ships breach neutrality. Wilson asks for an enlarged standing army of 142,000.

The one millionth Ford rolls off the assembly line, yet only one in 30 families own an automobile.

Albert Einstein formulates the general theory of relativity.

## Events of 1916

The United States purchases the Virgin Islands from Denmark for \$25 million.

The Workman's Compensation Act is approved for federal employees who suffer work related injuries.

The Keatings-Owens Act is passed by Congress to regulate child labor.

Woodrow Wilson narrowly wins a second term as President with 277 to 254 Electoral College votes.

Polio epidemic strikes 28,767 people during the summer and fall - 6,000 die.

## Events of 1917

The United States severs ties with Germany when Germany announces unrestricted submarine warfare. Four days after receiving the request from President Wilson, the United States Congress declares war on Germany.

The Selective Service Act is approved, authorizing conscription of males ages 21 to 30; ten million men register. On June 26, the first American troops arrive in Europe to assist European allies in WWI. General John Pershing is placed in command of American forces during the campaign.

The Liberty Loan Act is approved by Congress to fund \$2 billion in bonds at 3% interest to finance the war effort. A second Liberty Bond at 4% raised \$4 billion.

Congress passes the 18th amendment, advocating prohibition of alcoholic beverages throughout the United States.

The War Industrial Board rations food and fuel, taxes are increased to fund the war, and the government takes control of the railroads.

A record eleven billion people ride electric trolleys for transportation at a cost of five cents.

## Events of 1918

Inflation was raging at 13.5 percent and GNP was growing at a torrid 27 percent. The economy had been on an upward inflationary spiral since 1916 due to the war effort.

Women are increasingly employed in the manufacture of shells and explosives.

Loans to allies in the first year total \$5.2 billion. Taxes are raised 250 percent to meet war costs. 80 percent of the tax revenue comes from large incomes, taxed at 77 percent.

A third Liberty Loan is sold for \$4.2 billion to 17 million subscribers.

The convoy system, or groups of ships protected by destroyers, carry over 900,000 soldiers to France. 1.2 million U.S. troops fight at Meuse-Argonne to cut German supply lines.

Armistice Day is announced between the Allies and Germany on November 11. Woodrow Wilson is the first U.S. President to travel to Europe when he sails to Paris to attend the Paris Peace Conference in December.

Daylight savings time with official time zones is enacted by Congress to extend daylight hours for war production.

The worldwide Spanish flu strikes 21.6 million; twenty-five percent of all Americans fall ill - 500,000 die as emergency tents go up throughout the nation after hospitals are filled.

Vaudeville is popular as 25,000 performances take place at 4,000 theaters.

The first airmail service is begun by the U.S. Post Office between New York, Philadelphia, and Washington.

The Supreme Court declares the 1916 child-labor law unconstitutional.

## Events of 1919

Labor unrest is the most severe since 1890 due to three years of skyrocketing inflation. With prices up 79 percent since 1914 and wages increasing by only 14 percent, 2,665 strikes occur involving over four million workers; almost all are successful in gaining wage benefits and reduced hours.

The Klan grows to 100,000 in 27 states; there were seventy lynchings of blacks in the south in 1919 alone; race riots occur in 26 cities.

The 18th Amendment to the Constitution is ratified, prohibiting alcohol to be consumed or sold in the United States.

The treaty of Versailles is signed on June 28, ending WWI. Fatalities from the war are as follows: Russia - 2,760,000, Germany - 1,610,000, France - 1,430,000, Austria - Hungary - 910,000, Great Britain - 807,000, United States - 116,000.

Thirty-four states pass laws outlawing display of the red flag while 249 communists are rounded up by the FBI and deported.

**As America entered the twenties**, the population stood at 106,491,000 and the life expectancy was 53 for a male, 54 for a female; the average salary was \$1,236; the nation's GNP was \$91 billion, the Federal budget \$6.4 billion, and the National debt \$23.7 billion; the Dow varied from 67 to 100 in 1920. When the United States sent troops into battle for the first time on European soil in an effort to aid England and France, America became a world power as it never was before. When it became clear Wilson's League of Nations would not succeed in bringing world order, America recoiled from Europe and turned from the world into itself, and eventually experienced unparalleled economic, social, and intellectual energy. The immediate postwar period was a time of widespread strikes, along with fears of "reds" and terrorist bombs. Inflation, unemployment, and the Prohibition amendment also unsettled a triumphant America.

In 1920 America elected a little-known, handsome, and well-spoken Ohio senator, Warren Harding, for President. Harding promised, "not revolution but restoration." Politically, the subsequent decade was marked by a turning away from the powerful role of big government sought by Teddy Roosevelt and Woodrow Wilson. The laissez-faire Republicans of the twenties legislated less, taxed less, and reduced armaments.

The economy underwent a transformation that was virtually an industrial revolution. Henry Ford's ideas - the mass production of lower cost luxuries and the payment of higher wages to workers, which increased their buying power - became the model for industry. Technology was rapidly advancing with the advent of wireless Morse code communication, the airplane, automobiles, expanding electrical grids, movies, and the phonograph. The economy took off in 1921 on eight years of sustained growth, during which GNP grew 40 percent with little inflation. As wages rose and working hours moderated, consumers had more leisure time for recreational pursuits and an upwardly mobile society in America developed.

The booming economy, combined with the new technology, both enlarged the middle class and had a democratizing effect. The radio gave everyone a common diversification of entertainment, as well as a common and immediate awareness of important news events. Recordings similarly exposed everyone to the same music while movies provided common fantasies and

idols. The new advertising industry, its mission to reach the largest possible audience, presented role models often based on common heroes. The pleasures, conveniences, and status symbols of the wealthy were presented as attainable to everyone.

Stirred by competition from news media and aided by improved communications and the rapidly growing appetite for news, excitement, and heroes, journalists were producing mountains of type to fill tabloid front pages. They covered everything from news of sports, trials to movie stars, divorces, and natural disasters. Extensive coverage was also given to the most unusual and colorful of the decade's businesses - bootlegging and speakeasies.

As economic opportunities drew people to the cities, urban dwelling became the predominant mode of American life; bigger office and apartment buildings were constructed. As more people purchased cars, more roads were paved, more roadside restaurants and inns appeared, and suburbs expanded to serve a mobile population. The motorcar transformed the economy! Electricity, radio, phonographs, movies, automobiles, and telephones were becoming available to the common working man by the late twenties.

In the freedom of the city, Victorian manners and morals were shed as there was a thrust of female emancipation sexually and intellectually. The music of the Jazz Age and the dancing of the Charleston flourished. Women were first allowed to vote nationally in 1920, encouraging women in increasing numbers to seek college educations and employment. Business also contributed to the new liberation as it sought customers for everything from baked bread to vacuum cleaners, all of which reduced household tasks. However, all these social changes were not without social resistance. Intense controversy developed over women smoking, skirt and hair lengths, contraception, and "loose" morals in films.

But hope and excitement of the new predominated. As the decade progressed, the possibilities for everyone seemed endless, and get-rich-quick schemes proliferated. The most surefire possibility of rapid wealth was provided by the great bull market of the late twenties as the Dow increased almost fourfold to 381; a speculative fever gripped the nation! Then, just two months before the end of the decade, the great bull market expired; a shock of disbelief met the market crash as the great depression of the thirties was to follow.

## Events of 1920

The U.S. Senate rejects U.S. membership in President Wilson's League of Nations, which are meeting in Paris.

Women vote for the first time in a national election under the 19th Amendment.

Harding wins the U.S. presidential election.

California passes a law limiting Japanese land holdings.

The first commercial airline service begins connecting Key West to Havana.

Installment buying of household products gains in popularity. T

he illiteracy rate reaches a new low of six percent.

Two-thirds of the world's oil is originating in the United States.



Women registering to vote for the first time in a national election in Los Angeles in 1920.





Top left—The new radio audience reaches 50 million by 1925

Top right—Charles Lindbergh flies solo from New York to Paris in 1927

Bottom—U.S. Dough-boys liberate a French couple in 1918 from German-occupied territory.



## Events of 1921

The economy dipped into a depression with deflation -6.4 percent , GNP at -24 percent, and unemployment 11 percent. U.S Steel reduced prices three times. The Emergency Quota Act restricted immigration to 3 percent of the 1910 census to reduce competition for jobs.

There is social unrest as well with a record surge of labor strikes - Klan burnings multiply in the South and Midwest.

Cigarette consumption rises to 43 billion annually, despite its illegality in fourteen states.

## Events of 1922 and 1923

The first woman is appointed to the senate.

The economy revives with auto sales leading the way.

There are 100,000 radios manufactured while those without radios use a crystal set; thirty-five percent of households have a telephone.

In 1923, the economy soars as unemployment falls. U.S Steel fights reduction of twelve hour day.

President Harding dies of cerebral apoplexy propelling Vice President Coolidge to be sworn in as President.

A Klu Klux Klan convention in Indiana draws 200,000 people. Oklahoma governor declares martial law to combat KKK outrages.

## Events of 1924

The Indian Citizenship Act grants the right of citizenship to all Naive American Indians born within the territory of the United States.

The New Immigration Law takes effect to protect American workers; the law limits immigration to two percent of the 1890 census and no Japanese are allowed to immigrate.

Calvin Coolidge wins his first election as president, retaining the White House for the Republican Party.

By 1924 there were 556 radio stations, all advertising consumer products. Growth of the new radio medium was rapid from the first program broadcast in Detroit on August 31, 1920.

## Events of 1925 and 1926

As prosperity continues with forty percent of the population earning at least \$2,000 per year, the mass market increases for items like cars, radios, vacuum cleaners, and the recently introduced refrigerator. One in every 5.3 adults owns a motorcar.

In 1926 the first transatlantic phone call is made.

Over 14,500 movie houses show 400 films a year, as movies become America's favorite entertainment.

## Events of 1927

Charles Lindbergh flies the first solo, non-stop flight, from New York to Paris; he makes the flight in 33 1/2 hours, covering 3,610 miles in the Spirit of St. Louis, his aircraft.

Film producers add sound sequences to silent films and call them "talkies."

## Events of 1928

Bus service is available from coast to coast in 5 days with 132 stops.

Amelia Earhart becomes the first woman to fly the Atlantic.

Herbert Hoover, a Republican, wins the presidential election to become the thirty-first president of the United States.

The Dow Jones Industrial Average hits 300 as margin investors reach a record \$4 billion.

## Events of 1929

The electrification revolution created an industrial productivity boom and vastly improved quality of life. By 1929 a full 80 percent of homeowners had an electric iron and vacuum, 53 percent a radio, 37 percent a toaster and washing machine. Electrical kilowatt hours grew from 6 billion in 1902 to 118 billion kilowatt hours in 1929.

The boom in consumer credit in the twenties created a manufacturing surge in homes, cars, pianos, radios, and even phonographs and vacuums. Home mortgages increased from 12 billion in 1919 to 43 billion by 1929.

By the late twenties, 70 percent of the population attended the cinema weekly.

The stock market reaches an all-time high at 381; as a result, the Federal Reserve halts loans for margin speculation in the stock market. Billions are lost overnight in the market crash on October 29<sup>th</sup>.

By November 13, unemployment rose from 700,000 to 3.1 million.

There are at least 32,000 speakeasies thriving in New York City and 20,500 movie theaters throughout the United States; the number of theaters with sound increases from 1,300 to 9,000.

## Woodrow Wilson (1913-1921)

Woodrow Wilson (1856-1924) was an American politician and academic who served as the 28th President of the United States from 1913 to 1921. Wilson was born to an ethnic Scottish - Irish family in Virginia and was the third of four children. His parents, Joseph and Jessie Wilson, moved to the South in 1851 and came to fully identify with it, moving from Virginia deeper into the region as Wilson was called to be a minister in Georgia and South Carolina. Joseph Wilson owned slaves, defended slavery, and identified with the Confederacy during the Civil War.

Wilson did not begin reading until the age of ten, which he blamed on the lack of schools in the South. As a teen, he taught himself to achieve academically, studying at home with his father. His father moved the family to North Carolina in 1874, where Wilson attended Davidson College and later graduated from Princeton in 1879, studying political philosophy and history. In 1879, Wilson attended Law school at the University of Virginia; he was admitted to the Georgia bar and made a brief attempt at law practice in January, 1882. Abhorring the procedural aspects of practicing law, he abandoned the law profession to study political science and history and received his doctorate from John Hopkins University in 1886. In 1885 he married Ellen Axson, the daughter of a minister from Georgia. Wilson worked as a lecturer at Cornell University in 1886-87; he next taught at Bryn Mawr College from 1885 until 1888, teaching ancient Greece and Roman history. Ellen delivered their first child, Margaret, in 1886 and their second child, Jessie, in 1887. In 1890, Wilson was elected by the Princeton University board to chair political economy. Additionally, Wilson became the first lecturer of Constitutional Law at the New York Law School. The Princeton trustees



President Woodrow  
Wilson in 1919

promoted Wilson to President of the University in 1902, and remarkably during his eight years as President at Princeton, published five political works on Constitutional government in the United States.

In January, 1910, Wilson had drawn the attention of two New Jersey senators as the potential Democratic candidate in the upcoming gubernatorial election. Wilson quickly shed his professional style for more emboldened speechmaking, and presented himself as a full-fledged progressive and soundly defeated the Republican, Lewis. As governor, Wilson concentrated on four major reforms - changes in the election laws, a corrupt practice act, Workmen's compensation, and establishment of a commission to regulate utilities. Wilson's prominence as governor and in the national media induced his presidential campaign in 1912. Being the first Southerner to have a serious chance at the White House since 1848, Southern Democrats strongly supported Wilson's campaign for the presidential nomination. The Republicans at their convention had set the stage a week earlier, nominating William Taft, with Theodore Roosevelt stalking out only to launch his campaign as an independent, splitting the Republican vote. The

Democratic Convention in Baltimore deadlocked for over forty ballots - no candidate could reach the two-thirds required majority; Wilson ultimately won the nomination on the 46th ballot. Wilson took 41.8 percent of the popular vote to win the presidential election, while Taft and Roosevelt split the GOP. In his inaugural address of his first term in 1913, Wilson reiterated his agenda for lower tariffs and banking reform, as well as aggressive trust and labor legislation. Wilson successfully reduced tariffs, replacing the lost federal revenue with the first corporate and individual income tax, authorized by the 16th Amendment. He vested the power of banking in the hands of the government under the Federal Reserve Act passed in December, 1913. Wilson also attacked unfair business practices with the passage of the Federal Trade Commission Act and the Clayton Antitrust Act. During his term, Wilson was forced to defend his segregation policy. Segregation in government offices, and discriminatory hiring practices, had been started by Theodore Roosevelt, continued by President Taft, and escalated during the Wilson administration

In the spring of 1914 his wife, Ellen, became ill from failing kidneys; the devoted Wilson was at her bedside to the end, which came August 6. Then in December of 1915, Wilson married Edith Galt, an attractive southern widow and jeweler. Politically, from 1914 until 1917, Wilson's primary objective was to keep America out of the war in Europe, and his policy was, the true spirit of neutrality. After a German submarine torpedoed and sank the British ocean liner RMS Lusitania (in May, 1915) where over a thousand perished, including many Americans, Wilson requested funds from Congress to provide 500,000 troops. The bill also included a five-year Navy plan for major construction of battleships, cruisers, destroyers, and submarines. Wilson drew praise for his pleas for postwar world peace in May 1916 and again in December. Nevertheless, the central powers at war in Europe replied that victory over Germany was certain, and the allies required the dismemberment of their enemies; no desire for peace existed.

Wilson's remarriage rejuvenated his personal aspirations for re-election. Edith Wilson enjoyed, as Ellen never had, the crowds and power as a close collaborator with her husband. Executive decisions to avert a national economic disaster from the railroad strike enabled Wilson to bolster his political mastery and Wilson was re-nominated as the Democratic candidate without opposition. In contrast, the Presidential election was so close it was in doubt for several days; Wilson won with 277 electoral votes to Hughes's 254. Wilson's platform was a continuation of the Progressive Era reform for the working class - providing a minimum wage, eight-hour day and six-day week, health and safety measures, unemployment compensation, prohibition of child labor, safeguard for female workers, and retirement benefits.

Wilson found it difficult to maintain neutrality to the war in Europe after Germany sunk several American ships in March, 1917. Wilson called a cabinet meeting on March 20, in which the vote was unanimously in support of entering the war. Wilson delivered his war message to a special session of Congress on April 2, 1917, asking Congress to declare Germany's war stance as an act of war against the United States.

When the war drew to a close, Wilson spent six months of 1919 in Paris for the Peace Conference, there by becoming the first U.S. president to travel to Europe while in office. While negotiating the terms of the Peace Treaty of Versailles, Wilson proposed his League of Nations to ensure a lasting peace for future generations. While the general public, churches and peace groups generally favored the League of Nations, the Republicans vowed to defeat the League and discredit Wilson. Unfortunately, from September 26 thru October 2, 1919, Wilson suffered from a series of debilitating strokes and consequently became an invalid in the White House. Closely monitored by his wife, she insulated him from negative news and delegated selected matters to his cabinet. Because of the complex situation and the inability of Wilson to discharge the powers of his office, Congress developed the 25th Amendment to control succession to the presidency in case of illness.

Wilson's administration did effectively develop plans to demobilize the country at war's end, however the Republican controlled

senate abandoned the administration's proposals. Demobilization was chaotic and violent; four million soldiers were sent home with little planning, no money, and few benefits. As a result, wartime bubble in farmland prices burst, leaving many farmers deeply in debt, major strikes in steel, coal and the meatpacking industries disrupted the economy, and racial animosity erupted in serious race riots in two dozen major cities across the North.

At the end of his second term in 1921, Wilson and his wife moved to a townhouse in the Embassy Row section of Washington D.C. On February 3, 1924, Wilson died at home of a stroke at the age of 67.

## **World War I (1914—1918)**

In the early twentieth century, Europe was dominated by ambitious imperial states, producing an unstable international system that fueled an arms race. Decades earlier a series of wars in the 1860's and 1870's established Germany as Europe's dominant military power. In the 1890s, France and Russia formed an alliance to counter the might of Germany and its close ally, Austria - Hungary. In the first decade of the twentieth century, Britain, feeling threatened by the growth of the German navy, abandoned its isolationism and formed a loose alliance with France and Russia. In the years leading up to World War I, peace was maintained by a balance of power between the two hostile alliance systems. Meanwhile, the European states were all expanding their armed forces and equipping them with the latest technology. The behavior of Germany's leader, Kaiser Wilhelm I, was aggressive and erratic, but the spark that ignited war came in the Balkans. Russia had ambitions to spread influence in the Balkans as the champion of the Slav people. This led to hostile relations with Austria-Hungary, which was at odds with restless Slav minorities, including Serbs, within its own borders. In June of 1914, a Serb terrorist assassinated the heir to the Austro-Hungarian throne; Austria-Hungary was determined to use this as a pretext for war with Serbia. When Russia mobilized in defense of Serbia, Germany, a close ally of Austria-Hungary, declared war on Russia and France. The German invasion of neutral Belgium then ensured Britain would enter the conflict as well.

When Europe went to war in the summer of 1914, most people expected a decisive victory for one side or the other by year's end. In fact, the war did not end until November of 1918. World War I cost the lives of almost 10 million military personnel. These included over 2 million Germans, 750,000 British, 62,000 Austrians, 65,000 Canadians, 74,000 Indians, 58,000 Belgians, 1.4 million French, and 117,000 Americans. It is impossible to establish how many civilian deaths were attributable to effects from the war, although a figure of 6 million has been suggested.

From 1914 until early 1917, U.S. President Wilson's primary objective was to keep America out of the war with Europe; his policy was, "the true spirit of neutrality, which is the spirit of impartiality and fairness and friendliness to all concerned." Wilson made numerous offers for the United States to mediate peace; however, all overtures were dismissed by Europe. Republicans, led by Theodore Roosevelt, criticized Wilson's refusal to build up the U.S. Army in anticipation of war, but Wilson retained support of the peace element, including women and the religious. After enduring attacks on U.S. merchant ships by German submarines, Wilson requested and received funds in the 1916 appropriations bill to provide for 500,000 troops; it also included a five-year plan for major construction of battleships, destroyers, and submarines.

Wilson found it increasingly difficult to maintain neutrality after Germany's ambassador informed the U.S. Secretary of State of Germany's commitment to unrestrained submarine warfare. Then came the revelation of the Zimmermann Telegram, in which Germany attempted to enlist Mexico as an ally, promising Mexico she would support Mexico winning back Texas, New Mexico,



and Arizona from the United States. Then, in a deliberate act of aggression, in March, 1917, several American ships were sunk by Germany. In reaction, Wilson called a cabinet meeting on March 20, in which the vote was unanimous in support of entering the war. The declaration of war by the United States against Germany passed Congress by a strong majority on April 4, 1917. The U.S raised a massive army through conscription and Wilson gave command to General John Pershing.

The overthrow of the imperial government in Russia by Lenin's revolutionary government (the Bolsheviks) led to an armistice between Russia and Germany on December 16, 1917. Further progress toward a peace agreement, however, rose deeply divided issues. On the Russian side, the Bolsheviks were struggling to hold on to power, had no army, and were facing the beginnings of a civil war. Germany, insisting on its punitive peace terms, pushed its troops 30 miles per day, without resistance, deep into the Ukraine. Fearing imminent attack on the Russian capital, the Bolsheviks accepted harsh peace terms from the Germans on March 3, 1918. Russia lost almost all of its European territories including the Ukraine, Poland, Finland, Estonia, Latvia, and Lithuania; the areas lost were especially populous and prosperous, accounting for a third of Russia's pre-war population and half its industry.

With the war on the eastern front over, Germany was able to transfer more troops to the western front, making U.S. forces central to allied success in the battles of 1918. The Germans gambled on a massive offensive to win the war before newly arrived U.S. troops were committed to combat; launched on March 21, the Michael Offensive achieved a breakthrough on the Somme front and was a severe shock to the Allies; the offensive did not, however, achieve its larger objective. The Allies tightened the coordination between their armies and continued to fight. A series of German follow-up offenses in Flanders and at the Aisne River achieved further breakthroughs, but by June 650,000 American troops were in place in France, and by August over 1 million U.S. troops were in combat to counter the German offensive. While the Germans continued to fight hard on the Western front, defeated Germany sought an armistice in October. Bulgaria, Ottoman Turkey, and Austria-Hungary all surrendered to the allies. From late October, mutinies and revolutionary uprisings broke out in German cities. On November 9, Kaiser Wilhelm II was deposed and Germany became a republic. Two days later, on November 11, the Germans reluctantly accepted rigorous armistice terms and the fighting stopped. The terms of the armistice left Germany defenseless - Germany was to withdraw all troops from France, Belgium, German territory on the west bank of the Rhine, as well as all military equipment, including warships and submarines. The naval blockade of Germany would continue. Life remained a miserable struggle for most Germans, who faced poverty, cold, hunger, induced by political chaos and the Allied blockade. Ravaged by hyperinflation and threatened by political extremists, the German republic survived to achieve a fragile return to normalcy by 1924. However, German resentment and bitterness would lead directly to the outbreak of World War II in 1939.

Throughout the war, people had been told that their efforts and sacrifices would lead to the building of a better world where peace and justice would reign; the Paris Peace Conference of 1919 inevitably disappointed these high aspirations. The Treaty of Versailles imposed on Germany was a compromise that embittered the Germans without sufficiently guaranteeing French security. The map of Europe and the Middle East was extensively redrawn as a result of the collapse of the Russian, Austro-Hungarian, and Ottoman Empires. Nationalist movements created new states such as Czechoslovakia, Poland, and Yugoslavia. The peace makers - Britain, France, and the United States - determined the new borders; there was much disappointment, even among the victors. Italy did not gain territory it had expected, while the Arabs saw their part of the Ottoman Empire divided between France and Britain. The treaty also called for 132 billion Marks in reparation payments from Germany to the Allied countries. There was also an agreement on limiting Germany's armed forces to 100,000 men without tanks and aircraft. Much of the postwar world seethed with discontent and was immersed in suffering. In a climatic ending, an influenza pandemic in 1918 - 19 may have been the most costly natural disaster ever to strike the human race, killing between 50 and 100 million people worldwide.



During the war, the U.S. mobilized over 4 million military personnel. The war saw a dramatic expansion of the U.S. government in an effort to harness the war effort to make the world safer for democracy. By entering the war, America became a world power in a sense it never was before; America had moved to the forefront of the world stage.

## **The Progressive Era (1900 to 1920)**

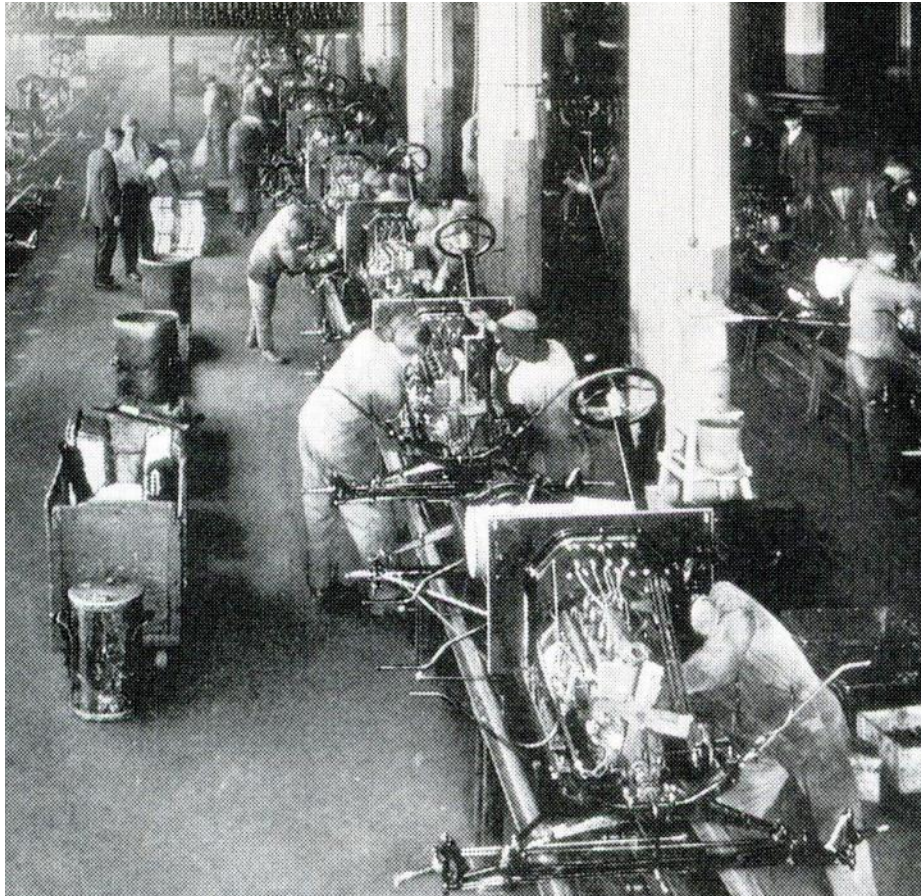
The Progressive era was a period of widespread social activism and political reform across the United States, from 1900 to the 1920's. The main objective of the progressive movement was eliminating corruption in government; the movement primarily targeted political machines and their bosses. By taking down these corrupt representatives in office, a further means of direct democracy would be established. The Progressive era also sought regulation of monopolies (Trust Busting) and corporations through antitrust laws; the antitrust laws were seen as a way to promote equal competition for the advantage of legitimate competitors. Many progressives supported prohibition in the United States in order to destroy the political power of local bosses based on saloons. At the same time, women's suffrage was promoted to bring the "purer" female vote into the political arena. Initially the movement operated chiefly at local levels and later expanded to state and national levels. The nation followed advances at the time in Western Europe and adopted numerous policies, such as major transformation of the banking system by creating the Federal Reserve System in 1913. A second theme was building an Efficiency Movement in every sector that could identify old ways that needed modernizing, and bring to bear scientific, medical, and engineering solutions. Reformers felt that old-fashioned ways meant waste and inefficiency, and eagerly sought out the "one-best system". Significant changes enacted at the national levels included the imposition of an income tax with the Sixteenth Amendment, direct election of Senators with the Seventeenth Amendment, and women's suffrage through the Nineteenth Amendment to the United States Constitution.

TRUST - BUSTING - In the Gilded Age (late 19th century) the political parties were reluctant to involve the federal government too heavily in the private sector. In general, the public and business accepted the concept of laissez-faire, a doctrine opposing government interference in the economy, except to maintain law and order. This attitude started to change during the depression of the 1890's when small business, farm, and labor movements began asking the government to intercede on their behalf. By the start of the twentieth century, a middle class had developed and was leery of the business elite. The progressives argued the need for government regulation of business practices to ensure competition and free enterprise. Congress enacted the Sherman Antitrust Act of 1890 to prevent one large firm from controlling a single industry. These laws were not rigorously enforced, however, until the years between 1900 and 1920, when President Theodore Roosevelt and President Woodrow Wilson, and others sympathetic to the views of the progressives came to power.

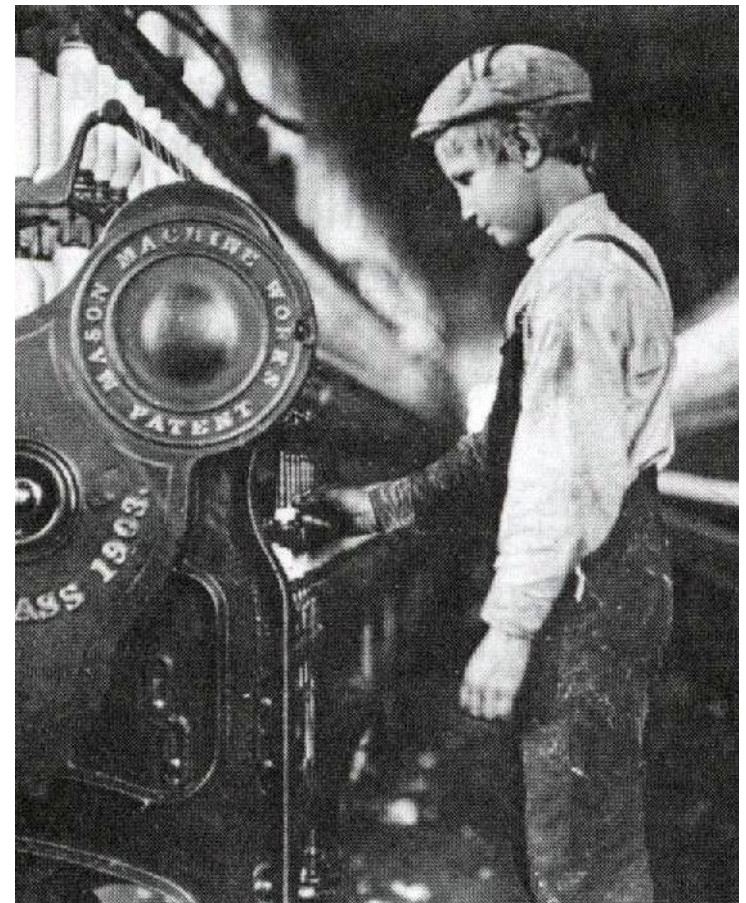
President Teddy Roosevelt stated, "Corporations must recognize their responsibility not merely to their shareholders but to the community at large." Even though the big story of American business was the steel and oil trusts of Carnegie and Rockefeller, Roosevelt decided to start his trust-busting battle with the leading railroad trusts of the Northwest - Northern Securities Company created by J.P Morgan. The courts found Northern Securities to be in violation of the Sherman Antitrust Act and ordered it dissolved. Roosevelt would say, "We do not wish to destroy the corporations, but we do wish to make them serve the public good." Federal regulation of business, however, proved difficult because the language of previous antitrust law was vague and were not adequately enforced. Under Roosevelt's direction, 44 antitrust lawsuits were filed in an effort to prevent bad trusts from restraining trade and manipulating markets. In 1906, another key antitrust lawsuit was brought against Standard Oil Company. It took close to five years, but in 1911, the U.S Supreme Court determined Rockefeller's oil company was in violation of the law, and



Women march for the right to vote in 1912



The Ford Motor Companies production lines become the model for the Efficiency Movement.



Widely prevalent child labor is used in textile mills and other industries.

Standard Oil was split into 34 separate companies. In 1906 the *Hepburn Act* was passed which gave the Interstate Commerce Commission the power to set maximum railroad rates. In 1914, during the Wilson administration, the *Clayton Antitrust Act* was passed to strengthen antitrust Legislation; the Clayton Act sought to prevent anticompetitive practices considered harmful to consumers by monopolies, cartels, and trusts.

FOOD and MEAT SAFETY - The *Pure Food and Drug Act of 1906* was the first of a series of significant consumer protection laws enacted by Congress and led to the creation of the Food and Drug Administration. Its main purpose was to ban foreign and interstate traffic in adulterated or mislabeled food and drug products; it required that active ingredients be placed on the label of a drug's packaging. The *Meat Inspection Act of 1906* prohibited the sale of adulterated or misbranded livestock and derived products as food and ensured livestock were slaughtered and processed under sanitary conditions. The act also declared such common meat preservatives as Borax, salicylic acid, and formaldehyde to be unwholesome. The acts were signed into law by Theodore Roosevelt.

REVENUE ACTS - The United States *Revenue Act of 1913* re-imposed the federal income tax following the ratification of the Sixteenth Amendment and lowered basic tariff rates from 40 percent to 25 percent. The 1913 act created the lowest tariff rates since the Walker Tariff of 1857. The duty on woolens went from 56 percent to 18.5 percent. Steel, raw wool, iron ore, and agriculture implements had zero rates. The Act also provided for the reinstatement of a federal income tax as a means to compensate for anticipated lost revenue because of the reduction of tariff duties. The income for couples exceeding \$4,000, and singles exceeding \$3,000, were subject to a 1 percent federal tax; less than 1 percent of the population made more than the exemption and paid taxes. The tax was progressive and peaked at 7 percent for incomes over \$500,000.

The *Federal Reserve Act*, enacted in 1913, is an act of Congress that created and established the Federal Reserve System, the central banking system of the United States. It created the authority to issue Federal Reserve Notes (now commonly known as the U.S. Dollar) and federal bank Notes as legal tender. The two Revenue Acts were signed into law by President Wilson. The Federal Reserve Board, consisting of seven members, was created as the governing body of the Fed. Each member is appointed by the President of the United States and confirmed by the U.S. Senate. The Federal Reserve Act created a national currency and a monetary system that could respond effectively to the stresses in the banking system to create a stable financial system. With the passing of the Federal Reserve Act, Congress required that all nationally chartered banks become members of the Federal Reserve System, and to set aside a stipulated amount of non-interest bearing reserves with their respective reserve banks. The Federal Reserve Act has been amended by some 200 subsequent laws of Congress and continues to be one of the principal banking laws of the United States.

ELECTION OF SENATORS - The *Seventeenth Amendment to the United States Constitution* established the popular election of United States Senators by the people of the states. The amendment became law in 1913 under the Wilson administration. Originally, under the Constitution, each state legislature elected its state senators. The issue with the original mode of selecting state senators was legislative corruption; there was a sense that senatorial elections by the state legislatures were bought and sold for favors and sums of money rather than competence and, therefore, the elections of senators were perceived to have become dominated by wealthy business interests. This legislation was a major reform of business for the Progressives.

CHILD LABOR - As the United States industrialized, factory owners hired young workers for a variety of tasks, and especially in textile mills where children were often hired to work together with their parents. Unfortunately, many families in both mill and mining towns depended on children's labor to make enough money for necessities. In 1916, the National Consumers League successfully pressured the U.S. Congress to pass the Keating-Owens Act, which was signed into law by President Wilson. It was

the first federal child labor law. However, the U.S. Supreme Court struck down the law two years later. In 1924, Congress attempted to pass a constitutional amendment that would authorize a national child labor law but this measure was blocked and the bill was eventually dropped. It took the Great Depression to end child labor nationwide when adults had become so desperate for jobs that they would work for the same wage as children. In 1938, President Franklin Roosevelt signed the Fair Labor Standards Act, which placed limits on many forms of child labor. The law stated, for non-agriculture jobs, children under fourteen may not be employed, children between fourteen and sixteen may be employed in allowed occupations during limited hours, and children sixteen to eighteen may be employed for unlimited hours in non-hazardous occupations. The law excludes children working in agriculture alongside a parent. As a result, approximately 500,000 children pick almost a quarter of the food currently produced in the United States.

**PROHIBITION** - The Eighteenth Amendment of the United States Constitution effectively established the prohibition of alcoholic beverages in the United States by declaring the production, transport, and sale of alcohol illegal; drinking itself was never prohibited. The amendment was ratified by three-quarters of the states in 1919. Prohibition was essentially a religious movement backed by Methodists, Baptists, Congregationalists, Lutheran's, and other Evangelical churches. Activists sought to break the liquor trusts, weaken the saloon base of big-city machines, enhance industrial efficiency, and reduce the level of wife-beatings, child abuse, and poverty caused by alcoholism. Consumer demand, however, led to a variety of illegal sources for alcohol, especially illegal distilleries and smuggling from Canada and other countries. The Eighteenth Amendment was repealed in 1933.

**WOMEN'S RIGHT TO VOTE** - Women's suffrage in the United States was established over the course of several decades, first in various states, and then nationally in 1920. The demand for women's suffrage began to gather strength in 1848 at the first women's rights convention where a resolution was passed in favor of women's suffrage, the legal right to vote. By the time of the first women's rights convention in 1850, however, suffrage was becoming an important aspect of the movement. The first national suffrage organization was established in 1869, led by Susan B. Anthony and Elizabeth Stanton. After the Supreme Court ruled against them in 1875, suffragists began the decade's long campaign for an amendment to the U.S. Constitution. Much of the movement's energy, however, went toward working for suffrage on a state-by-state basis.

The reform campaigns of the Progressive Era strengthened the suffrage movement and by 1916 suffrage for women had become a major national issue. That same year the conventions of both the Democratic and Republican parties endorsed women's suffrage, but only on a state-by state basis. In 1915 a suffrage bill was brought before the House of Representatives but was defeated. In 1917 a referendum in New York state to enfranchise women passed by a substantial margin. When another bill was brought before the House of Representatives in January, 1918, Wilson made a strong appeal to the House to pass the bill, but it was defeated; the amendment was voted upon again on February, 1919, and failed by one vote. The President called a special session of Congress where the amendment was introduced again, this time passing on May 21, 1919. Finally, on August 18, 1920, Tennessee narrowly ratified the Nineteenth Amendment, making it law throughout the United States. The 1920 presidential election became the first United States election in which women were permitted to vote.

Social reform continued during the depression years of the 1930's under President Franklin Roosevelt. Social Security, unemployment compensation, and workman's compensation to protect injured workers were all passed into law.



A family in 1928 listening to the new, phenomenally popular, 15-minute episode of Amos and Andy on evening radio.

## Edwin Armstrong, the father of Modern Radio

Edwin Armstrong built on the work of others; that is the commonplace of uncommon achievement. John Flemming, Reginald Fessenden, and Lee DeForest are the three who made important contributions for the continuous-wave transmission of sound, as distinct from the stuttering impulses of wireless telegraphy invented by Guglielmo Marconi. But it was four basic discoveries by Armstrong developed in thousands of experiments over forty years that extended the potential of human communication to the ends of the earth and beyond the planet.

Armstrong's story began with excitement roused in a 13-year-old boy by a book brought back from London by his father in 1904. It was the *Boy's Book of Inventions*, which included an account of Marconi's sensational transmission of Morse code across the Atlantic in 1901. Marconi's method of generating radio waves through sudden bursts of electricity was incapable of transmitting anything other than dots and dashes. The later development of continuous radio waves inspired in Armstrong a passion for sending words and music over the air for everyone to tune in and hear. By the time Armstrong entered the electrical engineering school at Columbia University in 1909, a human voice had already been transmitted for the first time without wires - not by Marconi but by Aubrey Fessenden. In 1906, Fessenden generated a continuous electromagnetic wave - something Marconi thought impossible.

For six years, radio remained pretty well where it had been for a decade. Some 99.9 percent of radio communication was still dot-dash in 1912, carried on with spark transmission and magnetic detectors. It looked like a dead-end until the twenty-year-old undergraduate Armstrong became determined to enhance the transmission of voice; Armstrong hoped to create an endless loop of high-frequency oscillations. Armstrong was the first to build such a circuit, which was labeled a regeneration circuit. This new circuit shuttled electrons back and forth thousands of times a second, building up the strength of signals by several hundred times. Next Armstrong created a tube that was not only a detector and amplifier of radio waves, but also a generator of them. It was a simple elegant circuit that could replace Marconi's clumsy spark-gap machines and Fessenden's massive AC generators. With this dual-purpose circuit, still the basis of all radio transmitters, modern radio was born. On his twenty-third birthday Armstrong applied for his first patent.

Westinghouse paid Armstrong for the rights to his patents in 1920. By the end of 1922 there were already 580 commercial broadcasting stations in America, a million listeners, and hundreds of companies manufacturing receivers. When Armstrong made yet another advancement in technology, called super-regeneration, RCA made Armstrong their largest shareholder to acquire the new technology. Armstrong would go on to develop narrowband FM. An AM radio receiver detects the waves and uses electrical circuits to remove the carrier wave and convert the modulating signal back into sound. The trouble was the circuits also amplified natural interference from other transmissions. In contrast, FM is a system of frequency modulations in which the signal occupies very little space on a long carrier wave, which both relieves congestion of the airwaves and reduces static.

In the postwar years Armstrong should have been in the pinnacle of his career, but in the heat of legal battles with RCA, Armstrong jumped to his death in 1954 at the age of 64.

## The Thirties and the Great Depression

The thirties, with the Great Depression and the rise of fascism in Europe and Asia, were a period of profound trial in American life - not just of personal and material survival but of democracy and capitalism, the fundamental systems of the American way. The beginning of the decade was a time of hardship and despair. Everything was falling: industrial output, employment, wages, prices, and human spirit. Banks began to fail and cities to default; breadlines at soup kitchens lengthened; large numbers of homeless began to wander the edges of towns; the farmer, unable to sell his produce, was faced with mortgage foreclosure; the city dweller, unable to find work at retrenching factories, was fearful of losing both his home and his savings.

The government, as usual, depended upon private charity and public optimism while it waited for the free market to lift the economy. In some intellectual circles, the fulfillment of Marxist prophesies was thought to be at hand: the inevitable demise of capitalism had arrived. Franklin Roosevelt, the Democratic nominee in 1932, seemed to understand what the nation needed - an active government. In his inaugural address, Roosevelt pledged "a new deal," and then, he used radio in an innovative manner to directly communicate with the people. The rest of the decade is the story of the New Deal with its three R's: relief, recovery, and reform; recovery proceeded slowly and in 1937 - 38, the economy fell again; large scale unemployment ended only with WW II.

In their hour of trial, the American people were entertained as radio matured as a mass medium. Comedians Jack Benny, Burns and Allen, and Bob Hope gathered faithful audiences; movies also provided an escape. Sound dramatically enhanced the medium's possibilities, and Hollywood drew many talents from Broadway. Big bands played the land, and swing was king. Jazz, for the first time, became the predominant popular music form, with Duke Ellington, Benny Goodman, and Glen Miller.

As militaristic, fascist governments grew more powerful abroad and western democracies struggled with economic problems and pacifist sentiments, Russia and its system appeared to some the only visible alternative; the viability of capitalism and representative government came into question. Most Americans, however, while disillusioned with the worship of business and eager to see a larger, more caring government role, retained their faith in the American system. America's awareness of the fascist menace crystallized with Hitler's territorial threats against Czechoslovakia. In September, 1939, Hitler's armies invaded Poland, and Europe went to war. America watched, FDR offered material support to the European democracies, but isolationist sentiment remained strong among the people and the U.S Congress.

### Events of 1930

The U.S population was 123,188,000 people of which 25 percent lived on farms; the average annual income was \$1,368.00. A new model T Ford sold for \$495.00. The GNP of the U.S. was \$90.4 billion, the federal budget \$5.46 billion, and the national debt \$16.9 billion. Unemployment rose to 8.7 percent in 1930, GNP was -13 percent, price deflation was -1.3 percent, and the Dow fell to 157. More than 1,300 banks closed by the end of the year.

### Events of 1931

Unemployment reached 16.9 percent, GNP was -16 percent, price deflation was -4.4 percent, and the Dow continues to fall to 74. Two out of three workers in Detroit are unemployed. National income is down 33 percent since 1929 and payrolls are down 40 percent. Many working women are earning 25 cents per hour while many cities ban the employment of married woman.



To generate income, Nevada legalizes gambling.

Lectures and books on Russia become more popular as interest in the "Soviet experiment" increase.

Japan invaded Manchuria.

Clyde Pangborn and Hugh Herndon make the first non-stop flight across the Pacific, 4,860 miles in 41 hours.

## Events of 1932

The Dow falls to 41, GNP reaches - 23 percent, price deflation is -4.7 percent and unemployment reaches 23.6 percent; auto sales are down 80 percent from 1929 and wages have dropped 60 percent since 1929. Detroit's Welfare Department owes \$800,000 and has on hand only \$8,000.

The Japanese invade Shanghai.

Franklin Roosevelt is elected President of the United States with 22 million votes to Hoover's 15 million.

Emilia Earhart is the first woman to fly transatlantic solo.

## Events of 1933

GNP improves to -4 percent, inflation recovers to +1 .3 percent, but unemployment remains staggering at 24.9 percent. FDR orders all banks to close for one week as the nation functions without available cash. By the end of the year 40 percent of banks failed. One-third of homeowners were behind in their mortgage payments. The marriage rate is down 40 percent from the 1920's level.

Jack Benny becomes a radio sensation.

The prohibition of alcohol is repealed. T

he Douglas DC - 1, which carries 12 passengers and travels 150 M.P.H., is introduced.

Hitler becomes the Chancellor of Germany.

Both Japan and Germany withdraw from the League of Nations.

## Events of 1934

The economy is recovering with GNP +17 percent and inflation up 4.5 percent while unemployment remains nearly one-quarter of the work-force at 21.7 percent. Owing to the shortage of jobs, the five day week becomes increasingly common. Doubling up becomes prevalent, as grown children, in-laws, and parents share living space.

The Securities Exchange Commission is established.

## Events of 1935

Unemployment remains at 20.7 percent while GNP grows at 9 percent; one in four households is on relief. 750,000 farms have been foreclosed since 1930. A total of 8 million men work for the government WPA program building schools, libraries, bridges,

roads, hospitals, and sewage systems.

The first DC-3, with heated cabins, is the first reliable passenger plane able to go cross-country nonstop and can carry 21 passengers 1,500 miles.

The FDIC is created to protect savings.

The Social Security Act is passed. Inheritance and Gift taxes are enacted.

Adolf Hitler denounces the Versailles Treaty and disarmament.

## Events of 1936

Unemployment improves to 16.9 percent.

Dust storms destroy large portions of farmlands of Kansas, Oklahoma, Colorado, Nebraska, and the Dakotas; half of the 6,000 farms in part of Colorado are abandoned.

FDR is reelected by a landslide claiming 523 of the 531 electoral votes.

13 percent of high school graduates enter college.

A Germany, Italy, and Japan axis is proclaimed.

## Events of 1937

Unemployment continues to improve to 14.3 percent.

Three thousand teenagers line up to see Benny Goodman.

A study indicates people spend 4.5 hours daily listening to the radio.

Amelia Earhart, on a round-the-world flight, vanishes over the Pacific.

## Events of 1938

The economic recovery sinks into another depression; GNP falls to -6 percent, price deflation is -.08 percent, and unemployment rises to 19 percent. The Dow falls from a 1937 high of 190 to 98.

As Germany invades Austria, FDR asks for a build-up of the Army and Navy.

The Fair Labor Law abolishes child labor and establishes the minimum wage at 25 cents per hour.

## Events of 1939

Unemployment continues to be high with 17.2 percent unemployed.

After Germany invades Poland, France and Britain declare war on Germany. Congress amends the Neutrality Act, allowing Britain and France to buy arms from the U.S. "cash and carry."

**The Great Depression of the thirties** was the longest, deepest, and most widespread economic worldwide depression of the twentieth century. The Great Depression started in the United States after the stock market crash of October 29, 1929. Personal income, tax revenues, profits, and prices dropped, while international trade plunged by more than 50 percent. Unemployment in the United States rose to 25 percent and in some countries rose as high as 33 percent. Construction was nearly halted in many countries. Farming communities and rural areas suffered as crop prices fell by 60 percent. GNP in the United States fell to a negative 23 percent in 1932. The reluctance of people to borrow meant that consumer spending and investment were depressed, which led to a deflationary spiral that started in 1931. Frantic attempts to shore up the economies of individual nations through protectionist policies, such as the 1930 U.S. Smoot-Hawley tariff Act and retaliatory tariffs in other countries, exacerbated the collapse of global trade. By 1933, the economic decline had pushed world trade to one-third of its levels just four years earlier.

British Economist John Maynard Keynes argued that lower aggregate expenditures in the economy contributed to a massive decline in income and to unemployment. In such a situation, the economy reached equilibrium at low levels of economic activity and high unemployment. Keynes believed to keep people fully employed, governments would have to deficit spend, as the private sector would not invest enough to keep production at the normal level and lift the economy. As the depression wore on, Franklin Roosevelt tried government financed work programs in an attempt to restart the economy, but never gave up on trying to balance the federal budget.

Monetarists, such as Milton Friedman, argue the Great Depression was caused by the banking crisis that caused one-third of all banks to fail and monetary supply to contract by 35 percent, causing a 33 percent drop in prices. By not lowering interest rates and by not increasing the monetary supply and injecting liquidity into the banking system to prevent it from crumbling, the Federal Reserve passively watched the transformation of a recession into the Great Depression. With significantly less money to go around, businesses could not get new loans or old loans renewed, forcing many to stop investing or go out of business. One reason the Federal Reserve did not act to limit the decline of the money supply was the gold standard. At that time, the amount of credit the Federal Reserve could issue was limited by the Federal Reserve Act, which required 40 percent gold backing of Federal Reserve Notes issued. By the late 1920's the Federal Reserve had hit its limit of available credit.

Irving Fisher argues the predominant factor leading to the depression was a vicious circle of deflation and growing debt. During the stock market crash of 1929 preceding the Great Depression, margin requirements to purchase stock were a meager 10 percent. When stock prices fell, brokerage houses called in the loans, which could not be paid back. Banks began to fail as debtors defaulted on debt and depositors attempted to withdraw savings in mass, triggering multiple bank runs. Outstanding debts of individuals and businesses became impossible to service as prices and incomes fell by 20 to 50 percent, while the debt itself remained the same. As a result, loans could not get repaid and bank failures snowballed. With future profits looking poor, capital investment and construction completely ceased. As banks became more conservative they built up their capital reserves and made fewer loans, which intensified deflationary pressures. A vicious cycle developed and the downward spiral accelerated. During the first ten months of 1930, 744 U.S. banks failed. During the decade of the thirties over 9,000 banks would fail.

The common view among economists is that the Great Depression ended with the advent of WWII. Many economists believe the government deficit war spending accelerated recovery from the depression. When the United States entered the war in 1941, it finally ended the last effects from the depression and brought the unemployment rate below 10 percent. In the U.S. massive war spending doubled economic growth rates and essentially ended the depression.

## President Franklin D. Roosevelt (1882-1945)

Franklin Delano Roosevelt, commonly known as FDR, was an American statesman and political leader who served as President of the United States from 1933 to 1945. A Democrat, he won a record four presidential elections and dominated the party after 1932 as a central figure in world events during the mid-twentieth century; he led the United States during a time of worldwide economic depression and total war. His program for relief, recovery and reform, known as the New Deal, involved a great expansion of the role of the federal government in the economy. As a dominant leader of the Democratic Party, he built the New Deal Coalition that brought together and united labor unions, big city machines, white ethnics, African Americans, and rural white Southerners in support of the party. The Coalition significantly realigned American politics after 1932, defining American liberalism.

His paternal family had become prosperous early on in New York real estate and West Indian sugar trade. However, much of his immediate family's wealth had been built by FDR's maternal grandfather, Warren Delano, Jr., in the China trade, including opium and tea. FDR was born on January 30, 1882, in the Hudson Valley town of Hyde Park, New York to businessman James Roosevelt I (1882 - 1900) and Sara Ann Delano (1854 - 1941). His parents were sixth cousins and both were from wealthy old New York families. At the time of FDR's birth, the world provided international stability - Christianity, capitalism, and colonialism cemented the cohesion; this was a time of enormous growth for the United States. In the seventeen years since the close of the Civil war, the U.S population had increased 51 percent to 53 million, immigration had soured to 800,000 people annually, and America's gross domestic product (GDP) had doubled since 1865 and was now the largest in the world. Yet the rapid pace of industrialization, the dislocation of families from rural to urban settings, massive immigration, unspeakable working conditions, labor unrest, and pestilential slums darkened the horizon. Within a decade of FDR's birth, the electric light, the telephone, and the automobile were invented, yet would be several decades before their conveniences would be known to the mass population. However, few worries intruded the life of FDR, who was brought up in a very privileged life style.

Sara was a dominant influence in Franklin's early life. No moment of Franklin's day was unscheduled or unsupervised. Awake at seven, breakfast at eight, lessons until eleven, lunch at noon, more lessons until four, two hours to play, dinner at six and to bed at eight. Initially, Franklin was schooled at home by Sara; at six he attended an impromptu kindergarten on a neighboring estate; then he began a series of governesses and tutors at home. FDR was drilled in Latin, French, German, penmanship, arithmetic, and history. As a youngster, Franklin was also his father's little partner, his inseparable companion with whom he rode, hunted, and sailed. At the age of four he was riding out each morning with his father to oversee the estate; at six he was given his own pony; at the age of three Franklin made his first of many annual trips to Europe. They spent every summer at Campobello, a rockbound island in Canadian waters off the coast of Maine. Franklin learned to sail at Campobello, and that is when he began to dream of Annapolis and a naval career. As a child Franklin collected stamps and over the years he would amass a collection of over one million stamps mounted in 150 matching albums. The Roosevelt's were serious about religion but took the Episcopal faith for granted. Nevertheless, a religious faith provided one of the sources of FDR's unflagging optimism. On November 1, 1890, James, Franklin's father, suffered a mild heart attack; he lived ten more years but became increasingly frail.

At the age of nine, Sara insisted Franklin attend a school in Germany to improve his German. Proud of his ability to cope in a foreign setting, Franklin enjoyed it immensely. FDR's mind was developing as he read rapidly and retained facts easily, and was already fluent in French and German; but Roosevelt was not a reflective thinker, he learned by doing. And the extensive traveling he did with his parents - he went to Europe eight times by the age of fourteen - exposed him to a wider range of experiences than most boys his age. At the age of fourteen, he looked forward to entering Groton - two years late; as it were, most boys entered at the age of twelve. Without any experience of organized school, he would be entering as a third year student. Groton was north of Boston

and had become the most exclusive school in America. Tuition was \$500 per year - twice what the average American family had to live on. Groton focused on religion, character, athletics, and scholarship - roughly in that order. 110 boys lived in an almost monastic setting - living in 6x10 cubicles. Mornings began at 6:45 with an icy communal shower, breakfast, chapel, three morning classes, dinner at noon, two afternoon classes, athletics, another icy shower, evening meal, chapel, and study hall. Summer vacations were spent at Campobello sailing his twenty-one foot knockabout, *NewMoon*.

FDR entered Harvard in the autumn of 1900, along with sixteen of his eighteen Groton classmates. While undistinguished as a student or athlete, he became editor-in-chief of the Harvard *Crimson Daily* newspaper, a position which required great ambition, energy, and ability to manage others. While he was at Harvard, his fifth cousin Theodore Roosevelt became President of the United States. Socially, FDR's dance card at Harvard was fuller than most; he kept a horse and a runabout, and there was scarcely a weekend when he was not attending a dinner or party somewhere in the Boston area. Roosevelt received his degree from Harvard in 1903.

Less than a year after graduating from Harvard, FDR married Anna Eleanor Roosevelt, his fifth cousin once removed. Franklin was an impressionable twenty-three and Eleanor twenty. The kiss she and Franklin exchanged at the close of the wedding ceremony was their first in more than a two year courtship; this era was the apogee of Victorian restraint. In refined circles contact with the opposite sex was strictly chaperoned. Touching was risqué, kissing stretched the limit, and premarital sex was absolutely prohibited. Eleanor, who lost both of her parents at the age of ten, was raised by her grandmother, who sent her to boarding school in England at the age of fifteen; the school was conducted entirely in French. Eleanor quickly became the most popular girl in school, excelling in German, French, and Italian, as well as writing and field hockey. In 1904, Franklin entered Columbia Law School, and in 1905, Franklin and Eleanor married, with President Theodore Roosevelt standing in as the father of the bride. Financially, Franklin and Eleanor were well provided for through both of their trust funds; between them, they had income of \$12,000, or \$240,000 after taxes today. Yet their combined income was insufficient to support their three homes, five servants, yachts, boats, automobiles, expensive clubs, and extensive travels. Franklin's mother, Sara, financed the shortfall.

Midway through his third year at Columbia, Franklin took the bar exam and passed handily; in September of 1907, he joined the most distinguished corporate law firm in the nation. However, Franklin had little passion for law, and spelled out his political path to the White House to a Harvard classmate. The young Roosevelt couple spent the summer of 1907 relaxing at Campobello and Hyde Park while Anna, their first born, was a one-year-old toddler. In their first ten years of marriage, Franklin and Eleanor would have six children, one of whom would die in infancy. As was accustomed to the wealthy, Eleanor delegated the raising of her children to nurses.

FDR ran for the New York State Senate from the district around Hyde Park in Dutchess County in 1910. The county was strongly Republican, having elected one Democrat in 1856. The local party chose him as a candidate because his cousin, Teddy Roosevelt was still one of the country's most popular politicians, and the candidate could pay for his own campaign. Surprising almost everyone, due to his aggressive and effective campaign, the Roosevelt name's influence, and the Democratic landslide that year, Roosevelt carried more than two-thirds of the votes. At the age of twenty-eight, Roosevelt had found his calling; he loved campaigning and the political process. In 1912, FDR campaigned for the re-election of President Wilson even though the political tide was running strongly against Wilson as the Democrats convened for their nominating convention in New York. No Democrat, except two, had ever won the White House without the electoral vote of New York. The 1912 Baltimore convention was Roosevelt's first exposure to national politics and he reveled in excitement. He spent days working hotel lobbies and dining rooms, shaking hands and touting Wilson's virtues. FDR proceeded to win his own election by a margin larger than two years before. FDR's victory was part of a Democratic sweep as Wilson defeated TR by two million votes and Taft by three million.



The Roosevelt home in Hyde Park, New York after a 1917 renovation.



The library dominates the south wing of Hyde Park. It was the room Roosevelt worked on his stamp collection, played with his children, and served cocktails every evening at 5:00.



Top left—Lucy Mercer

Bottom left—The Roosevelt family in Washington in 1916

Bottom right—Missy LeHand

Top right—Roosevelt during the 1920 election as the vice-presidential candidate on the Democratic ticket.





Reelected President Wilson chose his cabinet primarily to reward the faithful and FDR made certain he was not overlooked. During the day of Wilson's inauguration, March 3, 1913, the newly appointed Secretary of the Navy, Daniels, offered FDR an appointment. Barely thirty-one, FDR would become the youngest assistant secretary in the history of the Navy; Secretary of the Navy Daniels and Roosevelt made an odd couple, yet they served together harmoniously for virtually the entire eight years of Wilson's presidency. It was from Daniels that FDR learned the folksy art of Washington politics; the fact is, Daniels was the only person to whom Roosevelt was ever directly subordinate. Roosevelt had a life-long affection for the Navy - he had already collected almost 10,000 naval books and claimed to have read them all. During his seven-plus years in office, Roosevelt gained experience in labor issues, government management during wartime, naval issues, and logistics, all valuable skills for future office. It was as Secretary of the Navy that FDR established his enduring relationship with Louis Howe; they played politics like doubles partners play tennis, and their goal from the beginning was the White House.

The 1920 Democratic National Convention chose Roosevelt as the vice-presidential candidate with its presidential candidate Governor Cox. The Cox-Roosevelt ticket was defeated by Republicans Harding and Coolidge.

It was common knowledge that Roosevelt had extra-marital affairs, including one with Eleanor's social secretary Lucy Mercer, which began soon after she was hired in 1914; in September 1918, Eleanor found letters revealing the affair. Franklin had contemplated divorce, but Lucy would not agree to marry a man with five children. Eleanor never forgave him, and their marriage from that point on was more of a political partnership. He and Lucy maintained a formal correspondence, and began seeing each other again in 1941; Lucy was with FDR on the day he died. Franklin also had a twenty year affair with his private secretary Missy LeHand. Eleanor established a separate house, and increasingly devoted herself to various social and political causes independently of her husband.

During the summer of 1921 at Campobello, on August 12, FDR lost the power to move his legs. He initially ached all over and was numb from the chest down; his condition worsened daily and soon his hands and arms were paralyzed as well; his fever soared, he lost control of his bodily functions, and for a time his eyesight was threatened; he could not sit up. On August 25 it was determined FDR had poliomyelitis. By Mid-September it was decided to take Franklin back to New York, where he could be treated at Presbyterian Hospital. Thus far the press had reported only that Roosevelt was ill and recovering; polio had not been mentioned. Slowly FDR began to improve. By mid-October he was able to sit up and by October 28 he was able to pull himself up by a strap and swing his legs into a wheel chair. In March of the following year FDR was fitted with steel braces for his legs that weighed fourteen pounds each. Since his hips were paralyzed, he was incapable of moving his legs individually and was taught to pivot forward on his crutches. FDR was cared for by a Negro valet, LeRoy Jones, who woke him in the morning, bathed him, dressed him, and took care of his most basic needs. Missy was FDR's personal secretary and already a member of the family.

From 1925 to 1928 Franklin and Eleanor were together infrequently; the children were away at school, Eleanor had begun her career as a teacher, and FDR was in the South at Warm Springs, Georgia, hoping to regain the use of his legs. Both remained in close contact with Democratic politics. Franklin continued with his voluptuous correspondence with party officials all over the country. At Warm Springs, Georgia, FDR learned of the therapeutic effect of the thermal waters and pursued his quest for a cure. More to the point, it provided an opportunity to participate in the fight against polio; his infectious enthusiasm galvanized polio victims hitherto without hope. He engineered an ingenious set of hand controls for an automobile, which he drove through the countryside of Georgia. While in Warm Springs, Roosevelt became thrilled at his exposure to the life of ordinary peo-

ple in rural Georgia. From the poor people, FDR learned what it meant to live without electricity and running water; for children to be without shoes, adequate clothing, and a simple grade school education.

FDR continued to invest time into learning to walk short distances, toiling at Warm Springs on his own rehabilitation as well as helping to build a treatment program for others. By 1928 the treatment facility grew to a staff of 110 serving 80 patients, however, Warm Springs was not free of financial worries until FDR became president of the newly organized March of Dimes. By 1926 FDR developed a technique to walk short distances while wearing iron leg braces, a cane in one hand and the other tightly gripping the arm of his companion. That same year he walked to the podium to give the keynote address at the New York Democratic convention to describe the qualities presidential hopeful Smith would bring to the race against the GOP candidate Herbert Hoover. After fending off several well-wishers who sought his nomination for the senate or New York governorship, Mayor Jimmy Walker of New York placed Roosevelt's name in nomination for Governor; there was no opposition from the Democratic party. Despite his misgivings, Louis Howe set the campaign in motion with Missy LeHand, who had become a permanent fixture of the Roosevelt entourage. For four weeks FDR barnstormed the state, sometimes speaking as often as fourteen times a day. On the morning of November 6, as Roosevelt listened to the returns, it was clear the Democrats were going down. By 4 a.m. Roosevelt pulled ahead and won the election by 25,000 votes out of 4 million cast. When Roosevelt took the oath as governor of New York on January 1, 1929, the road to the White House lay open.

Roosevelt's work habits rarely varied: He had breakfast in bed about eight, during which he read papers, conferred with Missy and Howe, handled his personal correspondence, and set the schedule for the day. At ten he left for the capitol where he worked until five, taking lunch at his desk. Then home for a swim, followed by martinis for his guests, and dinner at seven-thirty with friends; meals were uproarious affairs, with everyone talking at once. After dinner, FDR was wheeled to his study, where he continued to work until bedtime. An exception to the daily routine was on movie night; FDR was addicted to motion pictures, and so at least once a week an informal theater would be set-up. Roosevelt relished informality; he treated employees as friends, enjoyed shirt sleeve poker sessions with journalists, and insisted on calling people by their first names as soon as he met them.

FDR was a walking American history book. There were no isolated events for FDR; everything that happened in politics, every crisis, every decision taken, was part of a larger American tapestry, part of an experiment in government still being worked out. In the spring of 1929, FDR held his first in a long series of fireside chats, bypassing the Republican legislature and speaking directly to New Yorkers over radio. Roosevelt was a master at simplifying complicated issues and bringing people into his confidence. For Franklin and Eleanor, this was the beginning of a remarkable partnership. Eleanor undertook to support her husband's career, but maintained different priorities and different interests, and they would often disagree; their personal lives would be separate, but they shared a mutual respect.

As a reform governor, FDR established a number of new social programs, and was advised by Frances Perkins and Harry Hopkins. Roosevelt won reelection for a second term by a 14 percent margin as his Republican opponent could not overcome the public's criticism of the Republicans current economic distress in the Great Depression.

The day after FDR's reelection, Louis Howe threw the governor's hat into the presidential ring. On July 1, 1932, the delegates at the Chicago Democratic convention announced Roosevelt their presidential nominee. Breaking with tradition, FDR's decision to fly to Chicago to accept the nomination electrified the nation. FDR promised aggressive government action to tackle the root causes of the depression and provide distress relief. Roosevelt built his own national coalition with personal allies such as newspaper magnate William Randolph Hearst, Irish leader Joseph Kennedy, and California leader William McAdoo. When Texas leader John Garner announced his support of FDR, he was given the vice-presidential nomination. As the campaign progressed,

FDR demonstrated an uncanny ability to say the right thing at the right time to the right audience. Roosevelt traveled more than 13,000 miles while making twenty-seven major addresses between August and November. By contrast, Hoover only made ten speeches toward the closing weeks of the campaign. The outcome was never in doubt; the turnout, almost 40 million, was the greatest in American history and, as expected, the GOP suffered a crushing defeat. Roosevelt won the presidential election by capturing 57 percent of the vote and carrying all but six states. The Democrats gained an unprecedented ninety seats in the house to give them a virtual 3 to 1 majority while also winning control of the Senate, 60 to 36. At the age of fifty, Roosevelt would remain President of the United States the rest of his life.

When Roosevelt was inaugurated March 4, 1933, the U.S. was experiencing the worst depression in its history. A quarter of the work force was unemployed and two million people were homeless. Industrial production had fallen by more than half since 1929; prices for crops and livestock had fallen by 60 percent. By the evening of March 4, thirty-two of the forty-eight states had closed their banks; five thousand bank failures had wiped out 9 million savings accounts. Historians categorized FDR's programs as "relief, recovery, and reform." Relief was urgently needed by tens of millions of unemployed.

FDR's first "new deal" concentrated on the first part of his strategy: immediate relief. He saw the depression caused in part by people no longer spending or investing because they were afraid. To give Americans confidence, Roosevelt signed the Glass-Steagall Act that created the Federal Deposit Insurance Corporation (FDIC) to underwrite and guarantee savings deposits. Roosevelt asked for powers to regulate gold and foreign exchange, provide for the issuance of Federal Reserve notes to restore the nation's currency supply, and authorize the secretary of the treasury to review and reopen all banks to be found solvent; within a month, eight out of every ten banks were open again.

What was now needed was a definite effort to put people to work and a program to raise farm prices. On March 16, FDR sent an agricultural bill to Congress intended to raise farm income by reducing agricultural surpluses through a system of domestic allotments. Farmers would be paid directly by the government not to produce crops beyond an allotment. The week after, FDR asked for quick authorization to establish a civilian conservation corps (CCC), which would employ 250,000 young men in reforestation and flood control; he requested \$500 million for direct relief for the unemployed.

FDR shifted gears asking for the creation of the Tennessee valley authority to develop the economic potential of one of the great river basins - and one of the most poverty stricken regions of the country. The Tennessee River and its tributaries, spilling into seven southern states, drained an area of 640,000 square miles. The once fertile land was depleted; income in the area was less than half the national average, only two out of every hundred farms had electricity, disease was rampant, medical care sparse, and sanitation primitive. The Tennessee valley bill was a massive step toward modernizing the South.

Next Roosevelt turned his attention to the plight of home owners beset by mortgages and taxes they could not pay. In 1932, 273,000 home mortgages had been foreclosed, and in 1933 the rate had doubled again. House prices plummeted sending new home construction to 10 percent of its 1929 level. On April 13, FDR asked Congress for legislation to protect individual home owners from foreclosure. A Home Owners Loan Corporation was established to refinance mortgages of distressed homeowners, provide money for taxes and repairs, and set repayment schedules over a longer term of time. The TVA government project pumped \$3.3 billion into the economy to build dams and power stations, control floods, modernize agriculture and home conditions. The repeal of prohibition also brought in new tax revenue. Eventually FDR came to the conclusion that if the nation was to recover, inflation was inevitable, and that meant the gold standard would have to go. If Washington kept the dollar tied to the gold standard it would be unable to fund the ambitious relief and public works programs the New Deal had initiated; plus, he believed a rise in commodity prices was essential

to ensure the nation's political stability. To achieve that meant going off the gold standard and letting the market set the value of the dollar. When FDR's first hundred days ended, Congress had responded with fifteen historic pieces of legislation; FDR's mastery of the legislative process was complete as he was successful at breaking the conservative hold on the Democratic party and made it an instrument of liberal reform.

In November of 1933, FDR issued an executive order establishing the Civil Works Administration (CWA); the CWA paid the prevailing minimum wage for unskilled labor. By April of 1934, the CWA had put over 4 million people to work and pumped close to \$1 billion into the ailing economy. In January of 1934, Congress enacted legislation establishing the Securities and Exchange Commission to regulate the investment industry. Congress also agreed to fix the price of gold at \$35 an ounce. After allowing the dollar to float for a year, Roosevelt decided to devalue it permanently at 59 percent of its previous worth, making U.S products more attractive. Roosevelt was being threatened politically by Huey Long, who was barnstorming the nation and claimed a mailing list of 7.5 million people. Long proposed to confiscate large sums of money from the wealthy by levying progressive income taxes, and redistributing the wealth to every American family; each family would receive a minimum annual wage of \$2,500 (double the median family income at the time), free college education, and a pension for the elderly. Simultaneously, a retired doctor in California was gaining popularity with a proposal for a pension for every elderly American. As a result, FDR moved quickly and sent the draft bill for Social Security to Congress in January of 1935. From the beginning the program was designed by FDR to be self-funding, with the contributions to be paid jointly by employers and employees; benefits would be proportional to a person's earnings. This was in contrast to the rule in most modern countries where the government provided the major funding for pension plans - America's social security would be freestanding: a property right, not a civil right.

The second item on Roosevelt's 1935 agenda was to find jobs for the unemployed. Congress responded with the largest appropriations in American history- \$4.8 billion for FDR to spend as he saw fit. On May 6, the president issued an executive order establishing the Works Progress Administration (WPA). In the first year of its existence, the WPA put more than 3 million people to work, and over an eight year span pumped over \$11 billion into the economy; projects ranged from the construction of schools, hospitals, parks, and highways. The two final accomplishments in 1935 were the creation of the Rural Electrification Administration and the passage of the Wagner Labor Relations Act. The REA brought electricity to the countryside where in 1935, only 11 percent of American farms had electricity; by the end of 1941, almost 50 percent of farms had electricity. The Wagner Act recognized the right of workers to organize and bargain collectively.

By almost any measure the economic surge since 1932 had been remarkable. National income had risen by more than 50 percent, 6 million new jobs had been created, and unemployment had dropped by one-third. Industrial production had doubled, stock prices were up 80 percent, and corporate profits had zoomed to nearly \$6 billion. The banking system had been rescued, depositors enjoyed a federal guarantee of their savings, most farm mortgages had been refinanced, and the Home Loan Corporation had bailed out more than 3 million debt-ridden home owners. In the 1936 presidential election, Roosevelt campaigned on his New Deal programs against Kansas Governor Alf Landon. FDR won 60.8 percent of the vote and carried every state except Maine and Vermont.

In contrast to FDR's first term, little major legislation was passed during his second term. Until 1939, Roosevelt's involvement in foreign affairs had been sporadic. When Japan invaded China in 1937, FDR was consumed by a fight going on in the U.S. Supreme court. When Hitler annexed Austria in March, 1938, it was Roosevelt's "recession within a depression" in America on the front burner. Regarding Hitler and Europe, Roosevelt swam with the isolationist tide. The aggressive foreign policy of Nazi dictator, Adolf Hitler in Germany, aroused fears of a new world war, but Americans wanted to keep out of it; in 1937 Congress re-



Franklin D. Roosevelt reinvented the presidency and in so doing reshaped America's future. FDR is pictured here doing what he did best—campaigning.



Roosevelt's famous fireside chats. Whenever FDR sought to rally public opinion he took to the airwaves, usually Sunday nights, to speak directly to the people.



Top left—Roosevelt's first press conference on March 6, 1933. FDR met the press twice a week—a total of 998 times—usually in the oval office, and always unrehearsed.

Top right—This photo is only one of two images of FDR in a wheelchair.

Bottom right—FDR and his daughter Anna in 1938.





President Franklin Roosevelt working on his stamp collection

acted by passing a stringent Neutrality Act which denied American arms to aggressors and their victims alike; the U.S. Army was kept on a starvation diet. But when Japan invaded China in 1937, public opinion strongly favored China, and Roosevelt found various ways to assist that nation. At the time of the Munich agreement in September, 1938, which annexed 29 percent of Czechoslovakia to Germany, Roosevelt said the U.S. would not join a "stop Hitler bloc" under any circumstances. On November 10, 1938, when Nazi leadership ordered a night of terror, burning 200 synagogues, 7,500 Jewish shops and countless homes, and sent 20,000 Jews off to concentration camps, FDR convened a high-level meeting to launch his plan for a massive expansion of American air-power; from that point forward, Roosevelt became consumed with defense and foreign policy.

After Hitler annexed the balance of Czechoslovakia in March of 1939, breaking the Munich agreement, Roosevelt said that France and Britain were America's "first line of defense" and needed American aid, but because of widespread isolationist sentiment, he reiterated the U.S. would not go to war. When World War II began in Europe in September 1939 with Germany's invasion of Poland, Roosevelt rejected the Wilsonian neutrality stance and sought ways to assist Britain and France militarily. In fact, FDR immediately met with congressional leadership to discuss the outright repeal of the Neutrality Act. Roosevelt reached a bipartisan compromise to repeal the arms embargo, but put the sale of weapons on a "cash-and-carry" basis: no sale on credit, no U.S. funding, no bank loans, no American transport. FDR addressed congress with the following message, "These perilous days demand cooperation among us without a trace of partisanship. Our acts must be guided by one single hard-headed thought - keeping America out of war." Public approval was overwhelming. In April 1940, Germany invaded Denmark and Norway, followed by invasions of the Netherlands, Belgium, Luxembourg and France in May; the German victories left Britain isolated in Western Europe. FDR, who was determined that Britain not be defeated, took advantage of the rapid shifts in public opinion. The fall of Paris shocked American opinion, and as isolationist sentiment declined, Roosevelt used his personal charisma to build support for intervention. America should be the "Arsenal of Democracy" he told his fireside audience. With the war going badly in France, FDR asked Congress for 50,000 planes (the U.S. was currently producing 6,000 planes a year), funds for modernizing the Navy and Army, and another \$1.9 billion. Within a year, Congress would appropriate \$37.3 billion for defense - a figure four times the federal budget in 1939.

With Wilkie's Republican presidential nomination, the fight over foreign policy shifted to Capitol Hill. On June 28, 1940, Congress amended the appropriations bill to prohibit the sale of military equipment to any foreign power unless the chief of staff of the Army and Navy operations certified it to be nonessential to national defense. Even though FDR was anxious to retire from politics, the isolationist sentiment on Capitol Hill removed the last doubts Roosevelt had about seeking a third term. FDR now saw himself more as a commander in chief than president and recognized the necessity to prepare the nation for war. At the time of the National Democratic Convention in Chicago in July, 1940, the principal issue was the need for peacetime conscription. Gallop Polls indicated 61 percent of Americans believed the most important task for the United States was to stay out of the war. At the same time, 79 percent favored all possible aid to Britain. Roosevelt initially kept the conscription bill at arm's length as it was an election year, and he did not wish to move too far ahead of public opinion. At the time of France's surrender, public opinion lurched forward in August to 86 percent in favor of a military draft. FDR reacted and proposed a selective service bill as being essential for national security. On October 16, 1940, more than 16 million men between the ages of twenty-one and thirty-five registered for the country's first peacetime draft. The Army, which numbered 189,839 men in 1939, would top 1.4 million by mid-1941.

During the summer of 1940, Britain was down to its last sixty-eight vessels to protect the island and trade routes, and out of cash. Churchill repeatedly pressed FDR for destroyers as a life and death issue for Britain's survival. On September 2, 1940, without congressional approval, Roosevelt exchanged 50 American destroyers with Britain for military base rights in the British Caribbe-



an islands.

By mid-October, Wilkes's political attacks were sending tremors through Democratic ranks; Roosevelt surveyed the damage and decided it was time to respond. On October 18, the White House announced that the president would make five campaign speeches in the final two weeks leading up to the election. On November 5, 1940, the voter turn-out (62.5 percent) was the greatest in more than three decades. FDR took 449 electoral college votes to Wilke's 82.

As Roosevelt was winning his third term, Germany was targeting British civilian sites with air attacks for fifty-seven consecutive nights. The U.S. Treasury informed FDR that Britain would exhaust their gold and dollar reserves within a month just to pay for military orders already placed. While Roosevelt relaxed on a Caribbean cruise, he received a historic four-thousand-word letter from Churchill outlining Britain's financial and war production problems, while under persistent air attacks by German bombers. The moment was approaching where Britain would no longer be able to pay for military armaments necessary to defend itself. Roosevelt plunged himself into deep thought and devised his masterpiece, which he called Lend-Lease. Essentially the president's plan called for the United States to lend Britain whatever it needed, at no cost, and the British would give back what it had borrowed when it could. On Sunday, December 29, FDR delivered one of his most popular fireside chats, the "arsenal of democracy" speech. Roosevelt told his listeners, "If Britain goes down, the Axis powers will control the continent of Europe, Asia, Africa, Australia, and the high seas, and they will be in a position to bring enormous military and naval resources against this hemisphere. The United States must prepare for the danger ahead. The people of Europe who are defending themselves do not ask us to do their fighting. They ask us for the implements of war, the planes, the tanks, the guns which will enable them to fight for their liberty and for our security. Emphatically we must get these weapons to them in sufficient volume, and quickly enough, so that we and our children will be saved the agony and suffering of war. We must be the great arsenal of democracy: For this is an emergency as serious as war itself. We must apply ourselves to our task with the same resolution, the same sense of urgency, the same spirit of patriotism and sacrifice as we would show if we were at war." On January 6, Roosevelt went to Capitol Hill to deliver his ninth State of the Union message; the bulk of the president's speech was devoted to preparedness, defense production, and the necessity of Lend-Lease. Resulting polls showed 75 percent of Americans supported the president and Lend-Lease and on February 8, the bill cleared the house. The next day Congress appropriated \$7 billion to fund the first shipment to Great Britain. By March, 1941 Lend-Lease agreement began to direct massive military and economic aid to Britain, the Republic of China, and later the Soviet Union.

Getting the armaments to Britain was a serious problem. In the three months leading up to Lend-Lease, 142 ships, roughly 800,000 tons of shipping, had been sunk. German U-boats were sinking British ships transporting armaments from America three times faster than shipyards could replace them. Roosevelt responded by concluding an agreement with Denmark to permit U.S. forces to occupy Greenland and establish bases there. The following day Churchill was advised America would be extending a security zone across the Atlantic. A gallop poll in June showed a clear majority of Americans now favored armed convoys to protect vessels carrying goods to Britain, however, 81 percent opposed America's entry into war.

On June 22, 1941, the war took a decisive turn. Without warning Hitler launched Operation Barbarossa, an invasion of his recent ally, the Soviet Union. Churchill responded with immediate support for the Soviet Union even though he was an opponent of Communism; Roosevelt followed Churchill's lead, although he was no more fond of Communism than Churchill. The military advised the White House that the Germans would sweep across Russia in one month, three at the most. Roosevelt decided to send Hopkins to meet Stalin and observe the situation first hand; Hopkins returned impressed with the Soviets resolve. FDR brushed aside the war department and the diplomats and invited the Soviet ambassador to the White House, asking for a list of items the United

States might supply to the Red Army. Within a week the Soviets submitted a detailed request of armaments totaling \$1.8 billion. Shortly thereafter, FDR formally declared the defense of the Soviet Union vital to the defense of the United States, making Russia eligible for aid under the Lend-Lease Act.

Churchill continued to press FDR for a declaration of war against Germany. Roosevelt replied by expediting the shipment of planes and tanks and requested another \$5 billion for Lend-Lease. Together they sent a joint message to Stalin pledging further assistance, and in the event of war in the Pacific, agreed to a "Hitler first" strategy. Meanwhile Congress grappled with an extension of the draft. The Selective Service Act of 1940 required inductees to serve for twelve months, and for many men, their service was about to expire. As a result, Congress extended the term of service an additional eighteen months. Passage of the draft extension act prevented the dismantlement of the Army on the threshold of war.

Roosevelt was consumed by the war in Europe: his relations with Europe, Lend-Lease, aid to Russia, and the struggle in the Atlantic. The military leadership shared FDR's concern. As a consequence, the deteriorating situation in the Pacific received less attention from FDR; unfortunately, discussions with Japan were handled by the State Department, and subordinate commanders saw little urgency. With Russia at bay with the Germans, Japan saw an opportunity to move south against Burma, Malaya, and the Dutch East Indies for oil; during that period of time Japan was dependent upon the United States for oil and gasoline. With limited Naval capacity, Roosevelt believed it was terribly important to keep peace in the Pacific in order to control the Atlantic to get armaments to Britain and Russia. In a memorandum to the Navy department, FDR emphasized the importance of the Battle of the Atlantic and suggested the Japanese were unlikely to move beyond Indochina if the United States did not cut off the flow of oil; Roosevelt did not want to risk war in the Pacific with Japan. In response to Japan's invasion of Indochina on July 23, Roosevelt announced a freeze of Japan's assets, requiring an application for an export license to release funds; FDR made it clear that oil was to be excluded from the freeze. Regrettably, the hawkish Acheson was put in charge of the freeze with Japan while FDR was out of the country. Acheson asserted the freeze order was imprecise and refused to thaw Japanese funds for any purchase whatever, including oil; the embargo on oil stunned the Tokyo government! FDR learned of the freeze on oil when he returned from Newfoundland, and by then was too late to reverse policy. On September 6, 1941, the Japanese government met with the emperor, who desperately sought to prevent war, and was given a month to negotiate a settlement with the United States. The president had given Secretary of State Hull a very free reign in dealing with the Japanese, although he gave him strict instructions to not let the talks deteriorate; Hull and the cabinet were inclined to support China regardless of the strategic consequences. At one point during the negotiations with Japan, Roosevelt also scribbled some conciliatory negotiating points to Hull to offer the Japanese; be that as it may, it is not known if FDR's lenient stance was ever presented by Hull to the Japanese. Negotiations with Japan terminated after an agreement failed on November 29th. Two weeks prior to December 7, the nine military and naval commanders in the Pacific received repeated warnings of pending hostile action by Japan. Seven of the commanders, including General MacArthur in the Philippines, put their commanders on a war footing; Hawaii was the only exception as neither Admiral Kimmel nor General Short took Washington's war warnings seriously. Attacks commenced as expected at Pearl Harbor, Oahu, Hawaii, as well as seven other locations in the Pacific, were attacked on the morning of December 7, 1941; the damage to the unprepared fleet at Pearl Harbor was appalling. FDR asked Congress for a declaration of war against Japan the next day and Congress acted within thirty-three minutes with a unanimous vote. Germany and Italy responded by declaring war against the United States on December 11th; FDR forced both Admiral Kimmel and General Short, the commanders in Hawaii, into retirement. Historians cite the possibility Japan would have never attacked Pearl Harbor and, therefore, the United States would have never entered the war with troops, if Acheson did not freeze Japan's oil against FDR's instructions or Roosevelt had negotiated with Japan rather than Hull.

As soon as the Japanese attacked Pearl harbor, Churchill decided it was essential for him to meet Roosevelt; Churchill arrived at the White House on December 22. The meeting produced an agreement on a "Germany first" strategy. FDR and Churchill also established a plan for an Anglo-American invasion of North Africa for later in the year. On New Year's Day, 1942, twenty-six nations led by the United States, Great Britain, the Soviet Union, and China, affixed their signatures to a document drafted by FDR pledging cooperation in the defeat of the Axis powers; Roosevelt coined the term "United Nations". In February of 1942, Roosevelt approved Executive Order 9066, authorizing the forcible evacuation of persons of Japanese ancestry from the Pacific coast of the United States. The order applied to forty thousand first generation immigrants who were debarred from citizenship by the Immigration Act of 1924, as well as to their children, some eighty thousand U.S born citizens. The Japanese were forced to liquidate their property at fire-sale prices at estimated losses totaled \$5 billion in current dollars.

In May of 1942, while the United States successfully defeated the Japanese at the Midway Islands in the Pacific, Russia was experiencing huge losses of troops, tanks, and artillery to the Germans. Russian foreign minister Molotov arrived in Washington May 29, to plead for more assistance; Molotov wasted little time in niceties. As soon as he met FDR in the Oval Office, he strongly expressed the need for a second front from the United States. He expressed the balance of the troops were in favor of the Germans and if the United States and Britain could mount a cross-channel attack, it would drain away forty German divisions. Roosevelt and General Marshal originally told Molotov yes to a cross-channel crossing in 1942, but Churchill later explained to Stalin why that was not possible. Churchill and the American joint Chiefs presented a case to Roosevelt that a cross-channel invasion could not be successfully deployed that early. Roosevelt needed little convincing and proceeded instead to order the invasion of French North Africa for November of 1942. To lead the North African invasion Churchill diplomatically suggested an American be named, and General Marshal chose Dwight Eisenhower.

In January of 1943, Churchill and Roosevelt met again at Casablanca. Everyone was confident Hitler's defeat in Africa was just a matter of time. The problem for Churchill and Roosevelt was the next step: Marshal argued for a cross-channel attack, Admiral King pressed the Navy's case for the Pacific, and the British insisted on the invasion of Sicily, Italy. The battle of the Atlantic had not yet been won, and Eisenhower, who had first-hand experience landing in North Africa, noted that the forces in Europe could not be assembled until 1944. Churchill and Roosevelt settled on a decision to attack Sicily. On July 10, 1943, Allied forces invaded Sicily in the largest amphibious operation to date. Roosevelt captured headlines around the world when he appeared on the lawn at Casablanca to make the following statement: "The elimination of German, Japanese, and Italian war powers means the unconditional surrender by Germany, Italy, and Japan. That means reasonable assurance of world peace. It does not mean the destruction of the population of Germany, Italy, and Japan, but it does mean the destruction of the philosophies in those countries which are based on conquest and the subjugation of other people". Roosevelt's "unconditional surrender" policy was deliberately announced at Casablanca to aid allied morale, assure Stalin that there would be no separate peace with Hitler, and confirm that Germany's defeat would be complete.

Roosevelt and Churchill met again in Washington in May, 1943, to wrestle with the problem of what to do after the conquest of Italy. Churchill and the British chiefs sought to press on from Italy and hit Germany from Europe's soft underbelly in the south. Roosevelt and the American chiefs of staff wanted to go at Hitler directly with a quick cross-channel attack. After two weeks of debate, the decision was reached to mount a cross-channel attack into France in May of 1944.

In August of 1943 at the Quebec conference, Churchill and Roosevelt discussed the logistics of the cross-channel attack and the Normandy landing in detail. Roosevelt also raised the question of Germany's surrender; they discussed the importance of capturing Berlin and how to carry out the reorganization of Europe; they also discussed the atomic bomb. When Albert Einstein ar-

rived in the United States in 1933, he and Roosevelt dined at the White House and conversed in German. When Einstein warned of the destructive power of nuclear fission, Roosevelt listened. When Einstein said evidence suggested the Germans were already at work on a nuclear weapon, the president took action. Following receipt of a letter from Einstein in October, 1939, FDR authorized preliminary research on a nuclear bomb, however the work proved unpromising well into 1941. Meanwhile, British scientists, working independently, concluded that if more resources were devoted to the project the first weapon could be ready by late 1943. After reviewing the British findings, FDR expedited the research for an atomic bomb in April 1941. In December, 1942, Enrico Fermi, an Italian Nobel laureate who fled to the United States after Italy enacted Nazi Jewish racial laws, attained a sustained chain reaction in his Chicago laboratory. This established the reality of an atomic bomb, which until then had been merely a theoretical prospect. Both Germany and Japan discontinued its efforts in 1943.

Speaking to the nation in a fireside chat, FDR focused on the return of our gallant men and women in the armed forces back into civilian life; they must not be demobilized into an environment of inflation and unemployment. FDR asked Congress for a massive program of education and training of returning servicemen - soon to be known as the GI Bill of Rights. The president's message to Congress requested federal support for college and vocational training for every returning veteran for up to four years. Generous unemployment insurance, job counseling, enhanced medical care, as well as low-cost loans for buying homes and farms was also included in the benefits. The GI Bill passed both houses unanimously and was signed into law June 22, 1944.

Prior to Roosevelt's first meeting with Stalin in Teheran, the subject of post-war Europe was discussed between FDR and General Marshal. FDR reached for a map of Germany and penciled in demarcation lines. FDR said the United States should have Berlin and northwest Germany including the ports of Hamburg, Bremerhaven, Lubeck, and Rostock, the Russians would hold a smaller zone to the east of Berlin, and the British were relegated to Bavaria and the Black Forest.

The president had come to Teheran in November, 1943, determined to strike up a working relationship with the Soviet leader. Stalin was in many ways the most effective war leader of the three; at the same time, of course, he was a murderous tyrant. The issue FDR wanted to discuss with Stalin were political, and the president steered his own course; FDR did not like rules, regulations, or a formal agenda as he preferred to work by improvisation rather than by plan. The conversation focused on the postwar period. Stalin believed Germany should be dismembered. Churchill said he was primarily interested in seeing Prussia - the evil core of German militarism - separated from the rest of Germany. Churchill also raised the question of Poland; he suggested moving Poland's border west and the Soviet Union would retain what it took in 1939. FDR met with Stalin privately and said he did not object to moving Poland's border west, but he could not endorse it until after the election. The principal issue at Teheran was the second front. To support the landings in Southern France, Stalin pledged a simultaneous Soviet offensive to pin the Germans down on the eastern front and prevent the transfer of any divisions to the west. Stalin turned to Roosevelt asking, "Who will command Overlord (code name for the cross-channel crossing)? The president was caught off guard. It was widely assumed General Marshal would be named, but FDR had second thoughts. FDR told Stalin no decision had been made. "Then nothing will come out of these operations," said Stalin. Stalin confirmed Russia would join the war against Japan once Germany was defeated, but the Soviets expected the allies were going to land in France to divert German troops to the west. Stalin concluded by toasting the president and the people of the United States.

The president left, promising both Churchill and Stalin to name a commander of Overlord within one week. There was good reason for FDR to hesitate. General Pershing, who knew both Marshal and Eisenhower, wrote the president from his hospital bed to caution against transferring Marshal to Europe. Both the command structure in Washington and the command structure in Europe were working well, said Pershing. "It would be a fundamental and very grave error in our military policy to break up working rela-

tionships at both levels." Roosevelt had taken Eisenhower's measure during the two days he spent in Northern Africa and liked what he saw. Ike had proved his ability to command large multinational coalitions in battle, had defeated the Germans in North Africa and Sicily, and worked well with the U.S and British high commanders. FDR had come to believe that Eisenhower might actually be a better fit to head the cross-channel attack, although the job was Marshal's if he wanted it; FDR asked Marshal what he wanted to do. Marshal replied that it was the president's decision to make. Marshal added he would cheerfully go whatever way he wanted him to go. "Then it will be Eisenhower," said Roosevelt. The president immediately dictated his decision to Stalin. The selection of Eisenhower as supreme commander in Europe was the last major military decision Roosevelt was required to make. More than any other president, FDR was uniquely able to select outstanding military leaders and give them discretion to do their jobs. In the Pacific, FDR turned to Mac Arthur over the war departments objections.

In December of 1943, FDR was lonely. Missy, his companion for twenty years, languished stroke-ridden at her sister's home in Massachusetts; Louis Howe, his longtime political ally, had been gone for a decade; and Hopkins had moved out of the White House; luckily, his daughter Anna filled the void. Roosevelt asked her to move into the White House with her children for the duration of the war, which she did.

The deterioration of Roosevelt's health became evident in February and March of 1944. FDR would often fall asleep, and in March his temperature reached 104 degrees. Admiral McIntire had been treating the president for years but now asked Lieutenant Bruenn, the staff consultant in cardiology, to examine FDR. The conclusion was obvious to Bruenn - Roosevelt was suffering from congestive heart failure; his heart was no longer able to pump blood effectively, and if it continued untreated, the president was unlikely to survive for more than one year. McIntire doubted FDR had a heart condition, rejected the diagnosis, and let Roosevelt continue his daily routine. With no improvement by FDR, McIntire finally agreed to let two outside consultants examine the president. They both agreed with Bruenn and believed FDR's condition was sufficiently serious that he should be informed of the full facts of his health. McIntire rejected the suggestion, preferring not to tell the president of the diagnosis. The president was, however, placed on a new regiment for his health and examined daily by Dr. Bruenn.

One of the pressing issues Roosevelt returned to confront was the crisis of European Jewry as Hitler's campaign of genocide was now in full swing. Few had yet grasped the extent to which mass extermination was being conducted in death camps throughout Europe. It was becoming increasingly clear that the problem Washington faced was rescuing an entire population caught in the Nazi death machine. From the beginning of FDR's presidency, he faced insurmountable obstacles. The immigration act of 1924, which limited immigration of a country to 2 percent of the number of people from that country who lived in the U.S per the 1890 census, was unyielding, and the seventy-eighth Congress was in no mood to consider changes for the Jews. Public opinion was indifferent; church leaders remained silent; the state department was permeated with genteel anti-Semitism; the war department resisted any diversion of troops from the central effort to defeat Germany. Hitler's "final solution" had been launched with the utmost secrecy on January 20, 1942. By December of 1942, a delegation from the Vatican and Jewish organizations presented the president with a twenty-page summary of the extermination data. Roosevelt received world-wide press denouncing the German's intentions, but given the fact U.S and British troops had yet to land on the continent of Europe, there was little that could be done. On January 22, 1944, FDR signed Executive Order 9417, establishing a War Refugee Board to take all measure possible to rescue victims of enemy oppression. Aside from the fact the president never intervened in military tactical matters, he firmly believed that the most effective way to save the Jews from Hitler was to defeat Germany as quickly as possible.

The Democratic National Convention in 1944 was a fight over the vice-presidency, not the presidency and FDR recognized the problems Vice President Wallace posed. Party leaders recognized they were choosing a president, not a vice president and they

were determined to dump Wallace for Truman. . Roosevelt did not attend the 1944 presidential convention and won the nomination on the first ballot 1,086 - 89. During the summer of 1944, FDR sailed to Pearl Harbor to discuss the strategy of the war in the Pacific with MacArthur.

Roosevelt's health took a decided downturn after the election. Two days after the inauguration Roosevelt departed for a rendezvous with Churchill and Stalin at Yalta, a Soviet resort town on the Black Sea. The big three met eight times in eight days, usually for three to four hours; as had become customary, FDR presided. The conference began with a review of the military situations as the war in Europe was slowly winding down. The conference reached a quick agreement on the occupation of Germany. The country would not be dismembered, as had been suggested in Teheran, and France would be added as an occupying power. A figure of \$20 billion was discussed for reparations, with the Russians entitled to 50 percent, however no firm agreement was reached. Arrangements for the trial of major war criminals was handed off to the three foreign ministers. In a major breakthrough, Stalin accepted FDR's proposal for voting procedures on the United Nations Council. The issue of postwar Poland proved the most contentious; since the Red Army occupied the entire country and had already installed a pro-Soviet government, the situation was fundamentally out of Roosevelt's and Churchill's control, however Stalin did agree to free elections. With the Polish issue in place, Roosevelt met privately with Stalin to arrange Russia's entry into the war against Japan for which agreement came quickly. The atomic bomb had yet to be tested, and whether it would be available was problematic. If Japan had to be invaded, the Joint Chiefs estimated it would cost a million American casualties. FDR saw the agreements with Stalin as a major victory. On March 1, 1945, Roosevelt made a dramatic, hour long appearance before a joint session of Congress to report on the Yalta Conference.

Shortly before one o'clock on April 12, 1945, the butler came in to set the table for lunch, FDR glanced at his watch and said, "We have fifteen more minutes to work." Then suddenly he put his hand to his head and said, "I have a terrific pain in the back of my head." FDR slumped forward and collapsed never regaining consciousness; at 3:35 the president was pronounced dead. FDR's declining health had not been known to the general public and his death was met with shock and grief across the U.S. and around the world.

On the morning of April 13, Roosevelt's body was placed in a flag-draped coffin and loaded onto the presidential train. After a White House funeral on April 14, Roosevelt was transported back to Hyde Park by train. As was his wish, Roosevelt was buried in the Rose Garden of the Springwood estate, the Roosevelt home in Hyde Park on April 15. Less than a month after his death on May 8, the war in Europe ended. President Truman dedicated Victory in Europe day and its celebrations to Roosevelt's memory, and kept flags across the U.S. at half-staff for the remainder of the thirty - day mourning period.

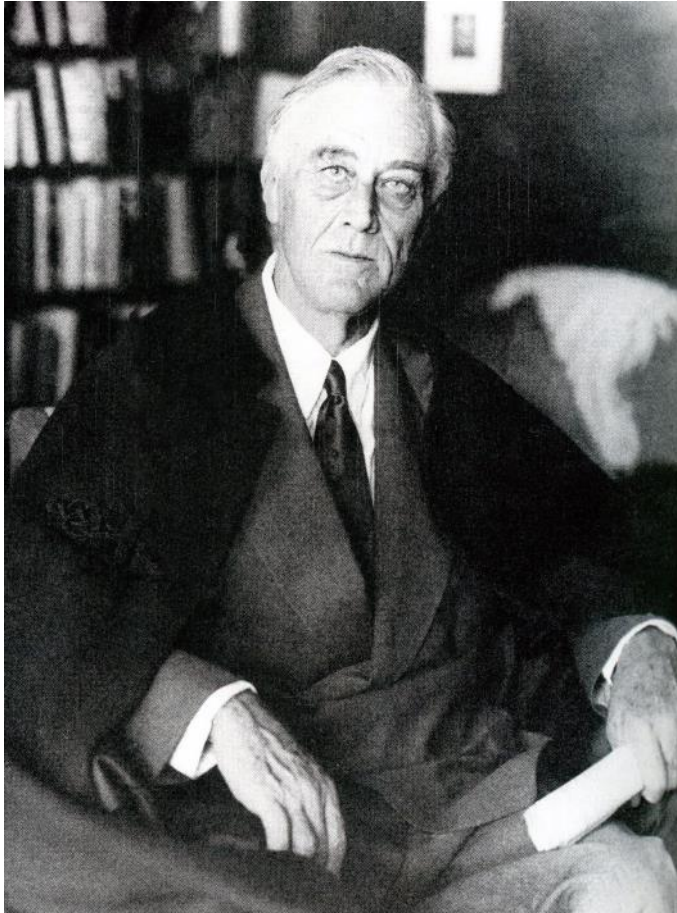


Stalin, Roosevelt, and Churchill at their first meeting in Teheran, November 30, 1943



Churchill, Roosevelt, and Stalin in February, 1945, at their final conference at Yalta





The last photograph taken of FDR on April 11, 1945.



A caisson drawn by six white horses brought Roosevelt's casket from Union Station to the White House , where the president lay in state before a funeral service.

## The Forties

In 1940 the United States population was 132,122,000 and the average worker earned \$1,299 per year. The price of a dozen eggs was 33 cents, one quart of milk 13 cents, and a loaf of bread 8 cents. The average life expectancy was 60.8 years for a male and 68.2 years for a female. 80 million people attended movies weekly. The GNP of the U.S was \$99.7 billion, the federal budget \$13.2 billion, and the national debt \$43 billion. In 1940 the Dow reached a high of 152, GNP was growing at 10% annually, inflation was scant 0.4%, but unemployment remained stubbornly high at 14.9%.

The first years of the decade were the darkest in modern times. A savage and militarily awesome German dictatorship conquered most of western Europe and put England under furious aerial bombardment. Russia was invaded, and Moscow and Leningrad came under siege. A militarist government came to power in Japan, and on the infamous day of December 7, 1941, the Japanese launched a surprise air attack on the American naval base at Pearl Harbor, Hawaii, and mounted swift, massive invasions throughout Southeast Asia, including the Philippines. Congress declared war, and the United States "isolationist period" abruptly ended. At home, the war became a calling - loud, clear, and pure; with the vast needs for swift armaments production and manpower, employment ceased to be a problem: women worked in factories, people from every social spectrum signed up, labor and management agreed to keep peace, and even children helped by planting Victory Gardens that sprouted everywhere. With austerity a wartime necessity, consumer deprivation afforded a badge of honor.

Roosevelt, elected for a fourth term in 1944, did not live to see the final victory; in April, 1945, the beloved president dies. Harry Truman, the feisty Missourian who succeeded FDR, accepted Germany's unconditional surrender in June 1945, before facing one of history's epochal decisions. On August 6, Truman deployed a weapon secretly developed during the war at FDR's directive: an atomic bomb was dropped on Hiroshima, Japan, and three days later, a second bomb was dropped on Nagasaki convincing Japan to surrender unconditionally.

The postwar period was frenzied by rapid demobilization of the troops: in 1946, there were 35,000 military discharges a day. A mania developed for such consumer items as beef, ice cream, alcohol, cars, and toys; tickets for sporting events and theater were in short supply; housing was at a premium. As workers sought higher wages and business higher profits, the relations between labor and management were strained. Massive strikes and inflation followed, and black markets developed; consumer goods remained in short supply while factories retooled for peacetime production. In the meantime, millions of veterans took advantage of the GI Bill to educate themselves, start businesses, buy homes, and have families.

Throughout the decade, radio remained an important news and entertainment medium. At the very end of the decade, a new medium developed, television, which went in to mass production in the 1950's. Sports audiences soared beyond 1920's levels. The great story of the decade, however, went beyond sports when Jackie Robinson became the first black in organized professional baseball. This was an era when many of the big bands broke up and lead singers went out on their own; one such example was Frank Sinatra who became a phenomenon as a bobby-sox idol.

On the international scene, America was determined not to isolate itself again, and led in the formation of the United Nations. The Second World War had changed the order of world power, and the former dominance of Western Europe was ended. Once again, however, victory in a world war had not brought an easy peace, and the two remaining great powers, the United States and the USSR, though wartime allies, soon clashed over the fate of Berlin and West Germany, Poland, Czechoslovakia, China and Greece. Thus, began the "cold war." America's involvement in world affairs went further the ever before. With severe economic conditions on the European continent and widespread food shortages, America took a number of steps by sending large amounts of money and

food abroad. Truman provided arms assistance to rebellion-torn countries like Greece. This was followed by the Marshal Plan, which gave economic aid to Western Europe, including Germany. America thus became deeply committed to helping the "Free World" stay free from poverty and totalitarian forces.

At home, in 1946, the Republicans took control of Congress and then united against Truman's efforts to extend the New Deal reformation. Civil rights and housing legislation was vetoed and the Taft-Hartley Act restricted labor. By 1948, everyone was certain that the Republicans would take the White House; Truman's surprise victory, however, will undoubtedly remain one of the nation's great political upsets. Conservative forces were, nevertheless, gaining in support, and with the advance of Communism abroad came fears of internal subversion. By the end of the decade, Czechoslovakia and China had fallen to Communist forces, and Russia had the atomic bomb.

## Events of 1940

FDR asks Congress for a record \$1.8 billion in military spending; defense plants spring up throughout the United States with seven-day, round-the-clock workweeks to ship armaments to Europe.

The economy flourishes with GNP growing at 10 percent. In one of the auto industry's best years, the average car costs \$1,200; gasoline cost 14-19 cents a gallon.

The Selective Training Act is passed, and 16,313,240 men receive registration cards for the first peacetime draft.

The first Social Security checks total \$75, 844; the first recipient receives \$22.54.

The NAACP denounces the army's policy of separate units for blacks and whites. FDR is nominated for a third term.

## Events of 1941

The draft is extended; all men ages 18 to 65 must register; those 20 to 44 may serve.

FDR freezes Axis funds in the United States. After Germany invades Russia, the U.S gives Russia \$1 billion in armaments for lend-lease.

FDR secretly orders the Manhattan project to develop the atomic energy.

The Japanese attack Pearl Harbor, Hawaii on December 7th - 1,500 civilians and 2,800 enlisted men are killed.

## Events of 1942

FDR asks for a \$58 billion budget for defense, asking for 60,000 planes and 45,000 tanks. Thousands join the nation's industries that call for more workers.

Unemployment falls to 4.9 percent.

400,000 U.S. and British forces under Eisenhower land in North Africa.

## Events of 1943

Unemployment fell to 1.9 percent while GNP soared to +21 percent.

"Pay as you go" income tax begins as 20 percent is withheld from payroll checks.

The American and Allied forces land on the beaches of Italy. Eisenhower is named commander of the allied European forces.

Rubber, metal, tin, nylon, silk, paper, meat, coffee, cheese, bread, butter, flour, shoes, and many consumer products are rationed. With the scarcity of goods and the booming economy, long lines develop at grocery stores, movies, bars, and restaurants.

## Events of 1944

The Allies launch D-Day, a massive assault on the beachhead of Normandy, France.

FDR is reelected to a fourth term as president of the United States.

## Events of 1945

FDR, Churchill, and Stalin meet at Yalta to make post-war plans.

FDR dies of a cerebral hemorrhage at Warm Springs, Georgia. Harry Truman is sworn in as president.

Germany surrenders unconditionally.

After leaflets are dropped warning Japan of terrible destruction, an atomic bomb is dropped on Hiroshima, Japan by the U.S. A second atomic bomb is dropped on Nagasaki before Japan unconditionally surrenders.

Penicillin, recently developed and administered to the armed forces, becomes available to the civilian population.

There is a shortage of 4,700,000 homes for families in the U.S. after the war.

The Department of Agriculture reports that 20 million tons of food are needed to feed Europe.

## Events of 1946

The relations between labor and management become strained; 200,000 strike at General Electric, 750,000 steel workers strike, 400,000 coal miners strike, and Truman orders the railroads seized if rail workers strike.

Prices soar and are up 33 percent since 1941.

The birth rate increases 20 percent over 1945.

The first 10 inch televisions from RCA sell for \$374.00.

Blacks vote for the first time in the Mississippi Democratic primary.

## Events of 1947

Truman orders a loyalty investigation of all federal employees to test for communist sentiments.

Inflation increases to 8.4 percent.

Through the GI Bill, college enrollment rises to an all-time high of 6.1 million students.

Jackie Robinson, the first black in professional baseball, is refused hotel rooms in numerous cities.

## Events of 1948

The U.S Congress appropriates \$5.3 billion to implement the Marshal Plan to rebuild and feed Europe.

Conflict erupts between Communist Russia and the U.S. over Berlin: Russia bans all land traffic as U.S airlifts in supplies to the German population.

Truman is elected to a second term in a giant upset victory over Thomas Dewey.

Captain Charles Yaeger breaks the sound barrier in a rocket powered X-1 at 35,000 feet.

A new hydrogen fuel for rockets is announced.

Truman orders racial equality in the armed forces.

Inflation statistics during the forties show a house costing \$4,440 in 1939 is now \$9,060; clothing is up 93 percent, food 129 percent, and home furnishings 93 percent.

## Events of 1949

NATO is created.

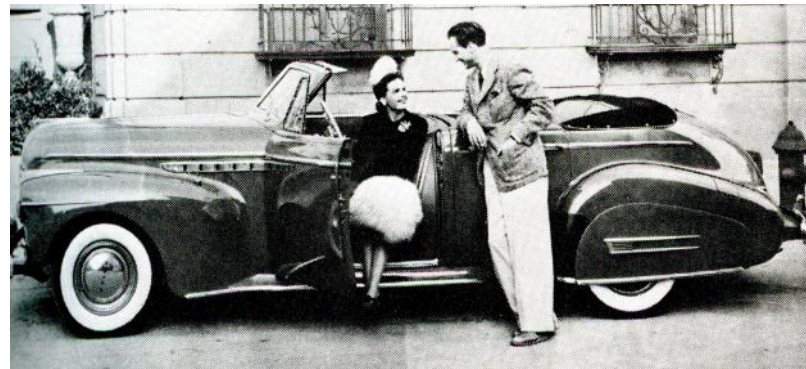
Chiang Kai-Shek and Chinese Nationalists have lost power to Communists led by Mao Tse-tung.

Russia develops an atomic bomb.

A U.S. two-stage rocket soars to a record 250 miles at 5,000 m.p.h.

The post-war baby boom levels off with 3.6 million births.

The minimum wage rises from 40 cents to 75 cents an hour.





## World War II

The Second World War involved the vast majority of the world's nations - eventually forming two military alliances: The Allies and the Axis. It was the most widespread war in history, and directly involved more than 100 million people from over 30 countries. In a state of "total" war, the major participants threw their entire economic, industrial, and scientific capabilities behind the war effort. An estimated 70 to 85 million deaths resulted from the war.

Some historians argue that the Second World War began in 1931 with the Japanese invasion of Manchuria. The terrible effects of the First World War had left France and Britain, the principal European victors, exhausted and determined at any price not to repeat the experience. Americans, after their vital contribution to the defeat of Imperial Germany, wanted to wash their hands of the corrupt Old World. In the view of the WWI German soldiers, the mutinies and revolts within Germany in the autumn of 1918, which precipitated the abdication of the Kaiser, had been caused entirely by Jewish Bolsheviks; however, the more likely reason for the unrest had been war-weariness and hunger. German nationalists dreamed of the day when humiliation of the Versailles treaty could be reversed as the treaty caused significant territorial, colonial and financial losses. Under the treaty, Germany lost 13 percent of its home territory and all of its overseas possessions, reparations were imposed, and limits were placed on the size of the military. However, life did improve during the second half of the 1920's in Germany, mainly due to American loans. But the world depression, which began after the Wall Street crash of 1929, hit Germany even harder. American loans ceased, and protectionism cut off the German export market. This led to massive unemployment, which dramatically increased the opportunity for demagogues promising radical solutions. In this new collectivist age, violent solutions appeared supremely heroic to both the political left and right. In the face of financial disaster, the authoritarian state suddenly seemed to be the natural modern order throughout most of Europe. In September, 1930, the Nationalist Socialist Party, which had little respect for democracy, opened the door for Hitler. In January, 1933, Hitler became Chancellor and moved rapidly to remove all potential opposition.

Hitler managed to appeal to the populations worst instincts: resentment, intolerance, arrogance, and racial superiority. As soon as Hitler had consolidated his power with the abolition of democracy and mass imprisonment, he turned his attention to breaking the Treaty of Versailles: Hitler expanded the German navy and air power (the Luftwaffe), conscription was reintroduced in 1935, and in 1936 German troops reoccupied the Rhineland in an overt breach of the Versailles Treaty. Cowardly, the French and British made no serious protest to Germany's rearmament. While rearmament lifted the German economy and halted the rise in unemployment, the brutality and loss of freedom seemed to most Germans a small price to pay. Hitler's forceful seduction of the German people began to strip the country of human values, step by step. Nowhere was the effect more evident than in the persecution of the Jews. At this time, the Nazi policy was aimed at stripping the Jews of civil rights and everything they owned, and then through humiliation and harassment to force them to leave Germany.

Hitler's program was to make Germany the dominant power in Europe. First, he would unite Germany and Austria, then he would bring Germans outside the borders back under its control. Hitler was not interested merely in reoccupying the territory lost by Germany after the Versailles Treaty, he wanted the whole of central Europe and all of Russia up to the Volga River to secure Germany's self-sufficiency. The "bread-basket" of Ukraine especially attracted German interest, especially after the near starvation caused largely by the British blockade during WWI. But one of the main purposes of his plan was to seize the oil in the east; some 85 percent of Germany's oil, even in peacetime, had to be imported. Hitler's ambition was far greater than that of other nationalists. In line with social-Darwinist belief that life was a struggle for racial mastery, he wanted to reduce the Slav population through deliberate starvation and to enslave the survivors.

Eager to obtain another ally, Hitler established the Anti-Comintern Pact with Japan in November, 1936. Profiting from the decay of the Chinese imperial regime, Japan established a presence in Manchuria, seized Formosa (Taiwan) and occupied Korea. As anti-Western feelings grew in Japan with the effects of the Wall Street crash and the worldwide depression, an increasingly nationalistic class viewed Manchuria and China in a similar way to the Nazis' designs on the Soviet Union: as a land mass and a population to be subjugated to feed the Japan home islands. In 1937, Japan captured the former Chinese imperial capital of Beijing, and by December the capital of Nanking. After the fall of Nanking, hundreds of thousands of Chinese civilians and disarmed combatants were murdered by the Japanese. Japan's aggressions left it isolated diplomatically, but the country exulted in its triumph. This marked the start of a fateful progression, both in foreign military expansion and in military influence over the civilian government in Tokyo. The Japanese military began to eye their Soviet neighbor to the north and cast glances south into the Pacific; their targets were the Far Eastern colonies of Britain, France and the Netherlands, with the oil fields of the Dutch East Indies.

In March, 1938, Germany annexed Austria, again provoking little response from other European powers. The British and French were horrified by the idea of another European war; to allow Nazi Germany to annex Austria appeared a small price to pay for peace. Encouraged, Hitler began pressing German claims on the Sudetenland, an area of Czechoslovakia with a predominantly German population that was folded into Czechoslovakia after World War I. Rather than invading Czechoslovakia, as Hitler had planned, the Munich negotiations with France and Britain offered him the Sudetenland in the hope of preserving peace and Hitler avowed to no further territorial ambitions. The Munich agreement lost Czechoslovakia one-third of its population and land, plus its most important industrial area. Roosevelt viewed the Munich agreement with mixed feelings, but with an army of 185,000 men, the United States was essentially unarmed. The U.S was also diplomatically isolated and divided over what its role in the world should be.

Crystal Night, November 10, 1938, helped solidify American opinion against Hitler. On November 7, Herschel Grynszpan, a seventeen-year-old Polish Jewish refugee, assassinated the third secretary of the German embassy in Paris as a protest to the expulsion of ten-thousand Polish Jews from Germany, without notice or legal recourse. In response, the Nazi leadership ordered a night of vengeance. German troopers burned nearly 200 synagogues, 7,500 shops were looted after windows were broken, and countless homes were destroyed; twenty thousand Jews were arrested and sent to concentration camps. By government decree, German insurance companies were absolved of any liability. All Jewish retail establishments were closed while Jews were barred from attending schools and universities, denied admission to theaters, and prohibited from driving.

## 1939

Hitler's seizure of the rest of Czechoslovakia in March of 1939 was a flagrant contravention of the Munich Agreement. When he marched into Prague, Hitler destroyed the last remaining illusion that his ambitions were limited. Britain and France, outraged, guaranteed their support for Polish independence as a warning to Hitler against further expansion. On August 23, 1939, Germany and the Soviet Union signed the Molotov - Ribbentrop Pact, a non-aggression treaty. The agreement gave each country rights to spheres of influence to conquered territory (western Poland and Lithuania for Germany; eastern Poland, Finland, Estonia, Latvia, and Bessarabia for Russia). Hitler, reassured the pact with Russia would eliminate the fear of war on a second front, and convinced the British and French would not fight, ordered an attack on Poland three days after the pact with Russia. At the last minute, Hitler was taken off balance by Britain and France's resolution to support Poland and postponed the attack. While pretending to negotiate with Britain, France, and Poland, Hitler's SS carried out a series of fake attacks disguised to be Polish attacks against German border custom posts. In the early morning hours of September 1, German forces crossed the Polish border with 1.5



million troops and 200,000 vehicles. Only about one-third of Poland's 1.3 million badly armed soldiers were in position. After a British ultimatum to Germany to cease military operations was ignored, on Sunday, September 3, Britain declared war against Germany; five hours later France followed suit.

The Polish army, although fighting with desperate bravery, was severely handicapped with obsolete weaponry and lack of radios. In central Poland resistance hardened as the Germans came closer to the capital. Regardless of Polish bravery, once intensive bombing raids continued at maximum strength, Warsaw surrendered on October 1; the stench from corpses buried by rubble became overwhelming from some 25,000 civilians and 6,000 soldiers killed in the bombing raids. Any remaining illusion of being saved by an allied offensive in the west was soon dashed. Britain felt that time was on their side, and a naval blockade of Germany to damage their economy and war effort was their best strategy. Germany responded by ordering U-boat warfare against Allied merchant ships, which was to escalate into the Battle of the Atlantic.

On September 17, Poland's martyrdom was sealed when Soviet forces crossed its long eastern border. By the end of the year some 65,000 civilian Poles and Jews were killed as German militia massacred civilians into gravel pits. Over 500 villages and towns were torched; 70,000 Polish armed forces were killed and 700,000 captured and sent to concentration labor camps. Shortly after Warsaw fell on September 27, Hitler announced a peace offer. When the British and French rejected the offer, Hitler decided to destroy Poland completely and a massive program of ethnic cleansing was begun: Polish cities were renamed, priests were arrested and deported, schools and universities were closed, Polish political prisoners were sent to a concentration camp renamed Auschwitz, Nazi party officials began selecting large numbers of Poles for labor camps and women to work as domestic servants, inmates of mental asylums were machine-gunned, and aristocrats, judges, journalists, professors, and anyone who posed a threat of leadership was captured and killed. Hitler's order for Euthanasia was responsible for more than 100,000 mentally and physically disabled Germans and Poles being killed; in Poland the victims were shot in the back of the head or sealed in trucks with the exhaust fumes piped in.

An order was issued laying down preliminary measures for dealing with Poland's Jewish population, which totaled about three and a half million before the invasion; a massive movement of population was envisioned. On October 30, Hemmler gave instructions that all Jews were to be forcibly transported. No plan had been made to house or feed the hundreds of thousands of Jews and displaced Poles who were the victims of forced migration. In theory, those Jews fit enough would be used for forced labor while the rest would be confined to temporary ghettos in the larger cities until they could be resettled. Jews trapped in the ghettos, deprived of money and with little food, were in many cases left to die of starvation and disease.

While the looting, killing, and chaotic conditions in Nazi-occupied cities made life appalling, it was scarcely better for Poles on the Soviet controlled side. Within twenty days of occupying Poland, Stalin ordered the arrest, torture, and execution of 143,000 Poles for espionage while mass deportations to Siberia began on February 10th of the following year. The first wave of 139,000 Polish civilians were rounded up at gun point by Russian rifle regiments who would rouse the families with banging rifle butts on the door; soldiers would barge in at gun point yelling, turning over beds, and searching cupboards for weapons; the families were given very little time to prepare for the terrible three-week journey as they were forced to abandon their homes and farms for good. Stalin wasted little time imposing its so-called "treaties of mutual assistance" on the Baltic States where Estonia, Latvia, and Lithuania allowed the Soviets to station troops in their countries; defiantly, Finland rejected these territorial demands and consequently, on November 13, Stalin invaded Finland. The Finns, with fewer than 150,000 reservists and teenagers, faced Red Army forces over one million strong; the Finish forces fought bravely but finally buckled in February of 1940.

In China, Chiang Kai-shek presided over a Nationalist movement to industrialize China, modernize the military, build roads, and

improve agriculture. While trying to deal with civil war with the communists in southern and central China, Chiang could do little to stem Japanese threats in the northeast. Before an agreement between the Nationalists and Communists could be signed to form a common front against the Japanese, Japan and the Chinese clashed at Marco Polo Bridge, south-west of Peking on July 7, 1937; this incident started the main phase of the Sino-Japanese war. On August 13, Japan attacked Shanghai with nearly 200,000 troops; during three months of fighting the Chinese suffered 187,000 casualties. The world was appalled at the massacres and mass rapes the Japanese soldiers inflicted on the population of Shanghai as accounts of civilian casualties mounted to 200,000. The scenes of massacre were hellish, with corpses rotting on every street and open space; every pond, stream, and river was polluted with decomposing bodies. Thousands of young women were carried off against their will and raped repeatedly in military brothels. Prisoners were slaughtered in mass executions by machine gun fire; other methods of killing were employed as well, such as pouring gasoline over victims and setting them on fire. After the capital of Nanking was taken, wounded Chinese soldiers were bayoneted where they lay while other soldiers were ordered to carry out bayonet practice on thousands of Chinese prisoners bound to trees; unthinkable, Japanese officers made prisoners kneel in rows, then practiced beheading them one by one. The human cruelty was beyond belief. The Japanese then planned to attack Wuchang and Hankow. To slow the enemy advance, Chiang Kai-shek gave orders for the Yellow River dikes to be breached, to use water as a substitute for soldiers. The tactic did delay the Japanese for five months, however the destruction and civilian deaths from flooding was horrific. With no high ground to seek shelter, starvation, illness, and drowning related deaths reached 800,000, while more than six million people became refugees.

The Japanese, having failed to deliver a knock-out blow to achieve a rapid victory, began to follow a more cautious strategy. With war in Europe approaching, they suspected that they would soon have to redeploy part of their vast forces in China to other fronts. In October, 1938, Mao's policies stated the Communist forces were not to fight the Japanese, unless attacked; instead, they were to conserve their manpower for seizing territory from the Nationalists. The Nationalist were alarmed by Communist expansion, and by Stalin's increasing support for Mao. The Japanese raids that continued in the countryside used massacre and mass rape as weapons of terror; they roped all of the young men in a village together and then split their heads open with swords and then they turned their attention to raping all of the women. The next major battle took place in March, 1939, when the Japanese forces attacked the capitol of Nanchang by using poison gas to overcome the Nationalist forces. Hundreds of thousands more refugees moved westward, bent under heavy bundles on their backs, or pushing wooden wheelbarrows.

For the Nationalists, the lack of outside help became increasingly grave, especially as they had lost their major industrial bases and tax revenues; harvests and food supplies had also been destroyed. Tens of millions of refugees were trying to escape westwards, if only to save wives and daughters from the cruelty of Japanese troops. Unsanitary overcrowding in cities led to outbreaks of cholera, malaria, and typhoid became widespread; ringworm, scabies, trachoma, and all the other burdens of poverty exacerbated by severe malnutrition inflicted the millions of refugees. Even so, the Nationalists main hope for the future now lay with the United States, which had started to reinforce its own bases in the Pacific and condemn Japanese aggression. Despite that, Chiang Kai-Shek now faced two internal challenges: The Japanese and the Chinese Communist Party under Mao, who was becoming more assertive. Some twenty million Chinese would die before the war ended in 1945.

## 1940

Hitler had originally wanted to attack France as soon as troops could be transferred from Poland, however, Hitler's generals did not

believe Germany possessed the fuel or the raw materials for an extended campaign. An Impatient Hitler, as an alternative to France, signed an order on March 7, 1940 to attack Denmark and Norway. A German occupation in the area would protect shipments of iron ore from Sweden; in addition, Denmark and Norway would also be able to provide ports for Germany facing the Atlantic. The attack began on April 9. Denmark capitulated in a few hours, and despite limited Allied support from Britain, France, and Poland, Norway was conquered within two months. In light of the Norwegian fiasco, the British House of Commons replaced Prime Minister Chamberlain with Winston Churchill on May 10.

Germany launched an offensive against France, Belgium, the Netherlands, and Luxembourg on May 10, 1940. The majority of France's tank units, although not technically inferior to the German panzers, were insufficiently trained, the French air force was still in a lamentable state, and the French air fields lacked effective anti-aircraft protection. In addition, the French air force had not trained in close support of their ground forces. Communications between French commanders and field units virtually collapsed as a result of bombs severing field telephone lines. With rumors spreading the enemy had crossed the Meuse River and they were to be cut off, the French artillery began to retreat. The next day the Dutch decided to surrender to avoid further loss of life. On May 14, Churchill received a request from France for ten fighter squadrons and all of the troops you can send - the Germans were heading for Paris with little resistance. Churchill sent a telegram to President Roosevelt urging rapid American help, but Roosevelt's reply offered no help to intervene.

Chaos mounted with the growing volumes of refugees. Including Dutch and Belgians, some eight million refugees took to the roads hungry, thirsty, and exhausted, with farm carts, bicycles, and few possessions. The French army, which relied on a static defense, was even less able to react to the unexpected with the roads jammed by terrified civilians. In addition, the French were paralyzed by the audacity of the German strike. Only isolated pockets of resistance remained, with the remnants of some French divisions fighting on in the face of disaster. On May 19, the British Air Force (RAF) was completely cut off from British expeditionary forces on the ground (BEF), so a decision was made to return the sixty-six planes to Britain; the RAF had already lost a quarter of its total fighter force; continuing British and French counter-attacks failed with little lasting success. The Germans, unprepared to lose so many men, resorted to bombarding the British with artillery and mortars rendering the entire Allied position subject to collapse.

On May 25, Churchill was determined to defend Calais. The French fought until they ran out of ammunition, and the British, who had suffered massive casualties, had no option but to surrender the town. With half of their 1,200 panzer unit destroyed, Germany halted the advance to give the infantry a chance to catch up. In the meantime, the British withdrew under the darkness of a heavy storm toward Dunkirk for evacuation across the channel. The British War Cabinet met at the House of Commons where a battle broke out between Lord Halifax and Prime Minister Churchill. Lord Halifax supported the possibility of approaching Hitler for peace terms for both Britain and France. Halifax was convinced that with no prospect of assistance from the United States in the near future, Britain was not strong enough to resist Hitler alone. Churchill argued that Hitler's terms would reduce Britain to a "slave state" ruled by a puppet government; the War cabinets support of Churchill was emphatic; Britain would fight to the end.

Operation Dynamo, the evacuation of British and French soldiers pinned against the English Channel at Dunkirk, started on May 19 with the wounded and rear troops. The main effort began on the night of May 26 when some 600 small boats, crewed by weekend sailors, were used in the operation to augment over 200 Royal Navy vessels. At night, the soldiers waited in the sea with water up to their shoulders as small boats edged in to pick them up. On May 29, Hitler launched a major sea offensive where ten German destroyers were sunk and many other vessels were damaged. Inland, the French and British managed to hold off the German attacks, which if successful, would have put an end to further evacuation. Churchill insisted the evacuation should

continue on equal terms of both French and British soldiers, but chaos developed over boarding ships to safety. On May 30, it looked like half of the British troops would be left behind, but the following day the Royal Navy and the little ships arrived in strength: destroyers, yachts, steamers, tugs, lifeboats, fishing boats, and pleasure craft. The German Luftwaffe stepped up air attacks whenever there was a break in the RAF fighter cover; terrible injuries were inflicted by air attacks, ships sinking, drownings, and unanswered cries for help. Conditions for the wounded left behind within Dunkirk were far worse, with medics able to do little for the dying. Evacuation in daylight now had to be cancelled because of the Royal Navy's heavy losses and two hospital ships being sunk. The last ships arrived off of Dunkirk during the night of June 3. Instead of the 45,000 troops hoped to be saved, the Royal Navy and assorted crafts had evacuated some 338,000 Allied troops, of which 145,000 were French; regretfully, some 80,000 French soldiers were left behind, mostly due to their slowness to withdraw. All of the British Army's artillery, small arms, 7,000 tons of ammunition, and 120,000 vehicles were left behind. "Never has a nation been so naked before her foe," wrote Churchill. The British lost 68,000 men in the battle of Belgium and north - eastern France.

The Germans wasted little time in launching the next phase of their campaign. On June 6, they attacked the line of the River Somme and the Aisne, enjoying considerable superiority in numbers and air supremacy. French divisions, having gotten over the initial shock of the disaster, now fought with great bravery, but it was too late. Churchill, without sufficient numbers of fighters to defend Britain, refused French requests to send more squadrons across the channel even though there were still over 100,000 British troops south of Somme. Although some French troops were fighting well, many others started to join the columns of refugees fleeing towards the south-west of France. Panic spread with rumors of poison gas and German atrocities. As these rivers of humanity, some eight million, poured to the south-west, they soon found that not only petroleum was unobtainable, but also food.

Paris was an almost deserted city. A huge column of black smoke arose from the Standard Oil refinery, which had been set on fire at the request of the French general and the American embassy to deny petroleum to the Germans. Churchill, visiting with the French government, who had moved from Paris to the Loire Valley, flew back to London with no illusions left about the fate of France; the military situation had turned hopeless. The French had lost thirty of their best divisions, the Belgians and Dutch had surrendered, and the British had all but been evacuated. The Germans turned south and crossed the Seine virtually unopposed and by June 13 were poised to enter Paris.

When Churchill was faced with the French demand for a separate peace, he was not prepared to release the French from their commitment until the British were certain the Germans could never get a hold of the French fleet. He also asked Reynaud to ask President Roosevelt for assistance. Every day Churchill could get France to resist would give Britain a better chance to prepare for the onslaught. The next day the French government left for Bordeaux in the last act of the tragedy. To England and France's disappointment, President Roosevelt promised nothing. General Brooke proceeded to waste no time in organizing the evacuation of the remaining British troops from France. A massive seaborne effort was mounted to evacuate another 191,000 Allied troops during a second evacuation under intense German aircraft bombings; 3,500 were drowned in one of Britain's worst maritime disasters. On June 18, the day after his arrival in England, French General Charles DE Gaulle made his famous broadcast to the French people. He revealed a remarkable perception of the future development of the war. While acknowledging that France had been defeated by a new form of modern and mechanized warfare, he predicted the industrial power of the United States would turn the tide of what was becoming a world war. He rejected the belief that Britain would be defeated in three weeks and Hitler would dictate a European peace.

As the Armistice officially came into effect in the conquered France, Hitler prepared to tour Paris on June 28. Japan, wasting little time in exploiting the defeat of France, warned the French government to immediately halt supplies to Nationalist Chinese forces

through Indochina. The French governor, buckling under the pressure, allowed Japan to station troops in Hanoi. Meanwhile, Churchill was intent on not letting the French naval fleet fall into German hands, as the French fleet would be an inestimable value to the Germans in an invasion of Britain; on July 3, the British made their move to take possession of the French fleet located around the globe.

A few days later, Hitler issued a directive for preparations of a landing operation against Britain, however his generals insisted that an invasion could only be attempted after the Luftwaffe had achieved air superiority; the Germans would need time to replace the 1,284 aircraft lost in the conquest of France. On July 31, Hitler, perplexed by Britain's refusal to come to terms with Germany, summoned his generals. Since there was little prospect of the United States entering the war, Hitler sensed that Churchill was counting on the Soviet Union. This played a major part in his decision to go ahead with his greatest project, the destruction of the Soviet power with a massive invasion; only the defeat of the Soviets would force Britain to concede, he reasoned.

In preparation for the invasion of Russia, the Nazi government was able to seize the raw materials, weapons, vehicles, and horses from France. French industry was reorganized to serve the needs of the German war machine as well as the German people. But before turning toward Russia, to avoid a war on a second front with Britain, Hitler instructed the Luftwaffe to concentrate on the destruction of the RAF, its ground support, Britain's armaments industry, as well as its ports.

The German offensive against Britain was set for the 13<sup>th</sup> of August, 1940. The English Channel definitely worked to the RAF's favor as Germany lost forty-seven aircraft to England's thirteen in the first air attack. England had foreseen a battle of attrition, and the mounting damage to airfields was a major concern. Although the RAF daily downed more German planes than Britain was losing, it was operating from a smaller base. An impressive increase in fighter plane production had removed one worry, but replacing pilot losses were England's greatest challenge.

On the night of August 24, a force of more than one hundred German bombers overflowed their targets and bombed London by mistake. Churchill retaliated by ordering a string of bombing raids on Germany. The German response was to send over a thousand bombers on September 7 in a massive air attack on England. If one takes the numbers for the core of the battles in August and September, the RAF lost 723 aircraft, while the Luftwaffe lost over 2,000.

Night bombing raids continued on English civilian targets throughout the fall and winter months. Regardless, the night-bombing campaign failed to break the will of the British people, even though 23,000 civilians were killed and 32,000 seriously injured by the end of 1940. At sea, the battle hung in the balance. More than five hundred British merchant ships had been sunk by German U-boats and surface ships; a total of more than 2 million tons of armaments from the United States, sold on a cash and carry basis, were lost. The threat of a German invasion had helped Churchill unify the country and prepare it for a long war. In Berlin, Nazi leaders were resigned to the fact that even the bombing campaign was unlikely to bring Britain to its knees.

Most serious of all, Britain was on the verge of bankruptcy. The cash and carry provisions of the Neutrality Act with the United States for armaments had drained the British Treasury. The inescapable conclusion was that the British would exhaust their gold

and dollar reserves within the month just to pay for the orders already placed with American industry. On December 9, Churchill described the British catastrophic situation to President Roosevelt in a 4,000-word cable. Roosevelt plunged into intense thought and his brainchild became known as Lend-Lease.

The president's plan was that the United States would lend Britain whatever it needed, at no cost, and the British would repay the United States by giving back what it had borrowed, when it could. The president took the initiative himself and carried the idea directly to the people in his most famous fireside chat speech. On December 29, 1940, he delivered his famous "arsenal of democracy" speech where he said, "If Britain goes down, the Axis powers will control the continents of Europe, Asia, Africa, Australia, and the high seas – they will be in a position to bring enormous military and naval resources against this hemisphere. The people of Europe who are defending themselves do not ask us to do their fighting. They ask us for the implements of war, the planes, the tanks, the guns which will enable them to fight for their liberty and for our security. Emphatically we must get these weapons to them in sufficient volume and quickly enough, so that we and our children will be saved agony and suffering of war."

The Gallup poll showed 68 percent of Americans in favor of Lend-Lease. On January 6, 1941, Roosevelt went to Capitol Hill to deliver his ninth State of the Union message which focused on the necessity of Lend-Lease. On February 8 the bill cleared the House 260-175. The next day Congress appropriated \$7 billion to fund the first shipments to Britain, the largest single appropriation in American history. Yet the problem for Britain of getting the armaments across the Atlantic remained. German U-boats were sinking British ships three times faster than the shipyards could replace them. Roosevelt responded by extending the security zone across the Atlantic with the American Navy providing armed convoys to protect British ships; fear spread that a German attack on American patrol boats would provoke war between the United States and Germany. By April, 1941, air cover was extended to the convoys.

Meanwhile the advance of the Japanese military during the summer of 1940 split the Nationalist armies in China and caused huge losses. In July a change of government in Tokyo brought General Tojo Hideki into the cabinet as minister of war. Tojo's goal was to starve the Nationalists of supplies while the military leaders were turning their gaze to the Pacific and south-west to the British, French, and Dutch possessions around the South China Sea. This would give them rice and deprive the Nationalist Chinese of imports, but above all Japan wanted the oil fields. Any idea of compromise with the United States which involved retreat from China was unthinkable to the regime in Tokyo after the deaths of 62,000 Japanese soldiers. In the second half of 1940, the Chinese Communist Party, under instructions from Moscow, launched a military campaign in the north with a 400,000-man army.

In Europe, Hitler hoped to seal off Britain and drive the Royal Navy from the Mediterranean before embarking on his overriding scheme, the invasion of the Soviet Union. Italy began the operations in the Mediterranean, initiating a siege of Malta in June of 1940, Egypt in September, and Greece in October. Despite that, Italy's chronically weak military proved to be a poor ally for Germany. Before invading Russia, Hitler was determined to secure both his flanks. He began negotiations with Finland, but the Balkans to the south were more important; the oil fields would provide oil for his panzer units.



Top left—A German fighter flying over Poland. Top right—German troops march into Bruges, Belgium. Bottom left—Hitler conferring with Generals during Belgium campaign. Bottom right—Children in London suburb outside the wreckage of their home.

## 1941

During the spring of 1941, Hitler launched attacks against Bulgaria, Yugoslavia, and Greece, which all collapsed within a month, even though the British had responded to Greek requests for assistance. By the end of May the British were driven from the Greek Island and the island of Crete. Within the first year of German occupation, 40,000 Greeks would starve to death. In December of 1940, British forces began counter-offensives against Italian forces in Egypt. By February, 1941, Italy had lost control of eastern Libya and large numbers of Italian troops had been taken prisoner. Consequently, the Germans soon intervened to assist Italy and by the end of March they had driven the British forces back into Egypt

On June 22, 1941, the war took a decisive turn. Without warning Hitler launched Operation Barbarossa, an invasion of his recent ally, the Soviet Union. German forces poured across the Russian frontier from the Baltic to the Black Sea. One hundred and eighty divisions, 3.8 million men, supported by thousands of planes, tanks, and artillery pieces surged forward in three parallel thrusts. In four days German panzers were 200 miles deep in Soviet territory. Two Russian armies had been destroyed, three badly mauled, and 500,000 prisoners were in German captivity. In the air, the Russians lost 1,800 aircraft on the first day of fighting, 800 on the second, 557 on the third, and 351 on the fourth; the Luftwaffe lost just thirty-five fighter planes. The initial raid brought the total of civilian casualties up to 40,000 killed and 46,000 badly injured.

Hitler justified the invasion of Russia as the surest way to force Britain to come to terms. Yet the primary objective was to secure Russia's oil and food, which he believed would make Germany invincible. The seizure of Soviet food production was intended to lead to the deaths of thirty million people in Russian cities. Clearly, Soviet prisoners of war would also be systematically starved; famine would be Hitler's weapon of war. Continuous intelligence arrived confirming the danger of a German invasion, but Stalin dismissed the reports as well as all the warnings from Britain about Germany's preparations to invade. Stalin blindly accepted Hitler's assurance that German troops were moving eastwards purely to put them out of range of Britain's bombing.

Hitler had amassed nearly three million German troops, soon to be supported by armies from Finland, Romania, Hungary, and eventually Italy in the crusade against Russia. In a matter of hours of the initial attack, all the bridges on its front had been seized, telephone lines were cut, and leading panzer formations were overrunning Soviet supply dumps. Two large panzer units swiftly achieved their first major encirclement, trapping four Soviet armies with 417,000 men west of Minsk. Almost before the Germans marched in, murderous pogroms began against Jews. Meanwhile the Russians massacred over 20,000 Polish prisoners so they would not be saved by the German advance.

In late June Roosevelt issued the following statement through the state department, "Hitler is the nation's number one enemy and proclaiming America's sympathy for any who opposed him". The military advised the White House the Germans would sweep across Russia in one to three months. For Roosevelt, there was no question that the Soviets should receive what they needed, although he detested Communism as much as Churchill. To short circuit the political minefield of arming Russia, Roosevelt sent Hopkins to meet Stalin and observe the situation first hand. Within a week the Soviets submitted a detailed request for military supplies totaling \$1.8



billion. Shortly thereafter, Roosevelt formally declared the defense of the Soviet Union “vital to the defense of the United States,” making Russia eligible for aid under the Lend-Lease Act.

From August 9th to the 12<sup>th</sup>, 1941, Roosevelt and Churchill were meeting aboard the American flagship cruiser, Augusta, in Newfoundland. Several times during the conference Churchill pressed Roosevelt for a declaration of war, yet Roosevelt would only agree to provide another \$5 billion for Lend-Lease. Together they sent a joint message to Stalin pledging further assistance, and in the event of war in the Pacific, agreed to a “Hitler first” policy. While Roosevelt met with Churchill, Congress grappled with an extension of the draft. The Selective Service Act of 1940 required inductees to serve for twelve months and for many their service commitment was about to expire. It was a crisis not unlike that faced by Lincoln during the Civil War. By a vote of 203 to 202 the bill to extend the term of service by eighteen months was narrowly passed; passage of the draft extension act prevented the dismantlement of the newly formed 1.4 million- man army on the threshold of war.

Stalin returned to the Kremlin on July 1 to make a broadcast to the Soviet people and surprised his listeners by addressing them as “comrades, citizens, brothers, and sisters”. Knowing that patriotism is shaped by war, Stalin perceived that this invasion would revive it. The terrible suffering of civilians caught up in the war did not enter Stalin’s calculations. Nikita Khrushchev, under Stalin’s order, began a massive effort to evacuate machinery from Ukrainian factories. The process succeeded in transporting by train 2,593 industrial units back towards the Urals and beyond. On July 9, Vitebsk fell. Like Minsk, Smolensk, Gomel, and Chernigov, it was an inferno of blazing wooden houses from Luftwaffe raids. The Soviets suffered 300,000 men killed, along with losing 3,200 tanks, and 3,100 guns attempting to defend Smolensk. But Soviet counter-attacks from the east helped delay the Germans on their march toward Moscow.

Despite the formidable advances, the German army had suddenly begun to fear that victory might not be achieved as quickly as planned. The three German armies had suffered 213, 000 casualties. Although the German loss was only a tenth of Soviet losses, if the battle of attrition continued much longer, the Germans would find it difficult to defend its over-extended supply line and defeat the remaining Soviet forces; the prospect of fighting on through a Russian winter was also troubling. Before advancing on Moscow, Hitler and his generals decided to direct the center army to go on the defensive, the North Army to advance on Leningrad, and the South Army to attack Kiev to protect their southern flank.

On September 16, as panzer units moved on Kiev, 700,000 Russian troops were encircled. The Sixth Army then advanced into the heavily bombed ruins of Kiev where the civilian population left behind was condemned to starvation; the Jews faced a quicker death by firing squad. As German morale soared, Hitler issued Directive 35, authorizing the advance on Moscow.

Meanwhile, the German advance through the Baltic States was finding increasing resistance as it came closer to Leningrad. Half a million men and women from the threatened city were mobilized to dig a thousand kilometers of earthworks and anti-tank ditches. As the Germans encircled Leningrad in August, 135,000 defenseless factory workers and professors sacrificed their lives in an attempt to slow down the tanks with nothing more than their bodies. The siege of Leningrad, the longest and most pitiless in modern history, had begun. In addition to half a million Russian troops, the civilian population of Leningrad stood at more than two and a half million

people, including 400,000 children. Hitler decided he did not want to occupy the city but instead would bombard it and seal it off to let the population starve and die of disease. The burning of food depots destroyed the six-month food supply for the city; in addition, the Russians had done little to bring in firewood for the winter months. To strengthen resolve, Stalin issued an order condemning to death any Red Army generals who surrendered, as well as the families of any soldiers who surrendered.

South of Leningrad, the Germans pushed across the main railway line to Moscow and by September 1, their heavy artillery was within range to begin bombarding. With a sense of triumph restored after the fall of Kiev, Hitler came around to a major offensive against Moscow, although his generals had mixed feelings. The German troops were ill equipped, panzer units were short of repair parts, and German bombers were still reduced from losses in the battle with Britain.

Just a little over 100 kilometers from Moscow, Viazma and Briansk were encircled with artillery fire and panzer units, while bombers attacked from the air. Rotting bodies piled up in Viazma, starving Red Army soldiers slaughtered horses to eat, while the wounded died unattended. Altogether, nearly three-quarters of a million men had been cut off. The smaller pocket of Briansk was proving to be the greatest disaster, with more than 700,000 men dead or captured. The route to Moscow was now barely defended. Stalin himself could not make up his mind whether to stay or leave the Kremlin while panic-stricken crowds were storming the train stations. Stalin, shocked by the sights, ordered NKVD rifle regiments to shoot looters and deserters on sight. On the eve of the Revolution, Stalin, deciding to stay, gave a stirring speech saying, "The Germans want a war of extermination. Very well then, they shall have one!"

The Kremlin ordered a new line of defense to be constructed by a quarter of a million civilians, mostly women, conscripted to dig trenches and anti-tank ditches; many of them were killed by German fire as they worked. Stalin ordered all buildings in combat zones destroyed and burnt to ashes to deny the Germans shelter in the approaching frosts. By the end of November, the German Third Panzer Army was within forty kilometers of Moscow. But, to the advantage of the Russians, in the beginning of December temperatures were dropping to minus 30 below centigrade. The Germans did not have the right oil for frigid temperatures, machine guns and rifles froze, radios failed to work, transport horses lacked forage, bread arrived frozen, and there was a shortage of gloves, boots, and warm clothing. Russian women, children, and old men were removed from their cabins by the freezing Germans and stripped of their clothing; legs were sawed off of the dead for their boots.

As the German army was collapsing of exhaustion and the cold, the Red Army's position was restored by moving divisions of troops from the east on the Trans-Siberian railway. Stalin launched a surprise offensive, forcing the German front into retreat. As the Germans retreated, they left behind burning villages, abandoned vehicles, dead horses, and wounded soldiers to die in the snow. Frostbite casualties exceeded those wounded in battle. German hospitals were amputating an increased number of limbs due to frostbite, yet many of the wounded would simply shoot themselves. Hitler, angry and baffled, ordered his troops to stand fast as both sides were reduced to take defensive positions and engage in trench warfare. Even though large territorial gains were made by the Axis forces during 1941, their campaign failed to achieve its main objective of defeating Russia before winter: two large cities remained in Soviet hands and the Soviet capability to resist was not broken.

Three million Russians were captured by October as prisoners of war. No prison camps had been prepared, so they were herded by the thousands into barbed-wire encirclements under open skies with little food or water. Thousands of Red Army prisoners died on forced marches simply because the Germans did not want their trains infected with the “foul-smelling” mass of people. In 1941 alone, more than two million Soviet prisoners died from starvation, disease, and exposure. Soviet troops responded in kind, shooting and bayoneting German prisoners out of anger. The life of an individual had lost all value.

Events leading up to the Holocaust began in 1939. The Nazis originally had hoped to force German, Austrian, and Czech Jews to emigrate through maltreatment, humiliation, and the expropriation of their property. Once war began, that became increasingly difficult. And the conquest of Poland brought a further 1.7 million Jews under their jurisdiction; by March of 1941, the Jewish ghettos in Poland were overflowing. Once the invasion of Russia began, senior Nazis embraced the idea of removing Europe’s Jews, as well as thirty-one million Slavs, to some area deep in the eastern part of the Soviet Union. By mid-1941, Himmler’s SS brigades, as well as German soldiers, were killing Jewish men, women, and children. Hundreds of Jews would be round up outside the villages, where they were forced to dig 150-meter trenches. The victims were forced to lay head to toe along the bottom of the ditch where they were shot with sub-machine guns. Then people were again driven forward to lie down on top of the dead to be shot. By the end of 1942, it is estimated 1.35 million Jews had been eradicated by German killing squads.

As early as 1935 Hitler had indicated that as soon as war came he would introduce a program of euthanasia. The mentally ill, those physically disabled, and children with birth defects, were all included in the category of “life unworthy of life”. The first mental patients to be killed were three weeks after the invasion of Poland in 1939; twenty thousand were killed. By late November, gas chambers using carbon monoxide were in operation. Early in 1940, experiments had been tried using sealed trucks as mobile gas chambers. During the summer of 1941, Heydrich became irritated with the messy ways of dealing with the “Jewish question” and lack of central control. Adolf Eichmann drafted an authorization, signed by Goring, instructing Heydrich to proceed with the organizational, functional, and material preparations for a complete solution to the Jews under German influence in Europe.

About a month later, Hitler issued instructions for the complete annihilation of the Jews. Heydrich estimated a total of eleven million Jews were in Europe that needed to be exterminated. On September 18, Himmler gave instructions to use the ghettos as storage camps for people awaiting transport to concentration camps; more than half a million Jews died of starvation in the Polish ghettos alone. Formidable extermination structures were set up to cope with the Jews who had not yet died in the ghettos or been shot. And numerous concentration camps had already been established soon after Hitler’s rise to power in 1933 to hold political prisoners. Himmler himself organized one of the first political prisons at Dachau and soon took over the administration of all such camps. The most essential element of the operation was transportation from the ghettos to the concentration camps. The Reichsbahn, one of the largest enterprises in Germany employing 1.4 million employees, made a considerable profit transporting Jewish prisoners in freight cars and cattle wagons. Shamefully, Hitler’s Germany paid the going fare of each Jew with money the German Gestapo stole from the Jewish people.

On September 3, 1941, the insecticide Zyklon B was used at Auschwitz for the first time in a test on Soviet and Polish prisoners. In November, 1941, work began for the preparation of many more death camps equipped with gas chambers. By the end of 1942, close to four million Jews would be killed in the gas chambers. The Nazi regime did everything possible to keep the extermination process a secret, but many tens of thousands were involved. Rumors spread, but once deportations began, Jews became a non-person in the eyes of fellow citizens. Ian Kershaw wrote: "the road to Auschwitz was built by hatred, but paved with indifference". As several historians have emphasized, the Nazis' euthanasia programs provided not just the blueprint for the Final Solution, but also the foundation for their ideal of a racially and genetically pure society.

On July 26, 1941, the United States and Britain acted together to freeze Japanese assets in retaliation for their occupation of French Indochina. The Japanese wanted air bases from which to attack the Burma Road, along which arms and supplies reached the Nationalist Chinese forces. But when the United States and Britain placed an embargo on the sale of oil and other materials in Japan, the stakes were raised much further. Roosevelt increased support of the Nationalist Chinese infuriated Japan, but they viewed the oil embargo as an act of war. After the oil embargo, Japan and the United States engaged in several negotiations to attempt to improve the strained relationship. On November 20, Japan presented its final offer; it called for the end of American aid to China and for the supply of oil and other resources to Japan. In exchange they promised to withdraw troops from Asia and Indochina. The American counter-proposal on November 26 required Japan to evacuate all of China and conclude non-aggression pacts with all Pacific powers.

Meanwhile, Britain's first priority was to secure its position in North Africa and the Mediterranean until the United States entered the war. British naval superiority managed to sink fifty-two Axis ships and damage another thirty-eight, curtailing Germany's resupply across the Mediterranean. A bombing offensive against Germany and an invasion of France is what Stalin demanded from the United States and Britain to divert German troops to a western front. Roosevelt, reluctant to enter the war, provided the Soviets with much needed anti-aircraft guns, aircraft, jeeps, trucks, and huge consignments of food on Lend-Lease. Russia's survival in the early part of the war was possible thanks only to American military production.

In the first week of September, Japan's military leaders had forced Emperor Hiroshito to accept their decision to go to war in the Pacific. The Japanese drive for imperial expansion had produced conflicting priorities: the war in China, fear of the Soviet Union, and the opportunity to seize the French, Dutch, and British colonies to the south. The occupation of French Indochina in 1940 proved to be a decisive step towards the strike south strategy; Indochina provided an ideal base from which to seize the oilfields of the Dutch East Indies. The Japanese plan aimed to secure a perimeter around the western Pacific and the South China Sea.

Five Japanese armies would seize the five main objectives. The 25<sup>th</sup> Army would attack the British naval base of Singapore. The 23<sup>rd</sup> Army in southern China would seize Hong Kong. The 14<sup>th</sup> Army would land in the Philippines, where U.S. General Douglas MacArthur had his headquarters. The 15<sup>th</sup> Army would invade Thailand and southern Burma. The 16<sup>th</sup> Army would secure the Dutch East Indies with the oilfields vital to Japan's war effort. Against the severe doubts of his colleagues in the Imperial Japanese Navy, Admiral Yamamoto insisted that some of these operations would be at risk unless he first sent his carrier force to destroy the U.S.

fleet at Pearl Harbor. Yamamoto's navy pilots had been practicing torpedo and bombing attacks for several months in preparation for the U.S invasion.

On December 6, 1941, U.S. Navy cryptanalysts deciphered a message between Tokyo and the Japanese ambassador in Washington; the message was abundantly clear. "This means war," Roosevelt said to Harry Hopkins. The message was passed to Brigadier General Gerow with instructions to warn bases in the Pacific. But Gerow decided to do nothing, saying "they have had plenty of notification". Gerow reacted in this manner because the U.S. Navy and Army headquarters in the Pacific had been told on November 27 that war was eminent.

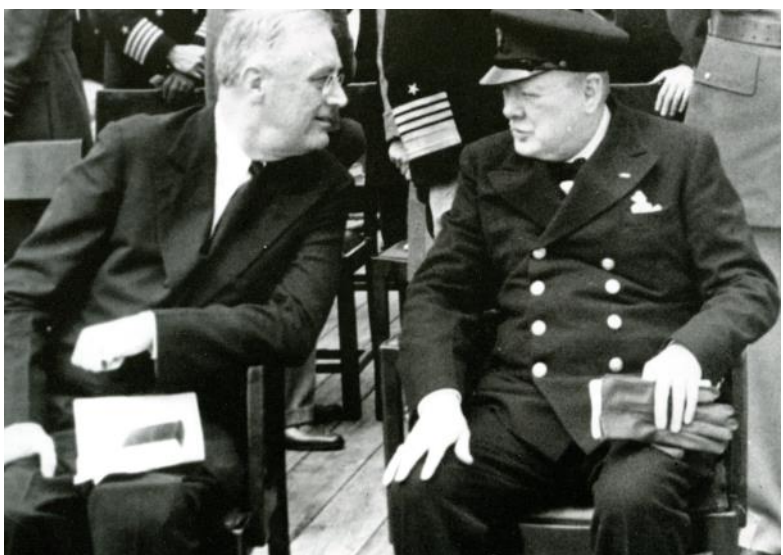
On Sunday morning, December 7, to the complete surprise of Admiral Kimmel, commander of the U.S Pacific fleet, the first wave of 183 Japanese aircraft circled the American fleet of the Pacific in Pearl Harbor, Hawaii. Exactly one hour later the second wave of aircraft arrived. And then suddenly the sky was empty as the pilots turned back to catch their carriers heading for home. Two battleships and two destroyers were lost. Another three battleships were sunk and beached but later repaired, and three more were badly damaged. 188 aircraft were destroyed and 159 damaged. Altogether 2,335 servicemen were killed and 1,143 wounded. Simultaneous with the attack on Pearl Harbor, Japan attacked the Philippines, Thailand and Malaya, and Hong Kong. With all attacks achieving success, the Imperial Japanese Navy was now unchallenged in the Pacific. On December 8, Roosevelt cabled Churchill in London to inform him that the declaration of war against Japan was passed by Congress. In solidarity with Japan, Germany and Italy declared war on the United States on December 11.

Japan would never have dared to attack the United States if Hitler had not started the war in Europe and the Atlantic. A two-ocean war offered Japan its only chance against the naval power of the United States and the British Empire. It was for this reason that the Japanese sought assurances from Nazi Germany in November 1941 that it would declare war on the United States as soon as they attacked Pearl Harbor.

Hitler believed the Japanese would keep the Americans occupied, and the war in the Pacific would surely reduce military supplies being sent to the Soviet Union and Britain. He knew nothing of the "Germany first" policy agreed between the Americans and British chiefs of staff. Hitler also believed that by declaring war on the United States, the entire North American coast could be opened up to a free fire zone in the torpedo war of the Atlantic; in Hitler's view, this was yet another way to bring Britain to its knees. Hitler's strategy that a victory over the Soviet Union would force Britain out of the war was turned on its head. Now Germany really would face a war on two fronts. Hitler's generals were dismayed by his apparent ignorance of America's industrial might.

Churchill arrived at the White House to debate a grand strategy to pursue with Roosevelt. On December 26, he addressed a joint session of Congress, the first foreigner accorded the privilege since Lafayette in 1824. The meeting produced agreement on the "Germany first" strategy. This decision influenced the building of the liberty ship program, a mass production of ships to transport men and supplies across the Atlantic. The "Victory Program" would ultimately require the build-up of more than eight million U.S forces, with generous estimates of armaments, tanks, aircraft, munitions, and ships needed to defeat both Japan and Germany; the quantity of military supplies manufactured by the United States would become staggering. There was agreement no attempts should

be made to land in northern Europe until Germany's industrial base and aircraft production had been reduced by heavy bombing. Roosevelt and General Marshal agreed to a North African landing sometime in 1942, joining Britain in defeating Germany's Rommel in North Africa, and to secure the Mediterranean.



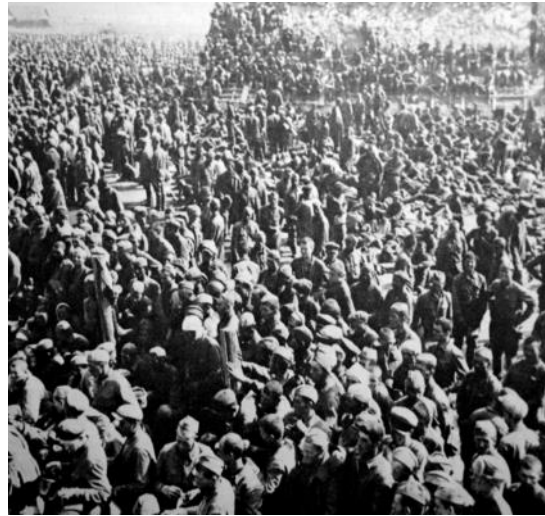
Top left—Japanese troops march into Chinese port city of Ningpo in May of 1941

Bottom left— FDR and Churchill chat aboard the H.M.S. Prince of Wales in August, 1941

Right—Civilian casualties of Japanese air raid in Chung King, China, June, 1941



Top left—water shortage in Leningrad forces residents to melt snow, December, 1941



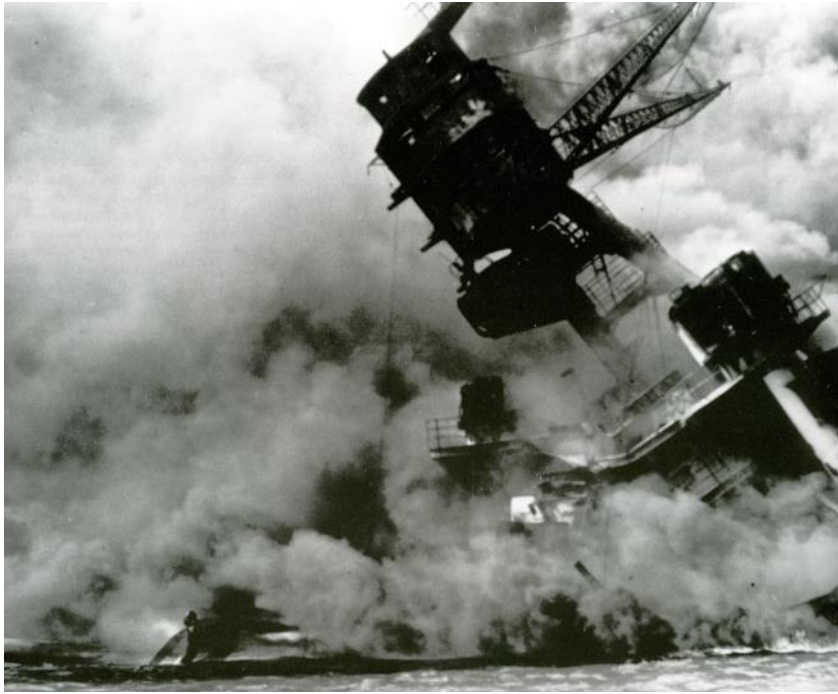
Top right—600,000 prisoners taken by Germany after battle of Kiev, September, 1941.



Bottom left—Women mourning 7,000 Jews executed by Nazi's in Kerch, Crimea, November, 1941



Bottom right—Women and children fleeing to eastern Russia after German invasion.



December 7, 1941

Top left—The U.S.S. Arizona burns after the Japanese attack on Pearl Harbor

Bottom left—The U.S.S. Shaw explodes during the Japanese raid on Pearl Harbor

Bottom right—The Pearl Harbor Naval Air Station shows wreckage from the surprise Japanese aerial attack.







FDR appears before a joint session of Congress to seek a declaration of war against Japan.

## 1942

Meanwhile, General MacArthur held back the bulk of his American troops when the Japanese began small landings of troops on December 10, 1941, just north of Manila in the Philippines. The main assault came on December 22, when an additional 43,000 Japanese troops landed on the beaches. MacArthur commanded a reserve force of 130,000 men, but he could only count on 31,000 American and Philippine troops. The battle-hardened Japanese troops forced MacArthur to withdraw his troops into the Bataan Peninsula to hold out. MacArthur's biggest challenge was to feed 80,000 soldiers and civilian refugees on a peninsula that the Japanese Navy had effectively blockaded and enjoyed air supremacy.

Renewed Japanese attacks began again on January 9, forcing MacArthur to retreat again on January 22, 1942. His sick soldiers, in tattered uniforms, their skin rotting from the jungle and swamps, were severely weakened. Nevertheless, the resistance of the American-Philippine troops forced the Japanese to eventually pull back their troops. Due to starvation and sickness, less than one quarter of MacArthur's troops were able to fight. On April 3, the Japanese attacked again with overwhelming force; the final surrender took place on April 9. On orders from President Roosevelt, General MacArthur, along with Philippine president Quezon, left by steamer to set up headquarters on the island fortress of Corregidor.

Beginning on April 9, 1942, the Bataan death march began with the transfer of eighty thousand American and Philippine soldiers and civilian refugees to the prison of camp O'Donnell; the transfer was facilitated by both rail and foot marches. The starved, sick, and debilitated prisoners were crowded into stifling hot boxcars like stacked sardines in standing positions. The prisoners that survived were then forced to march 69 miles to prison camp O'Donnell. During the march, prisoners received little food or water and were subject to severe physical abuse, including beatings, torture, and random stabbings with bayonets. It is estimated twenty-six thousand prisoners died before reaching the prison camp. The overcrowded conditions in the prison camp, poor hygiene, and lack of food and water caused dysentery and the rapid spread of disease; there were no medical supplies for the sick or wounded. An estimated twenty thousand died while in captivity until the war ended in August, 1945.

By May, 1942, Japan controlled the Philippines, Malaya, south-east Asia, as well as Hong Kong, Singapore and Shanghai on the mainland of China. In Hong Kong, the drunken Japanese soldiers continued to rape and kill local populations. In Singapore, any male between twelve and fifty was liable to be shot; many were bound and taken to the beach where they were machine-gunned. In Shanghai, a cholera epidemic killed thousands, food was hard to find and the black market was rampant.

In China, the Japanese army was still 680,000 strong. Chiang Kai-shek's Nationalist Chinese regime's biggest problem was of food supply. Fifty million refugees were fleeing Japanese cruelty; bad harvests and loss of agricultural areas to the enemy created a shortage of food and rising prices, resulting in mass starvation; corruption and profiteering was rampant. Conscription also became more difficult, with recruiters resorting to force; inflation made a soldier's pay for a whole month less than the cost of two cabbages. Chiang Kai-shek's strategy was to survive with a drawn-out war of attrition. As the Japanese concentrated their forces against the

Nationalists, the Communists under Mao did better in the less populated areas, mainly by imposing ferocious controls at every level upon the people.

During the winter of 1941-42, the Red Army's great defense of Moscow was undermined by Stalin himself. In January of 42, Stalin insisted on launching an offensive with his exhausted troops, only to be encircled by the re-established Germans and lose 60,000 men. Because the priority for transport went to the movement of troops and military supplies, the population of Moscow was close to starvation; children suffered from rickets, there was no fuel or wood for stoves so water and sewage pipes froze, and electricity was in short supply, with many blackouts. The overall mortality rate tripled.

Conditions in Leningrad were immeasurably worse. The key to survival of the city now lay more in its tenuous lifeline to the east – an ice road over Lake Ladoga. As Germans shelled the city four times a day, the Leningrad population was so weak from starvation that many collapsed on the frozen street as they searched for food; when a member of a family died, the corpse would be hidden in their frozen apartment so that their rations for food could still be claimed. Crows, pigeons and seagulls were eaten first, then cats and dogs, and finally rats. Children's sleds were used to carry corpses wrapped in cloth shrouds to mass graves. Many soldiers and officers resorted to eating corpses and amputated limbs. Because there was no stockpile of firewood before the siege - books, furniture, doors, and dismantled buildings were all burned trying to keep warm; most people died from the combination of starvation and cold as temperatures could drop to minus 40 degrees. Out of a population of 2,280,000 in December, 620,000 died over the winter of 1941-42.

During the summer of 1942, the end was close for Russia; many army commanders and officers were committing suicide or stripping clothes from dead soldiers to disguise themselves and their rank. While Stalin expected Hitler to make another thrust towards Moscow, Hitler had very different ideas. Knowing that German survival in the war depended on food and fuel, he intended to consolidate his hold on the Ukraine for food and seize the oilfields of the Caucasus.

The battle of the Kerch Peninsula led to a loss of 176,000 Russian soldiers, 400 aircraft, 437 tanks, and 4,000 guns. The first battle of Kharkov was a massacre of Russian soldiers with corpses piled up in waves in front of the German positions. The second battle of Kharkov clogged the roads with Russian corpses, 240,000 men were captured, along with 2,000 guns and the bulk of the tank force. By late August the Germans had reached the border of Asia, Hitler's ultimate objective; at this point, many felt the war was as good as over. But once again Hitler was failing to concentrate his forces, and at the very moment he was seizing a huge new expanse of territory, the more determined he became not to permit his generals to retreat. With German military expansion at its high-water mark, the German troops were exhausted and their supply lines were unsustainable.

The greatest threat to Britain in 1942 had nothing to do with military failures. Germany's navy, now fully deployed in the North Atlantic and along the North American seaboard, began to inflict heavy losses to Allied merchant ships delivering military supplies to Britain and Russia. Altogether, 1,769 Allied ships were sunk in 1942. After Churchill's euphoria at America's entry into the war, Britain faced starvation and collapse if the Battle of the Atlantic were lost.

America's first success came in the Pacific when the United States defeated Japan in the battle of the Midway Islands in early June, 1942. The Japanese attack on Pearl Harbor had one saving grace for America, it was their battleships, and not their aircraft carriers, that had been in port that fateful weekend. But, as the war progressed, US Navy submarines proved to be the most cost-efficient way of destroying the Japanese Navy.

Admiral Yamamoto, well aware of the United States potential to produce aircraft carriers more rapidly than Japan, wanted to get in a knock-out blow quickly; he believed an attack on the island base of Midway would force the few American carriers into battle. Luckily, Commander Rochefort, the chief cryptanalyst at Pearl Harbor, had helped break the Japanese naval code. On May 26, when the main Japanese invasion fleet left Saipan, its destination was no longer in any doubt. Rochefort set a signals trap, which offered certainty as to the Japanese plan, which offered US Admiral Nimitz the opportunity to evade the Japanese trap ahead and turn it into his advantage. With four Japanese carriers and a cruiser sunk, a battleship severely damaged, to say nothing of 250 aircraft destroyed, and all for the loss of one American carrier, Midway represented a decisive American victory.

As the German offensive in Russia was gaining ground during the early summer of 1942, Hitler came around to the idea of Rommel's dream of seizing Egypt and the Suez Canal in North Africa. The Japanese had indicated that they would advance westward into the Indian Ocean if the Germans took the Suez Canal but Hitler began to fear that American military support might arrive earlier than he had thought and decided to move quickly. The German attack in North Africa began against the British with 10,000 vehicles in the battle of Tobruk.

On June 21, the British General Klopper surrendered; four thousand tons of oil fell into Rommel's hands. On that day in June, Churchill was in the White House with Roosevelt when he was given the news of the fall of Tobruk. Churchill feared if Britain lost Egypt, and eventually the Suez Canal, the oilfields of the region would be lost. Since an early invasion by the United States of northern France was out of the question because of lack of air superiority and a shortage of shipping and landing craft, there was no other area in which American troops could be deployed against Germany other than possibly North Africa. The U.S Army needed battle experience before it could take on the German's in major battles on the mainland of Europe. And the Allies needed to learn the dangers of amphibious operations before they attempted a cross-channel invasion. General Marshal eventually agreed to make the best of what he considered Britain's bad fighting job by sending one of his best staff officers, Major General Dwight D. Eisenhower, to begin planning the North African landing. Churchill made the journey to Russia to inform Stalin that the American invasion of Western Europe would be delayed until possibly 1943.

Following the decision of July 1942 to postpone a cross-channel invasion, and land instead in French North Africa, Admiral King had seized the opportunity to reinforce the Pacific. As much as possible, he intended to keep the war against Japan under the control of the U.S. Navy, using the U.S. Marine Corps to spearhead amphibious operations. The U.S Army, meanwhile, planned to send nearly 300,000 troops to the region, most coming under the command of General Douglas Mac Arthur. The first priority in the Pacific was to recapture Rabul near Australia. The Japanese had turned it into a naval and air base in January and threatened the shipping route

from the United States to Australia. But before attempting to recapture Rabul, the U.S Navy insisted that the southern Solomon island, Guadalcanal, occupied by Japan, needed to be secured first.

On August 6, 1942, shielded by clouds and heavy rain, eighty-two ships and 19,000 U.S. Marines approached Guadalcanal and Tulagi. Fortunately for the marines, the Japanese had woefully underestimated U.S. strength. It would take until January of 1943 to crush the Japanese resistance in the jungles of the Solomon Islands. The Japanese, short of ammunition, would try to provoke the marines into revealing their position at night by cracking together two pieces of bamboo to simulate rifle fire. They would then creep up in the dark and leap into their foxholes with a machete, hacking in all directions. Hunger by the Americans was hardly mitigated by the captured supplies of worm-infested rice from the Japanese. But their worst enemies were tropical fevers, dysentery, and rotting flesh from tropical ulcers in the extreme humidity. The rainy season began and the downpours filled weapons pits and foxholes; men shivered and were soaked to the skin for days.

The Japanese defenders had been living on wild grasses and roots resulting in many to succumb to dysentery and malaria as a result of malnutrition. The Japanese piled their rotting dead as sandbags to defend their position. Unable to reinforce or resupply their troops, the Japanese were finally ordered to withdraw. Yet the battle for Guadalcanal became even more of a battle at sea. The U.S sank two Japanese battleships, a cruiser, three destroyers, and seven transports, which carried 6,000 troops. By the beginning of December, the U.S Navy controlled the approaches to the islands. For the Americans, the Solomon Islands turned out to be the first stepping stone across the Pacific towards Tokyo.

In Russia, Stalin was furious when he heard that the Soviet forces had been pushed back to the outskirts of Stalingrad, with the possibility of losing their waterway and oil. On August 25, a state of siege was proclaimed on Stalingrad by Germany. Stalin ordered the organization of "destroyer-battalions," consisting of male and female workers from the tractor, steel, and ordnance factories; barely armed, they were sent into action against the 16<sup>th</sup> Panzer division with predictable results – death. Most were expecting a Soviet collapse at any moment, yet the Allies failed to recognize the resolve of the battered Red Army and the dangerously over-extended German Army. Stalingrad looked like a cemetery with the entire city black with soot; on most days the smoke and dust was so thick that the sun could not be seen; civilians, starved and thirsty, huddled in the cellars of ruined buildings as the battle went on above.

The Russians were determined to defend the city or die in the attempt. Comrade Chuikov ordered his 20,000 remaining troops to shoot deserters and blockers were established behind the lines to shoot retreating soldiers. On September 16, 1942, as German radio was claiming the fall of Stalingrad, Chuikov was training his troops in what he called "the Stalingrad academy of street-fighting". The fighting consisted of night raids of men, armed with sub-machine guns, grenades, and knives, that would attack through the cellars and sewers. Night bombers specialized in flying their obsolete biplanes low over German lines at night, switching off their engines as they made bomb runs; these brave pilots were all young women. During the day psychological pressure was exerted by snipers; the broken terrain of the smashed city was ideal for snipers to hide themselves almost anywhere and shoot German soldiers trying to fetch water. As wounded men die, rather than remove the corpses, they were left in the street where vehicles simply drove over them; there were no doctors.

The relentless German attacks on Stalingrad were renewed with even greater vigor in October, with furious artillery bombardment beginning every morning; Hitler demanded a final push before the snows came. On November 9 the temperatures dropped to minus 18 degrees centigrade. On November 11, six German divisions began the offensive, and it looked as if Stalingrad was about to fall when everyone in Stalingrad with a head and hands, men and women, carried on the fighting. Stalin, finally listening to his generals, made a strategic shift to the south called operation Uranus, which was launched on November 19. This was combined with a diversionary attack called operation Mars, which became a massive sacrificial tragedy resulting in 70,374 dead and 145,300 wounded.

By November 21, the Red Army had encircled the entire Sixth Army of Germany, which totaled 290,000 troops. The Germans would need 700 tons of fuel, ammunition, and food to survive and escape. Never considering retreat, on November 24, Hitler ordered the sixth army to hold out whatever the circumstances, yet the inability to resupply the troops sealed their fate. As Christmas approached, the German forces of the Caucasus were evacuated while the Red Army was occupied with pinning down the Sixth Army; Hitler had no intention of letting his troops surrender. The Sixth Army was dying of starvation on a diet of a few pieces of horsemeat. The interaction of stress, prolonged malnutrition, lack of sleep, the intense cold which interferes with the body's metabolism, all renders the digestive system incapable of digesting even small amounts of food. German soldiers limped on frostbitten feet, their lips split open, and their faces turned yellow and departed; toes and fingers would fall off when the bandages were removed; crows circled to peck out the eyes of the dead and dying; nobody had the strength to remove the bodies of the dead. Many of the generals and officers shot themselves rather than surrender while some men chose a "soldier's suicide" by standing up in a trench and waited to be shot. Hitler heard the news of the surrender on February 2, 1943. After the surrender, the Red Army suddenly discovered they had 91,000 prisoners on their hands. Due to lack of preparation, the prisoners received no food and no medical assistance, nearly half died by spring. The shock of the defeat was overwhelming in Germany. In Moscow, the bells of the Kremlin rang out in victory while Stalin was portrayed as the great architect of this historic victory.

In October 1942, Rommel took sick leave from North Africa due to stress and other medical problems. Thanks to the ability to break the German Enigma codes, Allied submarine attacks and bombing sank even more German freighters in the Mediterranean in October. Hitler believed the Allied forces would not attack until spring, however Rommel was more realistic; he knew they could do little in the face of Allied air power and Royal Navy attacks on their supply convoys. Eisenhower's planning for Operation Torch, the North African landings, were in full swing in early September. There would be simultaneous landings at Casablanca on the Atlantic coast, and at Oran and Algiers in the Mediterranean. General Patton was to lead the Casablanca landing while Eisenhower would remain in the tunnels of the Rock of Gibraltar. But the supply problem, due to confusion and a shortage of shipping, became a nightmare. Most of the troops crossing the Atlantic arrived without weapons or equipment, so amphibious training was delayed.

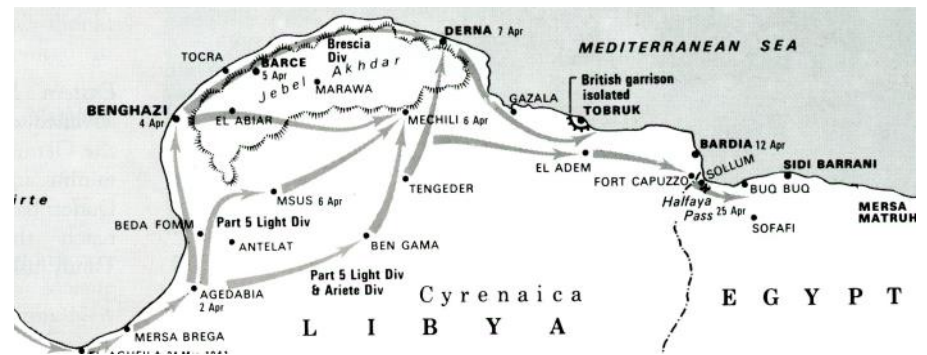
On October 19, the Americans began to launch a series of bombings against the Luftwaffe airfields in North Africa. Four days later, Britain's General Montgomery's artillery opened a massive bombardment on Axis positions, however the German minefields and Axis resistance proved much stronger than expected. On November 8, the Americans conducted their first amphibious landing in North Africa; initially there was much confusion, and as Patton later acknowledged, if they had been fighting in Germany they would have been massacred. Whatever the motives of Churchill in forcing the Americans to invade North Africa first, the decision was undeniably

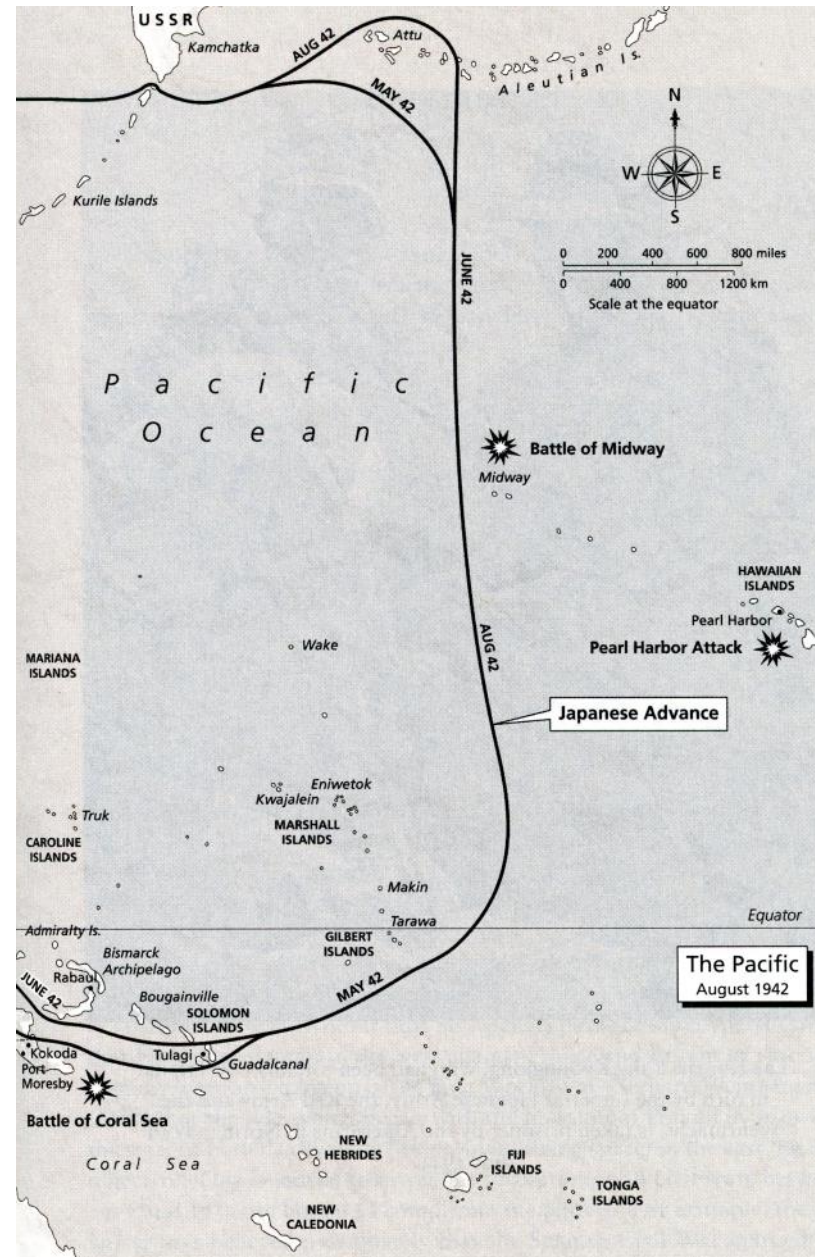
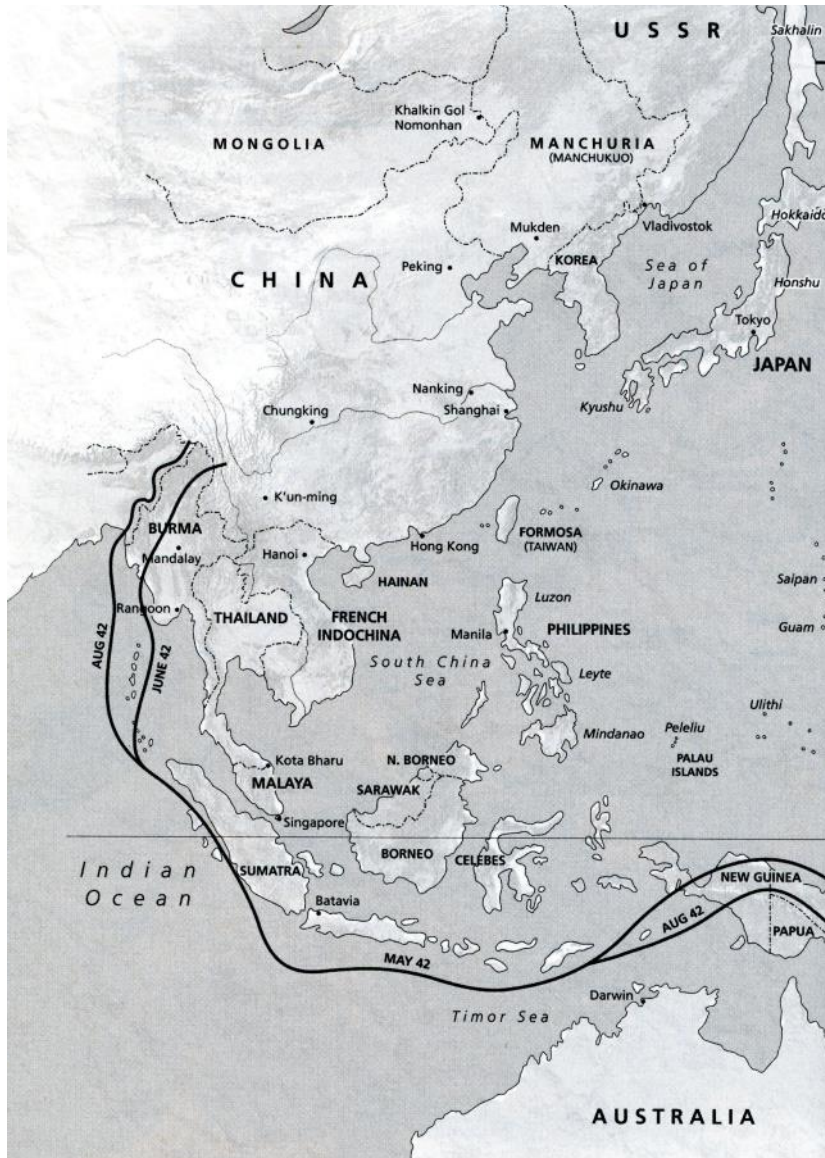
the right one. The U.S. Army had a great deal to learn before it could take on the Germans in northern Europe. Swift victories soon followed for the Allies in Morocco and Algeria. Short of ammunition, and above all fuel due to the Allies strangling the German supply line across the Mediterranean, Germans knew the end was in sight. Nevertheless, Hitler had no intention of allowing the Allies a base for invasion of southern Europe and intended a massive reinforcement of troops and air power, even though he desperately needed to supply the Sixth Army encircled at Stalingrad. The 250,000 German fighting force ultimately retreated to Tunisia, which was conquered by the Allies in May 1943.



Left—Hitler’s western line of occupation into the Soviet union by August, 1942.

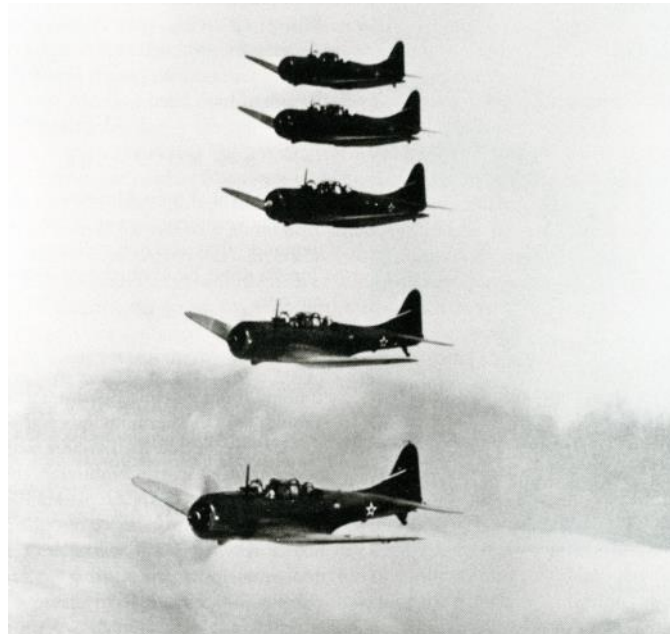
Below—The battles of North Africa. In 1942.





Left—Japan's 1942 expansion into the south-east Pacific. Right—The battles of Pearl Harbor, Midway, and Coral Sea in the Pacific





Top left—Allied convoy on the Atlantic heads towards Africa.

Top right—American Avenger torpedo attack planes on the African front.

Bottom left—Three Russian soldiers rest for a meal in Stalingrad



Bottom right—Russian troops march through Stalingrad after defeating the German army.

Top right—The Japanese battleship Haruna

Bottom left—U.S. marines come ashore at Guadalcanal in the Pacific

Bottom right—American and Filipino prisoners of war captured by the Japanese at the start of the Death March after the surrender of Batan in the Philippines.



## 1943

On January 14, 1943, Roosevelt arrived in Casablanca. He and Churchill, with the combined Chiefs of Staff, assembled to hear Eisenhower's report on the campaign in North Africa and make plans for the next step of the war. General Eisenhower made a fine impression, but it was not his finest hour; he was taken to task by Marshal for the chaotic landing and undisciplined troops. General Brooke was determined to get full agreement on finishing the war in North Africa, then invading Sicily. General Marshal still clung to the idea of a cross-channel invasion in 1943 while Admiral King pressed the Navy's case for emphasis in the Pacific, and the British insisted on the invasion of Sicily, Italy. The battle of the Atlantic had not yet been won, and Eisenhower made it clear the American army was far from ready for a cross-channel invasion in 1943. Therefore, Churchill and Roosevelt settled on a decision to attack Sicily, Italy. At the end of the conference, Roosevelt announced to the world there will be no negotiated peace, but rather an unconditional surrender of both Germany and Japan.

By the spring of 1943, German strength stood at just over 2,700,000 men, while the Red Army mustered up to 5,800,000, with four times as many tanks, and three times as many guns and mortars. A part of the increase in the Red Army's strength can be credited to the recruitment of 800,000 young women; the Red army also possessed greater mobility. The American Lend-Lease program was significantly changing the tide of the war with armament production. By the end of the war, the U.S. had supplied Russia with 400,000 heavy trucks, 2,000 locomotives, 11,000 railcars, and billions of dollars- worth of planes, tanks, food, clothing and strategic resources. While the Red Army was grinding away at the overwhelming bulk of the German army in Eastern Europe, Eisenhower was planning Operation Husky, the invasion of Sicily. Having learned from their mistakes in North Africa, the supply system was at last working. The British were flabbergasted by the largesse of the American industrial titan.

The battle of the Atlantic turned in the Allies favor in 1943 as well. But only after a total of 1,100 merchant ships carrying vital military supplies to Europe were sunk in 1942. It wasn't until the German codes were cracked in mid-December, 1942 that the U.S. was able to reroute their convoys to avoid the German wolfpacks. Then the new radar mounted on anti-submarine Liberators began to have an effect and escort vessels were being equipped with a new high-frequency direction-finding system which could locate German U-boats on the surface up to sixty-five kilometers away. As a result of improved detection devices, the Germans lost thirty-three U-boats during the month of May alone, resulting in an order to pull the remaining U-boats out of the North Atlantic. With the U - boat menace now drastically reduced, the build-up of American troops for an invasion of Europe could also begin.

During the summer of 1942, the U.S. Eighth Air Force began to assemble in Britain. To the astonishment of the RAF, who performed bombing raids at night, the Americans announced that their bombing campaigns would be by daylight. Its leaders claimed they would carry out precision bombing of the enemy's industrial fabric, however American bombing accuracy proved no better than those of the RAF; fewer than 3 percent of the bombs were falling within 1,000 feet of their intended target. A recent improvement in radio transponder technology did start to help guide aircraft to their objective much better. Nevertheless, even though the intentions were to target military industry, such as oil depots and communication centers, the reality was bombs spilling over to destroy German cities. Even though the pre-war theory was targeted industrial bombing to reduce civilian casualties, the strategy gradually

changed to the carpet bombing of entire cities. The combination of the USAAF attacking by day and the RAF by night turned into a devastating round-the-clock bombing of German cities. These initial air attacks against the German heartland forced Hitler to withdraw Luftwaffe fighter formations from the eastern front to defend the Reich, further enhancing Russia's advance.

In the spring of 1943 Allied losses rose to terrifying levels, with only one in five pilot's surviving a thirty-mission tour. On April 17, The Eighth Air Force over the city of Bremen lost fifteen bombers to German fighters. The United States Air Force lost 188 bombers and 1,900 crewmen in the first year of operation. The results convincingly implied the United States was simply not in a position in 1943 to achieve the air supremacy required to ensure a cross-Channel invasion.

The life of a bombing crew was full of dangers. The freezing winds, especially for the waist-gunners at open doors, were numbing; more men suffered from frostbite injuries than from combat wounds. If a gun jammed, men would tear off their gloves to clear the obstruction, only to find their fingers frozen to the metal. Any man badly wounded by flak was likely to die of hypothermia before reaching the base. It also became a common experience for many men to suffer from the shakes, fainting spells, blindness, and psychological breakdowns.

On June 10, 1943, the combined bomber offensive officially began. The leading wave of bombers dropped incendiaries to get fires going before the high-explosive bombs from the next wave blasted open buildings. The blazing buildings soon created an inferno which sucked in air from all around, the hurricane force winds that were created at ground level tore off clothes, stripping people naked and set their hair ablaze; houses would explode into a blaze in a moment and many citizens were asphyxiated by the smoke or lack of oxygen. Tarmac melted in the streets so people's shoes stuck as they ran to the river to protect themselves from the heat. Once the fires subsided, charred bodies were so reduced that burial parties could collect three corpses in a small wash tub. Concentration camp prisoners were brought in to collect body parts in zinc tubs and corpses trapped under collapsed buildings. Everywhere they heard screams of the wounded, the desperate calls or knocking of those trapped underground. As the USAAF attacked twice by day while the RAF by night, thousands of Germans fled the cities as the word of horror spread.

Hamburg was destroyed on July 24, 1943 and the battle of Berlin began soon thereafter. The bombing went on until March of 1944, yet 17,000 tons of high-explosive bombs and 16,000 tons of incendiaries failed to destroy the German capitol or the people's morale.

After exhausting battles in the Pacific to secure Guadalcanal and Eastern Papua New Guinea, the Americans knew that to eliminate the Japanese base at Rabaul would be long and difficult. In April, 1943 it was agreed Halsey's forces would leapfrog north-westwards from Guadalcanal along the Solomon Islands chain. At the same time MacArthur's forces would clear the Japanese from New Guinea and seize the Huon Peninsula, combining in a pincer attack on Rabaul. The Japanese reinforced Rabaul, New Guinea and the western Solomon Islands with 100,000 troops taken from Korea and China.

The dense jungles, mangrove swamps, and mountain ranges were more impenetrable than the planners had imagined. Soldiers found the jungles exhausting and disorienting, and they rapidly became spooked by the noises at night. It was the rainy season, with mud, perpetual damp, leeches, jungle rot, and patrol and skirmishes carried out in rain so dense that visibility was drastically re-

duced. The battles were sobering experiences, requiring numerical superiority of four to one, to say nothing of the massive sea and air support needed to secure the islands. The desperate fighting finally turned to America's advantage as marines began clearing bunker after bunker with a combination of explosive charges, gasoline, and flamethrowers, all which reduced the defenders to little more than charred skeletons.

Nazi ideas for ethnic cleansing were expanded in 1943. Goring, in charge of the war economy, simply wanted to strip the occupied areas and starve their population, while Himmler wanted to cleanse them by mass murder to prepare for German colonization. As for Poland, Hitler thought their country should be wiped off the face of the earth. Thru 1942, their goal was to dehumanize through suffering, starvation, and execution, the various victim categories of Jews, Slav's, Asia tic's, Roma's, homosexuals and political enemies. However, over the winter of 1942-43 the mass killings were stepped up to a much higher level of systematic production. In May of 42, when the mass killings started on a more significant scale, it became clear that the facilities were totally insufficient and the mass burials were polluting the ground water. A completely new system of gas chambers and furnaces were built during the winter of 42-43.

As the prisoners prepared to be loaded into boxcars, believing they were being transported to the Ukraine to work in agriculture, they were told to leave their luggage but ordered to bring their documents and valuables. As they were unloaded, people were deceived by the illusion of order and music being played. But soon they smelt the dead bodies, and when prisoners were separated according to their physical state, they soon guessed. First the men were separated from the women and children, which caused much unrest; dog-handlers and whip wielding guards dealt with the disruptions. SS doctors carried out exams for the selection process choosing those fit for labor, and the unfit who were to be eliminated immediately. Those fit for labor would be worked to death or gassed within two to three months.

The women, children, and those unfit to work, were told to move into the barracks to undress. Orders were shouted to undress for the bath-house, remove shoes, tuck stockings into shoes, be tidy, and to keep your documents, valuables, soap and towels with you. After the women removed their clothing they had their heads sheared. Naked, they stood in line while waiting to hand in their valuables and documents. They were then herded into sand alleys lined by fir trees, ordered to raise their hands over their heads, and then forced forward with whips and shots from sub-machine guns into a square where the victims saw a stone like temple. To force the prisoners into the building the guards unleashed their dogs; the screams could be heard for miles as they sank their teeth into them. Silence fell only once the heavy steel doors of the ten gas chambers were closed.

Twenty-five minutes after the gas was introduced, the doors would be opened and prisoner labor would begin to remove the bodies. Working prisoners carried out the horrific work of dragging the corpses out of the gas chambers where the "tooth crew" extracted gold from the teeth of the corpses with plyers. Another work party would load the corpses on to carts or trolleys to take them to mass graves or cremation furnaces. The most privileged male prisoners worked in the warehouse sorting the possessions – clothes, shoes, spectacles, and bundled up the bales of human hair. The clothing was all transported back to the Reich so it could be reis-

sued to the needy. The hair, proving to be better heat retention than wool, was woven into socks for military personnel; watches were given away as presents to soldiers.

The death camp machine of Treblinka, killing 800,000 prisoners in thirteen months, was not far short of the million killed at Auschwitz in thirty-three months. The best estimate of civilians and disarmed soldiers killed by the Nazi regime has been calculated from wartime reports generated by those who implemented Nazi population policy and postwar studies of population loss. The best estimates of deaths reveal up to 6 million Jews, 5.7 million Russian civilians, 3 million Soviet prisoners of war, 1.8 million non-Jewish Polish civilians, 312,000 Serbs, 250,000 people living in institutions, 220,000 Roma (gypsies), and 70,000 criminal offenders and homosexuals.

On July 10, 1943, Operation Husky, the American landing at Sicily, Italy, began with pre-dawn airdrops, followed by 2,600 ships landing with eight divisions, as many as in the Normandy landing eleven months later. By nightfall the Allies had 80,000 men, 3,000 vehicles, 300 tanks, and 900 guns ashore. The Germans were taken by surprise, expecting the invasion to be at Sardinia and Greece; Hitler immediately announced that he needed to withdraw troops from the Eastern front to defend Italy. The landing was far from easy in heavy surf and with the minefields covering the beaches, and often troops came ashore in the wrong places. Inland, the airborne landings in the high winds had been chaotic resulting in many paratroopers suffering leg injuries. Whatever the confusion on the Allied side, the 300,000-strong Axis forces were in greater disarray.

The Sicilian campaign was ultimately successful, although it permitted many of the Axis troops to escape. Morale was high in both the U.S Eighth Army and Patton's Seventh Army due to sharpened skills in both the amphibious operation and the fighting afterwards. The invasion had also prompted Mussolini's downfall and collapse of the dictator's Fascist regime. By September 3, the Americans had secretly negotiated an Armistice with Italy. To protect their underbelly, the Germans had built up their forces in Italy to sixteen divisions, and the Italians were understandably terrified of German reprisals. In September, Clark's US Fifth Army landed at Salerno, fifty kilometers south-east of Naples. One of the first priorities of Germany was to seize Rome; 650,000 Italian troops were disarmed and sent to prison camps as forced labor while the Jews in the city were rounded up and executed. The unexpectedly strong resistance by Germany took the Allied troops by surprise.

Americans put their new bombing doctrine into play, which called for "putting the city in the street". This meant smashing a town to rubble so that enemy reinforcements and supplies could not get through. Hitler, planning to defend Italy from the south of Rome, moved a total of thirty-seven divisions into Italy while fighting for its life with reduced troop strength on the eastern front against Russia. Goebbels and Ribbentrop urged Hitler to initiate peace talks with Stalin, but the angry Hitler refused to negotiate from weakness. Since there was no hope of negotiating from strength, Germany would fight on until total destruction.

The Allied invasion of Italy lacked clear thinking about the objective of the campaign. The real problem, of course, came from the very top where Marshall and Roosevelt were determined that nothing should delay the Normandy invasion – Operation Overlord. Wishful thinking that the Allies would be in Rome by Christmas had infected American commanders as well as Churchill. But there

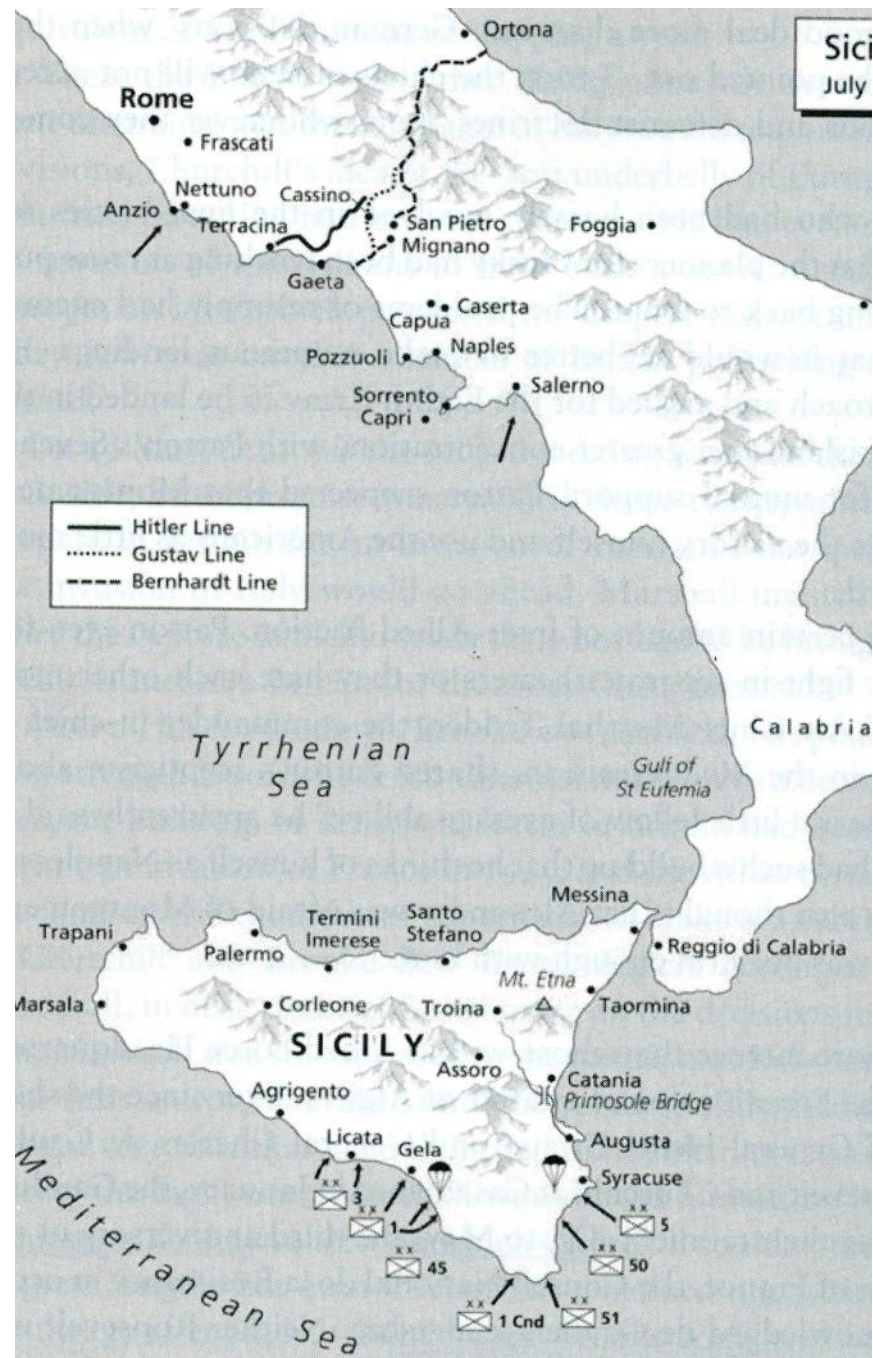
were clear indications the Germans would fight ruthlessly in retreat and take revenge on Italian troops and citizens, who were supporting the Allies. The Allied armies soon discovered advancing north from Salerno through the mountainous terrain would be difficult. In the constant rain and mud, trucks could not get near the forward positions. Food and ammunition had to be carried up steep, zig-zag paths by mules or men. On their way back down the mountains, the mules would carry the dead. Retreating Germans had blown every bridge and mined every route. And with seven US divisions sent back to England to prepare for Operation Overlord, the Allies no longer had the numerical advantage for a major offensive.

Clark's soldiers were a sorry sight by December; the men, with beards and long hair, had dark circles of exhaustion under their eyes; their uniforms were impregnated with mud, their boots coming to pieces, and their skin white and wrinkled from being continually wet; many suffered from trench foot. Italian homes and gardens were ruined and trees smashed from artillery. Surrendering soldiers and Italian civilians in battle zones were shot by the Germans. Southern Italy was not a happy place during the winter of 1943 – 44. With no men available to work the fields, civilians were starving and women were willing to offer themselves for a can of rations. Naples was wrought with children suffering from rickets, but the greatest killer was typhus.

Meanwhile, on November 28, 1943, Stalin had finally agreed to meet with Churchill and Roosevelt in Teheran, Iran. The topics to be discussed included the fate of Poland, post-war international relations, treatment of enemy states, trials of war criminals, arrangements for France, and a European Advisory commission on Germany. Roosevelt's project of the United Nations, which would come into being at the end of the war, would have the victor nations at its core. America was also at this time trying to promote Nationalist China's membership. Stalin insisted on keeping the Allies to their promise of a major invasion of France in the spring of 44. Poland was indeed a major issue for both sides; both Roosevelt and Churchill felt obliged to consider Stalin's claim to eastern Poland and western Ukraine, which Russia had absorbed in 1939. Roosevelt insisted on democratic elections in Poland, however Stalin believed he would incur little conflict from the America president on imposing a Communist government. Stalin agreed to join the war against Japan with the U.S as soon as Germany was defeated. Within one week of the Teheran meeting, Roosevelt selected Eisenhower to be supreme commander of the Allied forces in Europe and to command the cross-channel invasion into France.

Below left—First U.S troops land at the allied invasion of Sicily, Italy

Right—Map of U.S invasion of Italy







Top left—A woman flees fire in Seigburg, Germany

Bottom left—Jews are rounded up by the Nazis in Warsaw, Poland

Bottom right—German civilians in Hamburg, Germany after an air attack

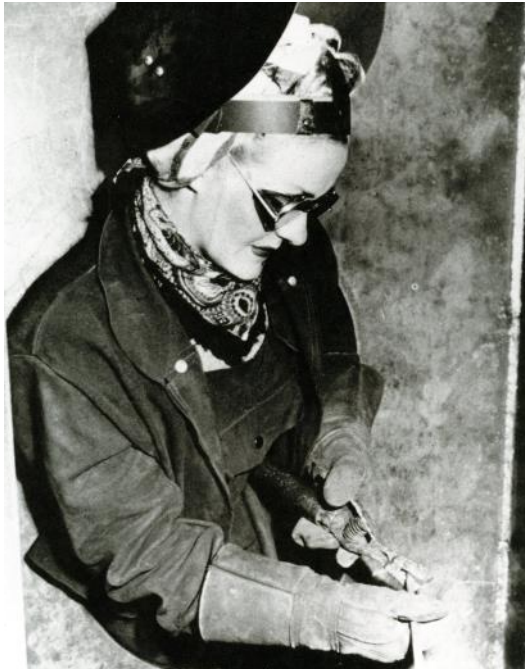


Top right—An American woman in St. Louis handling cartridges at an ordnance production plant

Bottom left—U.S. troops load into landing craft for the invasion of the Solomon Islands in the Pacific

Bottom right - U.S. soldiers in Guadalcanal jungle stalking Japanese snipers





Top left - An American woman in California shipyards welding Liberty ships

Bottom left –Sixteen inch guns fire from the USS Missouri in the Pacific

Bottom right –Dive bombers aboard a U.S aircraft carrier in the South Pacific.



## 1944

Churchill, while recovering from pneumonia after Christmas, became impatient with the static battle line in Italy. He returned with enthusiasm about General Clark's earlier idea to make another amphibious landing closer to Rome to outflank the German line from the north. Eisenhower, and British General Montgomery, were both uneasy about the idea, however both were leaving the Mediterranean for London to prepare for Operation Overlord. Churchill more or less took over command, and with the blessings of Roosevelt, convinced a wavering Clark to proceed with Operation Shingles with only two divisions. The beaches of Anzio, a hundred kilometers behind the German lines, were selected for a landing on January 22, 1944; the beachhead was surrounded by a mountainous terrain. The Germans were taken completely by surprise. Hitler, determined not to lose the capital city of Rome, ordered additional divisions from northern Italy as well as reinforcements from elsewhere. Clark failed to capitalize on the surprise landing, and instead delayed the advance until he had sufficient troop strength. Consequently, within three days the beachhead was surrounded by three German divisions; for weeks a rain of shells fell on the beachhead. By January 28, the German build-up had reached parity with the 60,000 Allied troops and with the skies heavily overcast, the Allies could no longer rely on air support. Americans and British had to dig in to face the fury of the expected counter-attack of now nearly 100,000 Germans.

On February 29, the Fuhrer ordered another major offensive to defend Rome, which was turned back by the firing of 66,000 shells by the Allies. Unyielding, Hitler refused to recognize his troops could not win as the Allies grew stronger and stronger in the battle of military hardware. The Germans could not continue to expend troops and weaponry much longer with such apparent exhaustible reserves of firepower being produced by U.S industry. At Anzio, three-quarters of its casualties had been caused by shellfire. In February, the full destructive potential of the Allies was unleashed with the U.S flying fortress of B-17, 25, and 26 bombers. After several months of intense fighting, the Americans and Allied forces finally broke through the German lines in May. Rome fell into Allied hands on June 4, 1944.

The Soviet offensive began in earnest with the advance on Kiev, the Ukrainian capital, which fell November 6, 1943. The capture of Kiev confirmed reports of the massacres of Jews, Roma, and communists at the hands of the Nazi's. The Germans tried to conceal the crimes by burning and removing the bodies; it is estimated 100,000 people were killed in Kiev. In January 1944, even after losses of 4.2 million men, the German armed forces were at their greatest strength with 9.5 million in uniform, with just under 2.5 million on the eastern front. But numbers were misleading as the German army was a very different organization to the one which started the invasion. Troop strength was kept up by pressing Poles, Czechs, and other occupied countries men into service. The other great difference was the German army could no longer count on effective support from the Luftwaffe, the bulk of which had been withdrawn to defend the Reich from British and American bombers.

In the early part of 1944 the Soviet priorities were clear, force the Germans from Leningrad and reoccupy the rest of Ukraine. On January 27, 1944, after 880 days, the siege of Leningrad was finally broken. In Western Ukraine, the German line was smashed on March 4. Two tank armies advanced into Romania which forced German and Romanian troops to surrender on April 10. Hitler, de-

terminated to save Hungary, installed a puppet government in Budapest and immediately rounded up 750,000 Hungarian Jews to send off to Auschwitz to be gassed. By May, the Red Army had won back almost all Soviet territory and had entered foreign territory.

In June the Red Army deployed deception measures suggesting a major build-up in Ukraine, when in fact it was transferring tanks and armies north to the Baltic, Poland, and Warsaw. The Allied strategic bombing offensive in Europe, and now the invasion of Normandy, had reduced the Luftwaffe air support to German armies in the eastern front to a disastrous level, making it easier for the Red Army to move armaments. Altogether Russia had moved 1,670,000 men, 6,000 tanks, 30,000 guns and heavy mortar, and the support of 7,500 aircraft to the north. The Russian offensive was launched on June 22 to the west of Warsaw, Poland and the Baltic Sea. German lines began to pull back into one defensive line after another in the vain hope of halting the onrush as the Russians attacked constantly. The ground attack, air support, and artillery fire were all coordinated; impact followed impact.

For the Germans, the retreat was disastrous. Vehicles had to be abandoned because they had run out of fuel; the U.S strategy to bomb oil installations was certainly helping. The road of revenge, as the Russians called it, was filled with scorched German tanks and guns. The corpses were so thick hundreds of them paved the road and ditches; so dense were the corpses, vehicles would drive over them. The German SS were given orders to liquidate the last survivors and destroy all evidence of the death camps as the Russians were quickly advancing. Hitler ordered the entire city of Warsaw to be razed to the ground – monuments, government buildings, the historical old town, the royal castle, churches, everything. There was no water with which to fight the fires, and field hospitals had little to treat those with severe burns; patients simply died in agony. The 67,000 Jews remaining in the ghettos were sent to their death in Auschwitz, where the production-line massacre had killed 430,000 in the last few months. The Red Army stopped as it approached Warsaw because Stalin clearly wanted the Germans to kill off as much of the Polish resistance as possible. Germany's Himmler soon ordered the total destruction of the city with fire and explosives.

By 1944 the balance of power in the Pacific had by now switched decisively in favor of the U.S. Navy. The astonishing American shipbuilding program far exceeded what the Japanese had feared prior to Pearl Harbor. The United States had also overtaken the Japanese in aviation technology. On January 31, 1944, twelve fast carriers and eight new battleships advanced on the Marshal Islands. The American's 650 aircraft destroyed almost every Japanese aircraft in pre-emptive strikes. As a result, the amphibious landing succeeded with a much lower loss of life. As the US Navy advanced toward Japan by securing Islands, the new US B-29 Superfortress, with a bombing range of 1,500 miles, could attack the Japan mainland from the Mariana Islands.

Japan, now realizing it could not win in the Pacific against American naval supremacy, launched a continental war in China to destroy the Nationalist Chinese forces. The Operation Ichi-go offensive was approved for half a million men to attack southern China and another 85,000 attacking from northern Burma into India. On January 24, General Tojo's objective was to destroy American airfields and open a land corridor from Manchuria down through China all the way to Indochina, Thailand, and Malaya. Stilwell was advancing 90,000 U.S. and Chinese troops into north-east Burma to eliminate Japan's jungle air bases and communication centers.

The Burma campaign was fought from March until the beginning of August in the high hills and thick jungles near Myitkyina and the U.S. air fields. The Chinese troops, exhausted and under-nourished, struggled on in appalling conditions - monsoon rains, leeches, lice, malaria, and even cerebral malaria, took their toll; so too did sepsis, pneumonia, and meningitis. Resupplying the men by air was almost impossible in a terrain of deep valleys with impenetrable bamboo thickets and elephant grass, as well as the steep ridges rising to 1,800 meters. Those badly injured were shot so they would not fall into Japanese hands. The Japanese, with no air drops of supplies, lost 70 percent of their military strength by June as most soldiers went for days with nothing to eat but wild grass and lizards; half of the Japanese deaths were due to starvation and disease.

In China, the Ichi-go Offensive had begun in April. It was the largest operation that the Imperial Japanese army had ever undertaken, with 510,000 men committed to the offensive out of a total of 620,000 men in China. But for once the Japanese did not have air superiority. Unfortunately, the Nationalist armies lacked weapons and munitions and soon crumbled away as the Japanese drove south. While the Japanese stepped up their offensive to destroy the American air bases on mainland China, they had no idea that their efforts were soon to become irrelevant.

The U.S. Fifth Fleet was now the largest in the world with 535 warships and a force of 127,000 troops. It was heading for the Mariana Islands to turn them into airfields, from which B-52 Super fortresses could bomb the Japan mainland. Japanese positions on Saipan, the largest and first target island, had been bombed by land-based aircraft for some time. By June the Japanese air strength had been greatly reduced, but the defending force of 32,000 men was still far greater than expected. After two days of bombardment by seven battleships, the marines went in. Once the Japanese were forced back to the northern point of the island on July 7, the survivors launched the largest *banzai* attack of the war. More than 3,000 Japanese soldiers, charging with bayonets, swords, and grenades, descended on two battalions of Americans. The marines could not shoot fast enough as the Japanese swept upon them. The battle ended two days later resulting in 14,000 American's killed and wounded, while the Japanese left 30,000 corpses on the island. Added to them were approximately 7,000 Japanese civilians whom committed suicide by throwing themselves from the cliffs into the sea. After Saipan, the islands of Tinian and Guam were invaded; Guam was the first U.S. territory to be recaptured. The airfields on Guam were secured by the end of July, and soon engineers were extending the runways for the B-29 Super fortresses.

After all the delays, detailed planning for Operation Overlord had begun in earnest in January 1944. Upon examining the draft invasion plans for Normandy, Eisenhower's reaction was three divisions of men were not enough, and the Allies needed more beaches. Eisenhower also insisted that he had to have full control over the Allied Air force.

In Eastern England the British had built secret training beachheads where every possible obstacle that the troops may encounter was duplicated, including minefields, pillboxes, underwater obstacles, and antitank defenses. Special units, all under Ike's command, all had to be trained, transported on the correct ship, with their needed equipment, and landed at the right place on the beach. Special units included: camouflage units, medical units, communications, frontline engineer units with mine-flail tanks, German speaking prisoner interrogation units, forward air controllers to direct air strikes, demolition experts, and an endless array of other specialists. The south of England was sealed of "tight as a drum" with more than 2 million troops waiting for the moment to ar-

rive. Perhaps the most contentious discussion was over the decision to use airborne troops. The inescapable fact remained, when you dropped paratroopers as a light infantry fighting unit, they will invariably be matched against regular infantry supported by tanks and artillery; another contested point was the number of aircraft needed for dropping a whole division. Yet Ike agreed it was a necessary risk that must be taken.

Everybody, including Hitler, knew the invasion was imminent, but Germany did not know exactly where or when. The British staged an intricate series of deception plans, hinting landings in Norway and south of Boulogne and the landing in Normandy a feint. As a result, Hitler insisted on maintaining 400,000 men in Norway. The German counter-intelligence services were certain that the invasion was near, but meteorological reports concluded there was no question of an invasion between June 5 to 7 because of bad weather. As a result, Rommel canceled all patrols and decided to visit his wife for her birthday and meet with Hitler. Regardless of the poor weather, the high tides and full moon on June 5 to 7 were necessary for the American landing to take place in June. After postponing the invasion for the night of June 5 due to storms and high seas, Eisenhower saw a brief break in the weather and ordered the invasion to proceed the night of June 6.

Overlord would be the largest amphibious operation in history, with more than 5,000 ships, 8,000 aircraft, and eight divisions of men in the first wave, all landing on five different beachheads of France. Nearly 18,000 paratroopers landed at one in the morning on June 6; many of them would be found dead, drowned by the weight of their equipment or hanging lifelessly from the limbs of a tree. About 156,000 troops were crammed on the ships crossing the English Channel. At around 4:00 in the morning the troops were ordered to assemble on the deck to climb down into the landing craft and the battleships opened up with their 14-inch guns. While the naval bombardment continued, landing craft filled with rocket launchers approached the shore. Many landing craft became stuck on sandbars, others were being over-turned dumping troops into the water, while others were heavily damaged by being tossed around by the waves.

Omaha Beach, dominated by steep bluffs, proved an even deadlier objective than the Allies expected. The naval bombardment fell too short to be effective. And the aircraft, deciding to wait a moment longer to unload their bombs to avoid hitting their own men on the beach, hit mostly fields and villages inland; none of the beach defenses, bunkers and fire points were touched. As a result, the first wave suffered very heavy casualties; traumatized soldiers froze at the foot of the bluffs. Once the Sherman tanks could engage the German bunkers, and destroyers, sailing dangerously close to shore, could hit German positions, the battle was tipped in favor of the Americans. The first twenty-four hours of the invasion of Normandy would cost 17,000 American, British, Canadian, and German casualties.

Hitler was asleep during the invasion and his naval officer decided not to wake him until more information was available. Field Marshal Rommel was at his home and did not receive the information of the landing until 10:15 in the morning. The combination of Rommel's absence on June 6 and Hitler's delay in releasing the panzer divisions would prove fatal.

Rommel, who knew Germany's defeat was imminent, urged Hitler to bring the war to an end. Hitler, in his world of illusion, convinced himself that the new V-1 rocket bombs, which he had just started to launch on London, would bring Britain to its knees. Between

June and September 1944, the Germans launched over 8,000 V-1's, damaging over 750,000 homes, killing over 6,000 civilians, and seriously injuring another 18,000. The more deadly V-2, carrying a one-ton warhead, killed another 3,000 civilians.

In March, 1943, the first assassination attempt of Hitler failed when an explosive attached to his Focke-Wulf Condor automobile failed to explode. Two more attempts on his life also failed that year. On July 20, 1944, a bomb hidden in a briefcase was slid under the heavy table where Hitler was standing during a situation conference. The bomb injured him but failed to kill him. Altogether more than 5,000 suspected opponents of the regime and their relations were arrested. While the Reich was gripped by Nazi frenzy over the failed plot, the collapse of the eastern front was soon to be matched on the western front. On July 25, 1944, Bradley launched Operation Cobra and on August 1, General George Patton's Third Army came into being. All divisions were now out of Normandy and basically unopposed; for Patton, the path was open to the Seine River.

German defenses were in a state of complete collapse: their communications were cut in the rapid withdrawal, commanders had no idea what was happening, vehicles ran out of fuel, and soldiers were receiving no supplies or ammunition. On August 25, 1944, the U.S. 4<sup>th</sup> Infantry Division entered the city of Paris to a riotous welcome. On September 3, Brussels was liberated and the next day Antwerp.

On The eastern front, the Red Army had extended their massive gains with an offensive further south, which started on August 20. Southern Ukraine fell with the loss of 350,000 German troops. Romania abandoned Germany to make terms with the Soviet Union, and Bulgaria followed suit two weeks later. In addition, all of Germany's occupation forces in the Balkans, especially those in Yugoslavia and Greece, were at risk of being cut off. Most importantly, Hitler's last oil supplies in Hungary lay open to the Red Army. On September 2, Finland also agreed to terms with the Soviet Union. To maintain its dominant army, increased repression began in the Soviet ranks. And to make up for its huge losses, the Red Army was forcibly recruiting Ukrainians, Belorussians, Poles, and men from the three Baltic States; many of these soldiers detested the Russians and were likely to desert.

The RAF and USAAF no longer had a great deal to fear from the Luftwaffe and, as a result, Allied bombing intensified. A relentless, systematic destruction of Germany's transport and communication infrastructure began in October, 1944. The Allied bombing of Germany's oil refineries was having a marked effect on the effectiveness of Allied field operations. In November, Hitler's strategy was to achieve a sweeping victory to knock at least one country out of the war, and then perhaps negotiate from a position of strength. The offensive called for the assembly of thirty divisions and the 6<sup>th</sup> Panzer Army to move forward toward Antwerp and Brussels. The Germans believed the attacking armies would have to reach the Meuse River in two days to take Antwerp.

On the 16<sup>th</sup> of December Germany's artillery opened fire. The effect of 1,900 guns along with firing from the front at the same time was profoundly disorienting. Unfortunately for the Allies, weather conditions of low clouds and poor visibility grounded Allied air support. General's Eisenhower and Bradley were meeting in Versailles when they were informed of the surprise attack; Eisenhower ordered three divisions to move immediately to Bastogne, just east of the Meuse. Eisenhower, expressing a positive outlook, saw this as a great opportunity to inflict maximum damage on the enemy in the open, rather than from behind defensible positions. Patton



was ordered to change his direction 90 degrees and move three divisions to Bastogne as fast as possible. The bridges were blown on the Meuse to prevent the Germans from advancing to Antwerp. With the priority of the supply lines being focused on fuel and ammunition, most of the American troops were still in their summer uniforms and were not prepared for winter warfare; consequently, trench foot and dysentery were widespread. For the Allies to succeed, everything depended upon skies clearing so that C-47s could parachute ammunition and supplies; a clear, cold day finally arrived on Christmas day. The Allied air force wasted little time achieving air superiority over the Luftwaffe, which had attacked with 800 fighters collected from all over Germany. The Allies ultimately prevailed and broke through the German encirclement on December 27. The Ardennes offensive, commonly known as the Battle of the Bulge, constituted a major defeat for the Germans and turned out to be their last major offensive. The Germans lost half their tanks and guns and suffered heavy casualties, with 12,652 killed, 38,600 wounded, and 30,000 taken prisoner.

## 1945

On February 1, 1945, the USAAF agreed to a new directive which placed Berlin, Leipzig, and Dresden on the target priority list just below oil. The U.S. launched its heaviest raid on Berlin the morning of February 3<sup>rd</sup>. The American bombers attacked Dresden, Germany on the night of February 13 with the usual mixture of high explosives and incendiaries which began the fires. The fires began to coalesce into a huge inferno, sucking in hurricane force winds; it was reported the smoke from the city rose to 15,000 feet. The conditions on the ground were horrifying – with shrunken carbonized bodies, most killed by carbon monoxide poisoning, molten lead pouring from the roofs, and melted tar on roadways trapping people like fly-paper. Hamburg, Heilbronn, and Darmstadt were all leveled. The beautiful town of Wurzburg, which had no military significance, was burned to the ground in the middle of March. The bombing blitz destroyed over 60 percent of the German cities. Estimates of the German civilians killed vary, but it was estimated to be around half a million people. Altogether 55,573 American aircrew died out of the 125,000 who served.

On March 30, Eisenhower issued his orders; he decided the main thrust would be toward central and southern Germany, along the Elbe River, just west of Berlin. He insisted that Berlin was not the logical, nor the most desirable objective for the forces of the Western Allies. Eisenhower also assured Stalin that he had no intention of advancing on Berlin, which infuriated Churchill. The German armies were crippled by fuel and ammunition shortages, as well as the lack of manpower and the desertion of many very young recruits. The question everyone was asking, why did Germany continue to fight when the war was so obviously lost? Historians have argued that the Germans fought to the last because of fear of Russian reprisals, the Allies insistence of an unconditional surrender, knowledge by senior Nazis that they would be executed for war crimes, and Hitler's fear of being captured and taken back to Moscow in a cage.

By January, 1945, it had become abundantly clear that the onslaught which the Germans had inflicted on other countries was about to fall on their own. On December 26, 1944, the Russians had 79,000 German and Hungarian troops trapped in the twin cities of Buda on the west bank of the Danube. Hitler's instructions were that Budapest should be defended to the last brick to preserve the Hungarian oil fields, which offered his last source of fuel. For the 50,000 Jews still in Budapest, the arrival of the Red Army offered deliverance, but few would be allowed to survive. After Soviet attempts to obtain surrender were rejected, a three-day artillery barrage

Bottom left—Canadian soldiers walk through rubble in Caen, France

Top right—Italian crowds watch Allied tanks move through Rome

Bottom right—A U.S. infantry division marches along the Champs Elysees after the liberation of Paris





Top left -U.S amphibious tanks head for the beaches of Guam

Bottom left -Bombs being loaded into a B-29 Superfortress at the Pacific base in Saipan

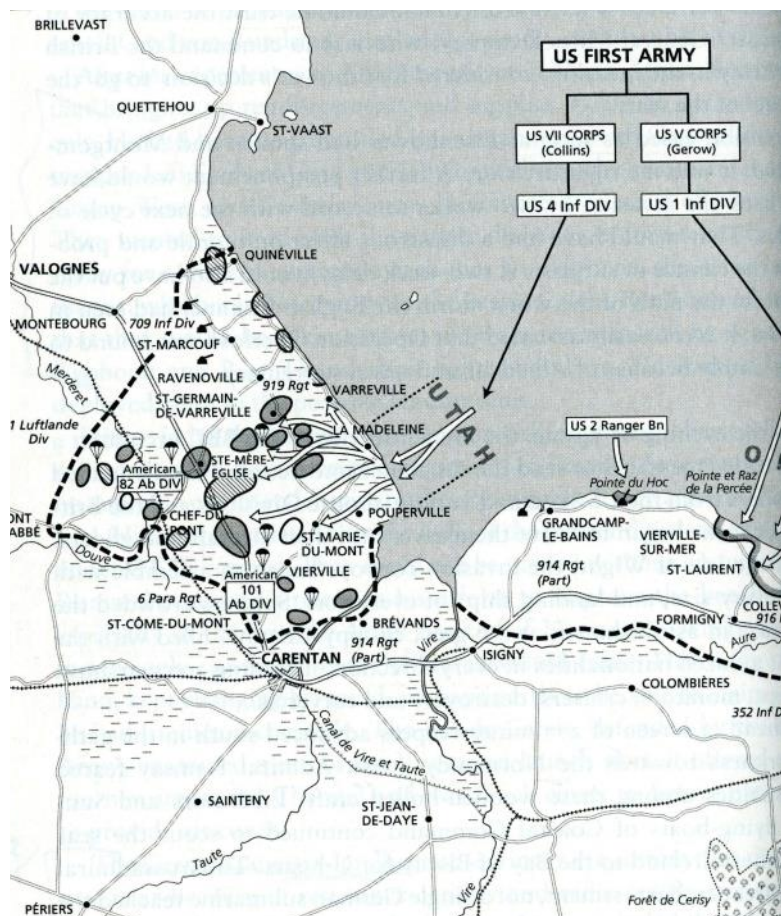
Bottom right - A Japanese kamikaze moments before slamming into the USS Essex carrier's flight deck.



Bottom left—Map of cross channel invasion

Bottom right—American reinforcements wade on- to Normandy beach.

Top right—U.S soldiers leave their landing craft under heavy enemy fire during D-day invasion of Normandy, France



and heavy bombing began. Over the next two weeks the Soviets forced German and Hungarian defenders back towards the Danube.

There was no water, electricity, gas, or working sewage systems in the surrounded cities of Buda; some 300,000 people were packed into the last bastion of Castle Hill. All the horses were eaten, starvation was universal, as were the lice, and an outbreak of typhus. On February 11 white flags began to appear. Some 28,000 German soldiers attempted to escape yet only 700 reached the German lines safely as the rest were massacred by the Russians. Red Army soldiers shot the German wounded, dragging them out to be crushed under tanks, while the Hungarians were rounded up for forced labor. Looting took place on an epic scale, art collections were seized, civilians were stopped at gunpoint for their watches, wallets, and documents, and the women were raped; the most attractive women were held for up to two weeks and forced to act as prostitutes. Almost every town the Russians conquered suffered as Budapest did.

As the Red army moved east toward Berlin, German refugees were fleeing the horrors of Russian soldiers; every road filled with old people, women and children, slowly moving with carts, on vehicles, or on foot towards the west. As Russian tank troops caught up with them and cleared the way for themselves, carts, belongings, and people were pushed aside into roadway ditches; women of all ages were raped and shot. As far as the eye can see, corpses of women, old people, and children, among piles of clothes and overturned carts, lined the roadways. Looting was combined with mindless destruction. Soldiers would burn down houses, kill livestock, and in both the villages and cities they would break the windows before throwing all the contents of the shops and apartments out into the street. The sidewalks and streets were filled with broken plates, radios, musical instruments, household goods, food, clothes, paintings, pillows, duvets, and household items of every description. The Russian soldiers turned into beasts.

Weeks before the Red Army arrival, Germans would evacuate concentration camp inmates deemed capable of walking on death marches to the west. Those who were to survive the march, an experience which was probably worse than all the horrors they had suffered so far, found themselves dumped in other concentration camps, where squalor, starvation and disease increased dramatically the last three months of the war. The Germans concentrated more on attempts to destroy the evidence, but there was more than enough evidence left behind, including 368,820 men's suits, 836,255 women's coats and dresses, to say nothing of seven tons of human hair. By January 30, Russian tanks approached the Oder River, the last line of defense before Berlin. In that one month of January, the German Army losses rose to 451,742 killed. The U.S Eighth Air Force launched its heaviest raid ever on Berlin. By February, it was estimated 8.35 million German refugees were heading west. The Red Army's rampage had produced the most concentrated shift of population in history.

As the Soviet Armies were approaching the Oder River east of Berlin, and the Allied forces were moving toward the Elbe River west of Berlin, Roosevelt, Churchill, and Stalin were meeting at Yalta on the Black Sea to decide the fate of the post-war world. The first session began on February 4, 1945. Roosevelt wanted above all to secure Soviet support for the United Nations Organization. The top British priority was to obtain guarantees that Poland would be free and independent. For Stalin, the main purpose of the Yalta conference was to force acceptance of Soviet control of central Europe and the Balkans. The Soviet Union had already established

their own puppet government in Poland and had armies immediately outside Budapest; Stalin saw no reason to compromise. They discussed the military situation and strategy, the dismemberment of Germany, the German occupation zones for each country, repatriation of prisoners of war, and reparation from Germany. Roosevelt wanted Stalin's commitment to declare war on Japan as soon as Germany surrendered. Roosevelt gave up hopes to force Stalin to accept a democratic government in Poland in exchange for his support of his two priorities - the United Nations and help with the war against Japan.

The fierce battle for the Philippine Islands began with the landing on Leyte in October, 1944 and did not end until June 10, 1945. General MacArthur's Sixth Army faced a much harder fight than he had expected as the Japanese rapidly reinforced the island. By the end of December 60,000 Japanese had been killed and some 3,500 Americans. Japanese General Yamashita, realizing he had no hope of defeating the U.S. forces heading in his direction, withdrew 152,000 men to the hills of Luzon, a smaller force of 30,000 to defend Clark Air Field, and another 80,000 into the hills above Manila. Waves of Kamikaze attacks damaged an American carrier, two battle ships, five cruisers, an escort carrier, and a fleet destroyer during the January 9<sup>th</sup> invasion. Another American landing took place on January 29 with an additional 40,000 men. By February 4, 1945, the Americans reached the Japanese defense line just south of Manila.

The Japanese defenders, knowing they were all going to die, massacred Filipinos and raped the women mercilessly before killing them. More than one out of every eight civilian Filipinos, 100,000 in total, died in the fighting, which lasted until March 3 in Manila. The Japanese east of Manila, which controlled the city's water supply, constructed caves and tunnels into the hillsides; once again, the Americans had to clear them out with phosphorous grenades and flamethrowers. They blew the entrances to the tunnels, then poured gasoline and explosives in the main opening to burn, suffocate, or bury those left inside. P-38 planes dropped Napalm bombs. As some of the Japanese escaped further into the jungle and hills, American pursuit was slowed as the Japanese destroyed almost every bridge and mined every approach. The battle for the Philippines did not end until June 4.

By January, 1945, the Ichi-go offensive in China was winding down as the Japanese forces had been reduced by transfers to the Philippines. As far as the Japanese command was concerned, the Ichi-go offensive had achieved its objective: Japanese troops had inflicted half a million casualties on the Nationalist Armies and forced them to withdraw from eight provinces. On April 25, five well equipped (by America) Nationalist divisions, supported by 200 aircraft, smashed a 50,000-strong Japanese force; it demonstrated well trained, fed, and equipped Nationalist forces could defeat the Japanese. This was the last major engagement of the Sino-Japanese war.

By January, 1945, the American air bases on Guam, Tinian, and Saipan were in operation. All of the B-29 Superfortress operations offered a great advantage to attacking the Japan mainland. Yet bomber losses mounted, partly from Japanese fighters rising to intercept them from the intervening islands, especially Iwo Jima. Consequently, a decision was made to invade Iwo Jima and Okinawa six weeks later. On Iwo Jima, twenty-one-thousand Japanese soldiers were hidden in caves and tunnels that stretched for twenty-five kilometers. The walls of pillboxes were constructed of two feet of concrete, laced with iron rails, and then ten to twelve feet of rocks. At dawn on February 16, the American invasion fleet arrived with eight battleships, twelve escort carriers, nineteen cruisers,

and forty-four destroyers; the naval fleet bombed the island for three days. At nightfall, 30,000 marines began the amphibious landing on February 19. The battle was slow and horrific as the marines advanced from ravine to ravine and ridge to ridge. By March 25, when the battle of Iwo Jima ended, 6,821 marines were killed and another 19,217 severely wounded. The entire Japanese force of 21,000 men were all dead.

Okinawa, one hundred kilometers long, lay 550 kilometers from Japan. Okinawa was defended by 100,000 Japanese soldiers who planned to defend the island to the end. On April 1, Easter Sunday, after six days of bombardment, 60,000 Marines and Army soldiers landed on the western coast. By April 5, two army divisions reached the limestone hills and began to understand the battle that awaited them; the hills contained man-made caves which had once been linked up with tunnel systems, plus the hills were dotted with funeral vaults in stone, which made excellent machine gun nests. While the army divisions were shaken with the mission they faced, the naval fleet offshore began to receive the full brunt of three waves of kamikaze attacks containing over 300 aircrafts in each attack. The U.S navy paid a heavy price; by the end of the Okinawa campaign, the suicides of 1,465 Japanese pilots sank 29 ships, damaged 120 more, killed 3,048 sailors, and wounded another 6,035.

On April 19 the Japanese pulled back from their first line of defense as artillery, navy aircraft, and the big guns of the fleet bombarded the Japanese. Three American divisions advanced after the intense bombardment while two more marine divisions advanced from the north end of the island. Fighting was intense; one small hill called Sugarloaf took the marines ten days to take at a cost of 2,662 casualties. Even some of the toughest marines faced nervous collapse due to the accuracy of Japanese mortar fire as well as the night attacks where Japanese would creep forward in the dark to infiltrate American lines. On May 21 the rains came which covered everyone and everything in liquid clay. Foxholes were filled with water and decomposing bodies were covered in maggots. On May 26, the clouds parted, and aircraft from carriers bombarded retreating Japanese and fleeing civilians with their 8-inch guns; some 15,000 civilians died along with the retreating soldiers. With the end near on June 18, Japanese officers committed a ritual suicide with self- disembowelment and simultaneous beheading by their aide. The body count of Japanese soldiers came to 107,539, but many others had been destroyed in the caves. The marines suffered 7,813 killed, 31,807 wounded, and 25,211 with psychological breakdowns.

On the 9<sup>th</sup> and 10<sup>th</sup> of March, 334 B-28 Bombers from the Twenty-First Bomber Command launched its first major incendiary attack on Tokyo. The 334 Super fortresses carpet-bombed Tokyo, sparing neither residential nor industrial zones. More than a quarter of a million buildings went up in flames. Altogether 83,000 people perished and another 41,000 were severely injured, even though leaflets were dropped warning civilians to leave all towns and cities with any industry. The USAAF was determined to carry on until all major manufacturing centers of Japan were destroyed. On May 14, five-hundred B-29's hit Nagoya, Japan's third largest industrial city, with the greatest concentration of fire bombs in the history of aerial warfare. On May 23, five square miles of Tokyo were obliterated, and thirty-six hours later, another 16 square miles of the city was destroyed. Coastal shipping between the home islands was also brought to a virtual halt by the dropping of mines in and around the Inland Sea., The USAAF could roam over Japanese air space with little danger as the few Japanese fighter planes remaining had been diverted to kamikaze attacks against the U.S Navy.

In Europe, when Stalin heard the news that the Americans had crossed the Rhine in early March, he knew the race for Berlin was on; Stalin never believed Eisenhower would not take Berlin. Stalin had two vital reasons for wanting to take Berlin before the Allies. The fall of the fascist beast was the key symbol of victory after all the Soviet Union had suffered and Berlin had also been the center for Nazi Germany's atomic research. Through its spies, Stalin was well aware of the United States progress towards creating an atomic bomb. The Soviet Union's atomic research program was also high priority but short of uranium, which they hoped to obtain in Berlin.

Eisenhower's obstinate refusal to accept that there were political implications in his strategy to avoid Berlin infuriated the British. He believed that his task was to finish the war in Europe as rapidly as possible and with the fewest casualties. He did not share Britain's political concerns about Poland and Stalin's ambitions. Eisenhower believed that ever since Stalin took the offensive, Europe was bound to be divided in Stalin's favor. The western allies were finding that they could liberate half of Europe only at the cost of re-enslaving the other half to Russia.

It was not long before the full horrors of the Nazi regime became apparent. On April 4 American troops entered Ohrdruf concentration camp to find apathetic, skeletal figures surrounded by unburied corpses. Guards tried to disguise themselves, but when they were pointed out by prisoners Allied troops shot them on the spot. Four days later British troops entered Belsen. Some 30,000 prisoners were in limbo between life and death, surrounded by more than 10,000 corpses; 46,000 had just died in the previous six weeks from starvation and typhus. Of those still barely alive, another 14,000 died despite efforts from the Red Cross.

The aimless movement of tens of thousands of concentration camp prisoners from one place to another continued with murderous futility. Some 57,000 women and men from Ravensbruck were still being herded west. Altogether, between 200,000 and 350,000 prisoners are estimated to have died on death marches as the German civilians showed them little pity. The speed of the Allied advance in the west prompted groups of SS to carry out numerous massacres of prisoners.

Eisenhower, taken aback by the British reaction over his change of strategy, vacillated over the taking of Berlin. On April 8 Eisenhower instructed Major General Bolling, who had just taken the city of Hanover, to keep pushing ahead to Berlin. On the night of April 14, Major General Bolling's 84<sup>th</sup> Infantry Division rumbled across the Elbe River, ready to advance on Berlin; Bolling guessed the opposition would be light, and they were right. Almost all of the German formations were deployed to the east to face the Red Army, which they knew were preparing to unleash an assault on the capital. Most German army units would be only too happy to surrender to the Americans rather than the Russians. However, Eisenhower had another change of heart and ordered Bolling to halt at the Elbe River. Eisenhower thought the capture of Berlin may cost up to 100,000 casualties and the European Advisory Commission had already settled how Berlin would be divided between the Allies. Also, Eisenhower wanted to avoid clashes with the Red Army at all costs.

On April 8, as the enemy closed in, Hitler and the Nazi leadership had embarked on a frenzy of killing. Prominent prisoners, especially those from the July assassination plot, were all murdered. Death sentences were handed out to deserters and any others who retreated without orders, soldiers were told to shoot any officer who retreated without orders, and all bridges, factories, and utilities were ordered destroyed. Women were given pistols and shooting instructions and pavements were ripped up to provide foxholes for



men and teenage boys with Panzerfaust launchers; the few German aircraft remaining were used to imitate Japanese kamikaze attempts to destroy the bridges over the Oder River. During the early morning hours of April 16, a barrage of 8,983 guns and heavy mortars opened fire; it was the most intense barrage of the entire war with 1,236,000 rounds fired on the first day alone. On the edge of the Oder River Russia had amassed 2.5 million troops; sixty kilometers away, the walls in Berlin vibrated from the gunfire. Women and girls prayed the Americans would reach Berlin first to save them from the Red Army. Stalin insisted on a full encirclement to ensure no American attempt might be made to take Berlin.

On April 20 it was Hitler's birthday, which was greeted by an Allied air force bombing. Hitler looked two decades older than his fifty-six years; he was stooped, grey-faced, and his left arm shook. After the Nazi leaders toasted champagne to his health, everyone except Goebbel was finding excuses to shed their uniforms to escape Berlin while an escape route to the south remained open. The last air raid on Berlin by the Americans on April 21 was quickly replaced by Soviet artillery shells now within range of Berlin city center. As Berliners awaited the arrival of the Red Army, some fathers would shoot their daughters and wives before committing suicide themselves; others fled the city with fleeing soldiers as there could be no doubt about adult males desperation to escape the Soviet labor camps. Hitler, in his disillusioned state, gave orders to the Ninth Army to hold its position and fight to the last man.

By the 25<sup>th</sup> of April the encirclement of Berlin by the Red Army was virtually complete. The main Berlin hospitals put the number of women raped between 95,000 and 130,000 while another 10,000 died due to gang rape or suicide. On April 28 American troops entered the concentration camp of Dachau. By the side of the camp they found cattle carts filled with skeletal bodies; of the 30,000 surviving prisoners, 2,466 died within a week. At dawn on April 30, the Soviets launched their attack on city center Berlin and launched their flag over the Reichstag, the symbol of Nazi Berlin. At 3:15 in the afternoon Hitler fired a bullet through his head, while Eva Braun, his wife of 24 hours, had taken cyanide. Their bodies were wrapped in blankets by military aides, set in the garden above the bunker, and set on fire according to Hitler's instructions. On May 1, when no word came from Goebbel to surrender, a hurricane of fire was unleashed on the city center. Later that afternoon, after their children were dead, Joseph and Magda Goebbel committed suicide by cyanide; in the distance you could hear shots of SS soldiers committing suicide. The Berlin operation cost the Soviets 352,425 casualties, of whom a third were killed.

Stalin had been angered to hear that German officers hoped to negotiate surrender solely with the western powers. On May 4, German forces in Holland, Denmark and northwest Germany surrendered at Montgomery's British headquarters. The act of military surrender was officially signed by Jodl and Friedeburg with Eisenhower on May 7, to take effect on May 9. In Yugoslavia, German forces did not surrender for another week. British troops were flown across the North Sea to help the Norwegians supervise the surrender of 400,000 German troops, the largest German force still intact. The chaos which the Nazis had brought upon the entire continent was demonstrated by the hundreds of thousands of displaced persons; millions of forced laborers brought to the Reich from France, Italy, the low countries, central Europe, the Balkans, and the Soviet Union, began to make their way home on foot.

For Churchill, in this immediate post-war period, he was alarmed by Roosevelt's intentions at Yalta to withdraw American forces from Europe as soon as possible. Britain was far too weak to resist both the strength of the Red Army and the threat of local Communists

profiting from devastated Europe. On July 16, the Potsdam conference in Berlin began, with President Truman, Churchill, and Stalin in attendance. Later in the day Truman received the signal: “babies satisfactorily born”, indicating the successful test explosion of the Atomic bomb had been carried out at 5:30 that morning. Stalin had expected the Americans would abandon Europe, while Britain and France would be paralyzed by their colonial problems. The Soviet Union possessed 400 experienced divisions ready to pounce forward like tigers; it was calculated the whole operation to conquer Western Europe would take no more than one month. All these plans were aborted when Stalin learned the Americans had the Atom bomb and were putting it into mass production.

By the time the Japanese resistance on Okinawa had ended, American commanders in the Pacific turned to re-examining how to proceed with the next phase, the invasion of the Japanese home islands. The kamikaze attacks and the refusal of the Japanese to surrender, combined with the knowledge of their biological weapon capability, made it a sobering task. And Japanese military leaders rejected the idea of unconditional surrender. It was estimated Operation Olympic to take the southern island of Kyushu in November of 1945 would cost 100,000 American lives, and Operation Coronet in March 1946 to invade the main island would cost an additional 250,000 lives. Admiral King preferred to bomb and blockade Japan, to starve it into surrender, but MacArthur and the U.S. Army complained that strategy would take years. And since the intense bombing of Germany had not achieved victory, the army brought the navy around to the idea of an invasion.

The successful test of the first atom bomb appeared to offer the Americans a way of shocking the Japanese into surrender, and avoid the horrors of an invasion. Demonstrating U.S. power to a Soviet Union, then ruthlessly imposing its will in central Europe, played an influential role in the decision to drop the bomb as well. On the morning of August 6, 1945, a B-29 Superfortress opened its bomb doors at 8:15 and less than a minute later most of the city of Hiroshima disintegrated in a blinding light. Approximately 100,000 people were killed instantly, and many thousands more died later from radiation poisoning, burns, and shock. President Truman issued a warning to the Japanese that if they failed to surrender immediately, they may expect a rain of ruin from the air, the like of which has never been seen on this earth. With no surrender forthcoming, a second bomb was dropped on Nagasaki on August 9<sup>th</sup>.

On the evening of August 9, the Emperor summoned the Supreme Council and recommended they should accept surrender terms; meanwhile the military leaders still refused to accept defeat. Eventually, on August 14, the Emperor stepped in and announced he was going to record a surrender broadcast to the nation and, shockingly, that evening army officers attempted a failed coup to prevent the broadcast of the Emperor's recording. At noon on August 15, Japanese radio stations broadcast the Emperor's recorded message, calling on all forces to surrender. On August 30, U.S. forces landed on Yokohama to begin the occupation of Japan while the formal surrender of Japan took place on September 2. General MacArthur, accompanied by Admiral Nimitz, took the surrender at a table placed on the deck of the battleship USS Missouri, anchored in Tokyo Bay off Yokohama.

Estimates for the total number of casualties in the war vary, because many deaths went unrecorded. Most suggest that some 75 million people died in the war, including about 25 million military personnel, which includes deaths in captivity of about 5.5 million prisoners of war. Many of the civilians died because of genocide, massacres, mass-bombings, disease, and starvation. The Soviet Union lost around 27 million people during the war, including 8.7 million in the military. Germany sustained 5.3 million military losses. The

mass bombings of Germany destroyed 160 cities and were responsible for the deaths of 600,000 German civilians. An estimated 11 to 17 million civilians died as a direct result of Nazi ideological policies, including the systematic genocide of around 6 million Jews, along with a further 5 to 6 million ethnic Poles and Slavs. In Asia and the Pacific, an estimated 20 million Chinese were killed, most being civilians killed by Japanese occupation forces. The Japanese government puts its casualties due to the war at 3 million. The United States lost 417,000 military personnel. About 12 million Eastern Europeans were employed in the German war economy as forced laborers. By 1942, the number of enslaved laborers working in Japanese mines and in the war industry reached 10 million.

The cost of World War II is unprecedented, 11 trillion in 2005 dollars. In 1945 dollars the United States spent 341 billion, Germany 272 billion, the Soviet Union 192 billion, Great Britain 120, Italy 94, and Japan 59 billion. Seventy percent of Europe's infrastructure was destroyed.

There is no doubt American industrial production tipped the war in the favor of the Allies. The figures are staggering. Between 1941 and 1945 the United States produced 300,000 military aircraft. In the peak year of 1944 American factories built 96,318 planes, more than the yearly total of Germany, Japan, Great Britain, and the Soviet Union combined. Henry Ford's Willow Run Plant produced a B-24 bomber every sixty-three minutes. A single shipyard could mass-produce an ocean-going Liberty merchant ship from scratch in one week. By war's end the United States had manufactured 2.4 million trucks, 635,000 jeeps, 88,400 tanks, 5,800 ships, and 40 billion rounds of ammunition. Quantity was the all-important goal of the war effort. American industry thrived on high-volume output performed on an assembly line basis; no other nation had mastered the art of mass production as efficiently as the United States. As the war dragged on, Japan and Germany simply could not produce enough munitions to continue the war.

Prior to WWII, the United States was an isolationist country, however the war would dramatically change the role America would play in world affairs. Of the major powers, only America's homeland was not systematically bombed, allowing for the United States to rise to the largest industrial power in the world. Where the British pound was the world currency prior to the war, after the war it was the dollar. The United States naval fleet dominated the Atlantic and the Pacific, as the Royal British Navy once did prior to the war. America, the sole country with an atomic bomb, was the only military power capable of keeping Stalin and the spread of communism in check. After the war, America would rise from an isolationist country to the leading world power, expected to be the world's peace-keeper and to stand up against humanitarian injustices. However, the question remains, were the American people willing to make the necessary sacrifices to police the world or was it strictly the Truman administration and the U.S governments priority? Ironically, the horrors of WWII, nor the power of American influence could achieve a lasting world peace.

Lower left—encirclement of Berlin

Lower right—Dresden, Germany lies in ruins after Allied air raids killed 35,000

Upper right—U.S. troops march through the bomb-wrecked town of Bitburg, Germany.





Top left—German prisoners surrender to General Patton's forces east of the Rhine River

Bottom left—Colonel General Jodl signs his surrender in Rheims, Germany

Bottom right—German Admiral VonFriedberg signs document of surrender



Bottom left—Prisoners in the Buchenwald concentration camp are liberated by U.S troops

Bottom right—An SS guard works in a mass grave at a concentration camp in Belsa

Top right—Bodies are removed from the Muhlhausen concentration camp in Linz, Austria





Top left—The American flag atop Mount Suribachi, Iwo Jima, Pacific Ocean

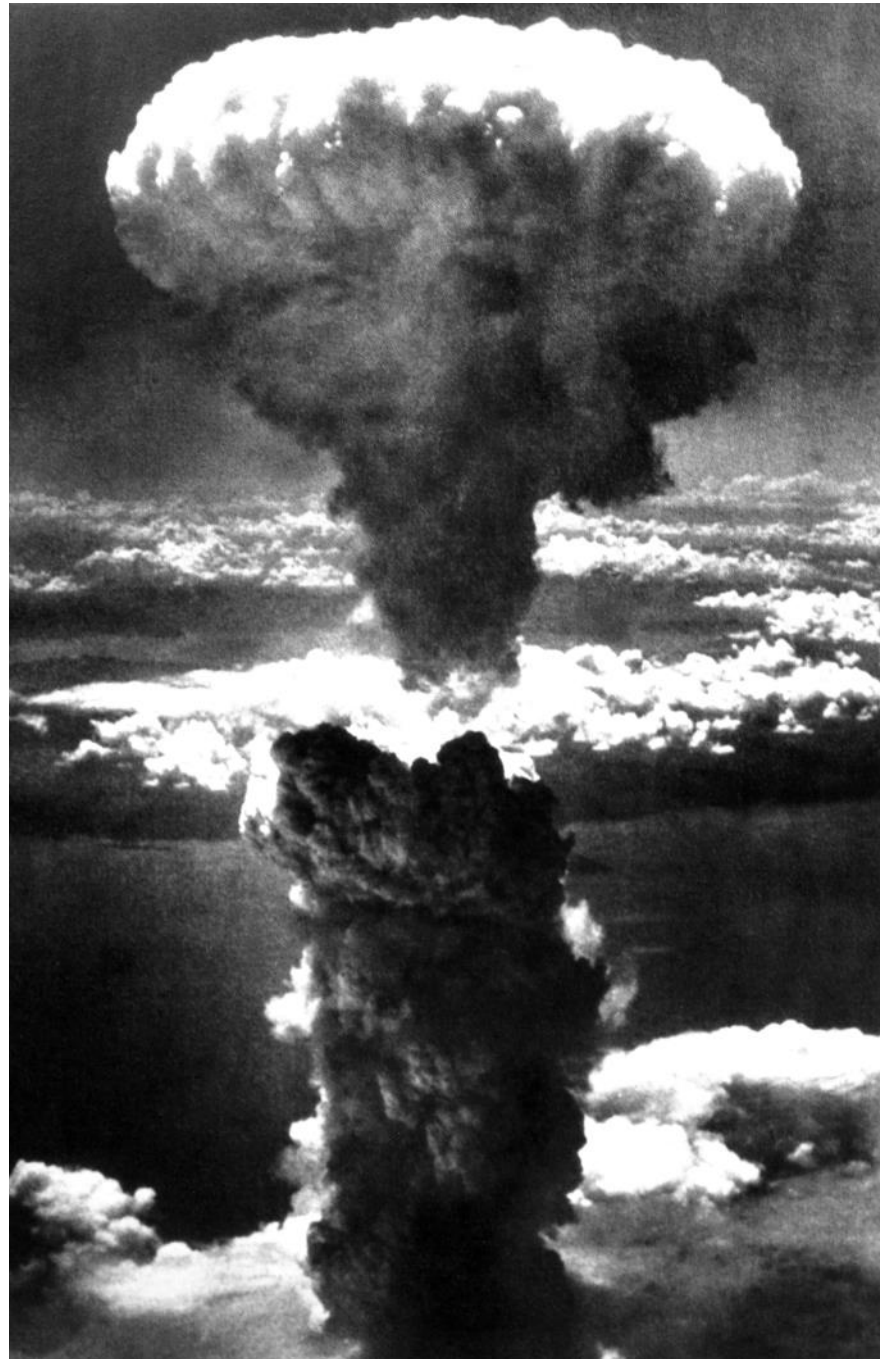
Bottom left—U.S. Marines direct flame throwers at Japanese on Iwo Jima

Bottom right—U.S Marines on Iwo Jima move past dead Japanese who refused to surrender.



Right—A mushroom cloud towers over the Japanese city of Nagasaki after the second atomic bombing against Japan.

Lower left—Superfortress bombers drop incendiary bombs during raid on Yokohama, Japan.







Top left—SS Essex aircraft drop bombs on Hokodate, Japan

Bottom left—Admiral Nimitz signs the Japanese surrender aboard the USS Missouri

Bottom right—Japanese officials arrive for the surrender ceremony aboard the USS Missouri





## Harry S. Truman (1884-1972)

Harry S. Truman was the thirty-third president of the United States (1945-1953), assuming that office upon the death of Franklin Roosevelt during the waning months of WWII. Harry's father, John, was a farmer and livestock dealer with no education beyond a rural school. Harry was born in a bedroom off the parlor so small there was barely space for the bed. In 1887 the family moved to his grandparents 600-acre farm in Grandview Missouri. A few miles beyond the immediate farm was a second farm owned by grandpa, this with nearly 1,000 acres. When Harry was six, his parents moved to nearby Independence so he could attend the Presbyterian Church Sunday school. Independence was southern in both spirit and pace, with a population of 6,000, it was a sleepy backwater, churchgoing, conservative town rooted in the past. It was a handsome community where the primary streets were paved, clean, and shaded by large old elm trees. The people took pride in their gardens, and on summer evenings after dark, families sat visiting on their front porches; national holidays and politics provided what little excitement that occurred. Dinner remained the midday meal with the standard Sunday dinner after church being fried chicken, bettered peas, mashed potatoes, and biscuits. For recreation, study groups would often meet to discuss literature and poetry. For daily chores, Harry and Vivian, his sister, had cows to milk, horses to water and feed, and wood to split for the kitchen stove. As was common in the south, the black residents

lived in makeshift houses and shacks on the edge of town where they were not welcome at most stores, denied use of the library, and segregated to separate schools.

At about the age of six his parents discovered Harry was badly handicapped by poor eyesight. As a boy, he did not attend a traditional school until he was eight; his interests were in music, reading, war, and history, all encouraged by his mother, with whom he was very close. During the summers he was tutored and was reading everything he could get his hands on - history became his passion; he would work his way through the shelves of the library studying standard works on ancient Egypt, Greece, and Rome where his heroes were great generals. For his tenth birthday, his mother presented him with a set of large illustrated volumes titled *Great Men and famous Women*. He had read the Bible twice by the time he was twelve and excelled in Latin and math. He rose every morning at five to practice piano, which he did twice a week until he was fifteen. For a boy, his mother said he was abnormally neat and clean. After graduating from Independence High School in 1901, Truman enrolled in Spalding Commercial College, a Kansas City business school where he studied bookkeeping, shorthand, and typing for one year. After working as a clerk at a bank in Kansas City, he returned to the Grandview farm in 1906 at the request of his family. The farming day began for Harry at five in the morning; every day was work, never-ending work, and Harry did everything there was to do. The small farm house still belonged to grandma Young and was crowded with five family members. The house was without electricity, running water, or indoor plumbing and the cooking was done on a coal stove. Harry remained on the farm for eleven years until he entered the army in 1917.

Because Harry was unable to afford university tuition, he attempted going to the costless Military Academy at West Point but was refused because of poor eye sight. Not to be denied, Harry memorized the eye chart and enlisted in the Missouri Army National Guard in 1905, serving until 1911 and attaining the rank of corporal. When the United States entered World War I, Truman rejoined the National Guard. By mid-1918, about one million soldiers of the American Expeditionary Forces were in France. Truman, who was promoted to captain in July, 1918, became commander of battery D, 129<sup>th</sup> Field Artillery in France. His unit joined in a massive military campaign late in the war at the opening of the Meuse-Argonne offensive, where his battery fired some of the last shots of the war on November 11, 1918. Truman always credited his war experience as a transformative experience that brought out his leadership qualities.

After his wartime service, Truman returned to Independence, where he married Bess Wallace on June 28, 1919; the couple had one child, Mary Margaret Truman. Shortly before the wedding, Truman and Jacobsen opened a haberdashery together in downtown Kansas City. After brief initial success, the store went bankrupt during the recession of 1921. Out of work and a family to support, he accepted the help of the Kansas City Democratic machine led by Tom Pendergast, leading to his election in 1922 as County Court Judge of Jackson County in western Kansas City. Again, with the support of Pendergast, Truman was elected presiding judge in 1926 and again in 1930. In 1933, Truman was named Missouri's director for the Federal Re-employment program, which was part of Roosevelt's Civil works program during the depression. This position created a relationship between Truman and Harry Hopkins, President Roosevelt's aide. After serving as a county judge and ready for change, Truman decided to run for governor or congress. Pendergast reluctantly backed him in the 1934 Democratic primary for U.S. Senate after four other potential candidates turned him down. Surprising Pendergast, Truman defeated the incumbent Republican by nearly twenty percentage points, riding the wave of

Roosevelt's popular New Deal programs. In late 1930, Truman used his chairmanship of the Committee on Military Affairs to start investigating financial abuses at military bases while the nation prepared for war; the committee reported to save as much as \$15 billion.

During the Democratic Convention in 1944, Vice President Wallace was popular among Democratic voters, but he was viewed as too far to the left and too friendly with labor for some of Roosevelt's advisors. The president, and several of his confidantes, wanted to replace Wallace with someone more acceptable to Democratic party leaders and Roosevelt's advisors, knowing that Roosevelt may not live out a fourth term. Truman was selected as the best choice due to his conservative stance within the party, his good relationship with labor, and the fact he came from a border state. Truman was selected and sworn in as Vice President on January 20, 1945. As it turned out, Truman had only been vice president for 82 days when President Roosevelt died on April 12, 1945.

Upon assuming the presidency, Truman asked all members of Roosevelt's cabinet to remain in place. The war in Europe ended shortly after taking office, on Truman's sixty-first birthday, May 8, 1945. In the wake of Allied victory, Truman journeyed to Europe for the Potsdam Conference with Churchill and Stalin and, coincidentally, he was at the conference when he learned the Trinity test of the first atomic bomb on July 16 had been successful. In August, the Japanese government refused surrender demands as outlined in the Potsdam Declaration, and with the invasion of the Japanese mainland imminent, Truman approved the dropping of the two available atomic bombs. Truman always believed that his decision to drop the atomic bombs saved many lives for both countries.

The end of WWII was followed by an uneasy transition from war to a peacetime economy. The costs of the war effort were enormous, and Truman was intent on decreasing government expenditures for military purposes as quickly as possible. The effect on the economy of demobilizing the military was unknown, but fears existed that the economy would slide back into a depression. There were severe shortages in housing and consumer products, and widespread dissatisfaction with inflation, which at one point hit 6 percent. The president was also faced with labor-management conflicts that had laid dormant during the war years, and as a result, there was a wave of destabilizing strikes in major industries. A serious steel strike in 1946 involved 800,000 workers, which was followed by a coal strike in April, and a rail strike in May. As a national rail strike threatened the country and the economy, Truman seized the railroads to keep the economy moving. Even though Truman had his triumphs, many considered the vast majority of his economic solutions ineffective. And Truman's proposals for national health insurance and integration were never enacted by Congress.

As a Wilsonian internationalist, Truman strongly supported the creation of Roosevelt's pet project - the United Nations. With the Soviet Union expanding its sphere of influence through Eastern Europe, Truman and his foreign policy advisors took a hard line against the USSR. He won bipartisan support for both the Truman Doctrine, which formalized a policy of Soviet containment, and the Marshall Plan, which aimed to help rebuild postwar Europe. During the Truman presidential term, the civil war in China between the Nationalists and Communists was still raging. By 1949, the Communists under Mao Zedong had won, leaving the United States with a new enemy in Asia; Truman came under fire from conservatives for losing China. The Truman administration had empathically voiced its call for energetic containment of an expansionist Soviet Union and Communism in Europe, but it was Asia where the Com-

munist movement was gaining the most ground. With limited resources, the United States felt compelled to choose carefully where America would actually take a stand; most agreed the priority in containing Communism should focus on a “Europe first” policy.

On June 24, 1948, the Soviet Union blocked access to the three western-held sectors of Berlin; in error, the Allies had never negotiated a route through the Soviet occupied zone to access Berlin. General Clay proposed a large armored U.S. column to cross the Soviet zone to get food and supplies to Berlin, however Truman believed that would entail an unacceptable risk of war. Choosing a less conflicting option, Truman proceeded to approve a plan to airlift supplies to the blockaded Berlin. The campaign to airlift food and other supplies such as coal and clothing, using military aircraft on a large scale, began on June 25<sup>th</sup>. The airlift was a welcome relief to Berliners and continued for several months; without any doubt, it was one of Truman’s great foreign policy successes.

The 1948 presidential election is remembered for Truman’s stunning come from behind victory. Within two weeks of the Democratic Convention, Truman issued Executive Order 9981, racially integrating the U.S. Armed Services and Executive Order 9980 to integrate federal agencies; Truman took a considerable political risk backing civil rights just prior to the election. After an unexpected victory, Truman’s second inauguration in 1949 was the first to be televised nationally.

The Soviet Union detonated their first atomic bomb on August 29, 1949. In response, on January 7, 1953, Truman announced the detonation of the first U.S. hydrogen bomb, which was much more powerful. On June 25, 1950, Kim Il – Sung’s Korean People’s Army invaded South Korea, starting the Korean War. Truman promptly urged the United Nations to intervene, which it did, authorizing troops under the UN flag led by U.S. General Douglas MacArthur. By August 1950, American troops pouring into South Korea under UN auspices were able to stabilize the situation, however, China surprised the UN forces with a large-scale invasion in November. The UN forces were forced back below the 38<sup>th</sup> parallel, where the war became a fierce stalemate for two years. Over 30,000 Americans were killed until an armistice ended the fighting in 1953. In February, 1952, presiding over an unpopular war, Truman’s approval mark stood at 22 percent.

The escalation of the Cold War was highlighted by Truman’s approval of NSC-68, a secret statement of foreign policy. It called for tripling the defense budget, and the globalization and militarization of containment policy whereby the U.S. and its NATO allies would respond militarily to aggressive actions of Soviet expansion. It called for partial mobilization of the U.S. economy to build armaments faster than the Soviet Union. The plan called for strengthening Europe, weakening the Soviet Union, and building up both the U.S. militarily and economically. NATO’s goals were to contain Soviet expansion in Europe and to send a clear message to communist leaders that the world’s democracies were willing and able to build new security structures in support of democratic ideals.

During Truman’s second term, Wisconsin Senator McCarthy accused the government of harboring Communists. Charges that Soviet agents had infiltrated the American government were believed by 78 percent of U.S. citizens in 1946 and became a major campaign issue for Eisenhower in 1952.

In 1951, after Roosevelt’s four term tenure, the United States ratified the 22<sup>nd</sup> Amendment, making a president ineligible for election to a third term. Regardless, the very unpopular President Truman announced he would not seek a second term. Thought provoking,

in 1953 there was no pension for retired presidents or senators and Truman's income, once he left the White House, consisted solely of his old army pension of \$112.00 per month. Desperate for income, he was forced to sell the farm land inherited from his mother along with a book deal for his memoirs, which netted him \$37,000. The following year, Congress passed the Former Presidents Act, offering \$25,000 annual pension to each former president. Truman died of multiple organ failure in 1972 at the age of 88.

## The Fifties

The population in the United States in 1950 was 149,188,000. The average person earned \$2,992.00 annually and the median priced home sold for \$10,000.00. The GNP of the United States was \$364.8 billion, with a national debt after the war of \$257.4 billion, and an annual federal budget of \$39.6 billion. In 1950 the Dow-Jones reached 235, GNP soared at 13 percent growth, and inflation clipped along at 5.7 percent, but fell to 0.7 percent in 1951. Before television was available to the population, sixty million attended movies weekly while 17.7 million attended baseball games annually.

The fifties were a time of conservative politics, economic prosperity, and above all, social conformity. Czechoslovakia and China had just come under Communist rule and Russia had recently announced its first atomic bomb when Truman revealed in 1950 that the United States was developing an even more powerful nuclear weapon – the hydrogen bomb. Such a disclosure exacerbated fear about the cold war and it became clear that a race for annihilating weapons was underway. Three other events further intensified national anxiety: Senator Joe McCarthy claimed knowledge of Communists in the state department, the exposure of a powerful underworld of crime, and North Korea invaded South Korea. Truman was widely supported in his decision to send troops to Korea, but Communist China entered the war in massive numbers, and a long, bloody stalemate developed.

In 1952, Dwight Eisenhower swept into office on a campaign against Korea, Communism, and corruption. He was a common-sense man, a great military leader, who promised peace and prosperity. In this climate of atomic anxiety, most Americans looked to the time-honored virtues of home, church, and community; there was a virtual revival of Victorian respectability and domesticity. America offered many corporate opportunities for those willing to conform – men in their gray corporate suits and their wives who remained home to bear children at the highest birthrate ever. Bible sales, like home construction and baby products, boomed once again not unlike the twenties.

Television came into its own in the fifties; westerns were especially popular and family shows like "Leave It to Beaver" and "Father Knows Best" gave humorous demonstration that all is well in the well-run family. Throughout it all, imperative forces were at work. Those that forever changed American life include the 1954 ruling that segregated schools were not constitutional and Rosa Park's 1955 refusal to go to the back of the bus, which was required by black Americans, were social changing events. In 1957, Russia fired a shot heard around the world when it launched the Sputnik satellite while America's first efforts in space proved to be a humiliating failure.

## Events of 1950

The cold war accelerates as Russia shoots down an unarmed American plane in the Baltic for spying.

NATO leaders agree on a five-year defense plan as Russia announces possession of an atomic bomb.

President Truman orders the development of the hydrogen bomb.

Senator Joseph McCarthy claims to have a list of 205 names known to be members of the Communist party working in the U.S. State Department.

The attack by North Korea (with Russian weaponry) on South Korea make it clear Communism is willing to use armed invasion and war as a means to conquer independent nations. President Truman sends U.S ground forces into South Korea.

## Events of 1951

There are 250,000 GIs fighting in North Korea.

The United States sends 100,000 troops to Europe to protect the NATO alliance against feared Russian aggression.

The 22<sup>nd</sup> amendment takes effect limiting the president to two terms.

## Events of 1952

The United States explodes the first hydrogen bomb in the Pacific Ocean

## Events of 1953

Dwight Eisenhower is elected the 34th President to the United States.

The United States, Republic of China, North Korea, and South Korea, sign an armistice to end the Korean War.

Julius and Ethel Rosenberg are executed in New York for committing treason against the United States.

100,000 East Germans defy Russian Communist threats and enter West Germany for food packages.

The first successful open- heart surgery is performed.

Charles Yeager travels a record 1,600 m.p.h. in an X-1A aircraft.

## Events of 1954 and 1955

The Supreme Court ruled that racial segregation in public schools is unconstitutional.

The Interstate Commerce Commission bans segregation on interstate trains and buses.

Joseph McCarthy begins televised Senate hearings into alleged Communist influence in the United States.

Construction of suburban shopping centers takes hold.

The minimum wage goes from 75 cents to \$1.00.

The first large scale vaccination of children against polio begins

The United States government agrees to train South Vietnamese troops to fight communism

## Events of 1956

Eleven blacks are arrested during a Montgomery, Alabama bus boycott.

The National Guard is called out for anti-black rioting in Clinton, Tennessee.

One hundred and one congressman from Southern states call for massive resistance to the Supreme Court ruling on desegregation.

Eisenhower wins a second presidential term in a landslide victory, 36 million to 26 million votes.

The Interstate highway system begins with the signing of the Federal-Aid Highway Act.

The first transatlantic telephone cable begins operation

Russian forces crush a Hungarian revolt

The first American test rocket for sending a satellite into orbit ascends to 125 miles at 4,000 m.p.h.

Albert Sabin announces the development of an oral polio vaccine.

Rock N Roll legend Elvis Presley appears on national television for the first time on the Ed Sullivan show.

For the first time, airlines carry as many passengers as railroads.

Drive-in theaters multiply in popularity reaching 7,000 in number.

## Events of 1957

**In 1957** the Arkansas National Guard blocks black students from entering a high school in Little Rock. President Eisenhower sends in federal troops to enforce integration and mob rule.



The U.S. Congress approves the first civil rights bill since reconstruction after the Civil War.

The USSR announces a successful test of an intercontinental ballistic missile and also launches the first space satellite named "Sputnik I."

The U.S. conducts its first successful test of an ICBM but fails at its first attempt to launch a satellite into orbit.

Americans fear that Soviet Union missile technology would soon be able to deliver a devastating attack on North America; consequently, there was an American outcry for a vast expansion of U.S. defense spending.

## Events in 1958

Explorer I, the first U.S. satellite to orbit the earth, is successfully launched. The U.S also launches the Pioneer rocket, which reaches an altitude of 7,300 miles.

Alaska is admitted as the 49<sup>th</sup> state to the Union.

Castro-led rebels seize the provincial capital in Cuba.

The USSR orbits Sputnik III weighing 2,925 pounds.

NASA is organized to unify and develop non-military space efforts. It announces a space program, Project Mercury with seven test pilots, and a goal of a man in space in two years.

The first passenger service by a jet airliner goes into service between New York City and Miami, Florida.

## Events of 1959

Hawaii become the 50<sup>th</sup> state to join the Union.

By the end of the decade, GNP is growing at 8 percent annually, the Dow Jones Industrial average reaches a high of 679, and annual inflation is a meager 0.7 percent. The popularity of movie-going falls as eighty-six percent of the population owns a television. The average price of a car continues to fall, reaching \$1,180.00

NASA selects the first seven military pilots to become the Mercury Seven, the first men to be launched into outer space.

500,000 steel workers strike

The U.S. Navy successfully launches the first weather station into orbit.

Laos asks the U.S. for aid against North Vietnam aggression.

## Dwight D. Eisenhower (1890 – 1969)

Dwight Eisenhower (known as Ike) was an American politician and army general who served as the 34<sup>th</sup> president of the United States from 1953 until 1961. He was a five- star general in the United States Army during World War II and served as supreme commander of the Allied Expeditionary Forces in Europe. He was responsible for planning and supervising the invasion of North Africa in 1942-43 and the successful invasion of France and Germany in 1944-45 from the Western front.

Ike's paternal grandfather, Jacob, was a prosperous farmer in Pennsylvania prior to the Civil War. He was persuaded, like many brethren members of the Mennonite religious sect, to move west after the Civil War for the opportunity of large tracts of cheap farmland in Kansas. The family arrived in April, 1878 and settled near the town of Abilene. He became wealthy enough to give each of his children \$2,000 and 160 acres of farmland on the child's marriage – a substantial gift in the late nineteenth century. Regardless of the generous gift, the eldest of seven children, Ike's father David, would disappoint him. Ike's father was determined to get a college education, and more interested in engineering than farming. It was at the Eastern Lane College where he met his future wife Ida; they would marry in 1885. How intense their religious belief was is hard to determine, however they joined a religious movement which later became known as Jehovah's Witness.

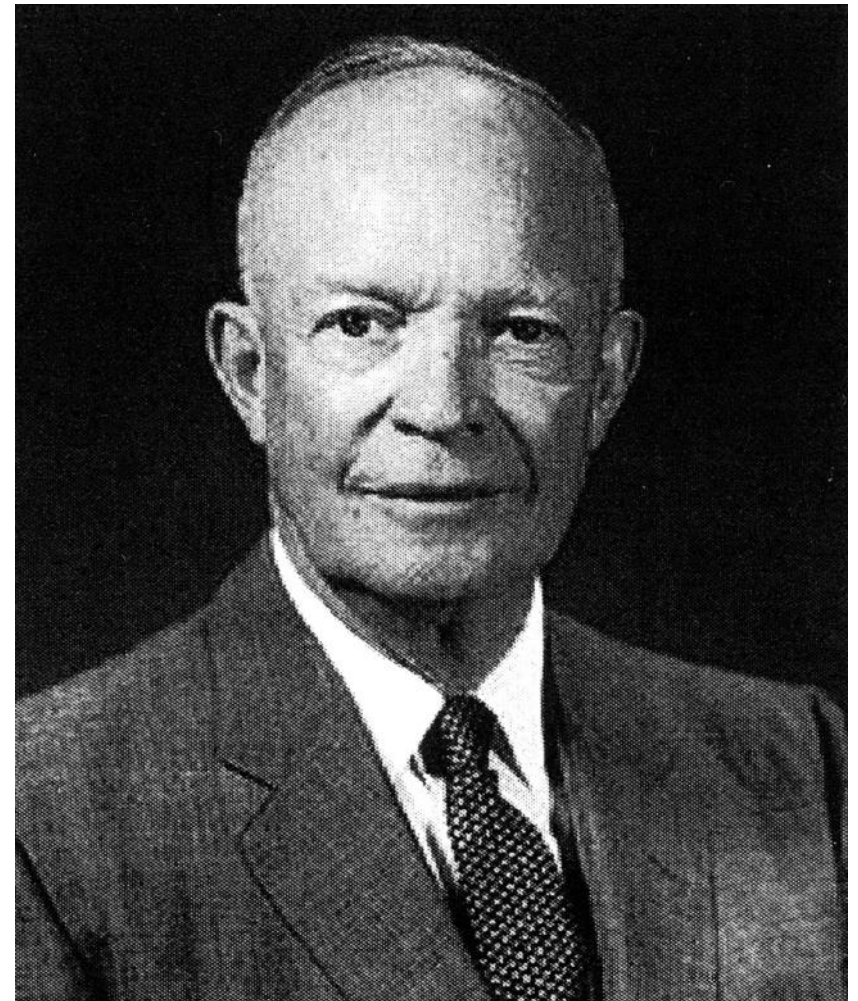
After failing as a merchant, Ike's father moved to Densison, Texas and found work as an engine wiper. In a house a little better than a shack located next to the railroad tracks, Dwight Eisenhower was born; the couple would ultimately have seven children. Somewhat destitute, in 1892 David moved his family back to Kansas with \$24 in his pocket. The Abilene of Ike's childhood was still a town of dirt streets, wooden sidewalks, horses, gas light and kerosene lanterns; indoor plumbing was unknown. Water still had to be carried into the kitchen for washing clothes and bathing, and firewood had to be chopped and split. From early childhood the boys attended a primitive elementary school, participated in daily Bible readings, and maintained a full schedule of backbreaking chores. Ike was above all self-educated, a product of reading rather than school learning. He was particularly interested in the history of the ancient world and the great battles of the Greeks and Romans; it was his mother's collection of history books that sparked Ike's early interest in military history. He idolized the human qualities of Washington, but Hannibal, Caesar, and Scipio interested him just as much. He came to realize that all admirable things in human history would have been meaningless, and come to nothing, had not soldiers been willing to die for their beliefs, and great military leaders trained to protect them.

Ike graduated from Abilene High School in 1909 and was determined to get out of Abilene; both he and his brother, Edgar, wanted to attend college but lacked the funds. With few options for college at his disposal, Ike chose to escape Abilene through the military; not surprising, he came in second in the examinations to attend either West Point or Annapolis. On June of 1911, he was on a train to West Point and would graduate sixty-first in a class of 164. As a second Lieutenant in 1915, even though the rest of the world was at war, the United States was at peace, and President Wilson was determined to keep it that way.

While stationed in Texas, Ike met Mamie Doud from Iowa, and the couple was married in January of 1916. The Eisenhower's had two sons, of which one died at the age of three from scarlet fever. When the United States entered World War I, Ike immediately re-



Dwight Eisenhower, commander of the Allied forces in Europe during World War II and while president of the United States from 1953 until 1961.



quested an overseas assignment but was denied and was ultimately assigned to train tank crews in Gettysburg, Pennsylvania. After the war, Ike was promoted to captain, a rank he held for sixteen years. From 1920, Eisenhower served under a succession of talented generals – Fox Conner, John Pershing, Douglas MacArthur, and George Marshal. He first became executive officer to General Conner in the Panama Canal Zone where he served until 1924. Under Conner’s tutelage, he studied military history and theory. On Conner’s recommendation, in 1925-26 he attended Command and General Staff College at Fort Leavenworth, Kansas, where he graduated first in a class of 245 officers. Then in 1935 Ike accompanied MacArthur to the Philippines, where he served as an assistant military adviser to the Philippine government in developing their army. Although he was promoted to brigadier general on October 3, 1941, on the eve of the American entry into World War II he had never held an active command.

After the Japanese attack on Pearl harbor, Eisenhower was assigned to the General Staff in Washington DC, where he served until June 1942 with the responsibility for creating the major war plans to defeat Japan and Germany. In November, 1942, after being promoted to lieutenant general in July, he was appointed Supreme Commander Allied Expeditionary Force of the North African Theater of Operations.

The terms of the armistice between France and Germany split France in two zones - Northern France was occupied by the Germans and Southern France remained unoccupied, ruled by a French government known as the Vichy government. The Germans had not occupied, nor were they interested in the French overseas colonial empire – Tunisia, Algeria, Morocco, Syria, Lebanon, and French Indochina (Laos, Cambodia, and Vietnam). The Americans, including Ike, were conscious of the fact that landing American troops in French colonial territory was likely to be taken as an act of war, and nobody underestimated the speed which Rommel, in neighboring Libya, would react when the Germans learned of the landing. Very few people appreciate the enormous risks Ike was taking at his first experience of command. He was gambling that the French would allow him to get his forces ashore, and that despite primitive roads and railways, challenging terrain, inexperienced troops, and uncertain air cover, he could move them into Tunisia, and take the port before the Germans did. As things turned out, this was a gamble he would lose, and overcoming the loss would cost the allies some 70,000 casualties; but it would also turn the United States forces into a battalion-hardened army – and transform Ike from a skilled military bureaucrat into the toughest, most experienced, most formidable, and most realistic American commander since Ulysses S. Grant. Ignoring Marshal's advice to stick to his desk, Eisenhower went up to the front often, as Grant often did, hoping to gain control of the battle; and when the troops witnessed Ike's calm and self-confidence, the troops responded. After the three landings on November 8 in French Morocco, and landings near Algiers, President Roosevelt would patiently wait six months for Eisenhower to deliver a firm victory. On May 13, 1943, the Germans surrendered in Tunisia while Ike's forces took more than 250,000 prisoners; for this achievement Ike was awarded his fourth star. In his first command of a battalion in battle, Ike successfully carried out a plan of his own devising, and on a scale unknown to the history of warfare.

After the capitulation of Axis forces in North Africa, Eisenhower oversaw the highly successful invasion of Italy. As was the case in ancient times, who controls Sicily is in position to control the Mediterranean. Part of the rationale for invading Sicily was to take the airfields for use in the invasion of the Italian mainland. Sicily however would be a tough nut to crack with a rough terrain that favored the defense. By the time the invasion took place the number of Axis troops in Sicily would have risen to over 300,000 against the 478,000 Allied troops that Ike proposed to land. The Allied secret service intelligence tried to disguise the landing locations with a naval diversion to the northeast. By 1943 Ike had more than 2 million men under his command, an area of responsibility that ran from the Sahara to Scotland, the armies of three nations reporting to him, and an invasion to launch in Italy with nearly 500,000 men. The amount of paper that crossed his desk was probably the largest in the history of warfare. His subordinate commanders were all difficult and demanding characters requiring patient treatment, and his superiors in Washington and London were impatient for victory.

For a period of six days and nights the RAF and USAAF bombed Sicily relentlessly, dropping 5,000 tons of explosives on an island thirty-two miles square. The beach landings of troops began at two-thirty in the morning on July 10; the day before the invasion

were tense, as the Mediterranean was proving treacherous with high winds. Indeed, the Germans were caught off guard since the weather looked too severe for a landing. On August 17, the Allies had taken control of Sicily, while 100,000 German troops, 9,800 vehicles, and 47 tanks were evacuated to the Italian mainland. The Italian government was already sending out peace feelers to Ike, desperate to take Italy out of the war before the Germans overran it and the SS executed everybody. Landing enough troops on the mainland of Italy was a problem for the Allies due to a shortage of landing craft, which were all urgently needed and being sent back to England for the preparation of the cross-channel landing; there were never enough landing craft to go around as the needs of the Pacific and the Atlantic could never be balanced. Under tremendous pressure from Ike, Italy signed an armistice on September 3, and American troops landed in Salerno on September 9. The German attack was furious and it was touch and go if the American commander, Clark, would be able to hold the beaches. The landing was a near disaster and is compared by historians to Gettysburg in the Civil war – a desperate battle with heavy losses. The campaign up the long, mountainous spine of Italy to liberate Rome would drain the Allied manpower, stifling the build-up of troops for the cross-channel invasion; as a benefit, however, the Italian campaign did tie up a certain number of German divisions, as was also true in the East in the German battle with Russia. With the cross-channel planning beckoning, Ike could no longer devote time to the Italy campaign and turned the fight over to Clark. Rome would not fall to the Allies until right before D-day in May of 1945.

An anxious Stalin pressed Roosevelt for an announcement of the supreme commander for the cross-channel invasion of Germany's France. On December 3, 1943, the appointment of General Eisenhower was announced as the supreme commander of all Allied forces in Europe. Ike would be responsible for planning and carrying out the Allied assault on the coast of Normandy in June, 1944 under the code name Operation Overlord, the liberation of western Europe and the invasion and defeat of Nazi Germany. There was nobody who had anything like Ike's record of leading an alliance – always the most difficult in warfare – or of commanding military operations on a huge, daring, and unprecedented scale. What inspired people: his lack of pretention, his sincerity, and his willingness to accept unimaginable responsibility was second to none. Everyone trusted Ike. They were willing to die for him.

Ike had correctly seen a major flaw in the planning for the Normandy landing and thought that five to six divisions would be needed, instead of the three for which the plan currently included. Ike also insisted in airborne divisions to drop parachute jumpers and gliders inland. And Ike also insisted on a bombing campaign to destroy the French railroad system. He believed a massive bombardment was necessary to disrupt the Germans ability to move their reserves and tank divisions toward Normandy was going to be indispensable to the success of the invasion. By the time Ike officially took up his command on January 15, the preparations for D-day were well under way – almost 3 million men, equipment, and supplies were being slotted into place all over Britain so that they could all be moved to the correct ports and loaded at the right time. The major problem confronting Ike was not the invasion itself, but what to do once the Allied Armies were well established on the beachhead. To sustain the kind of attack Ike had in mind, the flow of supplies would be a critical factor. For that reason, he decided he needed to take Cherbourg before the Germans destroyed the port facilities, and once the armies moved beyond the Seine, he would need to take the Antwerp port for the same reason. In warfare, Ike knew that Hitler and Rommel held strong beliefs in the value of attacking versus digging in, but Ike's solution was one that came natural to him – to keep the armies moving. And a war of movement on a vast scale was what Ike had in mind, one which would

keep the Germans off balance and unable to form a defensive line. But that intensified Ike's supply problem of keeping four Allied Armies continually supplied. The logistical problem was awesome and would ultimately be dominated by the need for fuel, and this in turn meant that the great ports had to be captured.

There was a terrible let-down after D-Day for Ike as he was tired and very depressed. The successful invasion was a triumph on a scale unequaled in military history, but the battle showed signs of breaking down into small, local attacks. The air force was hampered by bad weather and at the same time, the weather was impacting the efforts of the navy to supply the Allied armies on the beaches. Ike, who more than anyone else wanted to be at the front, was obliged to deal with a succession of VIP's demanding his attention, including Churchill and De Gaulle. At the same time, a major event of a different sort took place across the Channel. The first of Hitler's V-1 pilotless bomber missiles, manufactured with slave labor in deep underground caverns, began to land in England. In time, Ike would take every opportunity to get to the front to see for himself what was happening. His most dangerous excursions took place when he would squeeze himself into a tiny backseat of a converted two seat P-51 Mustang and fly over the front lines.

During June, Ike was largely responsible for the smooth transition of De Gaulle from a controversial exile to the unquestioned leader of France. Ike calmly ignored U.S government policy in the interest of snuffing out political strife in France at a time Ike needed solidarity in France to defeat Germany. By June 27, the German lines in France had crumbled allowing Ike could play his decisive card. George Patton, who Ike kept in England to make Hitler believe that there was still another invasion yet to come, could now launch the Third Army out of Normandy. Ike now had what he wanted: a battle of movement. With the fall of Paris, Ike delayed entering the city until August 27, not wishing to take the limelight from De Gaulle. Ike's difficulty now became supplying the city with fuel and food at a time when the Allied forces were running low on fuel and could no longer keep pace with the German retreat.

On August 20, Ike announced that effective September 1 he would take over personal control as ground commander of both the British and American armies, in addition to being Supreme Allied Commander. The English General Monty and Prime Minister Churchill preferred a single, carefully planned military attack against one city to end the war quickly; it was always Churchill's fear that if the war dragged on, it would only give Stalin the opportunity to seize more of Europe. Eisenhower's thinking was more deeply rooted in American military tradition and called for a broad-front approach from many directions. And like Grant during the Civil War, Ike believed the war would only stop when Germany was completely "fought out."

All over France the roads were converted to one lane of traffic so the vast army of trucks carrying supplies and fuel from the ports to the front lines could move swiftly without interference. American engineers were working day and night with heavy equipment to repair the French railway system, which the British and American air force had destroyed. Ike had set in motion a vast, complex organization of non-fighting men that included everything from trucking experts, bridge builders, locomotive specialists, and men who built and ran oil pipelines. But despite the construction of double pipelines from Cherbourg to Paris and from Marseille to Lyon – both miraculous achievements by the U.S. Army Engineer Corps – there was still not enough fuel getting to the front lines to sustain the broad advance Ike wanted. By Thanksgiving of 1944, Ike's front line ran over 450 miles from the German-Swiss border to Antwerp on the North Sea. By the autumn of 1944 Berlin had been reduced to rubble, the Russian army was 300 miles east of the German

capital, and Germany's impending catastrophic defeat was obvious. On December 16, Ike learned his name had been submitted to Congress for promotion to a five star rank general, while Hitler was planning a desperate, last offensive to capture the port of Antwerp in what came to be called the Battle of the Bulge.

As the Allied forces crossed the Rhine River in 1945, Ike prepared to make the final assault on Germany at the age of 54. In the absence of trust of the state department by Roosevelt, the responsibility for making decisions about Europe was shifted to Marshal and Ike, and the decisions were made on the basis of military necessity. Ike's plan called for a four-pronged attack to destroy German resistance west of the Rhine. Like Grant in 1864, Ike's plan set into motion all of the Allied armies to engage the enemy at every point, on the theory that superior numbers would either break the Germans or wear them down. Ike was given Stalin's assurance that the Soviet Union would keep up a series of military operations to prevent the Germans from moving reinforcements from east to west. Eisenhower came under increasing criticism from Churchill and his own right-wing party for not capturing Berlin before the Red Army did. The concern by many politicians in Britain and the U.S. was isolating Berlin deep within the Soviet zone of occupation. From Ike's point of view, none of this mattered as the occupation zones of Germany had already been agreed upon between the Allies. Ike felt strongly that no military purpose would be served by attempting to take Berlin, and he was not about to take the life of one American soldier to occupy a territory that would be handed over to Russia the moment the war ended.

Upon witnessing his first forced labor camp in April, Ike sent word to London and Washington urging that newspaper editors be sent to Germany immediately so that the evidence of Nazi atrocities could be placed before the American and British public. As German troops and officers were fleeing west to surrender, Ike insisted on a complete and unconditional surrender and at two-forty-one on the morning of May 7, the instrument of surrender was signed. After the surrender, Ike was invited to London to be honored with "The Freedom of the City of London" award; thousands lined the streets to cheer him as he was driven through the city. It was without doubt the most tumultuous reception ever given to an American since President Grant visited London. It had already been made clear to Ike that he would command the American occupation forces within the American zone in Germany, which entailed moving his headquarters to Frankfurt. He was not only responsible for the American forces, but increasingly for the starving Germans as well. The Germans now needed to be fed, housed, and given the opportunity to restart their economy. But without German banking, industry, and mining, there was no realistic possibility of rebuilding Europe.

In November 1945, Eisenhower returned to Washington to replace Marshal as Chief of Staff of the Army under President Truman. His main role was rapid demobilization of millions of soldiers, a slow job that was delayed by lack of shipping. Then, in 1948, Eisenhower became president of Columbia University, an Ivy League university in New York City. During that year Eisenhower's book about his experiences in command during WWII, *Crusade in Europe*, was published. For his war memoirs Ike received nearly \$500,000 after taxes, which was an immense sum for the day. Ike resigned from the University in December, 1950, to become the Supreme Commander of the North Atlantic Treaty Organization (NATO), and was given operational command of NATO forces in Europe. A "Draft Eisenhower" movement in the Republican Party persuaded him to declare his presidency in the 1952 presidential election. Ike's selection of Richard Nixon as the Vice-President on the ticket was designed to satisfy the Old Guard of the Republi-

can Party and provided a strong anti-communist presence; Ike defeated the Democratic candidate Adlai Stevenson in a landslide victory.

The foremost issues of the day were to balance the budget, bring the Korean War to an end, to terminate wage and price controls, and to articulate an anti-communist Russia policy. He implemented integration in the Armed Services, which had not been completed under Truman. The Cold War with Russia escalated during his presidency when the Soviet Union successfully tested a hydrogen bomb in 1955. In strategic terms, it was Eisenhower who devised the American strategy of nuclear deterrence based upon the triad of B-52 bombers, land –based intercontinental ballistic missiles, and Polaris submarine launched ballistic missiles. In Korea, Eisenhower threatened the Chinese with the threat of nuclear force if an armistice was not concluded. In July, 1953, an armistice took effect with Korea divided between north and south along the 37<sup>th</sup> parallel.

Eisenhower responded to the Russian launch of Sputnik in October, 1957, by creating NASA as a civilian space agency. Eisenhower accepted a request from the British government to restore the Shah of Iran, resulting in increased control over Iranian oil by the U.S and British companies. Also, Eisenhower firmly believed that if the Communists were allowed to prevail in Vietnam, this would cause a succession of countries to fall to communism. In February 1955, Eisenhower dispatched the first American soldiers to Vietnam as military advisors. Eisenhower also planned the Bay of Pigs invasion to overthrow Fidel Castro in Cuba, which John F. Kennedy was left to carry out. Eisenhower proposed to Congress the first Civil Rights Acts of 1957 and 1960 and signed those acts into law; they constituted the first significant civil rights legislation since 1875. The president placed the Arkansas National Guard under federal control and sent in the 101<sup>st</sup> Airborne Division to protect nine black student's entry into Little Rock Central High School, an all white school. One of Eisenhower's enduring achievements was championing and signing the bill that authorized the Interstate Highway System in 1956.

On the morning of March 28, 1969, at the age of 78, Eisenhower died in Washington D.C. of congestive heart failure.

## **The Violent Sixties**

The population at the beginning of the decade reached 177,830,000. The gross national product was \$503.7 billion, the federal budget \$92.3 billion, with a national debt of \$286.3 billion. The life expectancy of a male was 66.6 years and 73 years for a female. One dozen eggs cost 58 cents, one quart of milk 26 cents, a loaf of bread 20 cents. The average annual salary was \$4,743.00. In 1960 the Dow reached 685, GNP was growing at 4%, while inflation was a reasonable 1.4%.

The sixties were a time of momentous social movements, sweeping civil rights and social welfare legislation, of remarkable achievements in space, and tragic assassinations. It was a time during which the longest war and most active antiwar protest in American history took place. Although the economy prospered, a social and political idealism challenged the materialistic values and conformity of the fifties with an energy that effected changes throughout the American scene. The youth movement, with its assault on authority, gained an influence that was unprecedented in American history.



The decade began with a new type of leadership, John Kennedy – young, handsome, Harvard educated, wealthy, and Catholic – who won broad public acclaim with the first televised presidential debate and witty televised news conferences while president. Kennedy was embarrassed with the failed attempt to overthrow Castro’s communist regime in Cuba at the Bay of Pigs but demonstrated his foreign diplomacy capabilities during the Cuban Missile Crisis against the Communist Soviet Union. He built up the conventional armed forces, accelerated the production of nuclear missiles, cut taxes to stimulate the economy, and embarked on a massive space program; he also established the Peace Program and proposed civil rights legislation. Kennedy brought the presidency a youthful, sophisticated, and widely admired style. His wife Jacqueline, possessed a vibrant beauty that also elicited vogueish emulation. By November of 1963, the country was alive and hopeful when the tragic, senseless assassination of John F. Kennedy shook a grieving nation.

Indeed, there did remain an intolerable shame in American life – the persistent denial of rights and subjection to humiliating indignities of black Americans. In the late fifties, increasing numbers of civil rights advocates had begun to challenge racial bigotry in the laws of the land. In the early sixties, a major assault was mounted: blacks and some white supporters sat in at segregated lunch counters, boycotted segregated buses, sought to integrate white colleges, and organized marches on southern towns for voting rights. Their efforts were often brutally opposed, and the struggle was bloody. The unifying force led by Martin Luther King, whose courage and brilliant power of expression gave an irresistible moral and spiritual impetus to the undeniable justice of his message. More than 250,000 at the 1963 Washington D.C. civil rights march heard his “I have a dream” speech. In JFK’s presidential successor, Lyndon Johnson, Dr. King found an ally who would strengthen JFK’s proposed civil rights legislation. The Civil Rights Bill of 1964 and the Voting Rights Act of 1965 made black Americans at least equal before the law. That Congress passed these bills and other Johnson “Great Society” legislation, like Medicare and poverty programs, indicated that Americans yearned to fulfill its basic ideals and that material well-being alone was not sufficient - many believed government had a responsibility for social change.

Much of the decade involved youthful revolt against the establishment. Although Johnson championed peace and social progress, he began sending combat troops to Vietnam in 1965 with increasing troop requirements. A widening gap grew between promised victory for a just cause to curtail the spread of Communism and an increasing public view of an immoral war. America’s lasting involvement in Vietnam undoubtedly gave energy and a broad base of adult support to the youthful protesting of the war as college campuses became a major site of demonstrations against the war. The black movement also changed from the passive resistance of Martin Luther King to more violent “Black power” groups. From Watts in Los Angeles, California to Harlem, New York, ghetto riots resulted in numerous deaths and widespread burning of cities.

When the North Vietnamese mounted their Tet offensive in 1968, many believed that despite 500,000 combat troops in Vietnam, the United States was still far from victory. After LBJ announced that he would not seek reelection, Robert Kennedy entered the presidential race. With student rebellions sweeping the world, 1968 may well be seen as the apotheosis of the sixties; Martin Luther King was assassinated, and widespread riots followed; Robert Kennedy, like his brother John, was assassinated; protesters clashed with Chicago mayor Richard Dailey’s police force and turned the Democratic Presidential Convention into a battlefield.

Richard Nixon, appealing to the “silent majority” won the presidential election against Hubert Humphrey. Committed to “peace with honor”, Nixon began withdrawing troops from Vietnam in 1969 and he quickly established a lottery system for the draft, hoping to undercut student rebellion. However, 1969 was also a year of great triumph. Several space flight accomplishments had multiplied during the decade as most of the public watched with intense interest as Americans made increasingly complex journeys into space. On July 30, 1969, 700 million throughout the world witnessed, via television, an American plant the first footsteps on the moon.

## Events of 1960

Black Americans conduct a sit-in at a segregated lunch counter in Greensboro, North Carolina, which is followed by 70,000 blacks participating in sit-ins in more than 100 cities.

An American reconnaissance jet, with pilot Gary Powers, is shot down over Russia. He is sentenced to seventy years in prison but is traded for a Russian spy in 1962.

Castro and Russia sign an economic pact. Ike cuts sugar imports from Cuba and voices threats against communism in the western hemisphere.

Eisenhower reports the United States has an ICBM that can travel 9,000 miles.

The first communication and weather satellites are launched.

The largest television audience to date, 75 million, watch the first Kennedy - Nixon debate. Kennedy wins a narrow presidential election over Richard Nixon by 112,881 votes.

## Events of 1961

The U.S severs diplomatic ties with Cuba. Anti- Castro Cuban soldiers, supported by the U.S, fail in an assault to overthrow the Cuban government in what becomes known as the Bay of Pigs.

Russia sends the first man, Yuri Gagarin, into space to successfully orbit the earth. The first U.S manned flight, with Alan Shepard, is launched into space for fifteen minutes. Russia launches a second manned flight which lasts 25 hours and orbits the earth 17 times. As a result, Kennedy urges to accelerate the space program due to public fear of the USSR dominating space with a nuclear weapon threat.

Russian Communist East Germany builds the Berlin wall between East and West Berlin which raises tensions between Russia and the United States. Kennedy orders the resumption of nuclear testing.

## Events of 1962

John Glenn orbits the earth three times, becoming the first American to orbit the earth. During the year, Scott Carpenter orbits the earth three times and Walter Schirra six times. The first successful interplanetary probe passes Venus and records temperatures of 800 to 2,000 degrees F.

The Mississippi governor bars black American, James Meredith, from the University of Mississippi. President Kennedy sends in federal troops to enforce federal civil rights laws.

The Soviet Union announces plans to ship arms and technology to Cuba and warns the U.S. not to interfere. Based upon reconnaissance photographs, Adlai Stevenson at a United Nations assembly accuses the USSR of placing nuclear missiles in Cuba. JFK announces a sea and air quarantine of Cuba and intercepts Cuba-bound Soviet ships transporting nuclear missiles. On the brink of nuclear war, Russia agrees to dismantle and remove the missiles from Cuba.

## Events of 1963

Mass black anti-segregation demonstrations broke-out in Birmingham, Alabama. JFK sends in federal troops. During 1963, thousands are arrested in over 75 southern cities during civil rights demonstrations.

The USSR and the U.S. agree to a nuclear test ban treaty in the air, atmosphere, and water.

250,000 black Americans march for civil rights in Washington D.C. and hear Martin Luther Kings "I have a dream" speech.

Gordon Cooper orbits the earth twenty-two times.

The minuteman nuclear missile is developed; it can travel at 15,000 MPH for a distance of 6,300 miles. The first Polaris nuclear missile to be fired from a submarine is developed.

The Beatles release their first big hit song; "I want to hold your hand."

A factory worker earns more than a \$100 per week for the first time.

President John F. Kennedy is assassinated in Dallas Texas while riding in a motorcade. Lee Harvey Oswald is arrested hours later and is shot by Jack Ruby the next morning during live TV coverage while being transferred to another prison location. The Vice President, Lyndon Johnson, is sworn in as president.

## Events of 1964

President Lyndon Johnson calls for an end to poverty and racial discrimination. The Civil Rights Act of 1964 passes, forbidding public, employment, and union discrimination.

114 are injured when black Americans riot in Harlem and Brooklyn, New York. 248 are injured in riots over police brutality in Philadelphia.

14,000 National Guardsmen are called out to contain rioting in Watts, a black ghetto in Los Angeles; 4,000 are arrested as the city burns over a five- day period.

The Ranger VII transmits 4,316 photos of the moon back to earth.

Congress approves close to one billion dollars for an antipoverty program.

China explodes its first atomic bomb.

Lyndon Johnson defeats Republican candidate Barry Goldwater for president of the U.S. in landslide victory of 43 million votes to 27 million.

## Events of 1965

LBJ pledges support to South Vietnam and the first American combat troops are ordered to go there. LBJ offers North Vietnam unconditional peace and \$1 billion for reconstruction. The bombing of North Vietnam resumes when the offer is denied. The American troop strength reaches 190,000 by year-end.

25,000 demonstrators march on Washington D.C to protest the war in Vietnam.

The Gemini space program orbits two men, Virgil Grissom and John Young, in a space capsule for the first time. On another flight, Ed White successfully completes a twenty- minute space- walk. On a third flight, Frank Borman and James Lovell orbit the earth 206 times. And yet on another flight, the first docking of two space capsules is successfully completed.

## Events of 1966

LBJ asks congress for an additional \$4 billion in defense spending to support the expanding war effort in Vietnam. The U.S. troop strength is raised to 400,000; draft calls reach 50,000 a month; college students demonstrate nation-wide against the war.

Michael Collins and John Young dock with a target rocket and walk in space at a record 474 miles from earth. Surveyor I successfully completes' a soft landing on the moon.

## Events of 1967

The three- man crew to the Apollo space capsule were all instantly killed in an explosion during a test on the launching pad.

North Vietnam rejects LBJ's peace proposal as U.S. bombs Hanoi, the North Vietnam capital. The U.S. troop level reaches 525,000.

700,000 college students march against the war.

China develops the hydrogen bomb.

Riots by black Americans in Newark, New Jersey leave twenty-six dead after six days of rioting; forty-three more people die in eight days of rioting in Detroit.

## Events of 1968

North Vietnam launches an offensive against Saigon, the South Vietnam capital. Johnson calls for a partial bombing halt of North Vietnam as peace talks are scheduled to begin in Paris. Vietnam casualties exceed the Korean War.

Nixon announces his candidacy in February for the Republican presidential nomination.

On March 16, Robert Kennedy declared himself a candidate for the Democratic presidential nomination. Shortly thereafter Lyndon Johnson announced he will not seek another term as president.

Four days later Martin Luther King is assassinated in Memphis; forty-six are killed as massive rioting erupts in 125 cities. The largest peace time military force in modern times is called out to maintain peace. James Earl Ray is arrested for the assassination of Martin Luther King.

As the race riots burned out, the worst campus riot of the decade erupted at Columbia University over the war. After one week, with clubs and sweeping arrests, the New York Police recaptured the University.

On June 6, Robert Kennedy is assassinated after winning the California primary; Sirhan Sirhan is arrested on the spot for assassinating Robert Kennedy. Hubert Humphrey announces his candidacy for the Democratic presidential nomination.

The 1968 Civil Rights Bill passes.

The USSR invades Czechoslovakia.

Police clubbed demonstrators and dragged rioters off in patrol wagons at the explosive Democratic presidential convention in Chicago.

Nixon is nominated as the Republican presidential candidate and Hubert Humphrey wins the nomination at the Democratic convention in Chicago. Richard Nixon wins the presidential election by a narrow margin.

Astronauts Walter Shirra, Donald Eisale, and Walter Cunningham, circle the moon ten times and transmit television interviews back to earth.

## Events of 1969

President Nixon announces a troop reduction in Vietnam and adopts a policy of Vietnamization – gradually turning the responsibility of the war over to the South Vietnamese.

Astronauts Eugene Cernan, James Young, and Thomas Stafford, evaluate the lunar landing crafts performance during lunar orbit of the moon.

Astronauts Neil Armstrong, Buss Aldrin, and Michael Collins complete the first landing on the moon on July 20. Armstrong and Aldrin spend 21 hours walking on the moon collecting soil and rock samples.

The first draft lottery is held by birthdates and draft quotas are sharply reduced to appease college demonstrators.

## **John F Kennedy (1917 – 1963)**

### **The New Frontier**

John F. Kennedy was an American politician who served as the 35<sup>th</sup> president of the United States from January, 1961 until his assassination in November, 1963. John Kennedy was born in Brookline, Massachusetts to businessman/politician Joseph Kennedy, Sr. (1888-1969) and philanthropist/socialite Rose Fitzgerald – Kennedy (1890 – 1995). John F Kennedy's (JFK) father was the oldest son of businessman/politician Patrick Kennedy while his mother was the daughter of Boston Mayor John Fitzgerald. Coincidentally, all four of his grandparents were children of immigrants from Ireland. Jack Kennedy had five sisters and three brothers, Joseph Jr. Kennedy, killed in action in WWII, Bobby Kennedy, who served as JFK's attorney general and was assassinated in 1968 while campaigning for the Democratic presidential nomination, and Edward "Ted" Kennedy, who served as a U.S. senator for 47 years.

As he grew up, Jack Kennedy came to understand that being the second son of one of America's richest and most famous families set him apart from the many other privileged youths he knew. At age seven, Jack was sent to a local private school, Dexter, where he was supervised from 8:15 until 4:45. Summers were spent away from Boston at Cape Cod in Hyannis Port harbor, where he learned to swim, sail, and enjoy outdoor sports. Christmas and Easter were spent at their home in Palm Beach, Florida. Jack's father, who made his fortune in banking and finance, also became a force in the new film industry, and in 1927 moved the family to New York where the family in 1929 moved into a mansion on six acres outside of New York city. At the age of fourteen, Jack's parents granted him his wish to follow his older brother Joe Jr. to Choate, a private boarding school in Connecticut. Joe and Rose were less interested in the distinctive education the boys would receive than in the chance to expose them to the sons of America's most influential families. As Jack would soon learn, membership in the world of privilege carried lifelong responsibilities.

From the time he was three throughout his adolescent years, Jack suffered from a continuous series of medical problems ranging from scarlet fever to intense abdominal pains; there was not a year that passed without one physical affliction or another. In addition to being sickly, he lived in his elder brother Joe's glowing athletic and scholastic shadow, wrestled with the strains of uncommonly high parental expectations, as well as the pressures to live up to the "Kennedy standards." Jack was self-conscious about his physical health problems and was only an average student – strong in English and history but mediocre at best in Latin and French. He remained more interested in contemporary affairs, read the *New York Times* daily, and pursued his fascination with Winston Churchill's writings. Nevertheless, despite being sixty-fifth in a class of 110, Jack was assured a place at Harvard.

At Harvard Jack's focus was more on earning a social status, swimming on the varsity team, and winning the intercollegiate championship in sailing. His best friend described him as very humorous, very bright, and very unassuming. His essays focused on the uses of political and intellectual power to alter human relations. As he returned home from his first Western European trip at the age of twenty, Jack saw himself and his family as a kind of American nobility. Upon returning home, his father had been appointed by President Roosevelt as the ambassador to Great Britain and was on the cover of *Fortune* magazine. Hence, his father's new political appointment gave Jack an uncommon opportunity to be a part of English high society. In July, 1938, at the end of his sophomore year, he traveled to London to spend the summer working at the U.S. Embassy. In August, the family fled London to a villa in the south of France where they socialized with members of the English royal family. On return trips to London in 1939, besides from all the fun, Jack had a keen sense of responsibility about using his uncommon opportunity to gather information for a senior thesis. He found himself in the eye of the storm, traveling to Danzig and Warsaw where he spoke to Nazi and Polish officials, and then on to Lenin-grad, Moscow, Bucharest, Turkey, Jerusalem, Beirut, Damascus, and Athens. He received VIP treatment from the U.S diplomatic missions everywhere he went, staying at a number of U.S. embassies and talking to senior diplomats. Jack spent the remainder of the summer traveling in England, France, Germany, and Italy in pursuit of more information for his senior thesis. Jack's 148 page thesis titled, "*Appeasement at Munich*" argues that Britain's failure to arm itself in the thirties forced it into an appeasement policy with Germany at Munich; he further states this failure was not the consequence of weak leadership but of popular resistance led by pacifists seeking security through the League of Nations, opponents of greater government spending, and shortsighted politicians focused on personal political gains rather than the national good. The exploding world crisis encouraged Jack to turn his thesis into a book. The book, *Why England Slept*, received almost uniformly glowing reviews and substantial sales in the United States and Britain. The book was followed by trips to Argentina, Brazil, Chile, Uruguay, Peru, Ecuador, Columbia, and Panama.

In the fall of 1940, Jack was among the first slated for induction into the U.S. Army to serve in WWII. Because he was enrolled at Stanford for 1940-41 school year, he was not to be called until the end of the academic year. Despite that, due to a life-long disability from acute, ulcerative colitis, which created crippling colon and stomach pain, as well as the onset of serious back problems, Jack was promised an easy out of the draft. Nevertheless, thoughts of attending law school did not excite him and a stint in the military seemed like a challenging alternative. In 1941, when Jack failed the physical exams for admission into the army and then into the navy's officer candidate school, he turned to his father to pull strings on his behalf. One month later in October, 1941, he entered the navy, and as an ensign he was assigned a post in Washington as a paper pusher. During the spring of 1942 his back and stomach problems became so acute the navy declared him unfit for duty and, consequently, the Mayo Clinic was recommending a spinal fusion. In the midst of the war, Jack challenged the medical experts and instead applied for sea duty outside the United States. In July, 1942, the navy granted Jack's request for sea duty and sent him to North Carolina for sixty days of junior officer naval training; Jack's ambition was to command a patrol motor torpedo boat (PT's), but his chances were slim due to fierce competition and his pronounced back problems. Against his better judgement, Joe Senior intervened again on Jack's behalf to get him accepted in PT commander school in Rhode Island where he was retained as an instructor. It was not long and Jack went to his grandfather, Honey Fitz, for help to get shipped out; soon thereafter Jack was reassigned to his requested location – the South Pacific. The seventeen months Jack would spend in the South Pacific dramatically changed his outlook on the war and the military. The combat he witnessed in March, 1943, on his first days in the battle for the Solomon Island's quickly sobered him.

On a pitch-black night in August of 1943, with no radar on his PT boat which he commanded, Jack and 14 other PT boats were instructed to find and intercept a Japanese destroyer convoy. Upon locating the Japanese fleet, the PT boats fired their torpedoes and returned to base. With poor communication, the others were not aware Jack's PT boat was sliced in half by a Japanese destroyer. Two crew members were immediately killed while others, who were separated from the torn boat, were rescued by Jack, dragging them against powerful currents back to the hull of the sinking craft. After nine hours of clinging to the sinking hull, Kennedy organized the ten survivors into two support groups for a swim to a deserted speck of land. Jack, swimming on his stomach, towed a wounded crewman by clenching the ties of his life jacket in his mouth while the crewman floated on his back; the swim to safety took five grueling hours. After surviving for seven days on the island, Kennedy and his crew were safe aboard a PT and were transported for medical attention. Jack took ten days to recuperate from exhaustion and many deep abrasions, only to then proceed to find himself in a considerable amount of fighting for the next six weeks. By November his intestinal and back pain became so severe he was hospitalized and returned to the States. In June of 1944 Jack agreed to finally have the back surgery but continued to have almost constant back and abdominal pain that only codeine could relieve for several months. After it was concluded his incapacity for naval service was permanent, Jack was ultimately placed on the navy's retirement list on March 1, 1945.

In August, 1944, the Kennedy family was devastated by the death of Joe Junior, killed during a dangerous bombing mission targeted against V-1 German launch sites, for which Joe volunteered; Joe's plane exploded in mid-air over the English Channel with 22,000 pounds of explosives aboard. His brother's death evoked a terrible sense of loss in Jack. During his entire life, Jack's competition with Joe had defined his own identity and now there was no older brother to compete against, plus Joe Jr.'s death had sealed his superiority forever in his father's heart. Having been spared in the war, and privileged with so much God-given talent, Jack was determined to make a mark on the world.

As the war was ending in Europe in May of 1945, Jack went to work for the Hearst newspaper as a correspondent covering the United Nations, the British elections, and the Potsdam Conferences in Germany. After returning to London, he became terribly ill with a high fever and vomiting and was immediately hospitalized and diagnosed with Addison's disease. It is believed Kennedy's degenerated back tissue, intestinal ulcers, and atrophy of his adrenal glands were all the result of decades of inappropriate supplemental hormone treatments to treat his colitis.

From early on, his father ruled out a business career for his sons and the logical alternative was politics. Some useful, indeed, vital occupation was the only acceptable goal for the Kennedy children. And for Joe Kennedy senior, the family's reputation was always a consuming concern. A strong family interest, great family wealth, and a personal belief in the necessity for adequate leadership in our political life, had all given Jack the incentive to seek elective office. While Jack was making up his mind, his father was already setting the stage for Jack's political career; they both preferred a congressional campaign that could send Jack to Washington, where he could have national visibility. In 1946, Joe secretly persuaded James Curley to leave his Eleventh District to open up a congressional seat for Jack, who justifiably worried about being attacked as an outsider with no roots in the Eleventh District.



Jack surprised his father with how he hustled to convince the voters he understood their needs and problems. Out of bed by 6:15, Jack would be on the street by 7:00 – in time to meet arriving factory workers. After a quick breakfast, he would start knocking on every door in neighborhoods, making a strong impression on housewives. After lunch he would hit the barber shops, variety stores, fire and police stations, and taverns. At 4:00 he headed back to the factories, catching the workers coming out of work. In the evenings, Jack would make the rounds of three to six house parties organized by his sisters. But all the hard work would not have paid off in votes if he did not have something meaningful to say. However strong the appeal of his war record, Jack spoke repeatedly about the bread and butter issues that mattered most to working-class voters. As important as what he advocated, was the advantage of his father's wealth to get his name, message, and war record out before the public. It is estimated Joe may have spent close to \$300,000 in campaign advertising, a staggering sum for a congressional seat in 1946. In the end, Jack paid a heavy price for the intense daily schedule - increased abdominal pain of his colitis, constant back pain, and intensified symptoms from the Addison's disease, which caused nausea and vomiting; people around him noticed his bulging eyes, jaundiced complexion, and limping walk. But all the hard work and family commitment to the campaign paid off in a decisive victory of 69,093 votes to his opponents 26,007.

After serving six years as a congressman, Kennedy expressed an interest in running for the senate seat in 1952 against Cabot Lodge, whose famous name and three terms in the senate made him something of a Massachusetts icon. Joe, who worked around the clock, rented an apartment near Jack's where he supervised the campaign expenditures, and helped prepare speeches and policy statements. As in 1946, Joe supported Jack with large infusions of money – billboards, newspaper, radio, television ads, travel, direct mail, and the famous Kennedy teas which attracted thousands of women. Cabot was simply overwhelmed by the Kennedy advertising money; Joe may have invested several million dollars into the campaign. Jack's brother, Robert, who was working as an attorney at the Justice Department, was reluctantly persuaded to take over managing the campaign. Bobby Kennedy gave the campaign organization, organization, and more organization; the result was the most disciplined and smoothly working state-wide campaign in Massachusetts history. Kennedy volunteers delivered 1,200,000 brochures to every home in Massachusetts. With Bobby running the day-to-day, Jack was free to concentrate on the issues – anticommunism, labor unions, the Massachusetts economy, civil rights, and government spending. Kennedy won on his personality by a margin of 51.5 to 48.5 percent of the vote with a record 91 percent of eligible voters going to the polls. Jack's election to the senate opened the way to one of the great American love affairs between the Kennedy image and millions of Americans.

In 1954, sixty-seven percent of Americans remained primarily concerned about threats of war, communist subversion, and national defense. Between 40 and 64 percent of Americans felt a nuclear conflict within the United States was likely within five years. Jack believed if he was going to run for president, establishing himself as a leader in foreign affairs seemed like an essential prerequisite. Kennedy's views on the crisis in Indochina won him substantial attention and considerable praise in the press; he was emphatic that U.S military involvement in Indochina would be a mistake. After the French resistance collapsed in Indochina in 1954, Vietnam was split at the seventeenth parallel – a North Vietnam under a communist government in Hanoi and South Vietnam under a pro-western regime in Saigon, backed by promises of American economic and military aid.

In 1953 Jack married Jacqueline Bouvier, a beautiful twenty - two- year old socialite, and a political necessity essential for a young senator intent on higher office. Over the next six years Jack struggled with medical concerns – headaches, upper respiratory infections, intestinal pain, urinary tract discomfort, and almost constant back pain; he took daily doses of cortisone to control his Addison's disease. In late October of the same year, Jack had surgery on a collapsed lumbar vertebra that threatened his ability to walk. A metal plate was installed to stabilize the spine, however afterward, infection put his life at risk as Jack went into a coma; another surgery was required in February, 1954 to remove the infected plate, which would delay his return to Washington until May. His illness gave him additional inspiration to write a book, *Profiles in Courage*. The book recounts the careers of eight senators, all of whom had shown uncommon courage in risking their political careers by taking unpopular stands. Published in 1956, the book became a national bestseller and added to Jack's prominence. Meanwhile, during the 1956 presidential campaign, Jack seemed to be everywhere, exuding charm as he crisscrossed twenty-four states giving more than 150 speeches that endeared him to audiences. Seeing no compelling reason to stand aside, by 1957 Kennedy had begun campaigning for the next Democratic presidential nomination. Be that as it may, the state of his health would become a closely guarded secret as he became hospitalized nine times in one eighteen-month period.

In November, 1957, a daughter, Caroline was born. Jack's 1958 senate reelection campaign had borne out his extraordinary political attractiveness and he won by a landslide with 73.6 percent of the vote. Jack believed that effective leadership came largely from the top, therefore, Jack was convinced becoming president provided the only real opportunity to make a difference; he believed the time had come! The country was indeed witnessing the flowering of another great political family.

But can a Catholic become president? Sixty-four percent of voters thought Kennedy had the background and experience to be president, but many thought he was too young and 24 percent of the voters said they would not cast a ballot for a Catholic. But Kennedy was extremely popular; by early 1958 he was receiving one hundred requests a week to speak. Agreeing to give 144 talks, he delivered nearly one every other day in 47 states. Even though the campaign was a family effort, it was his father Joe who became the campaign's principal behind the scenes operator in the fight to gain the party leaders support. In 1959 the Gallop polls projected Kennedy would lose to the more experienced Nixon, whose eight-years- experience as vice-president under Eisenhower gave him a commanding lead. In response to the disappointing numbers, Kennedy launched an all-out campaign in the fall of 1959 to demonstrate his national appeal. Kennedy proceeded to conduct an exhausting speaking tour that took him to every state in the union.

After securing the Democratic presidential nomination, Jack's first major decision was to select a vice-presidential running mate. At a personal level the Kennedy's were not well-disposed toward Lyndon Johnson, however he seemed to be the logical choice as Johnson appeared the most likely of all to help win the crucial southern states.

In an early-evening acceptance speech at the Los Angeles Coliseum before eighty thousand people and millions of television viewers, Kennedy sounded his theme. "The Democratic party, by nominating someone of my faith, has taken on a new and hazardous

risk. I am telling you now what you are entitled to know: that my decisions on every public policy will be my own – as an American, a Democrat and a free man. Today our concern must be in the future. For the world is changing. The old era is ending. Abroad, the balance of power is shifting. There are new and more powerful weapons – new and uncertain nations - and new pressures of populations and deprivation. The world has been close to war before – but now man, who has survived all previous threats to his existence, has taken into his mortal hands the power to exterminate the entire species some seven times over. It is a time, in short, for a new generation of leadership – new men to cope with new problems and new opportunities. I stand tonight facing west on what was once the last frontier. From the lands that stretch three thousand miles behind me, the pioneers of old gave up their safety, comfort, and sometimes their lives to build a new world. We stand today on the edge of a new frontier – the frontier of the 1960's – a frontier of unknown opportunities and perils. The new frontier of which I speak is not a set of promises – it is a set of challenges. It sums up not what I intend to offer the American people, but what I intend to ask of them. Can a nation such as ours endure? Have we the nerve and the will? Are we up to the task – are we equal to the challenge? This is the question of the new frontier. That is the choice our nation must make – between the public interest and private comfort – between national greatness and national decline. All mankind waits upon our decision. We cannot fail their trust, we cannot fail to try.”

After two day's rest, Jack and Bobby plunged into a series of planning meetings. Bobby was blunt, hard, tough, and was a magnificent campaign manager. Warnings that Kennedy's Catholicism and youth made him unfit for the White House worried Jack and Bobby the most. Kennedy felt the surest way to convince voters that he was not too young or inexperienced to be president was to compete directly with Nixon in a televised debate. Against Eisenhower's advice, Nixon accepted the unprecedented challenge to four televised debates. Nearly two-thirds of the country's adult population tuned in to watch the historic debates. In July, 1960, gallop polls reported a majority of Americans regarded relations with Russia and the rest of the world being the primary problem facing the nation. Castro's pro-Soviet regime in Cuba, coupled with Khrushchev's warning that Moscow was grinding out missiles and that communism would bury capitalism, stirred fears of attacks against the United States. But civil rights was an even more difficult issue to manage in the campaign. Kennedy would ultimately lose the fourteen delegates from Mississippi and Alabama due to his support of the civil rights movement. The conflict between pressures for economic, political, and social justice for black Americans and southern determination to maintain the system of segregation presented Kennedy with no good political options. Given the majority status of the Democrats, the discontent over the economy and international affairs, and Kennedy's superior campaign, the question is not why Kennedy won but why his victory was so narrow. The answer lies in the unyielding fear of having a Catholic in the White House.



Top photos— Jacqueline Bouvier Kennedy and JFK sailing off the family compound in Hyannis Port, Cape Cod.

Lower-left—the first presidential debate with Richard Nixon on September 26, 1960.

Lower right—New York ticker-tape parade on October 19, 1960 prior to the election.



## Kennedy Presidency – 1960 - 1963

The torch is passed! Kennedy believed that no single element was more important in launching his administration than a compelling inaugural address; he wanted to renew national confidence and hope. The speech itself was one of the two most memorable inaugurals of the twentieth century. Kennedy began by saying, "We are all Federalists. We are all Republicans, Jefferson had said. We observe today not a victory of party but celebration of freedom." Kennedy asserted that the same revolutionary beliefs our forbears fought are still an issue around the globe today by adding, "Let every nation know, whether it wishes us well or ill, that we will pay any price, bear any burden, meet any hardship, support any friend, oppose any foe to assure the survival and success of liberty." Kennedy did not want Moscow to see his administration as intent on an apocalyptic showdown. To the contrary, much of the rest of his speech was an invitation to find common ground against a devastating nuclear war. Kennedy said, "For only when our arms are sufficient beyond doubt can we be certain beyond doubt that they will never be employed. Let us never negotiate out of fear but let us never fear to negotiate." The closing paragraph was a call to national commitment and sacrifice. "Now the trumpet summons us again, not as a call to bear arms, though arms we need – not as a call to battle, though embattled we are – but a call to bear the burden of a long twilight struggle, year in and year out – a struggle against the common enemies of man: tyranny, poverty, disease, and war itself – And so, my fellow Americans: ask not what your country can do for you – ask what you can do for your country."

Kennedy, comfortable with defense and foreign policy issues, decided to be his own secretary of state, as well as his own chief of staff. He asked Bobby to be his attorney general, who reluctantly accepted. Kennedy knew that it was essential to reinvigorate the sluggish economy to have a successful administration and since he was not well schooled in economics, he appointed Walter Heller, an economics professor from the University of Minnesota, to manage the economy.

### Cold war with Russia, Vietnam, and civil rights

President Kennedy's foreign policy was dominated by confrontations with the spread of Communism to third world countries by the Soviet Union. In April of 1961 Kennedy proceeded with President Eisenhower's plans to overthrow the communist dictator of Cuba, Fidel Castro. The United States was clearly wary of any communist governments becoming established in the western hemisphere. The plan, led by the Central Intelligence Agency with help from the U.S. military, was for an invasion of Cuba by a counter-revolutionary insurgency composed of American trained anti-Castro Cuban exiles in Nicaragua. The intension was to invade Cuba and instigate an uprising among the Cuban people in the hopes of removing the Communist Castro from power. Although training of the Cuban exiles and planning went forward, Kennedy remained very hesitant of the plan; any beachhead landing of the 1,500 invaders would possibly be met by a Cuban force of 25,000 troops. Fearing massive protests of any overt actions against Cuba by the United States, Kennedy instructed the CIA to inform the Cuban Brigade leaders that U.S. strike forces would not be allowed to participate in support of the invasion in any way; Kennedy did not want any invasion of Cuba to be associated with a Yankee military operation. The Brigade leaders responded that despite Kennedy's restrictions, they wished to go ahead. Prior to the amphibious landing, eight B-26's, piloted by Cuban exiles, took off from Nicaragua on April 16 hoping to destroy Castro's three dozen combat planes; the mission was a total failure. Fearing further disaster, Kennedy ordered the CIA to ground the second air attack until

the Brigade could be established on the beachhead. Regardless, as Kennedy feared, the entire plan was doomed for failure; almost 1,200 of the 1,400 exiles to land on the beach surrendered almost immediately to the 20,000 Cuban troops armed with Soviet tanks. The fiasco became known as the “Bay of Pigs” and raised Moscow’s standing in third world countries.

Kennedy’s greatest fear is that Moscow might use the Cuban conflict as an excuse to close off West Berlin. If there was to be a next world war, Kennedy believed it would begin over the contentious issue of Berlin. At the end of WWII, Germany had been divided into British, French, and American zones in the west and a Soviet zone in the east. Berlin, which was 110 miles inside the Soviet zone, was also divided into four zones. The Soviets had guaranteed access to Western Berlin through their zone. By 1961, the embarrassing exodus of East Germans to the west through Berlin provoked Moscow to do something. In 1961, Kennedy made it clear to the Soviet Premier Khrushchev that any interference with U.S. access rights to West Berlin would be regarded as an act of war; consequently, the summer of 1961 was arguably the most dangerous moment for a nuclear conflict since the beginning of the cold war. Behind the scenes at the White House, contested debates raged over what all agreed was a full-blown crisis in Berlin. Some officials urged an immediate military build-up in Germany; others argued for a more flexible response including negotiations coupled with military preparations. In response, Khrushchev gave indications he was ready for a nuclear confrontation. In a July speech, Kennedy announced a \$3.25 billion increase to the defense budget, a tripling of the draft quota, as well as an additional 200,000 American troops to build-up NATO Allies military strength in Western Europe. In the televised speech Kennedy said, “We cannot and will not permit the Communists to drive us out of Berlin, either gradually or by force. We will at all times be ready to talk. But we must also be ready to resist with force, if force is used upon us. To sum it up: we seek peace – but we will not surrender West Berlin.” Sunday morning, August 13, the Soviet Union began building barriers to block any East Berliners passage to West Berlin. A permanent thirteen-foot high concrete wall would follow, which would become known as the “Iron Curtain”. Kennedy’s measured, firm response to Khrushchev’s threats preserved West Berlin from communist control.

During the spring and summer of 1962, Khrushchev renewed threats against Germany and Berlin in his belief that Washington was planning to topple Castro. To boost his political standing, protect communism in the western hemisphere, and leverage his bargaining power over Berlin, Khrushchev decided to turn Cuba into a missile base which he could more directly threaten the United States. The Soviet military began operations to deploy twenty-four medium range nuclear missiles in Cuba with a range of 1,000 miles and sixteen intermediate range nuclear missiles with a range of 2,000 miles. During the summer of 1962, to reduce the likelihood of exposure of the Cuban missile build-up, Khrushchev told the U.S Interior Secretary that Moscow was delivering defense military equipment to Cuba for their protection. In response, Kennedy being suspicious of anything Khrushchev said, commenced with a series of forceful warnings to Moscow.

On October 14, 1962, CIA U-2 planes took photographs of ballistic missile sites being built in Cuba by the Soviets. The photos were shown to Kennedy on October 16 and a consensus was reached that the missiles posed an immediate nuclear threat to national security. Kennedy faced a dilemma: if the U.S. attacked the missile sites, it may lead to a nuclear war with the Soviet Union, but if the U.S. did nothing it would be faced with increased nuclear threat from close range. On a personal level, Kennedy needed to show resolve in reaction to Khrushchev’s military threat to the United States. More than a third of the National Security Council favored an

unannounced air assault of the missile sites. Many thought the assault plan was an over-reaction in light of U.S. missiles that had been placed off the Russian border in Turkey by Eisenhower. By the end of the day the question that remained for Kennedy was how to remove the missiles from Cuba without a full-scale war. New reconnaissance photos revealed the Soviets could have between sixteen and thirty-two missiles ready to fire within one week. In response, the Joint Chiefs were now urging Kennedy to move forward with a full invasion of Cuba. Kennedy feared an attack on Cuba would provoke Khrushchev to take action on Berlin, which would likely touch off a nuclear war. Kennedy favored announcing a quarantine of Cuba with a demand for removal of the offensive missiles and preparations for an air strike should Russia not comply.

Before the largest television audience to date, Kennedy announced his decision to the nation for seventeen minutes on Monday evening the 22nd. Kennedy made clear the gravity of what the whole world faced. He announced Moscow had created a nuclear strike capability that could strike most any major city in the Western Hemisphere. Kennedy bluntly condemned the Soviets of lying: The deployment represented a total breach of faith with repeated promises to supplying Cuba with only defensive weapons. Kennedy further announced the United States would henceforth quarantine Cuba to block all offensive weapons from entering Cuba; he added that Soviet action to stop its buildup would justify additional U.S. action, and any use of the missiles would bring retaliatory attacks against the Soviet Union. Kennedy further demanded prompt dismantling and withdrawal of all offensive weapons in Cuba under UN supervision. He also promised to counter any threat to America's allies, including West Berlin. With no response yet from Khrushchev on Tuesday morning, the country and the world feared the worst. A message from Khrushchev reached Kennedy by noon but offered little hope of a settlement. Kennedy ordered a quarantine to begin Wednesday morning, the 24th. That afternoon, Bobby sent a message to Russia that the U.S. would be receptive to discussing dismantling the U.S. missile sites in Turkey. In the meantime, the Soviets were making rapid progress in bringing their missile sites to a complete state of readiness in Cuba. U.S. forces had increased their state of readiness from a defensive position to DEFCON 2, an offensive position. All U.S. B-3 bombers, armed with nuclear weapons, were airborne over Iceland, and all submarines, armed with Polaris nuclear missiles as well as the Minuteman missiles in land-based silos, were on full offensive alert. It was known that Soviet military intelligence had intercepted the order from the Pentagon to begin the DEFCON 2 alert. Later that evening a letter arrived from Khrushchev dashing any hopes that Moscow would respect the quarantine. Kennedy returned an unyielding reply to Khrushchev that the U.S. was preparing to invade Cuba. On the 25<sup>th</sup> Khrushchev turned back a dozen ships from the quarantine and promised to dismantle the missiles in exchange for a promise not to attack Cuba. On the 26<sup>th</sup>, it was clear the quarantine was no longer the central issue but rather the continuing missile build-up in Cuba and how to remove them. On Saturday the 27<sup>th</sup>, as nine Soviet ships remained on course for the quarantine line, a new initiative was received from Moscow asking for the removal of U.S. missiles in Turkey in return for dismantling their missiles in Cuba. With the Cuban missile sites nearing completion, Kennedy feared Khrushchev's negotiations may be a ploy to gain time. Reports came in Saturday afternoon that an American U-2 flying over Cuba was shot down and killed its pilot. Now the Joint Chiefs were pressing Kennedy again for a massive air strike no later than Monday morning. Everyone agreed that dismantling the missiles in Turkey would undermine the NATO alliance and weaken the appearance of U.S. willingness to protect Europe. After much deliberation, Kennedy sent a reply blatantly stating the U.S. must have a decision within twelve to twenty-four hours with the message - if you do not remove the missile bases, we will. With war appearing imminent, Bobby reassured his brother that he had no doubts the decisions being made are correct, but he added, "before we attack them, you've got to make damned sure they under-

stand it's coming". Later that day, Khrushchev dictated a letter to Kennedy accepting his terms and instructed that the terms would be broadcast in Russia and, to every one's relief, at 9:00 A.M. Sunday morning the Soviet broadcast was heard in Washington. At the same time, Khrushchev sent the president a secret letter expressing satisfaction at Kennedy's promise to remove the missiles from Turkey in four to five months. Kennedy kept the quarantine in place until it was verified the Soviets had dismantled the launch sites and shipped the missiles back to Russia. After three weeks of negotiations and continued flights over Cuba, Kennedy announced to a televised audience on November 20 that all of the offensive missiles had been removed from Cuba; Kennedy had also insisted the departing ships be inspected at sea to confirm the missiles were being transported. The crisis brought the world closer to nuclear war than at any point before or since. October 1962 was not only Kennedy's finest hour in the White House, it was also an imperishable example of how one man prevented a catastrophe for the human race and the planet.

When briefing Kennedy, Eisenhower emphasized that the communist threat in Southeast Asia required priority. Vietnam had been under French rule for the past hundred years until a period of Japanese occupation during WWII. Vietnam gained their independence in 1954. Kennedy voiced a change in policy from supporting a free Laos to indicating privately that Vietnam, not Laos, should be deemed America's tripwire to Communist spread in the area. In May, 1961, he dispatched Vice President Lyndon Johnson to meet with South Vietnam's President Ngo Dinh Diem. Kennedy announced a change in policy that provided political and economic support, along with military advice to the South Vietnamese government. However, it was crystal clear that Kennedy had no immediate intention to allow the country to become a battleground for American forces. Late in 1961, the Russian backed Communist Viet Cong, in North Vietnam, began successfully increasing military pressure. Kennedy slightly increased the number of military advisors from 11,000 in 1962 to 16,000 in late 1963, but he was reluctant to order a full-scale deployment of troops. The dilemma remained: If the United States abandoned Vietnam, the faith that the U.S. had the will and the capacity to deal with the spread of communism would be lost. Despite concern about losing Vietnam, Kennedy was determined to resist mounting pressure to deploy American troops in combat. And if South Vietnam were to fall in defeat, Kennedy wanted to obtain the lowest possible profile in aiding Vietnam, fearing it would weaken America's international standing. By the summer of 1963, Kennedy faced a crisis in Vietnam; he feared giving up the territory to the communists while facing an election by the American people, yet the South Vietnamese military was ineffective against pro-communist Viet Cong forces. Before leaving for Dallas, Kennedy began making plans for the complete withdrawal of U.S. advisors from Vietnam and told Forrestal, after the 64 election we must find a way to get out of Vietnam. One year and one-half later, his successor, President Lyndon Johnson, committed the first combat troops to Vietnam and greatly expanded America's involvement in the war.

Kennedy called his domestic program the "New Frontier". It ambitiously promised federal funding for education, medical care for the elderly, civil rights legislation, and tax reform to halt the recession and expand growth. Congress did not enact much of Kennedy's proposed legislation until after his death.

The turbulent state of racial discrimination was one of the most pressing domestic issues of the sixties. Jim Crow segregation was the established law in the Deep South. The Supreme Court of the United States had ruled in 1954 that racial segregation in public schools and public facilities (such as busses, restaurants, theaters, bathrooms, and beaches) was unconstitutional, yet most in the



southern states did not obey the court decision. Kennedy verbally supported racial integration and civil rights. In his first State of the Union Address in January, 1961, President Kennedy said “The denial of constitutional rights to some of our fellow Americans on account of race – at the ballot box and elsewhere – disturbs the national conscience, and subjects us to the charge of world opinion that our democracy is not equal to the high promise of our heritage.” Kennedy believed the grassroots movements and demonstrations for civil rights would anger many Southern whites and make it more difficult to pass civil rights laws in Congress, which was dominated by conservative Southern Democrats. Even though Kennedy’s civil rights strategy was appropriate for the congressional mood in 1961, it was clear to Martin Luther King that the president remained reluctant to take significant political risks for the sake of black equality.

Kennedy continued to believe that executive initiatives could be an effective, if temporary, substitute for congressional action on advancing equal rights for blacks. On March 6, 1961, by executive order, Kennedy signed into law the Equal Employment Opportunity law affirmative action to ensure that applicants are employed and employees are treated during employment without regard to race, creed, color, or national origin. On November 20, 1962, Kennedy signed an executive order prohibiting racial discrimination in federally supported housing and on June 10, 1963, signed the equal pay act.

In February, 1963, Kennedy called upon congress to eliminate abuses of black rights. He cited five southern states which had fewer than fifteen percent of the Negroes of voting age registered to vote. Kennedy declared, “I am, therefore, recommending legislation to fulfill the Supreme Courts nine-year-old decision on desegregation of public schools, the enforcement of fair hiring, and the end to racial segregation in all places of public accommodation.” On May 3 and 4, when black demonstrators, including many young children, marched in defiance of city integration bans in Birmingham, Alabama, police and firemen attacked the marchers with police dogs and fire hoses; the TV images broadcast around the world put civil rights back in the headlines. On May 11 the Ku-Klux-Klan staged rallies in Alabama and Georgia and the Blacks responded with attacks on police and firemen, which brought out state troopers and anti-riot forces. A four-hour rampage left a nine-block area of the black ghetto a smoldering shamble. On June 11, 1963, President Kennedy intervened when Alabama Governor George Wallace blocked the doorway to the University of Alabama to stop two African American students from attending. Wallace moved aside only after being confronted by the Alabama National Guard, federalized under order of the president. That evening Kennedy gave his famous civil rights address on national television, launching his initiative for civil rights legislation. The prospect of race wars across the South during the summer convinced Kennedy that he had to take bolder action to address the problem; he believed the timing was now favorable to ask Congress for a major civil rights bill. Seizing on the success of facing down Wallace, Kennedy immediately went on national television and announced his decision to ask Congress for civil rights legislation. The speech included several memorable lines: “We are confronted primarily with a moral issue. It is as old as the scriptures and is as clear as the American Constitution. The heart of the question is whether all Americans are to be afforded equal rights and equal opportunities. Now the time has come for this nation to fulfill its promise.” The following week Kennedy asked for the enactment of the most far-reaching civil rights bill in the nation’s history. Regardless of the political consequences, Kennedy felt he had to act.

Martin Luther King planned his march on the capitol for August 28 to dramatize the issue and mobilize support throughout the country for the civil rights legislation. Kennedy was not in favor of the march, nevertheless, since it was clear that they would be unable to stop it, the Kennedy's tried to ensure its success. The march of 250,000 demonstrators marked a memorable moment in a century-long crusade for black equality. Nothing caught the spirit of the moment better, or did more to advance it, than Martin Luther King's concluding speech in the shadow of Lincoln's memorial. His remarks included the following text: "I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave owners will be able to sit together at the table of brotherhood....I have a dream that one day every valley will be exalted.... And when this happens....we will be able to speed up that day when all God's children, black men and white men, Jews and Gentiles, Protestants and Catholics, will be able to join hands and sing in the words of the old Negro spiritual, free at last! Free at last! Thank almighty God, we are free at last!" The bombing of a church in Birmingham on September 15, which killed four young black girls, made the sense of urgency greater than ever. Kennedy knew it would take decades to resolve race relations in the South, but he believed passage of a civil rights bill would help. As he left for a political trip to Dallas November 21 there was still no legislation however his proposals ultimately became part of the Civil Rights Act of 1964.

Economically, Kennedy proposed the first major tax reform in an attempt to lift the country out of two recessions in the last three years. In his 1963 State of the Union Address, he proposed substantial tax reform and a reduction in the income tax rates from the current range of 20-90 percent to a range of 14 – 65 percent; he also proposed a reduction in the corporate tax rates from 52 to 47 percent. Kennedy also ended a period of tight fiscal policies, loosening monetary policy to keep interest rates down and encourage economic growth. As a result, the economy accelerated notably during his presidency. Despite low inflation and interest rates, the economy had expanded at an anemic pace of 2.2 percent during the Eisenhower administration and a meager 1 percent the twelve months prior to Kennedy taking office. Yet the economy prospered under the Kennedy administration. During the 1961 to 1963 period, GDP expanded by 5.5 percent, industrial production rose by 15 percent, and automobile sales rose by 40 percent. This rate of growth continued thru 1969, and has yet to be repeated for such a sustained period of time.

By November, 1963, the presidential campaign had already begun. As part of the campaign, Kennedy planned trips to Florida and Texas in November. Convinced that his stand on civil rights would make it difficult to win most southern states, he intended to make a special effort to hold on to Florida and Texas. Unfortunately, the Secret Service and FBI never picked up on the fact Lee Harvey Oswald, an unstable individual who had lived in Russia and openly identified himself with Castro's Cuba, might be a threat to the president. If they had been attentive to his movements, they would have noted his presence in Dallas, where he worked in the Texas School Depository, which overlooked Kennedy's motorcade route. If he had been a person of concern, they would have taken notice of the mail-order Italian rifle he purchased shortly after the president's visit was announced. President Kennedy was assassinated in Dallas, Texas, at 12:30 pm Central Time on Friday, November 22, 1963, while on a political campaign trip. Traveling in a presidential motorcade, in an open convertible, he was shot once in the back, the bullet exiting his throat, and once in the head. Kennedy was taken to Parkland Hospital for emergency treatment, but pronounced dead at 1:00 pm at the age of 46. Lee Harvey Oswald, an order - filler at Texas School Book Depository from where the shots were fired, was arrested for Kennedy's murder. He denied shooting anyone, claiming to be a patsy. On November 24, Oswald was killed by Jack Ruby during the televised coverage of

Oswald's prison transfer. Vice President Lyndon Johnson was sworn in as President on Air Force One, transporting Kennedy's body and his wife Jacqueline back to Washington. Kennedy's death came one year after Castro's government foiled a CIA-assassination plot in Havana. President Johnson was eager to reassure the country that only Oswald was involved, fearing speculation about Cuban or Soviet responsibility might provoke a nuclear war. President Kennedy is buried in Arlington Cemetery along with his two brothers Robert and Ted. Howard Taft is the only other U.S. president to be buried at Arlington Cemetery.



The presidential inaugural parade on a cold, icy day in January, 1961 passes by missiles as a symbol of the cold war.



JFK and Jackie with son, John and daughter, Caroline





Left—The president and John Glenn examine the small Mercury capsule that carried John Glenn in orbit around the earth 3 times in February of 1962

Right—The president conducting his popular, televised weekly presidential news conference, always filled with some humor and wit.



Right—The president huddles in the cabinet room with General Taylor and Defense Secretary Robert McNamara to discuss the Cuban Missile Crisis in October, 1962.

Left—In a rare exception from his no-sweat demeanor, JFK announces a response to the Soviet threats during the Berlin crisis.





In October, 1962, JFK and his brother Robert, the Attorney General, seek to find a way out of a possible nuclear Armageddon with Russia.



Top left— An East German guard escaping to West Germany right before the construction of the wall to stop people from fleeing Communist Russia's Germany.

Top right—Robert Kennedy, the attorney General, orders an army of U.S. Marshals to disperse mobs viciously attacking freedom riders being bussed to a freedom rally in Alabama.

Bottom right—Birmingham, Alabama police use police dogs and fire hoses to disperse a peaceful protest rally which shocked the nation and stirred the president to action.







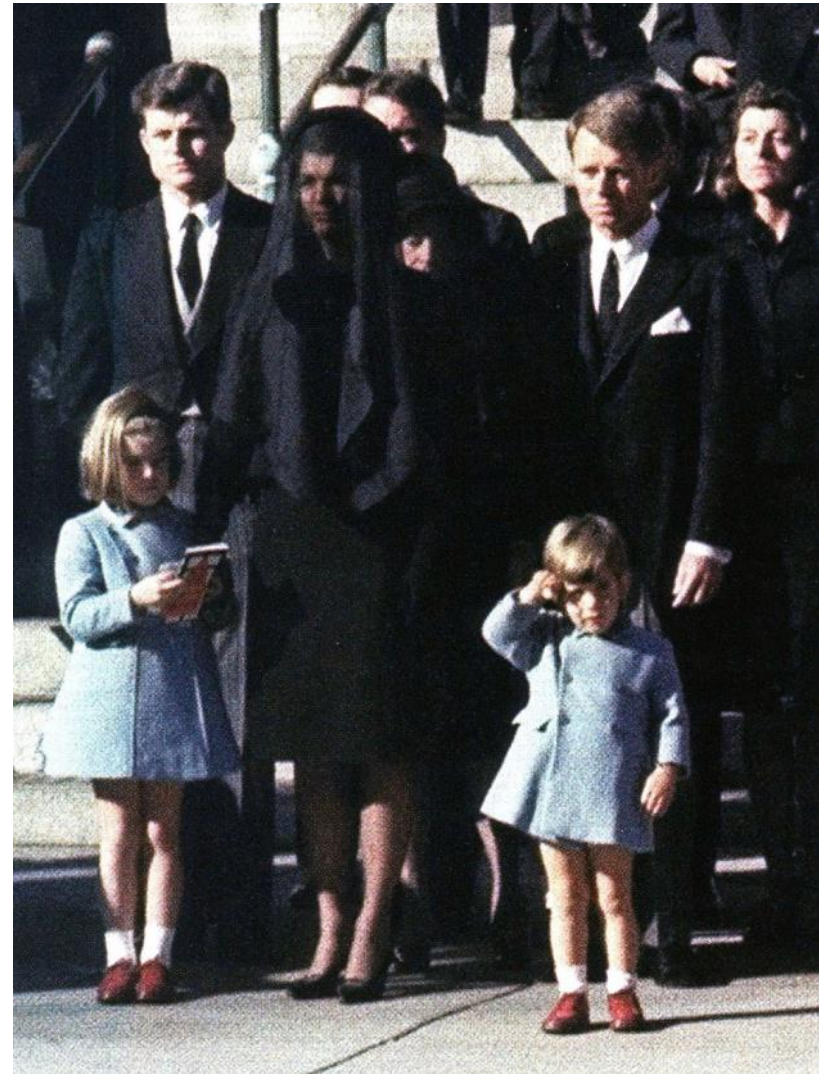
Top left—The president and Mrs. Kennedy arrive at Dallas's Love Field on November 22, 1963 for a political rally. JFK had selected Jackie's outfit.

Top right—President Kennedy's motorcade moments before he was assassinated.

Bottom—Vice President Lyndon Johnson is sworn in as President on Air Force One alongside Jacqueline Kennedy.



President Kennedy's casket lying in state at the Rotunda of the Capitol with Mrs. Kennedy and Caroline kneeling at the casket.



After the Funeral mass , Jacqueline, Caroline, JFK's two younger brothers, Robert and Ted, all stand together as John salutes his Daddy.



Jacqueline asked for the funeral to be modeled after Abraham Lincoln's, a century before. JFK's coffin would lie in state, and during the funeral procession, be followed by a riderless horse, symbolizing a fallen soldier, as Lincoln's casket had been. Assisted by Robert Kennedy, she chose a burial site at Arlington National cemetery below the Robert E. Lee estate where Kennedy had admired the view

## Lyndon Johnson (1908 to 1973)

### The Great Society 1964-1968

Lyndon Baines Johnson, often referred to as LBJ, was the 36<sup>th</sup> President of the United States from 1963 to 1969. Four years after leaving office, Lyndon Johnson died of a heart attack in a Texas ranch house no more than one mile from where he was born. His grandfather spent his life working as a cowboy, driving herds after the Civil War 1,200 miles across dangerous country from Texas to Kansas. Lyndon's father, Sam, courted his future wife, Rebekah, during his first stint in the state legislature from 1904 to 1908. When his two terms were up, he stayed out of politics for nearly two decades and devoted his attention to real estate. After the war in 1918, when Lyndon was ten, Sam began another stint in the legislature. While growing up, Lyndon loved joining his father in the legislature sessions and going with him on the trail during his campaign for re-election in the Model T Ford. Lyndon could see his future life saying, "I saw it all before me. I would become a political figure. I would reach beyond my father. I would finish college. I would gain great power and gain high office." Lyndon graduated from Johnson City High School in 1924, having participated in public speaking, debate, and baseball. After working on a road gang for six months, Lyndon finally made the decision to try to make it with his brains rather than his hands. One week later he was admitted to Southwest Texas College in 1926. He worked his way through school, participated in debate and campus politics, and edited the school newspaper.

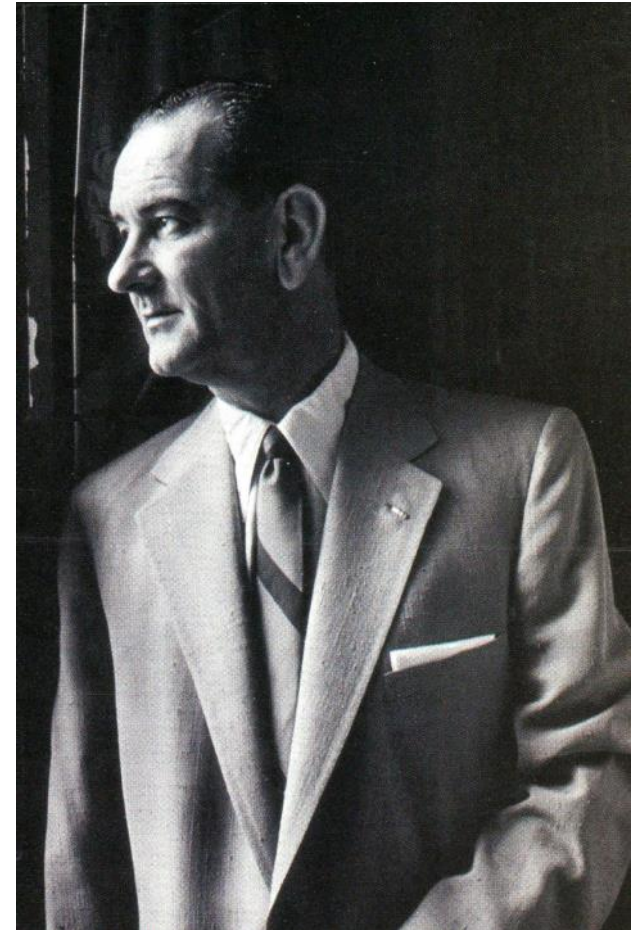
Johnson wrote in the college newspaper during his freshman year, "What you accomplish in life, depends almost completely upon what you make yourself do..... perfect concentration and a great desire will bring a person success in any field of work he chooses." In June of 1928 the Democratic National Convention was in Houston. Ignoring the college rules against automobile trips, Lyndon persuaded a friend to drive him there. With a bundle of editorials from the College Star for credentials, he talked convention officials into admitting him as a member of the press. At a later date Lyndon gave an impromptu speech on behalf of a candidate, impressing Willy Hopkins, a rising politician running for state senate. After Lyndon successfully managed Hopkins campaign to victory, the following year Hopkins returned the favor by recommending Lyndon's name to Richard Kleberg, who had been elected to the U.S. Congress. Two weeks after graduation Johnson was off to Washington to work for Kleberg.

Upon arriving in Washington it was natural for Johnson to learn how things worked in the nations' capitol – the relationships and sources of power – just as he had in college politics. If people were the main source of Johnson's education, he also read three daily Washington newspapers, plus the local Texas papers, as well as the *New York Times* and the *Wall Street Journal*. Every evening he assembled a packet of night reading, including the daily Congressional Record, copies of pending bills, newsletters, official publications, and committee reports. Within a few months he knew how to operate in Washington better than many who had been there for twenty years. As an assistant to Congressman Kleberg, Johnson worked eighteen hours a day, seven days a week, managing to create a fully functioning office.

After the death of Congressman Buchanan, in his home town of Johnson City, Lyndon Johnson announced his candidacy for the United States Congress. Johnson poured massive energy into those forty-two days of campaigning – a seemingly tireless flow of

personal activity and labor which no other candidate could match. Barely able to speak, he had to be rushed to the hospital two days before the election. At the age of twenty-nine he had been elected to the Congress of the United States. Not one to be satisfied, after three years in Congress Johnson had become terribly restless and unhappy. When the first opportunity came, he decided to run for the United States Senate. Once again, the death of Senator Morris provided his opening. Looking back on his defeat, Johnson described the months that followed as “the most miserable in my life.” Five months after his return to the House, the Japanese attacked Pearl Harbor. The next day Johnson enlisted in the Navy, where he served in Australia under General MacArthur. While serving in the Pacific, Johnson was assigned to high risk bombing missions against Japanese airbases, which is why he received the Silver Star and other medals of bravery. Twelve months later President Roosevelt issued a special order that returned all Congressmen and Senators to Capitol Hill.

It was during this period that Johnson laid the financial base which eventually made him a millionaire. In 1943 when Johnson returned from the Navy, the Austin radio station KTBC was up for sale. The station was bankrupt when they took it over for \$17,500, the price of its debt. It was a risky buy but the feeling that with his wife’s energy and talent, she could make it go; his wife Lady Bird was a force. The assets of KTBC rose to nearly two million in ten years and to seven million within twenty years. Johnson used the profits to make highly profitable investments in land and in bank securities. In 1948, the other Senate seat in Texas opened up and that same afternoon LBJ announced his candidacy for the United States Senate.



Traveling by private helicopter, he visited twenty towns a day. Three weeks before the election an exhausted Johnson was hospitalized but resumed the campaign the following day. Winning by a mere 87 votes, LBJ joined the freshman senate class of 1948. LBJ served as a United States Representative from 1937 to 1949 and as a United States Senator from 1949 to 1961; he also spent six years as a Senate Majority Leader. After failing to obtain enough votes to become the Democratic presidential nominee, Johnson accepted Kennedys offer to be his Vice- Presidential running mate.

Amid suspicions of conspiracy against the government, Johnson was quickly sworn in as President on the Air Force 1 plane in Dallas on November 22, 1963, just two hours and 8 minutes after John Kennedy was assassinated in Dallas. LBJ’s presidency designed the “Great Society” legislation upholding civil rights, Medicare, Medicaid, federal aid to education, urban and rural development, and his “War on Poverty”. Assisted in part by a growing economy, the War on Poverty helped millions of Americans rise above the pov-

erty line during LBJ's presidency. The Civil Rights bills banned racial discrimination in public facilities, interstate commerce, the workplace, and housing; and the Voting Rights Act banned certain activities in southern states used to disenfranchise African Americans. With passage of the Nationality Act of 1965, the country's immigration system was reformed and all racial origin quotas were removed.

LBJ escalated American involvement in the Vietnam war. In 1964, Congress passed the Gulf of Tonkin Resolution, which granted LBJ the power to use military force in Southeast Asia without having to ask for an official declaration of war. The number of American military personnel rose dramatically from 16,000 advisors in non-combat roles in 1963, to 550,000 in military roles by early 1968. American war casualties soared! Growing unease with the war stimulated a large, angry, antiwar movement based especially on university campuses in the United States and abroad. LBJ faced further troubles when summer racial riots broke out in most major cities after 1965. While he began his presidency with widespread approval, support declined as the public became upset with both the war and the growing violence at home. He ended his bid for re-nomination in 1968 after a disappointing finish in the New Hampshire primary.

## **Civil rights**

In The days following JFK's assassination, LBJ made an address to Congress saying that "No memorial oration or eulogy could more eloquently honor President Kennedy's memory than the earliest passage of the Civil Rights Bill for which he fought so long." The wave of national grief following the assassination gave enormous momentum to Johnson's promise to carry out Kennedy's plans and policy. LBJ signed the Civil Rights Act into law on July 2, 1964. The Selma to Montgomery protest marches in March, 1965, led by Martin Luther King for Negro voting registration rights, ultimately led LBJ to initiate debate on a voting rights bill. Johnson's speech to a television audience was one of his best. "I speak tonight for the dignity of man and the destiny of democracy....At times history and fate meet at a single time in a single place to shape a turning point in man's unending search for freedom...So it was a century ago at Appomattox. So it was last week in Selma, Alabama.... There is no constitutional issue here. The command of the Constitution is plain. There is no moral issue. It is wrong to deny any of your fellow Americans the right to vote....This time, on this issue, there must be no delay, no hesitation, and no compromise with our purpose...." The Voting Rights Act, which outlawed discrimination in voting allowed millions of southern blacks to vote for the first time. The results were significant – between the years of 1968 and 1980, the number of southern black officials elected as state and federal officeholders nearly doubled. Regardless of the new civil rights legislation, major riots in black neighborhoods caused a series of long hot summers. They started with a violent disturbance in Harlem in 1964, the Watts district in Los Angeles in August, 1965 – the first riot to capture national attention - Watts was the precursor of more than one hundred riots that stretched out for three long summers, leaving 225 dead, 4,000 wounded, and \$112 billion in property damage. The biggest riots came in April, 1968, in over one hundred cities after the assassination of Martin Luther King. Newark burned in 1967 where six days of rioting left 26 dead and 1,500 injured while the inner-city burned to a shell. In Detroit in 1967, Governor Romney sent in 7,400 national guard troops to quell fire bombings, looting, and attacks on business and the police. Detroit continued to burn for three days until 43 were dead and 2,250 injured while property damage ranged into the hundreds of millions.

## **The Great Society**

LBJ expressed intentions to embark on a mammoth program of social reform; he was bent on achievements that would leave his mark on the country's history that the Great Society was not a utopian vision, but the inevitable direction for progressive action. LBJ's concept of achievement was derived from the New Deal and Roosevelt, which dominated the formative years of his public life. Johnson became deeply conscious of the effect he might have on the daily lives of citizens for generations to come as he envisioned how the Great Society would offer something to almost anyone: Medicare for the elderly, education assistance for the young, tax rebates for business, a higher minimum wage for labor, subsidies for farmers, vocational training for the unskilled, food for the hungry, housing for the homeless, poverty grants for the poor, clean highways for commuters, legal protection for blacks, improved schooling for the Indians, rehabilitation for the lame, higher benefits for the unemployed, reduced quotas for immigration, auto safety for drivers, pensions for the retired, fair labeling for consumers, conservation for hikers and campers, and more, and more, and more. In 1965 alone, Johnson submitted sixty-three actions on a bewildering variety of legislation. Pass the bill now and worry about its effects and implementation later – this was the White House strategy. In late 1963 LBJ launched his initial offensive of his War on Poverty, utilizing the plans for a poverty program that were in the preliminary stage of development from the Kennedy administration. In 1964, Congress passed the Revenue Act of 1964 and the Economic Opportunity Act, as part of the War on Poverty. LBJ set in motion legislation creating programs such as Head Start, food stamps, and Work Study. During the Johnson years national poverty declined significantly, with the percentage of Americans living below the poverty line dropping from 23 percent to 12 percent. LBJ fervently believed that education was a cure for ignorance and poverty and was an essential component of the American dream. He made education the top priority of the Great Society agenda in 1965, with an emphasis on helping poor children achieve better educations. For the first-time large amounts of federal money went to public schools. In 1965 LBJ also turned his attention to health care, newly named Medicare. To reduce Republican opposition, Medicare was presented as a three-layer cake – hospital insurance under Social security, a voluntary insurance program for hospital visits, and an expanded medical welfare program for the poor, known as Medicaid. The bill passed Congress on July 28. And then on April 5, 1968, LBJ urged the passage of the Fair Housing Act.

Between 1965 and 1968, five hundred social programs were created - administered with varying degrees of success. Now as administrator of the Great Society, LBJ had to deal with a bureaucracy of one million employees, hired to implement more than four-hundred grant-in-aid programs. Rising government expenditures to fund the Great Society and the war in Vietnam started to produce inflation in late 1965. The Council of economic advisors in December, 1965, warned a tax increase would be necessary if expenditure could not be contained. LBJ flatly refused, fearing the legislation of the Great Society would be the sacrificial lamb of a tax increase and spending cuts. For this reason, the precise costs of the war were kept from Congress and the American people throughout his administration.

## **Vietnam**

LBJ subscribed to the Domino Theory in Vietnam and to a containment policy that required America to make a serious effort to stop all Communist expansion. At Kennedy's death there were 16,000 advisory personnel in Vietnam with an executive order to start withdrawing with 1,000 men at the end of 1963. LBJ reversed Kennedy's order and expanded the number of military personnel and the role of American involvement. LBJ was a master politician, effective at successfully moving legislation through Congress, however he was skeptical of his ability to sort out the complicated decision-making process concerning Vietnam. As a result, Johnson turned to others for guidance, who all shared the view that Vietnam was a critical testing ground of America's ability to counter Communism. While LBJ's heart was in the Great Society, he feared America's passive role in Vietnam would only lead to defeat and humiliation. Johnson felt boxed in by unpalatable choices – between sending Americans to die in Vietnam or give in to the Communists. If he sent additional troops he would be attacked as an interventionist and if he did not he risked being labeled a coward and soft on Communism; he also believed that no Democratic president could politically survive the loss of South Vietnam to the Communists. In early 1965 the time for a decision was near. The Communists, by every measure, were winning the war. Either he committed himself now, he was told, or he stood to lose South Vietnam. The problem is, LBJ never believed he politically could, or never researched options to, pull out of Vietnam. As a result, he mistakenly followed a path of escalation. And due to his fear of making a decision to escalate, he chose targeted bombing and gradual escalation out of indecision. This type of approach he found most congenial: targeted bombing of military installations represented the moderate path between the compelling extremes of massive destruction and total withdrawal.

Unfortunately, there was no sign the bombing had stopped the flow of supplies from the North, but instead, more weapons were now in Vietcong hands. America might control the sky, but the land was still being captured by the Communists. By July of 1965, Johnson was given three choices by commander Robert McNamara: 1) Cut our losses and withdraw 2) Continue at present level and expect to withdraw or escalate quickly at some time in the future 3) Promptly escalate with 200,000 ground troops. Johnson chose option number three and now the question turned to implementation. Rather than asking Congress to declare war and raise taxes to fund the war, Johnson chose a strategy not to tell Congress or the public no more than absolutely necessary. The administration would escalate the ground troops gradually and by pretending there was no major conflict, he could continue to propose and pass Great Society legislation.

By the end of 1965 there were 184,000 troops deployed in Vietnam. After consultation with joint Chiefs and other advisors, LBJ decided to increase troop strength by 15,000 per month during 1966 rather than increasing them at one time; this approach muted the publicity. Political and public impatience with the war began to emerge in the spring of 1966. Consequently, the troop strength was increased to 400,000 in 1967 along with an increase in bombing. In March, Robert Kennedy assumed a more public opposition to the war. The fact of his opposition and probable candidacy for the presidency in 1968 inhibited the embittered Johnson from employing a more realistic war policy. By the middle of 1967, 70,000 Americans had been killed or wounded in the war. As troop strength increased to 525,000, public protests against the war rapidly increased, culminating with a demonstration of 100,000 at the Pentagon in mid-October. As casualties mounted and success seemed further away than ever, LBJ's popularity plummeted. College students and others protested, burned draft cards, and chanted, "Hey, hey, LBJ, how many kids did you kill today?" Johnson could scarcely



travel anywhere without facing protests. On January 30, 1968, came the Viet Cong and North Vietnamese Tet offensive against South Vietnam's five largest cities, including Saigon and the US embassy. While the Tet offensive failed militarily, it was a psychological victory, definitely turning public opinion against the war effort. There existed much outcry, too many riots, too many demonstrations: the nation seemed in a state of continual unrest and, as the people saw it – the man in the White House was to blame. On March 31, 1968, LBJ spoke to the nation of "Steps to Limit the War in Vietnam". He then announced, "I shall not seek, and I will not accept, the nomination of my party for another term as your president.



## Martin Luther King

(1929 – 1968)

Martin Luther King Jr., American clergyman and civil rights leader, was fatally shot at the Lorraine Motel in Memphis, Tennessee, on April 4, 1968. He was a prominent leader of the Civil Rights Movement and Nobel Peace Prize winner who was known for his use of nonviolence and civil disobedience. In February, King traveled to Memphis in support of striking African American city sanitation workers, who, at the time, were paid significantly less than white workers. On April 3 King returned to Memphis to address a gathering at the Word Headquarters of the Church of God in Christ where he delivered the speech, now

known as the "I've Been to the Mountaintop" address. At 6:00 p.m. on April 4, King was standing on the balcony outside his room when he was struck by a single bullet. Shortly after the shot was fired, witnesses saw a man fleeing from a rooming house across the street from the Lorraine Motel. Police found a package dumped close to the site containing a rifle and binoculars, both with Ray's fingerprints. A worldwide manhunt was triggered, which culminated in the arrest of James Earl Ray at London's Heathrow Airport. Ray pleaded guilty and was sentenced to 99 years in the Tennessee State Penitentiary. He died at the age of seventy.

That night, Senator Robert Kennedy, running to gain the presidential nomination of the Democratic Party, learned of the King assassination while traveling to campaign in Indianapolis. Advised by the Indianapolis Police Chief that he could not provide him protection from violence, Kennedy decided to go ahead and spoke from the back of a flatbed truck. The short four-minute speech is widely

considered one of the greatest speeches in American history. When the audience quieted, Kennedy said, “For many of you who are black and are tempted to be filled with hatred and mistrust of the injustice of such an act, against all white people, I would say that I can also feel in my own heart the same kind of feeling. I had a member of my family killed, but he was killed by a white man. The country must make an effort to go beyond these rather difficult times. A poem by Greek playwright Aeschylus reads, “Even in our sleep, pain which we cannot forget falls drop by drop upon the heart until, in our own despair, against our will, comes wisdom through the awful grace of god.” The country needs and wants unity between blacks and whites. Pray for the King family and the country.”

Despite the urging of calm by many leaders, a nationwide wave of riots erupted in more than one-hundred cities. After the assassination, the city of Memphis quickly settled the strike on favorable terms to the sanitation workers.

Martin Luther King Jr. was an American Baptist minister who became the most visible spokesman and leader in the civil rights movement. King is best known for advancing civil rights through nonviolence activism. He led the 1955 Montgomery bus boycott and in 1957 became president of the (SCLC) Southern Christian Leadership Conference. With the SCLC he led an unsuccessful struggle against segregation in Albany, Georgia, and helped organize a nonviolent 1963 protest in Birmingham, Alabama. He helped organize the 1963 March on Washington, where he delivered his famous “I Have a Dream” speech. On October 14, 1964 King won the Nobel Peace Prize for combating racial inequality. In 1965 he helped organize the Selma to Montgomery marches. In his final years he expanded his focus to include opposition towards poverty and the Vietnam War.

## **Robert F. Kennedy**

(1929 – 1968)

Robert Kennedy’s presidential campaign began on March 16, 1968 when he entered the primary election as a challenger to incumbent President Lyndon B. Johnson. His primary challenger was Eugene McCarthy. On March 31, President Johnson stunned the nation by dropping out of the presidential race. LBJ withdrew from the election during a televised speech, where he announced a partial halt to the bombing of Vietnam and proposed peace negotiations. After the president’s withdrawal, Vice President Hubert Humphrey entered the race on April 27. Kennedy’s political platform emphasized racial equality, economic justice, non-aggression in foreign policy, decentralization of power, and social improvement. After winning primaries in Indiana, Nebraska, and South Dakota, on June 4, 1968, Kennedy was victorious in California with 46 percent of the vote. Around midnight Kennedy addressed his supporters at the Ambassador Hotel in Los Angeles, confidently promising to heal the many divisions within the country. After addressing his supporters during the early morning hours of June 5, Kennedy left the ballroom through a service area to greet kitchen workers. In a crowded passageway, Sirhan Sirhan, a twenty-four-year-old Palestinian-born-Jordanian, opened fire with a revolver and shot Kennedy in the head at close range. Kennedy died in the morning on June 6.

Kennedy's body was returned to New York City, where he lay in repose at St. Patrick's Cathedral. Roberts brother, Ted, eulogized him with the words: "My brother need not be idealized or enlarged in death beyond what he was in life; to be remembered simply as a good and decent man, who saw wrong and tried to right it, saw suffering and tried to heal it, saw war and tried to stop it. He concluded by paraphrasing George Bernard Shaw, "As he said many times, in many parts of this nation, to those he touched and who sought to touch him: Some men see things as they are and say why? I dream things that never were and say why not?" Later that day, a funeral train carried Kennedy's body from New York to Washington D.C., where he was laid to rest at Arlington National Cemetery next to his brother.

Kennedy was born in Brookline, Massachusetts, the seventh child of Joseph P. Kennedy and Rose Kennedy. After serving in the U.S. Naval reserve as a seaman apprentice from 1944 to 1946, Kennedy returned to Harvard University and graduated in 1948. He received his law degree from the University of Virginia, and was admitted to the Massachusetts bar in 1951. He began his career as a lawyer at the Justice Department but later resigned to manage his brother John's successful campaign for the U.S. Senate in 1952. He gained national attention as the chief counsel of the Senate labor Rackets Committee from 1957 to 1959, where he challenged Teamster President Jimmy Hoffa over corrupt practices. Kennedy resigned from the committee to conduct his brother's campaign in the 1960 presidential election. He was appointed United States Attorney General by his brother, the president, and served as his closest advisor from 1961 to 1963. His tenure is best known for his advocacy for the civil rights movement, the fight against organized crime, and involvement in U.S foreign policy to Cuba. After his brother's assassination, he won a seat in the United States Senate for the state of New York in 1964. While in office Kennedy opposed racial discrimination, the U.S involvement in the Vietnam War, and was an advocate for issues relating to human rights and social justice. In 1968 Kennedy became the leading candidate for the Democratic nomination for the presidency by appealing to the poor, minorities, and young voters

Right—Kennedy campaigning for the Democratic presidential candidate.

Lower left—Pallbearers carry Kennedy's casket from St. Patrick's Cathedral in New York . It would be carried by funeral train to Arlington National Cemetery.



## A Rendezvous with the Moon

The manned space program was conceived during the Eisenhower administration, however funding for the program was far from certain. Early in his presidency, Kennedy was poised to dismantle the manned space program due to cost but postponed any decision out of deference to Vice President Johnson, who had been a strong supporter of the space program in the senate. However, this quickly changed on April 12, 1961, when Soviet cosmonaut Yuri Gagarin became the first person to fly in outer space, reinforcing fears about America being left behind in technological competition with the Soviet Union and fear of Russia's capabilities to control nuclear weapons from outer space. Kennedy now became eager for the United States to take the lead in the space race to curtail public fears about Russia and provide a lift in his falling poll ratings after the Cuban Bay of Pigs fiasco. On May 25, 1961, Kennedy announced the manned space travel goal in a speech to Congress: "I believe this nation should commit itself to achieving the goal, before the decade is out, of landing a man on the Moon and returning him safely to the Earth. No single space project in this period will be more impressive to mankind, or more for the long-range exploration of space; and none will be so difficult or expensive to accomplish. No nation which expects to be the leader of other nations can expect to stay behind in this race for space.....We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard." The technological goal Kennedy set for the United States is nothing less than remarkable when you consider at the time NASA did not have any knowledge of human space travel: how to design a spacesuit, how to build a rocket powerful enough to launch a man into earth orbit, how to design a space capsule, how to fly one, or how to build a small onboard computer to navigate the space capsule. Nor did they understand the math to calculate the trajectories to put a space capsule into orbit and return it safely back through the atmosphere, or if a human being could survive being in outer space – the weightlessness or fierce gravitational forces. There was so little knowledge about human space travel that NASA had very little idea as to what they even needed to learn how to do! When you consider the lack of knowledge, it makes the feat of landing a man on the moon in 8 years beyond belief.

Project Mercury was the first human spaceflight program of the United States, running from 1958 through 1963. At two in the afternoon on April 9, 1959, the seven astronauts selected to the Mercury space program were introduced to the world. By the time NASA's space task group was formed in the fall of 1958, Max Faget had been thinking about the difficulties of manned space flight for a few years. He understood, sooner than many of his colleagues, that there was no advantage to an aerodynamic shape in space, since there was no atmosphere - no air - to act on it or slow it down. Faget and several others had been struggling with the design of the craft and the thorny problems of atmospheric reentry where a space vehicle plummeting into the atmosphere at 10,000 miles-an-hour would result in temperatures of about 3,000 degrees. So when two of Faget's colleagues pointed out that meteors with rounded noses were aerodynamically stable and survived the searing heat of the plunge through the atmosphere, the team came up with a blunt-nosed shape craft that would slow down on reentry and create a shock wave that would deflect much of the blast-furnace heat away from and around the craft. After much refinement, endless wind-tunnel, spin-tunnel, heat, and drop tests, and trajectory work on primitive computers, the cone-shaped, blunt-bottomed Mercury capsule was finished. Faget added a thick ablative heat shield made of aluminum honeycomb and several layers of fiberglass. The outer layer of the shield would absorb some of the heat and burn away, protecting the capsule itself. A pack of small rockets strapped to the bottom of the craft would also

decrease its speed and massive g-forces during reentry. The team determined the capsule would decelerate at approximately eight g's, which would be bearable if a man was on his back to help him withstand the force. So Faget and his team designed a fiberglass contoured survival couch.

The Mercury space capsule carried supplies of water, food and oxygen for about one day in a pressurized cabin. The capsule was fitted with a launch escape rocket to carry it to safety away from the launching rocket in case of a failure. The flight was designed to be controlled from the ground via a system of tracking and communication stations, however for safety, back-up controls were outfitted on board. Small rockets were used to bring the spacecraft out of its orbit, after which an ablative heat-shield protected it from the heat of atmospheric reentry. Finally, a parachute slowed the craft for a water landing. Both astronaut and capsule were recovered by helicopter from a U.S. Navy ship. The spacecraft was cone shaped, with a neck at the narrow end and a convex base; it was constructed of a strong titanium and covered with hundreds of heat-radiating shingles of equally strong alloys to resist the expected thirty-five-hundred-degree temperature of reentry. The lone pilot sat with his back to the convex heat shield, facing about 120 controls: 55 electrical switches, 30 fuses, and 35 mechanical levers. The spacecraft was small, measuring 10 feet 8 inches long and 6 feet wide at the end of the convex cone. The heaviest Mercury spacecraft weighed 3,000 pounds fully loaded.

To supplement the onboard environmental control system, the astronaut wore a pressure suit with its own oxygen supply, which would also cool him. In such case there was a failure in cabin pressure for any reason, the astronaut could make an emergency return to earth, relying on his suit for survival. There was no onboard computer in the early Mercury flights; any trajectory or reentry calculations would be made by computers on the ground and transmitted by radio. The capsules path could not be changed, although its altitude could, both from the ground and by the astronaut, with eighteen small thruster jets that altered pitch, right-left yaw, and side to side roll. For orientation, the pilot could look through the small window in front of him or from a screen connected to a periscope which could be turned 360 degrees.

The launch rocket for suborbital flights was an 83-foot-tall single stage launch vehicle. The Redstone, as it was named, burned alcohol and liquid oxygen producing about 75,000 pounds of thrust, which was not enough for orbital flights. It was a descendent of the German V-2, and was developed for the U.S. Army in the early fifties by Von Braun, a German rocket engineer who invented the V-2 rockets during WWII under Hitler's regime. The Kerosene-fueled Atlas rocket, also developed by Von Braun for the new ICBM's, would be over four times more powerful than the Redstone and used for orbital Mercury missions; it was a two-stage rocket that stood 95 feet tall, but the recent history of success for both the Redstone and Atlas boosters wasn't encouraging. The Mercury seven had barely begun training when they were flown down to Cape Canaveral on May 18, 1960 to see their first missile launch. A minute after the Atlas rocket lifted off it exploded into a million pieces; it was the fifth straight Atlas failure. By December, only one-third of the satellite launches were successful. Von Braun's army team in Huntsville, Alabama had already been working on design studies for the super Saturn booster (powerful enough to launch a space capsule out of earth's gravitational pull) since the spring of 1957, a full six months before sputnik was even launched.

The prime concern of each mission was the safety of the astronaut. Therefore, virtually every system was backed up by two or three alternatives. Every unit was tested ten to a hundred times longer than what it would be used in an actual flight until its reliability could be measured statistically and predicted to the nth degree. Plus, the astronauts trained in an exact replica of the cockpit with instrumentations that used state-of-the-art computers to simulate every conceivable in-flight emergency – 275 separate systems failures to be exact. And monkeys continued to be sent into space in capsules atop various rockets, and most survived.

There were two suborbital missions. The first on May 5, 1961 by Allan Shepard lasted 15 minutes and 22 seconds, and reached a maximum speed of 5,134 MPH. The single stage rocket boosted the capsule to a height of 116 miles in 2 minutes and 30 seconds before separating from the spacecraft. The capsule then continued on a ballistic curve until it started to fall back to earth and slowed to 341 miles per hour as the massive deceleration of eleven g's slammed Shepard into his contour couch. The space craft landed about 262 nautical miles from the launch site. Grissom made a second suborbital flight on July 21, 1961, which was an exact repeat of the first flight by Shepard, and the last on the smaller Redstone rocket. The flight went off without a hitch until the capsule hit the water. Somehow the hatch cover blew off and the capsule started to take on water and sink. Grissom tore his helmet off and escaped out the hatch into the ocean as the capsule went to the bottom.

The third Mercury flight on February 20, 1962 by John Glenn, at age 41, was the first orbital flight. For the first time, Glen's orbital flight would utilize a worldwide tracking network; it would also be the first launch on top of the new two-stage Atlas rocket, which had experienced two explosions during the last five liftoffs. After ten delayed launches, John Glenn lifted off at 9:47 AM on February 20, 1962 with sixty-two million following the launch on television and radio. Five minutes after liftoff, maximum speed reached by the two-stage rocket was 17,544 miles per hour in the upper reaches of the atmosphere. The first stage rocket was released after 2 minutes and 10 seconds and the spacecraft gradually moved to a horizontal position at an altitude of 87 nautical miles. The spacecraft was inserted into orbit after 5 minutes and 10 seconds, whereby it would gain speed from the rotation of the Earth and separate from the second stage of the rocket. Once in orbit, it was not possible for the spacecraft to change its trajectory during its planned three orbits except by initiating reentry; each orbit would typically take 88 minutes to complete at a speed of 17,000 MPH and would remain in an elliptical orbit, the lowest point being 87 nautical miles and the highest point being 150 miles. During his second orbit, Glenn started to experience problems with his automatic attitude thrusters and then his gyroscopes. Glen switched over to full manual control as he prepared for reentry; he would hit the atmosphere at Mach 24. Just then yellow warning lights flashed at Mercury Control indicating the ablative heat shield and landing bag were no longer locked onto the craft. As the problem appeared insoluble, they could not leave Glenn up there while they found a solution as Glenn only had enough fuel and oxygen for three orbits. Glen was told not to jettison the retro pack, which was possibly the only thing holding the heat shield in place with titanium straps. As he approached the outer limits of the atmosphere, Glenn assumed full-manual control of the craft, using the semiautomatic fly-by-wire to assume the proper reentry angle. If the approach was too sharp, the capsule would burn up; too shallow, and the capsule would remain in orbit and run out of oxygen in a few hours. As he tried to steady the rocking craft during reentry, Glen reported seeing large pieces of the retro pack rip off into flaming chunks and burning remnants of the heat shield doing the same. With the hand controller, he continued to help steady the buckling capsule as he strained against eight g's of deceleration. As the temperature of the air reached ninety-five hundred degrees around the capsule, Glenn could see a bright orange, glowing fireball sheathing the craft and feared he may burst into

flames. After circling the globe 3 times during a 4 hour and 55-minute flight, Glenn returned safely with his second parachute deploying at 21,000 feet.

Carpenter completed a duplicate of Glen's 3 orbit flight on May 24, 1962, returning to the earth's atmosphere at 18,000 miles per hour. The only problem that developed was the failure of the three-automatic attitude-controls to work properly. Schirra followed with a 6-orbit flight on October 3, 1962. By January 1963, most of the creative people had moved on to the Gemini and Apollo missions as the end of the Mercury missions were in sight. Gordon Cooper, at thirty-seven, was scheduled for twenty-two orbits – at ninety minutes per orbit, almost a day and a half. Several tracking stations had been added since the multiple orbits would change paths over the earth quite significantly. Cooper lifted off in the early morning on May 15, 1963. During the nineteenth orbit, recurrent surges of electricity began playing havoc with the spacecraft. Two orbits later, a short circuit shut down the automatic control system. Cooper would have to take complete control of the capsule manually and hold it steady in all three axes, and he would have to manually line up the capsule's angle of reentry by hand and fire his retro-rockets at the exact right second. To determine the time to fire his retro-rockets, Cooper lined up the scribe marks etched on the window with the visible horizon. It was the first completely manual reentry of the Mercury program. Each Mercury mission saw its share of failures and on every flight except one – Schirra's – the pilot found it necessary to take manual control at some point.

To push farther into space would require a bigger, better, even more complex spacecraft. The Project Gemini spacecraft would carry a two-astronaut crew. Its objective was the development of space travel techniques to support the Apollo mission to land astronauts on the moon. This meant performing missions which lasted long enough to travel to the moon and back, to perfect space walks (EVA) and working outside the spacecraft, and pioneering the maneuvers necessary to achieve space rendezvous and docking with another craft. First and foremost, the completely made over spacecraft would be an operational spacecraft with enough power, through larger and more rocket thrusters (sixteen), for its pilots to fly in the vacuum and microgravity of space. The spacecraft was all "stick" with the pilot controlling attitude through yaw, pitch, and roll and also change of direction and speed in all three axes (up/down, forward/backward, and left/right). Each man would have his own set of controls and they would share the joystick. The only thing the ground control could do was update the new, primitive onboard computer. For more power, the large batteries were converted to fuel cells that produced more electricity, less weight, and the valuable by-product of water. Almost all the service components previously crammed into the small Mercury cabin, would now be attached to the crafts outside in the detachable service module. The Gemini spacecraft was increased in size to 18 feet 5 inches long and 10 feet wide, with a launch weight of 7,100 to 8,350 pounds. The space for the astronauts was still cramped, about the leg room of the Volkswagen bug, but the astronauts loved the new Gemini capsule. Astronaut Gus Grissom spent most of his time at the McDonnell plant in St. Louis working on the new spacecraft. He sat in the mock-up for hours at a time, delivering to its designers his opinions on virtually every aspect of the spacecraft. With 50 percent more space inside the capsule, it's extra weight would also need a more powerful rocket to launch the heavier craft. A new ICBM booster, called the Titan II, being developed for the air force to launch nuclear warheads was the launcher chosen for the Gemini program. It's thrust was 430,000 pounds and was the most powerful in the nation's arsenal.



Over the next twenty-two month, from March 1965 to November 1966, sixteen Americans would roar into space on ten different Gemini missions. The Gemini crew would comprise three of the Mercury Seven, every remaining member of the New Nine, and five astronauts from the 1963 selection. There were two unmanned Gemini missions that preceded Gemini 3, which blasted off on March 23, 1965. Gus Grissom and John Young completed a three-orbit shakedown cruise in 4 hours and 52 minutes. On June 3, 1965, Jim McDivitt and Ed White, orbited the earth for four days in Gemini 4. The mission had two goals. The effort to rendezvous with another vehicle in orbit was a complexing failure, while the space walk was a smashing success. In attempting to dock with another craft they learned the complexity of orbital mechanics. Adding speed in an attempt to dock while in orbit raises a ship to a higher orbital path, where it will paradoxically slow down its speed, since the orbital speed is a direct function of its distance from the center of gravity of the object its orbiting. McDivitt's failure was a lesson learned, and much of the future Gemini missions would involve perfecting orbital mechanics. A few hours later the cabin was depressurized, the hatch opened, and a hundred miles above the earth White floated in space for twenty minutes. He was connected to the capsule by a twenty-five-foot umbilical cord supplying oxygen. He maneuvered with bursts of compressed air from a small zip gun. Near the end of August, Gemini 5 stayed in orbit eight days – the minimum length of time needed for a lunar landing and return to earth. The first week long flight was the first to use fuel cells for electric power. The flight also evaluated guidance and navigation systems for future docking missions. However, Gordon Cooper and Pete Conrad were plagued with problems, from issues with fuel cells, the electrical systems, to low oxygen levels and jammed thrusters. But the eight-day ordeal eased fears of some doctors about the dangers of prolonged weightlessness and human's ability to travel to the moon and back. On December 5, 1965, Frank Borman and Jim Lovell blasted into low earth orbit on Gemini 7, beginning a marathon fourteen-day flight. Ten days later, Gemini 6, with Wally Schirra and Tom Stafford launched into orbit. After the craft reached orbit, Schirra skillfully maneuvered to within a foot of Gemini 7. During three revolutions of the earth, the two vehicles kept within one-hundred yards of each other in an impressive feat.

On March 10, 1966, Gemini 8 and its crew of Neil Armstrong and Dave Scott lifted off smoothly. After reaching orbit command Armstrong initiated the first of nine thruster maneuvers – burns – to catch the target, Agena upper stage rocket launched ninety-five minutes earlier and now in a higher orbit. Both Armstrong and Scott had spent extensive time in the much-improved, full size Gemini simulator practicing rendezvous and docking. Less than six hours after liftoff, Armstrong braked his ship about 150 feet from the twenty-six-foot-long Agena, shining in the bright sunlight. Rendezvous was accomplished. After a half hour of inspections, Armstrong slowly approached to within three feet using Gemini's small thruster jets. He received permission to dock, a job that required exquisite timing and a feather-light touch. A few moments later, his craft's nose eased into the locking collar and latched on. Armstrong and Scott had just achieved the first docking in space. Gemini 8 had just moved into night and the two Astronauts were going to get some sleep to prepare for Scott's space walk tomorrow. Just before bedtime, Scott looked at the control panels and noticed they were in a thirty-degree left roll. They corrected the roll by using thrusters but after a minute the roll started again. Armstrong instructed Scott to turn off the Attitude-control system in the Agena rocket. The roll stabilized, but a few minutes later it began again, this time at a faster rate- and then even faster. They were spinning in space while connected to a rocket full of fuel, and they were out of communication with mission control. Something had to be done quickly, before the gyrations broke them apart, causing the Agena to explode, or ripping the Gemini's service module, carrying their life-sustaining essentials, from the craft. Next they heard the Agena thrusters firing. Scott said to Armstrong, "We'd better get off." "Go," said Armstrong, and as Scott hit the undocking switch, Armstrong

quickly pulled away from the Agena before the two spacecraft ran into each other. After moving a safe distance from the Agena rocket, the Gemini rolled even more rapidly and started to tumble end over end 160 miles above the earth. Soon it was estimated it was spinning at a rate of two full revolutions per second. Just then they came into communication with Mission control in the western Pacific south of Japan, but they would only have a few minutes to communicate before they would move out of range again. Both men were being thrown around, and they were becoming dizzy; they were having trouble controlling their eyeballs and seeing the overhead dials and switches. Nausea was soon to come. Both were seconds away from passing out, and if they did, the chance of recovery would be remote. They both knew there was only one option left, to ignite the reentry control thrusters; to their disadvantage, the reentry control panel was in an awkward position over Armstrong's head. There were over a dozen switches to select from by feel, and fortunately their countless hours of training prepared them to locate switches blindfolded. Somehow Armstrong reached up and found the right switch. He flicked it on, then threw the switches to activate the engines that would control the Gemini's reentry into earth's atmosphere; but when Armstrong tried the hand controller, he got no response. Still tumbling end over end, they started throwing switches again in case one was in the wrong position. Just then, the hand controller started working. With a delicate pulse of the thrusters, Armstrong managed to slow down the violent spinning, and finally, stop it. He immediately turned off the reentry control to save fuel – they would need it. They had used up 75 percent of the fuel just to stop spinning. After reactivating the thrusters one by one he found the culprit: the number 8 yaw thruster was stuck in the on position, probably due to an electrical short. The Gemini mission rule dictated that using the reentry system meant that the mission must be aborted, however, if they didn't bring Gemini 8 down very soon, they wouldn't have another opportunity for a full day – fifteen more revolutions. That was too long and too risky. Mission control selected a splash down site 621 miles southeast of Japan in less than three hours.

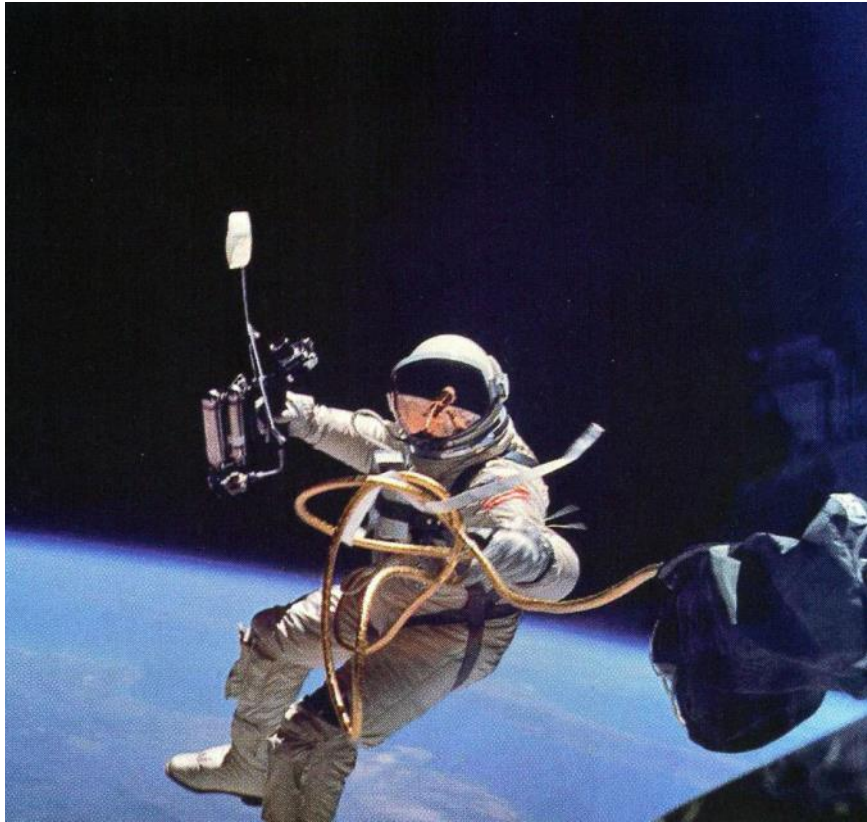
The last four Gemini flights involved perfecting docking and EVA skills. The docking went well, but none of the first three EVA's did. Each spacewalker had a difficult time, especially when he ran into Newton's pesky third law of motion – for every action, there is an equal and opposite reaction.

The Gemini 9 flight by Stafford and Cernan on June 3-6, 1966, focused on three different docking experiments, included a two-hour space walk, and completed 44 orbits. During Cernan's spacewalk, his heart rate zoomed to 180 beats a minute, and his visor fogged up so badly he could hardly see. The exhausted Cernan barely made it back to the hatch, where his crewmate had to drag him inside. On July 18-21, 1966, Young and Collins on Gemini 10 were the first to use propulsion systems on the target vehicle to which they docked. Collins did a spacewalk and also a standing in the hatch exercise for 49 minutes. For Collins EVA, two handrails were added to the outside of the Gemini, and the astronaut was given a maneuvering gun. He was successful at performing a few tasks, however when he spacewalked over the docked Agena rocket with his longer fifty-foot umbilical cord, he cartwheeled and spun out of control between the two spacecraft. Again, his crewmate had to help him into the capsule and untangle him from twisted umbilical cord. An altitude record of 739.2 nautical miles was accomplished along with a perfect rendezvous and docking using a new propulsion system on the Gemini 11 flight by Conrad and Gordon on September 12-15, 1966. Gordon attempted a two-hour EVA but forty minutes into the spacewalk was blinded by sweat and utter exhaustion; he was ordered to abort and get back inside the capsule. Every astronaut found that attempting to perform a task during an EVA in a 21-layer space suit, inflexible when pressurized, was much more difficult in space than in ground simulation. The flight completed 59 orbits. Lovell and Aldrin completed the last Gemini

12 flight on November 11-15, 1966. As the craft headed toward the Agena rocket for docking, the onboard radar failed. Aldrin used a sextant, slide rule, and charts he had largely prepared himself, and using their small onboard computer, completed a successful docking. They then separated from the Agena and docked successfully several more times. The next day, Aldrin opened his hatch and floated outside for a spacewalk of two hours and twenty minutes. With the help of new waist tethers, both hand and footholds attached to the capsule and Agena rocket, along with several rest periods, he performed a variety of difficult chores without difficulty. The problems of EVA had finally been solved. The Gemini program had garnered 1,993 hours in space.

There were several flight plans being discussed as to how to navigate a lunar landing, but the final decision as to how it would be done, or what the lunar landing craft would look like, was not decided until November of 1962. The spacecraft would consist of three modules sitting atop a massive three stage Saturn V rocket. The three-stage Saturn-5 rocket was designed to send the three fueled modules to the Moon and back to Earth. The larger, cone shaped Apollo Command Module (CM) would house the three astronauts in a hospitable environment during their journey to and from the moon. It had its own reaction control system engines to control its altitude and steer its atmospheric entry path. The module was 11.4 feet tall and 12.8 feet in diameter and weighed approximately 12,250 pounds. The Command Module would be connected to the cylindrical Service Module (SM), which supported the Command Module with a service propulsion engine, a fuel cell power generation system, and storage for various consumables. The module was 24.6 feet long and 12.8 feet in diameter and weighed approximately 51,300 pounds fully fueled. The two modules would operate as a single unit for the entire trip until the service module was jettisoned before the final reentry into the Earth's atmosphere. The four-legged LM, or Lunar Module, was designed to operate only in the airless vacuum of space and specifically in the moon's weaker gravity. During liftoff the LM, with its light-weight delicate skin, would be housed in a protective shroud directly beneath the service module. Once out of earth orbit, the command service module would turn around and dock with the Lunar Module, nose first. The LM consisted of a decent stage with four legs, and an ascent stage, each with its own rocket engine. The ascent stage also included a small cabin with enough room for two astronauts to stand side-by-side with a small triangular window sixteen inches in front of their face. Its fuselage was designed totally without aerodynamic considerations and was made of extremely lightweight construction. The initial LM module weighed 36,200 pounds and allowed surface stays of up to 34 hours. While in lunar orbit, the LM separates from the command service module and lands on the moon. After an overnight stay, the upper ascent stage with its own rocket engine blasts away from the decent stage platform and reunites with the command service module. After the two astronauts have crawled through the docking tunnel from the LM into the command service module, the ascent stage of the LM is discarded.

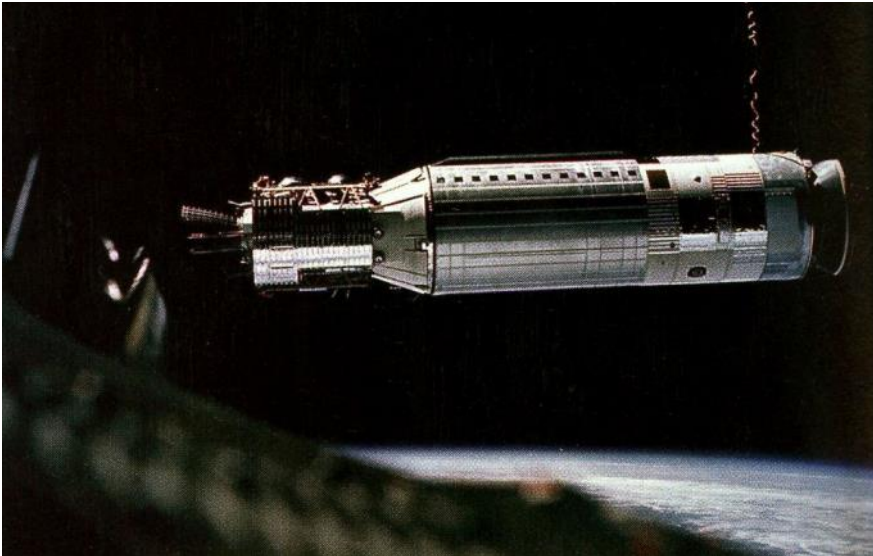
The Lunar mission profile began with the three stage Saturn-5 liftoff and burn for 11 minutes to achieve a "parking orbit" of 100 nautical miles. After one or two orbits to verify readiness of the spacecraft systems, the third stage reignites for six minutes to send the spacecraft on a voyage to the Moon. At lift-off, the capsules are arranged in the following order from top to bottom: CM, SM, LM (covered in panels), and the third stage. Once out of the earth's orbit, the protective panels surrounding the LM separate away to expose the LM. The pilot then rotates the CM and SM, which are connected together, 180 degrees to dock the CM with the LM, which is still connected to the third stage. Once the CM, which houses the three astronauts, has docked with the LM, the third stage is dropped to go into solar orbit. Now the SM is out front, CM in the middle, and LM at the end. After a three-day voyage to the Moon, the spacecraft goes into a 60 nautical mile high lunar orbit. After a rest period, two of the astronauts move into the LM to power up its



Upper left—June 20, 1965, Ed White performs the first space walk for twenty minutes outside his spacecraft. On Gemini 5

Right—The first Gemini flight being launched by the new and more powerful Titan II rocket on March 23, 1965.





Top left—Gemini 8, crewed by Armstrong and Scott, performed the first hard docking with this Agena target vehicle on March 16, 1966.

Lower left—On December 15, 1965, Gemini 7 and 6 performed the first space rendezvous of two spacecraft.

Lower right—Armstrong and Scott inside the Gemini capsule after an emergency landing in the Pacific.



systems. The LM and CSM separate, and after moving a safe distance away from each other, the LM fires its descent engines. Once the LM approaches the lunar surface, the pilots take over manual control for a vertical lunar landing. After exploring the Moon, the pilots fire the ascent engines, using the descent stage as a launching pad. The LM and CSM rendezvous and dock. After the two astronauts have moved back into the CSM, the LM's ascent engines are fired to separate the LM from the CSM. The LM falls out of lunar orbit to crash on the Moon's surface. Next the SM engines fire to send the CSM back to Earth. Prior to re-entry, the SM is released and the CM is rotated 180 degrees to face the heat-shield toward the Earth. Atmospheric drag slows the CM for re-entry and a splashdown in the Pacific.

Developmental delays plagued both the Apollo command and service module (CSM) and Saturn V rocket. The LM, especially, was behind schedule. A vehicle to fly in the vacuum of space, with not even the slightest breeze, and almost no gravity, had never been designed before. Weight was a constant issue. As a result, structural joints were hollowed out and the aluminum cabin walls were milled to twelve-thousandths of an inch thick. The combustion ascent engine continued to be plagued with problems; it would have no back-up so it had to be 100 percent reliable. And the LM's decent engine was something that had also never been invented yet: a throttleable rocket engine that would fire a constant thrust until it was turned off. The pressure to get these components finished and shipped to Cape Kennedy was intense, and despite some shoddy workmanship and incomplete inspections, they did. There was just too much involved for the astronauts to stay on top of it. Grissom gave NASA a long list of problems, and they assured him they would be fixed before the actual launch. But GO fever had taken over and there was not enough time to fix what needed to be fixed now. The first Apollo flight was scheduled for February 21, 1967 by astronauts White, Grissom, and Chaffee, but there were several important tests to be completed before launch. One test was a simulated full countdown, at the end of which the spacecraft would be switched to internal power, almost identical to actual launch conditions, to test compatibility of all systems. Inside the cabin would be 100 percent oxygen as used on both Mercury and Gemini. At about noon on January 27, at Cape Kennedy launchpad, Grissom, White, and Chaffee, in their white flight suits, took the elevator up to the command module. Technicians sealed the three-part entry hatch. The crew sat three abreast, shoulders almost touching, running tests until sunset. At 6:31, as they were running through the final checklist, there was a slight surge in electricity. A few seconds past, then a voice rang out, "We've got a fire in the cockpit." The fire lasted just twenty-five seconds, but the three astronauts were gone, asphyxiated by the toxic gases in the cabin from the fire. The pure oxygen was almost instantly replaced by carbon monoxide and toxic smoke that invaded the crew's oxygen lines. It was later estimated that interior temperatures reached at least twenty-four hundred degrees Fahrenheit. It would be determined that a spark – probably a short in a bundle of the twenty miles of wire in the Service Module - had reached something flammable and ignited. The fire would change everything in NASA. On February 3, 1967, the agency announced it had suspended all manned spaceflights until the cause of the fire was known. The fire provided NASA with the time and determination to build a safer, more reliable ship and implement improved safety practices and higher levels of quality control. NASA investigators compiled a list of 8,000 potential problems that needed to be resolved, and 1,607 changes were recommended. The control board approved 1,341 alterations and the command module eventually underwent 1,300 changes.

The Atlas rocket that launched John Glenn into space had already undergone ninety-one unmanned flights before Glenn's launch; Gemini's Titan II, thirty-four unmanned test flights. The Saturn V, its first stage alone twenty-one times more powerful than the Atlas,

would have just two unmanned test flights. But everybody trusted von Braun's team. The first Saturn V test flight would be attempted at Kennedy Space center. The rocket stood 33 feet in diameter and 363 feet tall, weighed 6.2 million pounds, and its first stage alone generated 7.6 million pounds of thrust from its five huge Rocketdyne F-1 engines. It would burn 212,000 gallons of kerosene and 346,000 gallons of liquid oxygen, a total of 2,200 tons of fuel, if it cleared the launchpad. The next two stages would burn almost half a million more gallons of fuel. On November 9, 1967, ignition occurred, and seconds later the monster rocket began to slowly lift-off the pad; an eight-hundred-foot-long flame spewed from the first stage. Three orbits and almost nine hours later, the command module floated down into the Pacific. The test flight had achieved every one of its goals. The second test flight, made on April 4, 1968, and intended to reaffirm the booster's reliability, was close to a disaster. Teams immediately began working around the clock to pinpoint the problems and correct them. NASA accepted the Apollo 7 spacecraft from North American Aviation in May of 1968 and began strict checkout tests. By the scheduled launch date in October, Schirra and his crew had trained for the Apollo mission for more than one year, including almost six hundred hours together in the command module simulator with its 725 manual controls.

On October 11, 1968, astronauts Schirra, Cunningham, and Eisele tested the new Saturn rocket and Apollo 7 spacecraft in a twelve-day flight from October 11-22, 1968; it had been twenty months since the Apollo explosion killed three astronauts. The flight went smoothly from a technological stand point. Every system was thoroughly tested during the eleven days the spacecraft was in Earth orbit. Faith had been restored in NASA and the Apollo program and its ability to fly to the moon. The Apollo time-schedule called for four more progressively complex flights before an attempt to land on the moon – if the problematic LM was ever finished. And since the LM was not ready for testing in outer space, it was agreed that Apollo 8 would orbit the moon.

Astronauts Borman, Lovell, and Anders manned the first flight to the Moon on Apollo 8 on December 21-27, 1968, and made ten lunar orbits in twenty hours. The crew practiced the procedures over and over in simulators, running through some eight hundred emergency situations until they could do them in their sleep. Navigation and trajectory throughout the 579,606-mile trip would have to be pinpoint accurate. With three fast moving objects – the Earth, Moon, and the spacecraft – MIT's computers would have to calculate in-course velocity corrections accurately. After three orbits around the earth, Collins ignited the third stage engines and accelerated the craft to 24,259 miles per hour, enough to escape Earth's gravity and achieve translunar injection. Two and a half days after launch, the astronauts turned the craft's hind-end forward, fired its retrograde rockets to slow it down, and disappeared behind the moon. While on the back side of the moon and out of radio contact, Apollo 8 would have to fire their thrusters for exactly 4 minutes and 2 seconds to decelerate the craft to 3,200 miles per hour, the right speed to drop them into lunar orbit without crashing them into the moon or hurling them out into deep space. The three astronauts successfully went into ten lunar orbits with the low point of the orbit skimming 60.5 miles above the surface. On the last revolution, again when they were behind the moon, the engines were fired for 3 minutes and twenty-three seconds to boost the spacecraft out of lunar orbit and into a perfect trajectory toward Earth. This Apollo flight, like the previous one, had gone almost perfectly. It was definitely a tribute to Apollo's computer-controlled navigation, guidance, and tracking systems.

In early 1969, the LM had never been tested in space yet. Armstrong had been flying the LLRV (LM test vehicle) in 24 earth-bound test flights since March 27, 1967. But before Apollo 11 would attempt to land the LM on the moon, first Apollo 9 and 10 had to go off

without a hitch; each mission had its challenges and dangers. Apollo 9 would be firing up the LM and flying it out of sight of the command module while in earth orbit, and then maneuvering back to the command module and docking with it. Apollo 10 would duplicate Apollo 9's fight test of the LM, except in Lunar orbit rather than Earth orbit.

Von Braun's Saturn V boosted Apollo 9 into space on March 3, 1969. A few hours later, McDivitt, Scott, and Schweickart, tested the portable life system (LM) to be used on the lunar surface. Scott maneuvered the command service module around, and linked it with the LM. After remotely opening the LM's four-piece housing shroud, Scott carefully docked the two vehicles together as twelve latches snapped into place to form an airtight silicon seal; the craft then delicately pulled away from the Saturn's third stage. The astronauts then pressurized the LM, and Schweigert and McDivitt entered the LM through the tunnel, powered it up, and pulled free of the command module. The fragile LM roamed up to one hundred and eleven miles away. Over the course of six hours, the LM passed every test. Even the all-important ascent engine-which had no back-up – worked smoothly. It powered the LM back to the command service module, where the two vehicles rendezvoused and docked once more. Ten days after leaving earth, Apollo 9 returned safely.

As a dress rehearsal for landing on the Moon, Stafford, Young, and Cernan, on May 18-26, traveled to the Moon and flew the LM down to within 50,000 feet of touching down on the Moon's surface. There were still too many unknowns to think about a lunar landing. Apollo 10's launch went off without a hitch. Three days later the crew fired the SPS engine and moved into lunar orbit sixty-nine miles above the lunar surface. On the twelfth lunar revolution, Stafford and Cernan transferred to the LM, separated from the command service module, powered their descent engine, and arced down toward the moon to an altitude of forty-seven thousand feet. They could not descend any lower than 47,000 feet, since Young in the command service module could not descend any lower than that to rescue them in case of emergency. The crew flew over the Sea of Tranquility, the planned landing site for the next flight. The landing radar, essential to a successful landing, worked perfectly in its debut. When Stafford began preparing to activate the ascent engine to push them toward a rendezvous with the command service module, Cernan – anticipating his commanders' procedure, flicked the navigational control switch on to help him. A moment later, an unsuspecting Stafford flicked the same switch, setting it back to off. The LM immediately starting gyrating as its radar locked on the moon rather than the command service module. Next the LM's thrusters automatically fired and the craft began to roll end over end. Not knowing what went wrong, they flipped more switches but to no avail. Fortunately, hundreds of hours of failure simulations had prepared them for this scenario, and Stafford switched over to the manual system, ignited the descent engines, and got the spacecraft under control using his directional thrusters. Then they fired the ascent engine, which propelled them toward the correct rendezvous point. A couple of lunar orbits later, the two vehicles were successfully docked. After Stafford and Cernan were safely transferred to the command service module, the LM was released to eventually enter orbit around the sun. Three days later, the command module hit the earth's atmosphere at a record speed of 24,791 miles per hour, and splashed down just two miles from the recovery ship.

Because of the actual moon landing that Apollo 11 would be performing, the thing that would take the longest to prepare for was the astronauts training. No one had ever trained for any kind of voyage as much as an Apollo astronaut did for a lunar-landing mission. The crew practiced endlessly for every move they would make, in the LM, in the command module, and on the surface of the moon.



They became familiar with hundreds of switches and controls; and they went through hundreds of urgent situations that may come up, from a fuel leak to a dead engine to an emergency rendezvous at a dangerously low altitude, computer failure, communication problems, spacesuit malfunction, navigation, thruster, oxygen problems, and much more. They even practiced eating, drinking, and sleeping in the weightlessness of space in their cramped quarters. In the six months between January and July, the three crewmen trained for fourteen hours a day, six to seven days a week, and any spare time was spent reading reports, procedures, and mission rules. The mission rules book regarding problems resulting in a “Go” or “Abort” decision were constantly evolving. NASA management and Armstrong were constantly butting heads concerning a landing radar failure. Armstrong did not want some nervous flight controller aborting the descent of the LM based upon questionable information. But Armstrong reserved the right as commander to make the final decision to land or abort. The plan was to land at dawn, when the angle of the sunlight on the moon’s surface was at ten to twelve degrees, meaning the shadows from the hills and craters were not too long, yet the light not too bright, which would cause a washout and make visibility difficult. Armstrong believed his crew was ready even though the training time was tight. The three astronauts knew the machines and systems well and were confident in the thousands of people involved in readying the three million parts of the Saturn V, the two million parts of the command service module, and the one million parts of the lunar module. They placed the odds of a successful moon landing at fifty-fifty.

On July 16, 1969, before Armstrong, Collins, and Aldrin strapped themselves into the command module, Fred Haise had been busy for hours reviewing switch positions and running through a checklist of 417 steps. At T minus nine seconds, the five massive F-1 engines ignited, and at 9:32 am, as they reached their full thrust at 7.6 million pounds, the twenty-ton hold-down clamps at the booster’s base sprang free, and the 6.5 million-pound spacecraft began to slowly rise. Two minutes and forty seconds into the flight, at the end of the first stage burn, the men felt four times their normal weight. Forty-five miles up, the astronauts were jerked forward as the spent first stage fell away into the sea. As the five J-2 second stage engines took over the ride smoothed out. A few seconds later at sixty miles altitude, the launch escape tower was jettisoned, and at one hundred and ten miles up, the single J-2 engine of the third stage ignited. The ascent to orbit had taken twelve minutes.

At least fourteen danger points would occur during the flight. NASA called them go/no-go decision points, those complex mechanisms and split-second timing that had to transpire flawlessly. The launch was the first danger point. The next point, which would occur during the second orbit at one hundred-and ten-miles altitude, was trans-lunar injection (TLI). Restarting the single third stage engine for a five-minute-and-forty-seven second burn would, if perfectly timed, increase the spacecrafts speed to 24,258 miles per hour, fast enough to pull it out of Earth orbit and propel it toward a specific point where the moon would be when Apollo 11 reached it in three days. The risk was in the nature of the fuels, handling liquid oxygen at negative 297 degrees and liquid hydrogen at negative 423 degrees. A short while later Collins separated the command service module from the third stage, turned around, then docked with the LM, whose four-panel protective panel was peeled away. Then one of the astronauts threw a switch to release the third stage. They had one engine left, the big service module engine with 19,500 pounds of thrust that would be used on several occasions during the voyage. It had to work every time. The passive thermal control was next. In the vacuum of space, with no atmospheric protection against the sun’s rays, the temperature was over 280 degrees on the side of the spaceship facing the sun and negative 280 degrees on the other side. The heat must be distributed evenly in the spaceship to prevent fuel tank pressures from

rising or falling to dangerous levels. Collins used his thrusters to induce a slow rotation of the ship – one full turn every twenty minutes, to distribute the heat evenly. Apollo 11 was now slowly spinning in its “barbecue turn” as it moved toward the moon. Two dangerous maneuvers were behind them with no more scheduled until they reached the moon’s vicinity in three days.

The gravitational pull of the earth extended more than halfway to the moon, and their escape velocity of almost 25,000 miles per hour gradually diminished during the voyage to a tenth of that speed. Not that the crew could tell, since there was nothing to compare their speed to; they had no sense of movement. Traveling at a snail’s pace of 2,040 miles per hour and just 38,000 miles from their destination, the spacecraft entered the moon’s gravitational field and instantly began to pick up speed. As they approached the moon it reflected light four times as bright as moonshine from earth, and they could see stars again; the dazzling sunlight had prevented that for their entire trip. Now, as they neared the moon, another danger point approached: lunar orbit insertion (LOI). They had to turn their ship around and apply a braking burn that would slow their speed from 5,225 miles per hour to 3,248 mile per hour, allowing the craft to be captured by the moon’s gravity and drop down to an elliptical orbit. The onboard computer would have to compute the math perfectly or Apollo 11 would be carried back to the earth, or the sun, or crashed into the moon. They would fire their thrusters when they were on the back side of the moon and out of communication with mission control. The onboard computer, developed by MIT, was the first mini-computer ever developed. It was the size of a briefcase, the equivalent of seventy-two kilobytes, with the processing speed of one megahertz, and the first computer to use the new miniaturized, integrated circuits. As their craft circled behind the moon from Earth, the crew entered the numbers into the computer and Collins punched in the command to start the service module engine. It fired right up, and burned for five minutes, fifty-five seconds, placing the spacecraft into an elliptical orbit of the moon. About an hour later they made another seventeen second burn to drop Apollo 11 down into a lower elliptical orbit of fifty-four and sixty-six nautical miles. Then Armstrong and Aldrin floated into the LM to prepare for the next day’s landing, spending two and a half hours powering it up and pre-setting switches.

As the astronauts woke up at 6 a.m. on the day of the lunar landing, they were circling the moon for the ninth time, making a revolution every two hours. All three suited up in their liquid-cooled undergarments that would keep their body temperature down on the hot lunar surface. At 9:30 a.m. Armstrong and Aldrin entered the LM. About an hour later Armstrong sealed the hatch and said, “we’re go for undocking.” At 12:45 p.m. the LM drifted fifty feet away from Collins, who was inside the command service module. They flew in formation together as Armstrong rotated the LM, named Eagle, one full revolution so that Collins could inspect the LM for any damage and make sure the four landing legs were in proper position. After a positive review of the LM, Collins fired the service module engine to move a safe two miles away. As Eagle emerged from the back side of the moon, moving at about our thousand miles an hour, with reestablished radio contact, mission control communicated they are go for DOI (descent-orbit insertion). Armstrong burned the descent engine for twenty-eight and a half seconds to slow Eagle down enough to allow the moon’s gravity to pull them to fifty thousand feet; if the burn was a few seconds too long they would crash into the moon. Columbia, the command service module, remained sixty miles above them and behind. With Eagle at 50,000 feet, the powered descent initiative (PDI) to lunar landing was planned to take twelve minutes. The braking phase would come first, a steady burn of eight and a half minutes to drop them down to seven thousand feet and slow the LM to four hundred miles per hour. Then the short final approach of one minute and forty seconds would begin, drop to five hundred feet, and further slow their speed to about twenty miles per hour. The last minute,

mostly a vertical drop to the surface. While Aldrin kept his eyes glued to the computer display and other gauges, Armstrong watched the features below as they sped over the brownish-gray lunar surface – craters, hills, ridges, and cracks. They were landing about three miles further downrange than planned where the terrain was rougher. At about 40,000 feet an alarm sounded and yellow caution lights flashed on their computer screen with a 1202 digital readout. Neither Armstrong or Aldrin had ever heard of the 1202 alarm. Every fifteen seconds or so the alarm would sound again however mission control confirmed they were go for landing. At about 600 feet it appeared the computer was going to land them on the side of a crater, the warning alarm sounded again, and Armstrong decided to take over manual control as his heartbeat had doubled to 150 beats per minute. With his right hand, he carefully tilted Eagle back to allow the rocket engine to slow their velocity, with his left hand he adjusted the rate of descent by one foot per second. The noise of the sixteen small thrusters was deafening. They were at two hundred feet and had slowed to thirteen miles per hour. Their new landing site was in view but their fuel was getting low. They continued skimming over the brightly lit gray surface at one hundred feet below when another alarm sounded. Then a red warning light flashed on the fuel reading. Aldrin started calling out the amount of fuel remaining in seconds – sixty-five, sixty-four, sixty-three....The ground was close now, forty feet, and they were starting to kick up so much dust they could not judge the rate of descent or where the ground was. They could not feel the touchdown but Armstrong yelled “shutdown” and quickly turned off the descent engine or the back pressure could cause an explosion. The Eagle had landed at 2:17 p.m. with eighteen seconds of fuel remaining.

In preparation for their walk on the moon, they were especially careful about securing their suits, helmets, gloves, and various connections; one less-than-perfect joining could mean a quick death. Their heavy-duty spacesuits were twenty-one layers thick; each suit would be pressurized to 3.5 pounds per square inch, making it bulky and not very flexible. The helmets had a special outer gold-plated visor to reflect glare of the blinding sun, unfiltered by an atmosphere. The self-contained backpack each man would wear could provide enough oxygen, cooling water, and electrical power to keep him alive in the moon’s vacuum and extreme temperatures for four hours. Fortunately, the one hundred- and ninety-pound suits weighed only thirty pounds on the moon’s surface. Finally, at 9:39 p.m., they finished depressurizing the LM and pulled open the hatch at their feet. Armstrong assured mission control there was no problem adjusting to the moon’s low gravity, moving around in a loping manner, and the visibility was good. An estimated 530 million television viewers from all over the world watched the historic event in black and white as Armstrong took his first step on the moon and said, “That’s one small step for man...and one giant leap for mankind.” At eleven minutes after midnight, he closed and secured the hatch, pressurized the cabin, and stowed the forty-eight pounds of rocks they collected.

Neither of them slept well in the cramped LM and there were several more go/no go decision points to come in the flight, all of them dangerous, but only one hadn’t been attempted on a previous mission: the liftoff from the lunar surface. Unlike all of the other systems, there was no backup to the ascent engines thirty-five hundred pounds of thrust which had to work to lift the five-ton LM off the moon’s surface. Liftoff was scheduled for a little after noon when Columbia would be close overhead. Eagle’s crew spent the next couple hours preparing the many switches and breakers to make sure they were in the right position. Collins, in the command service module, had little time to worry about the LM’s liftoff; there were eight

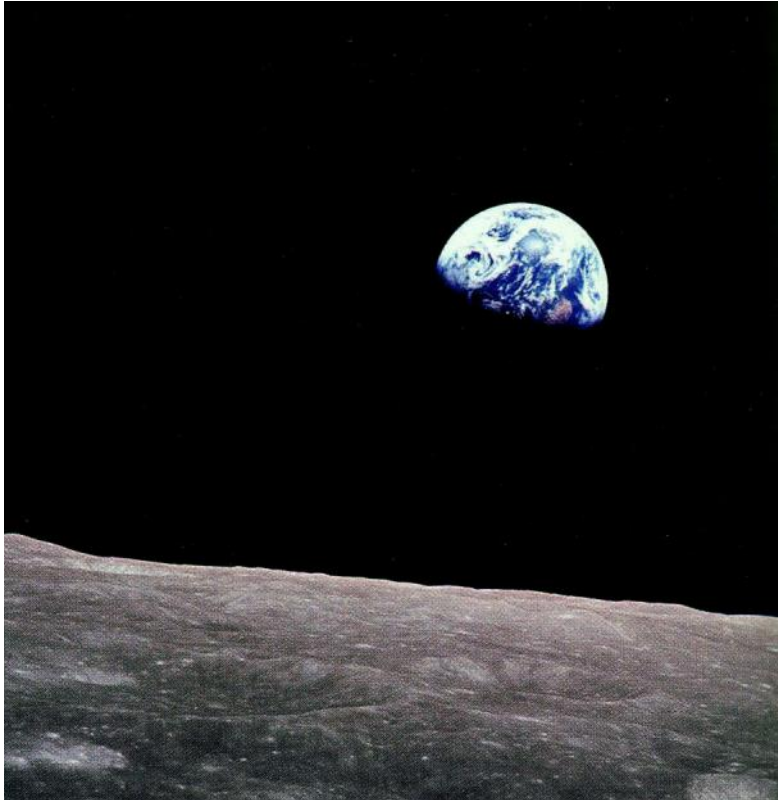
hundred and fifty separate computer keystrokes necessary to effect rendezvous with eagle. The docking would demand several tricky maneuvers and perfectly timed acceleration and braking burns.

At 12:37 Eagle's ascent engines fired, explosive devices separated the ascent stage from the lower half of the descent stage, and the Eagle had wings. Within seven minutes after liftoff, Eagle was high enough and going fast enough to overcome the moon's meager gravity. Over the next three hours, both Armstrong and Collins carefully maneuvered their spacecraft to allow eagle to catch up to Columbia. After a successful docking, Armstrong and Aldrin crawled through the pressurized tunnel into Columbia and Collins flipped a few switches to separate the command service module from the LM. As they disappeared around the back side of the moon for the thirty-first lunar orbit, they were go for TEI (transearth injection). The TEI burn of two minutes and twenty-eight seconds would increase their speed to 2,236 miles an hour, enough to free them from the moon's gravity and send them back to earth. At 11:50 a.m. on July 24, the ninth day of their journey, the eleven-thousand-pound command module splashed down safely in the ocean.

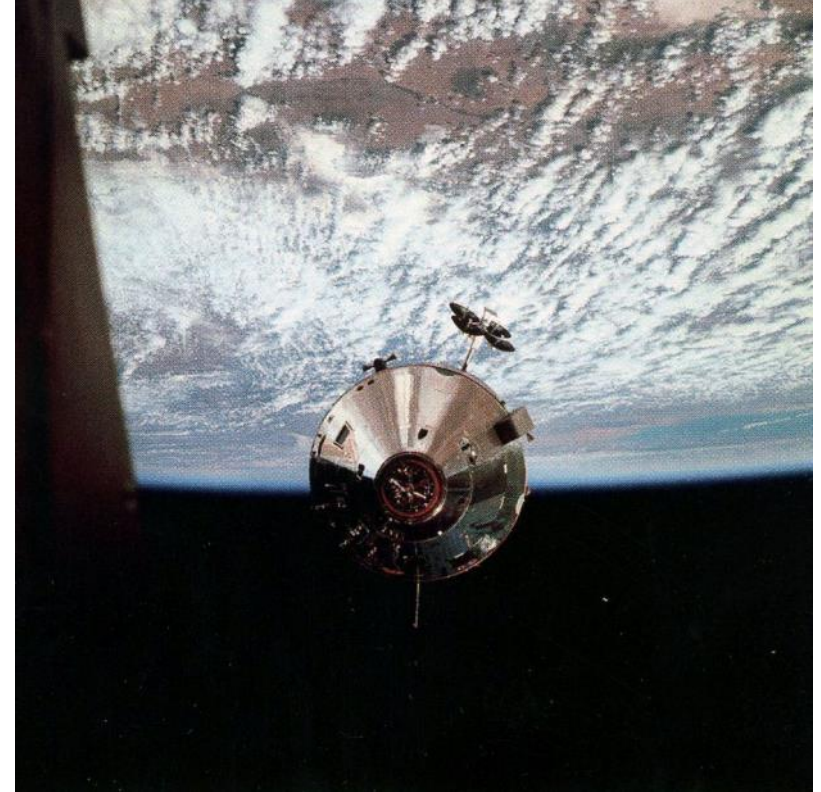
There were five additional successful flights to the Moon from 1969 thru 1972. The third attempt on April 11-17, 1970 by Astronauts Lovell, Swigert, and Haise, aborted near the Moon due to an oxygen tank explosion which destroyed the Service Module's capability to provide electrical power, crippling the CSM's life support system. The crew used the LM as a life-boat to return safely to Earth. The Apollo program returned over 382 pounds of lunar rocks and soil for study. The rocks collected from the Moon are extremely old compared to rocks found on earth, ranging in age from 3.2 billion years to about 4.6 billion years. Almost all rocks showed signs of being subjected to multiple impact events, which is not possible on earth due to its thick atmosphere.

Von Braun, the young boy who lived in Germany prior to World War II and dreamed of inventing rockets that would fly men to the moon, saw his dream come true.

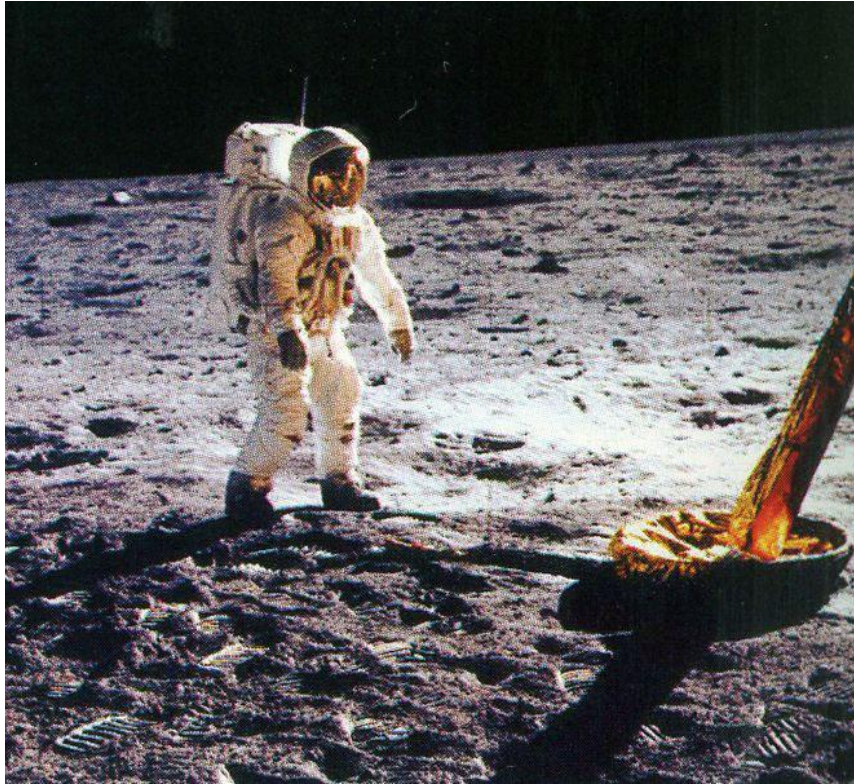
Historians agree that the technological feat accomplished by the United States in space travel during the 1960's will be remembered as the most significant accomplishment by mankind, not only in the twentieth century, but possibly in all of recorded history.



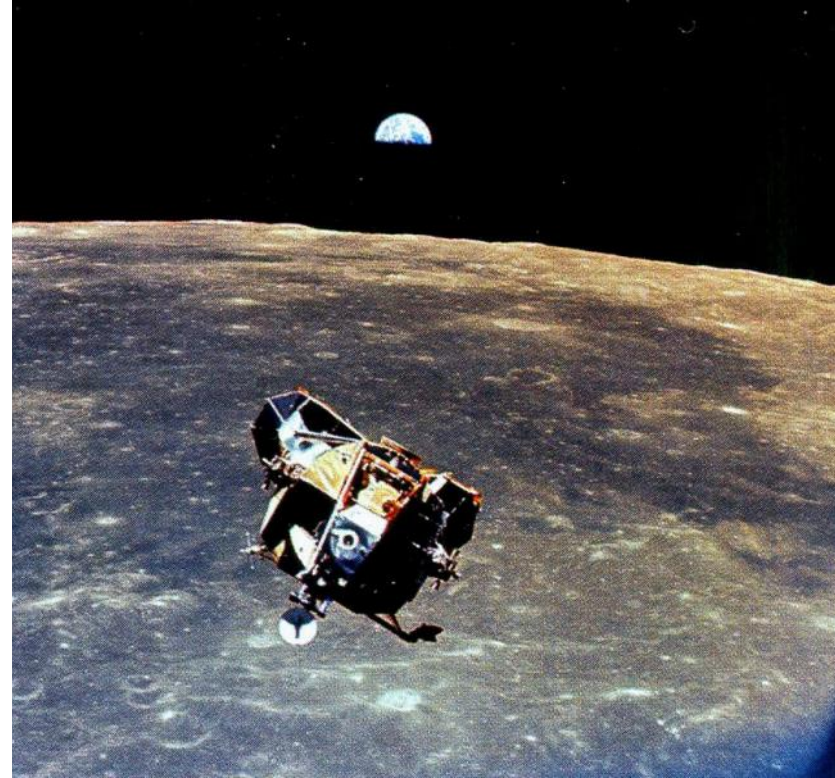
The iconic Earthrise over the lunar surface taken from Apollo 8 on December 24, 1968.



Apollo 9, launched on March 3, 1969, provided the initial flight test of the LM in Earth orbit. This photo taken from the LM as it prepares to dock with the command service module.



July 20, 1969, Apollo 11 lands on the moon; Armstrong photographed standing on the lunar surface.



The LM ascent stage of Apollo 11 rises from the lunar surface to dock with the command service module.

## The Seventies

The seventies began the decade with a population of 204, 879,000 people. Life expectancy for a male was 67 years and a female 75. The GNP of the United States was \$977 billion, the federal budget, \$197 billion, and the national debt \$382 billion. The Dow Jones Industrial Averages reached a high of 842 in 1970 and broke thru 1,000 for the first time in 1972. Inflation soared to 6.5 percent at the beginning of the decade while skyrocketing to 14.1 percent by 1975, staying at double digit rates the remainder of the decade. Unemployment climbed to 10 percent, interest rates rose to 14 percent on both the 3-month treasury bill and the 30-year government bond by 1981, while the stock market plummeted to 742. At the beginning of the decade, a dozen eggs sold for 61 cents, a quart of milk 33 cents, and a loaf of bread 24 cents.

The seventies witnessed many unprecedented events in American history – the first peacetime gasoline shortage, the first president to resign, and the first lost war. It is no wonder self-doubt clouded the nation's bicentennial. The decade began with a tragic event during an anti-war rally at Kent State University when Ohio National Guardsmen opened fire and killed four students. A more hopeful period ensued as Nixon wound- down the war, beginning with reducing troop strength starting in 1970, and prepared to swallow the bitter pill of peace without victory over the communists. The president also took far-reaching initiatives in foreign affairs. Long an anti-communist, Nixon and his secretary of state, Henry Kissinger, made friendly overtures to communist Red China to open trade between the two countries. In addition, in 1972, Nixon negotiated the first major postwar arms limitation agreement with the Soviet Union.

Elected to a second presidential term in 1972 by a landslide, and at the pinnacle of his political career, Nixon plummeted to scandal during the Watergate Senate investigation of an alleged pre-election break-in at the Democratic Committee headquarters. Finally, after battling the supreme court, Nixon agreed to release his secret tapes of White House meetings, and their publication sealed his fate. With the president's criminal complicity widely accepted, a house committee in 1974 voted articles of impeachment. During this time, Vice President Spiro Agnew resigned over corruption charges, and Gerald Ford was appointed vice president. Nixon, then facing an impeachment trial, elected to resign, and Ford became America's first appointed president. Ford's first official act was to pardon Nixon.

The country was shocked at the extent of its leader's moral decay, and the immediate post-Vietnam War period, all concurrent with the Watergate scandal. By 1975, North Vietnam occupied Saigon, the capitol of South Vietnam. On January 15, 1973, after pressuring South Vietnam to accept the peace accord, President Nixon announced the end of the offensive operations against North Vietnam. The Paris Peace Accords ending the conflict were signed January 27, 1973 and were followed by the withdrawal of the remaining American troops; President Nixon had been sharply reducing American troops since 1970. The terms of the peace accord called for a complete ceasefire in South Vietnam, allowed North Vietnam forces to retain territory they had captured, released US prisoners of war, and called for both sides to find a political solution to the conflict. The Saigon government and Vietcong were to work towards a lasting settlement that would result in free elections in South Vietnam. Surprised by the ease of their military advances, and ignoring the 1973 Paris Peace Accord, the North Vietnamese stormed through the south in 1975 and threatened Sai-

gon. With the enemy nearing, President Ford ordered the evacuation of American personnel and embassy staff. In addition, efforts were made to remove as many friendly South Vietnamese refugees as possible. Advancing quickly, North Vietnamese troops finally captured Saigon on April 30, 1975. During the Vietnam war, the United States suffered 58,119 killed, 153,303 wounded. South Vietnam's losses are calculated at 230,000 killed and 1,169,763 wounded. North Vietnam suffered approximately 1,100,000 killed in action. It is estimated 2-4 million Vietnamese civilians were killed during the conflict.

Between Vietnam and Watergate, most Americans lost faith in the integrity and judgment of the national leaders. In the meantime, the economy suffered as recession and inflation continued in an unprecedented manner. Then in 1973, OPEC, an organization of third world oil producers, embargoed oil exports to the United States in response toward America's posture toward the Israeli – Arab war. In 1976, America elected a little-known Christian from the deep South, Jimmy Carter, who advocated human rights and promised executive integrity. During his administration, however, the economic problems grew worse, and double-digit inflation and soaring interest rates devalued the dollar. The economy, in general, fared poorly, and basic industries like autos, steel, homebuilding, and any durable goods suffered enormous losses.

The great inflation of the seventies, which began in 1972 and did not end until the early eighties, is labeled the greatest failure of American economic policy in the postwar period. Over the nearly two decades it lasted, there were four economic recessions, two severe energy shortages where the price of oil would quadruple in a span of five months, and an unprecedented peacetime implementation of wage and price controls in 1971 and 1974. The great inflation was blamed on oil prices, currency speculators, and greedy union leaders. However, it is clear that easy monetary policies, which financed massive US debts to fund LBJ's Great Society, finance the Vietnam War, and a politically desired growth economy leading up to the 1972 presidential election, were the cause. In 1973 inflation more than doubled to 8.8 percent. Later in the decade, it would soar to 12 percent; by 1980, inflation climbed to 14 percent. It would take a change in a Fed chairman and a brutal policy of tight money and high interest rates, including the acceptance of a recession, before inflation would return to single digits. In the early seventies the prime lending rate stood at 9.75 percent and 30-year fixed rate mortgages averaged 7.5 percent. By 1980, while short term treasury bills stood at 14 percent, the prime interest rate had rose to an astonishing 21.5 percent, and 30-year fixed rate mortgages peaked in 1981 at an average rate of 18.6 percent. Unemployment peaked at ten percent; business bankruptcy was widespread, especially in durable goods such as homebuilding, automobiles, and furniture.

There is another story to be told of this decade, but it is a subtler one. It tells of the gradual integration of the many ideals of the sixties into the mainstream of American consciousness. To the extent that these views supported equality, diversity, and individual rights. The ideals and legislation of the civil rights movement gained significant acceptance during the seventies. Segregation was officially eliminated, and blacks were free to vote everywhere. In both southern and northern towns, more blacks than ever entered political life. Needless to say, ingrained prejudice still remained in many areas of society, but the principle of equality was taking hold. The ideal of female equality also became further amalgamated into the national consciousness and a federal law prohibiting discrimination based upon gender was passed. More women went to medical school, law, and business schools.



Other issues, like the future of the environment, the danger of exhaustion, as well as the reality of pollution, entered the mainstream of national awareness. Environmental concerns prompted numerous industrial regulations geared toward reducing toxic waste in the air and water. An expanding health food industry promised uncontaminated foods. There was also a trend toward self-awareness, self-improvement, and self-fulfillment. Part of this was expressed in an explosive interest in exercise, health foods, and self-help books.

Finally, alongside America's political and economic trials and its social and cultural transfigurations, the late seventies witnessed another phenomenon – the dawning of the microchip age. From calculators to video games, technology became part of everyone's awareness. A technological revolution, and with it perhaps yet another industrial revolution, was in the making, promising vast, exciting, but uncertain changes.

## **The Technology Revolution**

### **The Third Industrial Revolution**

Technology and human life cannot be separated. The modern technology of the late twentieth century is simply an advancement of old technology. For example, the first industrial revolution was driven by iron and steam power, while the second industrial revolution was powered by steel, railroads, electricity, petroleum, and the combustion engine, while the third industrial revolution is powered by computer microchips. We use modern technology in our daily life and our need and demands from technology keep on rising. Computer microchips operate just about everything and have greatly benefited how we live. Modern microchip technology has improved transportation: our automobiles, airplanes, ships, and space travel have all been greatly enhanced to make travel safer, more pleasurable, cheaper, and faster. Microchip technology has improved our communication and how we access and deliver information. Electronic mail (email), mobile phones, and instant text messaging are modern tools that have simplified the way humans and business communicate. Electronic media such as the internet, world-wide-web, and social networking have vastly changed and improved the way we exchange ideas, which can develop our societies. The world wide web and smart phones has made it incredibly easy to gain access to a vast amount of relevant information at any time, and from any location. Microchip technology has changed the way businesses function, market their products and services, sell and deliver their goods, all improving the overall productivity and growth of the world economy. Microchip technology has also improved our education: Smart whiteboards, computers, mobile phones, iPad's, projectors, and the internet have all improved the way students learn in our schools. Online educational technology supports individual learning and is mobile; students can learn from anywhere at any time. There have been benefits to the health industry as well. It is now possible to monitor your health with applications on your smart phone. And today's hospitals have implemented modern technology in surgical rooms, improving results and safety. Modern technology has played a significant role in improving the entertainment industry. Easy access and storage of music is available with services like iTunes; 3-D movies and the technology advances in creating visual effects can put one on the edge of their seat; and video games and visual systems

like smart televisions entertain us in our homes. There are innumerable ways modern technology has improved life, from social networking to making it easier to discover old and new friends, online shopping, increased productivity, automated household appliances, and even security systems operated right from our mobile devices.

The following is a brief review of how technology advanced from 1964 into the twenty-first century. International business systems (IBM) introduced the first family of mainframe computers for commercial and scientific use in 1964. These mainframe computers were delivered to larger businesses between 1965 and 1978. The launch of system 360 was IBM's first Solid State Technology (SLT) and was the beginning technology of the development of smaller, more powerful computers. The first 360 system could perform up to 34,500 instructions per second with a memory of 8 to 64 KB. Later 360 models increased speed and increased memory up to 512 to 1024 KB. The model of the early 1960's cost millions of dollars, would occupy 10,000 square feet, and could take up to sixty people to operate them.

In 1981 IBM introduced the first desktop personal computer (PC). Within a short time, the introduction of "IBM compatible" products and software proliferated the market. The operating system for the PC in the eighties and early nineties was named DOS, a disk operating system. The MS-DOS operating systems most IBM computers used was mostly developed by Microsoft. In fact, Microsoft, founded in 1975 by Bill Gates, formed a partnership with IBM in 1980 to bundle Microsoft's operating system with IBM computers. In 1985, IBM requested Microsoft to develop a new operating system for their next generation of PC's. Microsoft produced that operating system, but also continued to sell their own alternative directly to others. When Microsoft launched several versions of "Microsoft Windows" in 1990, they used a new graphical user interface (GUI), which would replace the older DOS operating system. By 1993, Microsoft Windows had captured 90 percent of the world's personal computer operating systems. As personal computers became widespread in homes and small businesses, the development of operating software to perform a variety of tasks exploded. Personal computers, in conjunction with a plethora of software choices, dramatically improved efficiency, productivity, and the way businesses and individuals performed a variety of tasks.

In the mid to late 1990's mobile phones, known as cell phones, started to become more widely used by the general population. A cell phone is a portable phone that can make and receive calls over a radio frequency link while the user is moving within a telephone service area. The radio frequency links to (PSTN) the public switched telephone network. From 1983 to 2018, worldwide mobile phone subscriptions grew to over seven billion, penetrating virtually 100 percent of global populations and reaching even the bottom of the economic pyramid.

The Internet is a global system of interconnected computer networks that use the Internet protocol suite (TCP/IP) to link devices worldwide. It is a network of networks that consist of private, public, academic, business, and government networks of local to global in scope, linked by a broad array of electrical, wireless, and optical networking technologies. The origins of the Internet date back to the federal governments research in the 1960's to build communication through a network of computers. The primary precursor of the Internet served the military in the 1980's. The linking of commercial networks in the early 1990's marks the beginning of the tran-

sition to the modern Internet. In 1993 the Internet carried only 1 percent of two-way communication, by 2000 this figure had grown to 50 percent, and by 2017 more than 97 percent.

Most traditional communication media, including the telephone, radio, television, paper mail, and newspapers were reshaped, and redefined by the Internet. The Internet gave birth to new services such as email, Internet television, online music, digital newspapers, and video streaming websites. Newspaper, book, and other print publishing quickly adapted to the new website technology. The Internet has enabled and accelerated new forms of personal interactions through instant messaging, internet forums, and social networking. Online shopping has grown exponentially both for major retailers and small businesses as it extends their “brick and mortar” presence to serve a larger market, or even sell products entirely online.

The Internet was necessary in order for the World Wide Web (abbreviated WWW or web) to have a format for distribution of information. Whereas the Internet is a global system of interconnected computer networks, the Web is a global collection of documents and other resources, linked by hyperlinks and URL's. Web resources are usually accessed using HTTP, which is one of many internet communications protocols. The Web browser was first released in 1991 to research institutions. The Web has been central to the development of the Information Age and is the primary tool billions of people use to interact on the Internet. Web pages are the primarily text documents formatted in HTML language. In addition to formatted text, web pages may contain images, video, and audio. From 2000 to 2010, businesses began marketing their products and services on web pages and news and educational information available on the Web exploded. Between 2005 and 2010, the number of web users doubled, and surpassed two-billion users by 2010. By 2010, the indexable Web contained at least 25 billion pages and operated over 109 million domains, of which 74 percent were commercial.

With the potential for vast amounts of information to be accessed via the Web, a need was created for a system to search for the various documents. In 1998 the Google company was launched by Larry Page and Sergey Brin to be used as a web-based search engine.

Smart phones, basically a pocket-size, hand-held personal computer, were introduced to the population in 2007. Smartphone are personal computers with a mobile operating system and an integrated mobile broadband cellular network connection for voice, SMS, and internet data communication; most if not all smartphones support Wi-Fi. Smartphones are able to run a variety of software components, known as “apps”. Most basic apps include event calendars, camera, and a web internet browser. Modern smartphones have a touchscreen color display to activate app features and a virtual keyboard to type email and text messages. Today, smartphones largely fulfill their users' needs for a telephone, digital messaging (texting), email, digital and video cameras, GPS navigation, a media player, clock, news, web browser, calculator, event calendar, video game player, flashlight, compass, address book, and note taking. By 2018, it is forecast close to 2.5 billion smartphones are in use worldwide.

At the beginning of the twenty-first century, we can only speculate and imagine what the future of technology holds with the development of artificial intelligence, driverless automobiles, robot-run factories, remote surgery, and quantum computing.

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