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HERBERT CLARK HOOVER

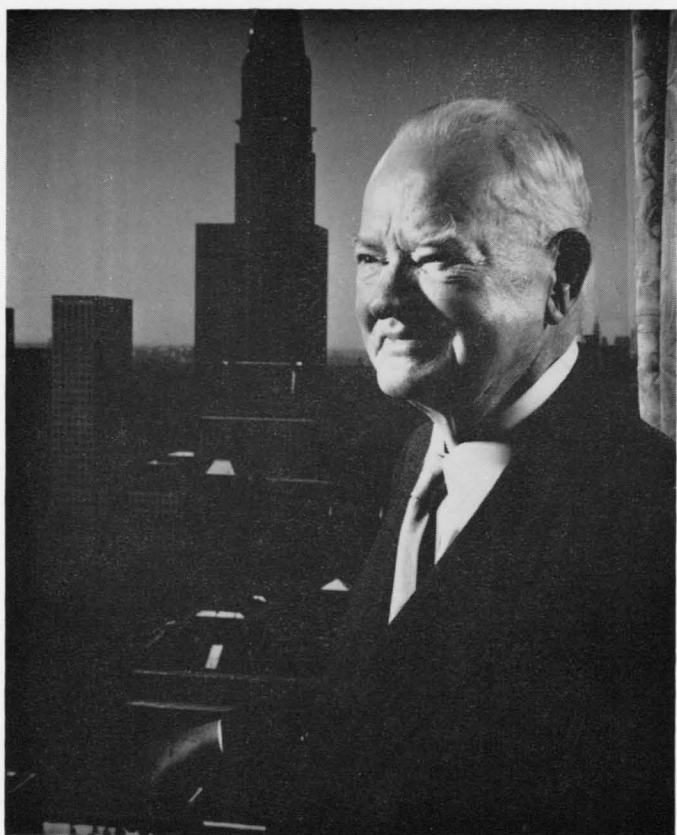
1874—1964

A Biographical Memoir by
ZAY JEFFRIES

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Biographical Memoir

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Wendell Hoagberg

HERBERT CLARK HOOVER

August 10, 1874–October 20, 1964

BY ZAY JEFFRIES

HERBERT HOOVER, thirty-first President of the United States, was born on August 10, 1874, at West Branch, Iowa, and died in New York City on October 20, 1964. He was elected to membership in the National Academy of Sciences in 1922, and although he had abandoned his formal professional career eight years earlier, he was, at the time of his election, regarded as the most distinguished mining engineer in the world.

Giving up his formal professional career at that time was not a move that he had preplanned. World War I, quite unexpected by most of the people of the globe, broke out in 1914. Thousands of Americans were stranded in the warring countries. Mr. Hoover was called upon to try to bring order out of chaos and help these people, some forty thousand of whom were teachers, to obtain funds, temporary sustenance, and home-bound transportation. His performance was so outstanding that he became the number one candidate to take charge of Belgian Relief, an activity which he managed so well that it was, prior to his subsequent relief work, regarded as the outstanding achievement of its kind in world history.

After we entered the war President Wilson called on Mr. Hoover to be the United States Food Administrator. Also, he assisted the American team at the Peace Conference and wrote a book about it, published in 1958, entitled *The Ordeal of*

Woodrow Wilson. After the Armistice in 1918 millions of people in the war-torn countries were helpless, destitute, and starving, and pestilence was beginning to assume alarming proportions. No other individual was considered to possess, even approximately, the ability to cope with such a crisis, so he had to do for most of Europe what he had earlier done for Belgium and part of France. Again the performance was successful beyond belief.

Beginning in 1921 he was Secretary of Commerce under Presidents Harding and Coolidge until 1928, when he resigned because he was a candidate for election to the Presidency on the Republican ticket. He was elected, and to date he has been the only Academy member to be so honored. In less than a year after he assumed office came the devastating stock market crash, followed by the great business depression. Most of his four-year term was spent, therefore, in trying to alleviate the hardships resulting from this calamity. To make things more difficult, a Democratic House of Representatives was elected in 1930, and he was not successful in getting some of the legislation passed that he deemed essential to cope with the depression problems. This condition worsened as the 1932 election neared. Then the Democrats scored a decisive victory and from November 1932 to March 1933 neither the incoming President nor the Congress would cooperate with him. This was indeed an agonizing experience for the President but it was also very bad for the country.

During the period from 1933 to 1947 Mr. Hoover had little opportunity to serve his government because he was not asked. However, he served as adviser on a "when asked" basis to many individuals, some in high government stations, and he was perhaps the keenest critic of the New Deal.

While Mr. Hoover was President and for years thereafter, he was the victim of organized and well-financed smear activities.

His Quaker upbringing and heavy load of constructive work caused him to refrain from answering these unfair and even flagrantly untruthful outbursts. His public image was greatly impaired and it could be restored only by the lapse of sufficient time to show that he was no longer a political threat to the successes of the Democratic party and to prove to the world that he was in truth wholly dedicated to the improvement of the lot of mankind.

President Truman brought about the beginning of the end of the Hoover defamers in 1947 by calling on him to solve a world crisis. The crisis was the aftermath of destitution, starvation, and seeming hopelessness of millions of people in the countries that had been at war. Here too his performance was typically outstanding.

Gradually, but surely, Mr. Hoover was recognized as the number one citizen of the United States and in many ways he was the number one citizen of the world. He was called upon by both President Truman and President Eisenhower to make a study of our governmental structure and to offer suggestions for reorganization and improvements. Both of the resulting reports give evidence that he undoubtedly knew more about our government than any other person.

During his lifetime Mr. Hoover probably received more honors than anyone who ever lived. There were at least forty gold medals including the Public Welfare Medal of the National Academy of Sciences, awarded in 1920 "for eminence in the application of science to the public welfare." He received more than eighty honorary degrees from colleges and universities in various parts of the world. His decorations, honorary memberships, and other significant recognitions and distinctions are numbered in the thousands. If any other person has been so greatly honored, I have failed to find a record of it.

Obviously a memoir of so great and unique a personality

could stretch out into several volumes, but I must here stress, briefly, his activities in science and engineering. To the reader, however, who wishes to know more about his whole career, I can strongly recommend *Herbert Hoover*, a biography by Eugene Lyons published by Doubleday and Company, Inc., on August 10, 1964. Not only does this book of 444 pages of relatively small print reflect authoritatively Hoover's great achievements, his struggles, his philosophy, and much of his home and social life, but in addition it is a literary gem. In the book the reader will find references to Hoover's own writings and to other biographies and publications which will provide a seemingly endless amount of reading matter, not excluding some of the offerings of his detractors.

In considering Hoover's eminence as an engineer, one must conclude that he was one of those rare individuals richly endowed by nature. He was blessed with a rugged constitution, a fine mind, a passion to learn, a drive to work, and a potentiality to help others. These attributes were coupled to a steadfast adherence to what he held to be right and true. The preparation for his career had progressed a long way by the time he left Iowa in 1884. His boyhood days were saddened by the death of his father when he was six years old and of his mother when he was nine. The joy and excitement of living seem, however, according to his own accounts, to have outweighed the sadness, the struggles, and the hardships. By the time he was ten years old, he had spent eight or nine months with his uncle, Laban Miles, at an Osage Indian school in Indian Territory where he "learned much aboriginal lore of the woods and streams, and how to make bows and arrows." He had also learned to do most of the things incident to the farm life of the time. Nor had play, recreation, and school work been neglected. Also, the rigid discipline of the Quaker religion seems to have developed in him a fortitude which in later life enabled him to endure great vicissitudes.

When his uncle, Dr. Henry John Minthorn, living in Newberg in the Willamette Valley, Oregon, lost his only son, the Hoover relatives decided that Herbert should make the trek at the age of ten across the continent and live with his uncle and his Aunt Laura.

His experience in Oregon for the next seven years provided an important addition to his preparation for an engineering career. He continued his studies, performed all kinds of chores, roamed the woods, and fished the streams. He learned much physiology from his uncle, attended evening classes at a business school, learned to use a typewriter, and was coached in book-keeping. In addition, he took on summer jobs for wages and saved some money. He even tried a business venture with another boy involving twenty dollars in cash. They tried to recondition old sewing machines for resale, but this venture failed. In view of his later outstanding successes in business, this activity may have taught him a lasting lesson.

Perhaps, however, the most significant event while he lived in Oregon was a visit by an engineer from the East, a Mr. Robert Brown, whose enthusiasm for his profession caused Hoover to decide to become an engineer. A visit to a mining prospect in the Cascades with a mining engineer finally convinced him that he wanted to study geology and mining engineering.

He did not have the qualifications for entrance to an engineering school but he approached this whole problem with a sophistication which was unusual for a boy sixteen or seventeen years old. He investigated many schools and eventually decided that he would try to enter the newest of these, the Leland Stanford University which was soon to be opened. Once he had made up his mind, nothing could dissuade him from this decision, not even the pressure from his relatives to enter a Quaker college in Indiana. He did not meet all of the requirements when he took the entrance examinations but his record

in mathematics was so good that he was encouraged by the Stanford representative to try to make up the deficiencies by private tutoring, which he did by arriving in Palo Alto three months before the university opened in 1891.

It would be difficult to overemphasize the importance of his four years at Stanford as a final preparation for his chosen profession. The first president of Stanford was the eminent Dr. David Starr Jordan, but the professor who had the greatest influence on his early training was Dr. John Branner, former state geologist of Arkansas and the first head of the Department of Geology and Mining. Dr. Branner was not only a distinguished geologist but a great teacher as well. There was no other engineering course that could compare with the one Hoover had chosen. The intensive geological studies were designed to enable the graduates to recognize and evaluate mineral deposits and the mining course aimed to help them work mineral deposits at a profit. Any subject considered essential in achieving these objectives was permitted and even encouraged.

Having taken the same course at the South Dakota School of Mines, beginning in 1906, I can vouch for the fact that it was exceptional. Besides the more usual subjects like English, Chemistry, Mathematics, Physics, Geology, etc., we had to study explosives, mine surveying, shaft sinking, tunneling, stoping, mine timbering, mechanics, machine design, hydraulics, strength of materials, drafting, fire assaying, metallurgical processes and equipment, transportation, power plants, ore dressing, and mining law among others, but mine administration was stressed too. If the points on the catenary curves assumed by the cables in aerial tramways had to be calculated, hyperbolic functions were sometimes used.

Hoover had not been at Stanford long before Dr. Branner selected him as an assistant at a salary which helped the young

student to defray personal expenses, and the association with Dr. Branner gave him a special opportunity to become more proficient in geology, an ability which he was later to use with telling effect.

His extracurricular activities were noteworthy. He made expense money by helping to establish and operate a laundry service and a paper route. He led a movement of nonfraternity students which established the practice of giving them equal status with fraternity members in school activities. He managed the baseball and football teams with great skill. Before he was graduated in 1895 he had to handle thousands of dollars which came from gate receipts and thus got a start in "big" undertakings.

Especial attention should be given to his summer vacation work. The summer of 1892 was spent in the Ozarks of Arkansas on a geological survey of the state. During the summers of 1893 and 1894 he worked for the United States Geological Survey in California and Nevada. During this period he worked with Dr. Waldemar Lindgren, then recognized as one of the world's foremost geologists. Hoover was especially grateful for the opportunity to spend many evenings around camp fires in the high mountains and in hospitable homes of mine managers with Dr. Lindgren and his staff. Here the young student learned much that could not be taught in a university. These and other extracurricular activities provided a substantial increment to the scholastic preparation.

After he was graduated in 1895 he had difficulty in getting any kind of work in the mines. His efforts, however, were ceaseless and eventually he got a job on the night shift, seven days a week, ten hours a day, pushing a small mine car underground at two dollars a day. After a few months this work played out and he then, in seeking further employment, experienced turndown after turndown. He finally got a job as a regular under-

ground miner at which he saved one hundred dollars. With such a huge amount of capital, he thought it was time to try for better things. He moved to Berkeley to live a while with his older brother, Theodore, and younger sister, May. Soon he secured a position with Mr. Louis Janin, then the outstanding mining engineer of the Pacific Coast. He was assigned to mining engineering jobs in Colorado and later in New Mexico and other states, and then was asked to join Janin's staff in San Francisco. Never again did he have to seek work. Positions sought him.

By 1897 Janin had gained such confidence in Hoover's ability that when an important firm of mine owners and managers in London asked him to recommend an American mining engineer for work in Australia, he selected Hoover. Hoover accepted a position with Bewick, Moreing, and Company as a full-fledged mining engineer and was immediately assigned as assistant to a resident manager of the company properties in Australia. The salary of six hundred dollars per month was most unusual for one only twenty-three years old. There were ten gold mines and some prospects mostly located in Coolgardie and Kalgoorlie "among the hottest, driest and dustiest places on earth." But with the generous use of the newer and more advanced mining methods and equipment and sound administration, the results were so good that the home office in 1899 asked Hoover if he would like to go to China at a salary of twenty thousand dollars a year and expenses to be chief engineer of the Chinese Engineering and Mining Company, a large coal mining concern. He gladly accepted this offer because it provided the means to support a wife and gave promise of a climate suitable for a decent home life.

Accordingly, he cabled to Lou Henry at Monterey, California, asking if she would be willing to marry him and assume residence in China. Miss Henry had been a freshman at Stan-

ford when he was a senior but it seems that they knew they were destined for each other. A favorable answer was promptly received and thus began a partnership which only death could dissolve.

Hoover's success in China was as phenomenal as it had been in Australia, despite many trials and tribulations including the Boxer Rebellion. It is doubtful whether Tientsin, which was besieged by the Boxers, could have held out without the fortitude and ingenuity of both Mr. and Mrs. Hoover.

Hoover expanded the Chinese company into a large and profitable industrial empire including the building of a new port, opening new mines, establishing water transportation on the Yellow River, and adding to the variety of manufactured products. All of this was accomplished in about three years. During this period Belgians had acquired the majority of the outstanding bonds of the concern, and a Belgian was sent to China to take general charge.

During his stay in China Hoover had many interesting and even exciting experiences. There were trips to various parts of China, either in search of mineral deposits or to examine reported discoveries. The political situation was complicated enough in normal times but after the Boxer Rebellion it was chaotic. His dealings with the various factions demonstrated great skill and provided splendid training for the later dealings with governments at war with one another during the Belgian Relief work. By 1902 Hoover had been offered a junior partnership in Bewick, Moreing, and Company which he accepted.

During the following years, until 1908, he operated from the company offices and ranged over most of the world. There were coal mines in China, Wales, and the Transvaal, a tin mine in Cornwall, a group of gold mines in Western Australia, New Zealand, South Africa, and West Africa, copper mines in Queensland and Canada, a lead-silver mine in Nevada, and a

turquoise mine in Egypt. "In addition, there were constant examinations of new prospects and engineering work for other concerns."

Toward the end of 1902 when Mr. Moreing, the managing partner, was in Manchuria hunting tigers, Hoover was in charge of the London office. One morning he found on his office desk a long letter marked "Private and Confidential." It was a confession of the junior partner, A. S. Rowe, that he was guilty of defalcation, the extent of which proved to be around a million dollars. Although an authority gave the opinion that the company was not legally liable for the loss, Hoover decided that the firm should assume the burden of payment. He cabled Mr. Moreing, who not only agreed to Hoover's decision but offered to pay three-quarters of the loss from his personal funds. Hoover and another junior partner agreed to pay the remainder. The entire amount was paid in about three years.

This episode "electrified" the bankers and mining fraternity not only of London but of the world. Hoover became world-famous "overnight." Instead of harm being caused to the firm, business expanded rapidly. People knew that this firm was most competent in engineering and management, but now it had an unmatched reputation for integrity. Concerns began to feel that if Bewick, Moreing, and Company would accept a contract for their engineering and management, success was assured. Incidentally, Rowe escaped to Canada, was apprehended, tried, and sentenced to ten years in prison.

During Hoover's partnership in Bewick, Moreing, and Company perhaps his greatest achievement was the "break-through" he made in connection with the great Broken Hill mines of Australia. The ore contained lead, silver, and zinc. The mines had been operated on a large scale for many years but the zinc values could not readily be recovered by the then known processes, so the vast piles of tailings contained a con-

siderable amount of this metal. Hoover, on behalf of the firm's clients, purchased control of around five million tons of these tailings and proceeded to try to find a process for zinc recovery. After much research an adaptation of the new flotation process proved to be successful. This was the first large-scale use of the process.

The increasing mining costs and the depletion of the richer ores indicated that the operations in the district were approaching the low-profit or no-profit stage unless, indeed, the zinc could be recovered. The breakthrough so revived these mines that even now they constitute one of the important world sources of silver, lead, and zinc. But zinc recovery was not the only innovation. Under Hoover's guidance new and up-to-date equipment was installed, mine administration was streamlined, and not only were labor rates increased but working conditions were much improved. These changes were dear to Hoover's heart because he wanted the workers to prosper. He wanted the jobs to represent an important part of their lives and he wanted them to have good living quarters. He had no strikes even though others did, but his costs were competitive. Two of the Broken Hill mines came under Hoover's guidance, the Zinc Corporation and the South Block Broken Hill Mine, but all the mines of the district profited by his innovations.

In 1908 Hoover was no longer obligated by contract to stay with the firm and he decided to establish his own engineering operation. Despite lucrative offers to stay with Bewick, Moreing, and Company, he felt that a more satisfactory family life could be arranged if he were independent. By this time the Hoovers had two sons, both born in London, Herbert, Jr. in 1903 and Allan in 1907. When they were small babies, Mrs. Hoover registered them as Americans. The Hoovers never gave up their American citizenship.

During the free-lance period from 1908 to 1914 Hoover had

no partners. He established offices, first in New York, San Francisco, and London and later in Petrograd and Paris. This operation represented his final period in formal engineering. It should be noted also that even though most of his engineering and management contracts were in the field of mining, he considered the new activity as that of "engineering doctors to sick concerns." In 1914, before he took up the relief work, about one hundred and seventy-five thousand workers came under his general guidance. He was proud of the fact that in all of his operations he never had a strike. The spirit of his organization is reflected in the following quotation from his memoirs: "Ours was a happy shop. There was the sheer joy of creating productive enterprises, of giving jobs to men and women, of fighting against the whims of nature and of correcting the perversities and the incompetence of men."

Perhaps the mining operation that had the greatest influence on Mr. Hoover's life career was Burma Mines. The undertaking was important in part because he acquired a large personal interest in this mining venture, and the mine turned out to be "one of the largest and richest lead-zinc-silver ore bodies ever discovered."

Burma Mines was started before Hoover became a free lance. Not only was he responsible for the engineering but he was also a director of the company. When he became a free lance, he was made managing director and later Chairman of the Board. In part the great significance of Burma Mines is the reflection of Hoover's judgment in undertaking a challenging development costing many millions of dollars and years of time and his engineering and administrative skill in bringing the property into profitable operation. The flow of underground water was so great that only a tunnel nearly two miles long through treacherous terrain could remove it. More than three years were required to drive the tunnel. In addition to bridge,

highway, and rail construction and construction incident to the winning of the ore, large mills for ore concentration, hydroelectric power plants, houses, towns, hospitals, schools, and recreation grounds had to be provided. Even coal mines had to be opened up and other facilities had to be provided to take care of around a hundred thousand people.

Burma Mines probably provided the increment to Mr. Hoover's funds which enabled him to devote the last fifty years of his life to humanitarian and public service, not only without compensation but at considerable personal expense. It is a matter of record that he took no salary from our government even when he was President. While still administering the Belgian Relief, he sold his interest in Burma Mines.

Also, during his free-lance activity he and a Mr. Govette who had earlier managed certain of the Australian Broken Hill mines joined forces and acted as managing directors of a greatly expanded Zinc Corporation in the Broken Hill area which in the succeeding thirty years produced over \$400,000,000 worth of lead, zinc, and silver.

An engineering-management contract with an old feudal estate in the Siberian Urals near Sverdlovsk was noteworthy in several respects. (1) The prosperity of the estate depended on the profitable operation of a large low-grade mineral deposit containing mostly copper but also some gold and silver. (2) The Russians had been unable to operate this deposit profitably. (3) English mining engineers failed too. (4) Hoover, by introducing up-to-date mining methods and equipment and using the "pyritic" smelting process, made the mining operation profitable. (5) The operation remained profitable even after Hoover resigned as a director and it was managed by the organization which had been selected and trained under his guidance. (6) When the Russian revolutionists took over and dismissed the American managers and others trained to carry

on the sensitive operations, the result was a miserable failure.

This was the Kyshtim estate of some 2,340 square miles. Its 100,000 people had lived in relative poverty although the forests had been well managed and there was an iron and steel as well as a modest chemical industry. The farm land, however, was poor. When the mine began to produce good profits and employ thousands of people, the estate became about the most prosperous area in all of Russia.

The decision whether to accept or reject an offer to take on an engineering-management contract is most important. For example, a large coal-mining enterprise in Wales wanted Hoover to accept a contract. After investigation he rejected the offer. The wages were much too low, the methods and equipment were inadequate, and the union would not agree to the temporary unemployment which would result if the operations were modernized and automation was used to an optimum extent. He could not convince the union that, if the costs could be sufficiently reduced, employment might later be increased and each employee then could enjoy a much higher standard of living.

During this free-lance period, Hoover's book *The Principles of Mining* was published; it proved to be both timely and timeless. The text was based on lectures he had given at Columbia and Stanford universities.

But we are not yet ready to leave the free-lance period. In 1907 Mr. and Mrs. Hoover began an important joint project which was to take five years to complete. This was to translate from the original Latin a most exhaustive treatise on the world mining industry. The book, entitled *De Re Metallica*, had been written by Agricola and was published in 1556. Although there had been translations of parts of it in German, French, and Spanish, no one had succeeded in deciphering all the book's contents in these languages and those who had tried it in Eng-

lish failed. The challenge was made to order for the Latin scholar, Mrs. Hoover, and for Mr. Hoover, who perhaps in 1907 knew more about the mining business, both modern and ancient, than anyone living. Agricola had coined some Latin words and had used expressions which may have been intelligible to some people three hundred and fifty years earlier but could not in the early 1900s be translated. The meanings had to be determined by studying the old art profoundly, which Mr. Hoover did. In 1912 when the translation was published, a notable introduction and explanatory notes were added which made the volume much more than a mere translation. The volume was issued in a super deluxe edition including a special binding, special paper and type, and reproductions of Agricola's illustrations. The limited edition of 2,000 copies represented a substantial financial loss to the Hoovers. The volumes are now collectors' items.

Although the free-lance phase ended Hoover's formal engineering career in 1914, one should not come to the conclusion that it ended his interest in, contribution to, and influence on engineering. He remained "the engineer" throughout the remainder of his life. A book, *Economics of the Mineral Industries*, reaching the library shelves in December 1964 after his death, contains a foreword by him. In it he wrote, "No engineer loses the love of his profession." In 1961 he participated in the dedication of a new engineering building—the United Engineering Center in New York.

The Belgian Relief operations involved much engineering besides the engineering approach to the planning. One reason that I have stressed mainly the larger of his many engineering-management contracts is the preparation they gave Hoover for the relief work. The cash outlay for the Belgian Relief was more than nine hundred million dollars, and some five million tons of food and supplies were acquired, transported, and distrib-

uted to millions of people. The relief organization operated about sixty ships and carried on many activities involving engineering, even including factories.

Soon after the Armistice in 1918 Hoover was asked to take charge of the relief and rehabilitation problems of twenty-two nations. Within about two years this assignment was to involve over nineteen million tons of food and other supplies. Including some additional assignments, plus the Belgian Relief, coupled with that of the twenty-two nations, the organizations which Hoover directed during and immediately after World War I handled over thirty-three million tons of food and other supplies valued at over five billion dollars. At one time General Pershing wrote, "Mr. Hoover is the food regulator of the world." Many engineering projects were involved in these vast undertakings, including the reconstruction of ports, highways, bridges, canals, and railways.

As the relief work was coming to a close, several engineering organizations sought his guidance. He was the first president (1920-1921) of the Federated American Engineering Society and of its Engineering Council. At this time he was also elected to the presidency of the American Institute of Mining and Metallurgical Engineers. As one of his projects in connection with the Engineering Council, he started a campaign against waste in America. He appointed a committee of seventeen eminent engineers. They made a profound study of "waste" and presented their report, which has been characterized as a most important contribution. When Hoover assumed office in March 1921 as Secretary of Commerce, he began to urge the country to put some of the suggestions of this report into practice. He drove hard for implementation of "Simplified Practice," designed to reduce the great variety of sizes, specifications, etc., with the over-all objective of reducing costs and increasing distribution. Such a result, he argued, would greatly improve the

standard of living. Interestingly enough, the principal tools for increasing the standard of living were, according to his views, science and technology. The journalist-historian, Mark Sullivan, wrote, "One may say that Hoover has regarded our entire business structure as a single factory, conceiving himself, as it were, consulting engineer for the whole nation."

Hoover conceived a master plan and recorded it in four basic items, the first three stating what should be done and the fourth giving the expected benefits:

1. Lower the cost of production and distribution by eliminating waste, increasing the skill of our workers and manufacturers, promoting scientific research, and applying its discoveries to labor-saving devices and new articles of use.
2. Assure that these lowered costs of production and distribution be passed on to the consumer in lower prices.
3. To do so, we must maintain a competitive system.
4. With lower prices, people will be able to buy more goods and thus create more new enterprises, more jobs at higher real wages, and constantly higher standards of living.

Hoover stressed the great importance of standardization in addition to Simplified Practice as a tool to accomplish his objectives. He gave strong support to the American Engineering Standards Committee, which later became the American Standards Association, in its efforts to develop uniform standards for the whole nation. This support was recognized in 1951 when the Association awarded Hoover its Howard Coonley Medal. The citation, part of which follows, is significant:

"In all America, no great and honored name is more closely associated with the harmonious integration of human activities that is called standardization. As an engineer, as a public servant rising to the highest office of the land, as a private citizen working in the public interest, he has for more than half a

century labored to reduce waste, improve efficiency and increase production through standards. . . .”

While Hoover was Secretary of Commerce, he succeeded in having the Bureau of Mines and the Patent Office transferred to the Department of Commerce. The Bureau of Mines and the National Bureau of Standards provided him with powerful tools for the accomplishment of his objectives. His contributions to science and engineering during his more than seven years as Secretary of Commerce were not merely important, they were outstanding. There was, however, one engineering feat which deserves special mention because he took personal charge of relief in connection with a national calamity.

In 1927 the Mississippi River was in flood—the worst in history. The river was out of its banks for a thousand miles from Cairo, Illinois, to the Gulf of Mexico. In some places it was a hundred and fifty miles from new bank to new bank and hundreds of thousands of people were in danger or in distress. What was more fitting than his appointment by President Coolidge as Director of the Mississippi Flood Relief! Immediately Hoover the great engineer, began to function. First, he made a survey to get the facts. Then he decided what should be done and in particular what could be done within the estimated means and time limits. Next he organized the job and then did it. He quickly mobilized the Coast Guard, the Red Cross, a Naval contingent, the Army engineers, the appropriate agencies of all the afflicted states, the riverboats, and thousands of civilians. He even had a thousand new riverboats built in ten days.

In all, around one and a half million men, women, and children were moved to safe, temporary quarters, housed, and fed and medication was provided so timely and in such quantities that health impairment was practically nonexistent. The humanitarian aspects of the relief did not end with subsidence of the water. During the next two years Hoover helped many of

the flood victims to establish new homes and he kept up much of the health improvement activities.

I realize that the above is a mere outline of a few of the hundreds of Mr. Hoover's activities and accomplishments that have a bearing on Hoover the engineer. I have been studying the man, his methods, and his achievements for more than fifty years and I wish to record some of my conclusions.

Among all the individuals of whom I have knowledge either through personal acquaintance or otherwise, he had the closest approach to a "computer mind." His extensive reading on a great variety of subjects and his almost unmatched experiences were used as "input." He was selective in the input bits and they were so recorded in his brain that he could readily recall them. He also possessed the ability to approach any large-scale task in such a way that it was broken down into units which were not beyond the possibility of management by an individual or a small group. When these units were properly attended to and coordinated, the whole task would be adequately managed. There was, therefore, no task too large or too complicated for him to tackle, and if, indeed, there existed a potential solution, he was quite likely to find it.

I believe that much of Hoover's success in many areas outside of the field of engineering was due to his great ability as an engineer. All of the capabilities I have mentioned were evident in his formal engineering career. These comprise the main reason for his rise to world-wide eminence in seven years after he finished his course at Stanford in Geology and Mining. Considering that his entire formal engineering career lasted only nineteen years, it is remarkable that during that time he reached the peak of his profession and laid the foundation for solving vast and intricate problems.

In conclusion, it seems to me that an impression of Hoover's wholesome attitude toward life and his fellow men can be

gained by quoting a short speech he made at the Gridiron Club dinner in Washington, D.C., shortly after his defeat for reelection to the Presidency in 1932. It should be recalled that the smear campaign was still on and that many of his detractors were present. Some were waiting eagerly to watch him squirm when the gridiron got really hot. Here are his remarks, reported by Theodore G. Joslin in *Hoover after Dinner*, published by Scribners in 1933:

“You will expect me to discuss the late election. Well, as nearly as I can learn, we did not have enough votes on our side. During the campaign I remarked that this Administration had been fighting on a thousand fronts; I learned since the campaign that we were fighting on 21 million fronts.

“I notice in the press a generous suggestion that my countrymen owe to me some debt. I have said in part elsewhere that, on the contrary, the obligation is mine. My country gave me, as it gives every boy and every girl, a chance. It gave me schooling, the precious freedom of equal opportunity for advancement in life, for service and honor. In no other land could a boy from a country village without inheritance or influential friends look forward with unbounded hope. It gave to me a certain measure of success in my profession. It conferred upon me the honor of administering the world’s response to the appeal of hundreds of millions of afflicted people during and after the war. It gave me high place in the war councils of the nation. My country called upon me to represent it in the reconstruction of human and economic relations between former enemies on the continent of Europe after the Armistice. It gave me an opportunity for service in the Cabinets of two Presidents. It gave me the highest honor that comes to man—the Presidency of the United States. For this fullness of life, for the chance to serve in many emergencies, I am indebted to my country beyond any human power to repay.

“Only a few rare souls in a century, to whose class I make no pretension, count much in the great flow of this Republic. The life stream of this nation is the generations of millions of human particles acting under impulses of advancing ideas and national ideals gathered from a thousand springs. These springs and rills have gathered into great streams which have nurtured and fertilized this great land over these centuries. Its dikes against dangerous floods are cemented with the blood of our fathers. . . .

“We are but transitory officials in government whose duty is to keep these channels clear and to strengthen and extend their dikes. What counts toward the honor of public officials is that they sustain the national ideals upon which are patterned the design of these channels of progress and the construction of these dikes of safety.”

No doubt several people at the dinner would have been amazed if they could have seen in a crystal ball what actually happened to Mr. Hoover during the next thirty-odd years. Beginning with his seventy-fifth birthday in 1949 there was a spontaneous outpouring of praise and appreciation for him. Some of his earlier critics added their good words. These sentiments became more widespread with succeeding birthdays. The foreign comments had been most favorable at all times with the exception of those from Moscow. Some of the Communists, despite the great benefits they had received through Hoover's relief activities, couldn't resist the temptation to denounce him as an “imperialist.”

When Mr. Hoover died, the outpourings reached avalanche proportions. They matched his various activities in diversity and they came from many parts of the world. Especially warming were the comments from the engineering profession, for his colleagues had long regarded him as the personified symbol of **THE GREAT ENGINEER.**

ANNOUNCING THE DEATH OF
HERBERT HOOVER

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

TO THE PEOPLE OF THE UNITED STATES:

It becomes my sad duty to announce officially the death of Herbert Hoover, the thirty-first President of the United States, on the twentieth day of October, nineteen hundred and sixty-four, at 11:35 o'clock in the morning.

Mr. Hoover's service to our country, spanning a period of nearly a half century, was marked by a signal honesty of purpose, a devotion to fundamental principles of ethical conduct, and a deep concern for the welfare of all of his fellow men. Among the rich products of his efforts have been the advancement of the cause of peace, the strengthening of our bonds with other nations, the enrichment of the lives of millions of human beings around the world, and a vital improvement of the operation of this Government. His patriotism knew no partisanship.

A gentle and tolerant man, Mr. Hoover will be long remembered for his humanitarianism, his genuine humility coupled with a determined courage, and the strength of the faith which motivated his actions. He has earned the abiding respect and affection of the people of this Nation and of other nations throughout the world.

We in this country will be joined by his many friends abroad in mourning the death of this truly dedicated American. But we can take comfort in the inspiring legacy of ideals and example of devotion which he has bequeathed to us all.

NOW, THEREFORE, I, LYNDON B. JOHNSON, President of the United States of America, in honor and tribute to the memory of this great and good man, and as an expression of the public sorrow, do hereby direct that the flag of the United States be displayed at half-staff at the White House and on all buildings, grounds, and naval vessels

of the United States for a period of thirty days. I also direct that for the same length of time the representatives of the United States in foreign countries shall make similar arrangements for the display of the flag at half-staff over their embassies, legations, and other facilities abroad, including all military facilities and stations.

I hereby order that suitable honors be rendered by units of the armed forces under orders of the Secretary of Defense on the day of the funeral.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this twentieth day of October in the year of our Lord nineteen hundred and sixty-four, and of the Independence of the United States of America the one hundred and eighty-ninth.

(SEAL)

By the President:
DEAN RUSK
Secretary of State

LYNDON B. JOHNSON

STATEMENT BY THE PRESIDENT

Mrs. Johnson and I want to extend our deep personal sympathy to Herbert Hoover's sons and the other members of his family.

We have lost a wise American, and the world has lost a humanitarian citizen of all mankind. His steadfast leadership served us undaunted through good times and bad—as businessman, provider for the poor and hungry, President and elder statesman.

He combined the best of our national heritage with broad-gauged understanding of the tumultuous times in which he lived. A man of character and conviction, he was both profound and practical in meeting the many tasks he undertook for his fellow men.

He lived a full and useful life, and we are all deeply in his debt.

We shall miss his thoughtful counsel and kindly spirit. But his unquenchable sense of public responsibility for both our nation and a troubled world stand as an example that will endure.

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