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## HENRY FORD

1863 - 1947

This famous American industrialist was, more than any other single person, responsible for the introduction of mass production techniques into modern industry. By so doing, he vastly increased the standard of living throughout his nation and, ultimately, the whole world.

Ford, who was born near Dearborn, Michigan, never attended high school. After finishing grammar school, he worked as a machinist's apprentice in Detroit, then as a repairman, then as an engineer. He was still a young man when, in 1885, Karl Benz and Gottlieb Daimler (working independently) invented their automobiles and started to market them.

Ford quickly became interested in these "horseless carriages," and by 1896 he had constructed an automobile of his own design. In spite of his talents, however, his first two business ventures were unsuccessful, and had Ford died at forty he would have been deemed a failure.

But Ford was not easily discouraged. In 1903 he tried again, and it was through this third venture, the Ford Motor Company, that he achieved wealth, fame, and lasting importance. The company's rapid success was due in large part to Ford's basic concept which, as stated in an early advertisement, was

. . . to construct and market an automobile specially designed for everyday wear and tear—business, professional and family use; . . . a machine which will be admired by man, woman, and child alike for its compactness, its simplicity, its safety, its all-around convenience, and—last but not least—its exceedingly reasonable price, which places it within the reach of many thousands who could not think of paying the comparatively fabulous prices asked for most machines.

His earliest models, though fairly good, did not quite achieve those lofty goals. But his famous Model T, introduced in 1908, came pretty close. It was surely the most celebrated car ever produced; and eventually more than 15 million of them were sold.

Early on, Ford realized that in order to sell his cars at a low price he would have to make his production costs very low. To accomplish this, he introduced a set of very efficient production techniques into his plants. These included (a) completely interchangeable parts; (b) an extreme degree of division of labor; and (c) the assembly line. These were all designed to increase the efficiency of the individual worker.

It was crucial, Ford believed, not to waste the worker's time by forcing him to fetch the materials and parts he needed, or even to lift them off the floor before he could start work on them. Instead, Ford arranged to bring the work to the worker by means of conveyor belts, slides, or overhead trolleys. The items were deliv-



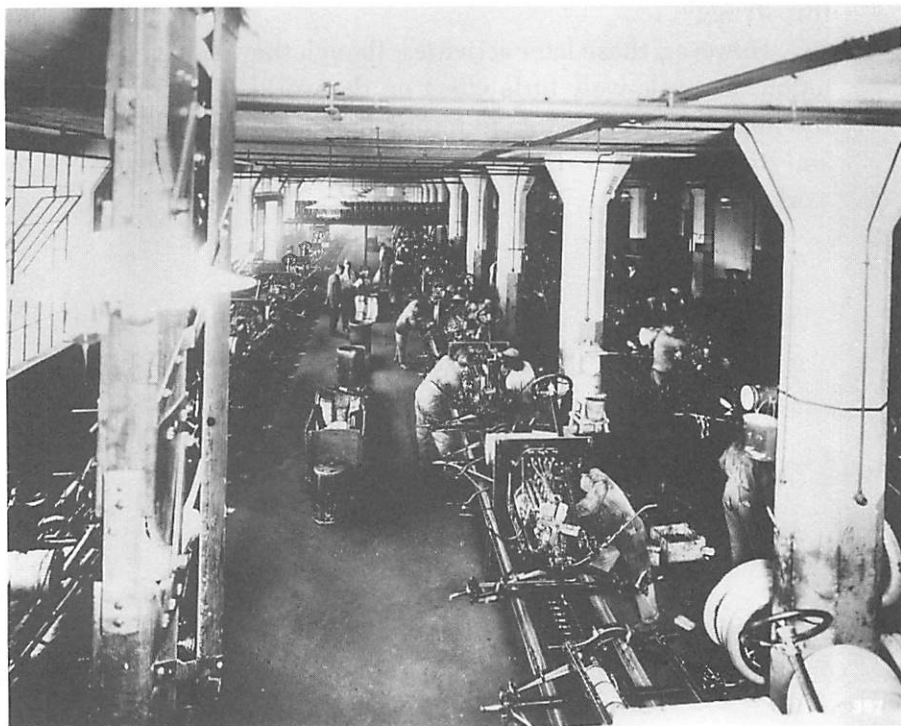
*Ford's famous "Model T."*

ered at waist level, where the worker could perform his task most quickly. Production methods should be analyzed carefully, in a constant attempt to find better, more efficient techniques. Complex tasks should be broken down into simple ones, so that they can be carried out by unskilled workers (some of whom might be of low intelligence, uneducated, or handicapped), and without long periods of training.

None of these ideas were original with Ford. Eli Whitney had utilized interchangeable parts more than a century before; the well-known efficiency expert, Frederick Winslow Taylor, had advocated all of those ideas in his writings; and several smaller firms had already used assembly lines in their operations. But Ford was the first major manufacturer to apply these ideas wholeheartedly.

The results were astounding: In 1908, the cheapest Model T sold for \$825. By 1913, the price was down to only \$500. In 1916, it was reduced to \$360. Finally, in 1926, the retail price hit a rock-bottom \$290. As the price came down, sales zoomed. The U.S. became a “nation on wheels,” and Ford became the world’s wealthiest private citizen.

As Ford’s workers became more productive, he could afford to pay them higher salaries. In 1914, he astonished the industrial world by raising the *minimum* wage in his plant to five dollars a day—an enormous figure for that time, and nearly twice as much as the company’s *average* wage had previously been. As the new, higher wage scale which Ford had introduced spread through the country, the overall result was to bring factory workers out of poverty and into the middle class.



*Assembly line at Ford's Highland Park plant.*

But Ford's innovations had an even broader impact. He was not secretive about his mass production techniques. On the contrary, he was eager to publicize them. Other manufacturers, seeing his success, copied his production methods. The result was a tremendous increase in productivity throughout the country, and eventually the world.

After Ford achieved financial success, he became active in various political causes. The results of these activities, however, must have disappointed him. His strenuous pacifist efforts during the early years of World War I fell on deaf ears. In the 1920s he embarked on a campaign of anti-Semitic propaganda; but this merely brought him discredit, and he eventually made a public retraction. In the 1930s, he bitterly fought the introduction of unions into his company. But this just antagonized his workers, and brought the company no benefits; so he eventually abandoned this struggle too.

However, these later activities, though they damaged his reputation, had relatively little effect on the world. They do not affect the importance of his role in revolutionizing industrial production, and thereby vastly increasing the productivity and income of workers.