

Making the Most of Men<sup>1</sup>By Ida M. Tarbell<sup>2</sup>

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NO MAN in the history of American industry has made a larger contribution to genuine co-operation and juster human relations than did Frederick Winslow Taylor by his "Principles of Scientific Management." He is one of the few—very few—creative geniuses of our times.

The importance of the principles which Taylor developed, has been amply demonstrated, but their potentiality has been hardly touched. It is the future that will prove what they can do for humanity. A few wise men have seen this from the start. Lenin saw it. The best of the American, English and French industrialists have seen it, but the world at large barely knows his name or knowing it execrates it as that of one who has taught how men might be more effectually exploited.

It is most fortunate that the first life of Taylor should have been done by one who understands the meaning to humanity of his work as well as one who appreciates to the full his unusually pungent personality, also by one who was not afraid of the hard work of mastering great masses of difficult technical material thoroughly enough to interpret them to the general reader. Frank Barkley Copley, the author of this life, has given himself to the task as fully as a man could and as gladly, for he revered Taylor and his aims and asked nothing better than to help others to understand him.

Taylor, born and bred in gentle surroundings, was cut off from college by defective eyesight. He turned by natural instinct to industry—his aim engineering. He began at the bottom in a shop, and immediately this youngster of unspoiled intelligence and of entire integrity of character found that he was set down in a world where management was hit-and-miss and where operations were conducted by rule-of-thumb. He found himself held back by the superstitions, taboos, suspicions, ignorance of employer and employee. The industrial world of the 70's was one of fallacies. On the side of the employer was a superstitious fear of overproduction and a belief that "the lower the wages the higher the profit." On the side of the employed was a corollary fear that there

was only so much work to be done and therefore you must do only so much in a day and never as much as you could. Machines must be held in. To young Taylor all of this was wrong in aim, cruel in effects and false in principle.

In the first interview I ever had with Frederick Taylor he began by telling me how early he had been impressed with the idea that the mission of industry was to produce abundantly in order that all men might enjoy abundantly. To limit your own production or others' production, not to give the fullest opportunity and the fullest return to each for what each did, impressed him as defrauding humanity and curbing human capacity, and yet that seemed to be the practice of both labor and capital.

He was a blunt man, and from the beginning of his shop associations fought his fellow workmen, his foremen, his employer on these points. Not only did he struggle to get out of a machine all of which it was capable but he fought to improve both machines and processes. Invention after invention poured from his fertile hand and brain—a steam hammer, of which so great an engineer as Gantt has said, "I do not know a more daring piece of engineering construction." Then the art of metal cutting—a better steel for tool—revolutionary developments. There were improvements in belting, in oil machines. Nothing that he had to do with satisfied him, so deep was his feeling that man's business in the world is to improve all he touches.

One of Mr. Copley's achievements in this book is making the reader feel the struggle of mind, the struggle in human relations that it cost Taylor to effect each one of these changes. He had men against him—the men he worked with, the men over him. He was a nuisance—a dreamer—a disturber of the things that are; and every form of opposition, including continuous ridicule, followed his efforts. But he could not be stopped or downed—the creative power was too intense in him. He had too great a reverence for it to allow stupidity and narrowness to chill or hinder it.

These inventions and improvements of his show the mettle of the man; but there was something broader than mechanical genius and an unbreakable will to keep it active. There was a most interesting and beautiful sense of human beings alive in Taylor. He saw their capacities atrophied by the industrial fallacies of the times and from the start he sought to free them. A man should have pride in his own ca-

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capacity. He should have an incentive to make the most of himself. In every shop he entered he endangered his position by his unwillingness that the earning capacity of any man should in any way be hindered. He wanted a man to make all that he rightfully could and he wanted to help him in that by making the conditions under which he labored stimulating rather than hindering. That meant that a man must work in an orderly, systematized shop, have helpers when necessary, be trained for his task, be in constant friendly relations with the management, his suggestions listened to, instruction given him if needed.

It was out of this effort to make the most of men that his principles of management grew—the greatest contribution that we have had, in our time certainly, to the future of labor, for these principles free the employee from rule-of-thumb, bring science to the aid of his task—boldly announcing that there is no task so humble that it is not worthy of scientific study; that the study cannot be done by superiors and imposed upon the worker but that it must be done in co-operation with the worker, and that his ideas must be heeded and studied. His system would take unskilled labor out of the world, would give a formula for every task and furnish training to the man who undertook that task.

It was by years of study and experiment, made under constant hindrance and ridicule, that Taylor developed these principles. Copley shows us vividly how the man's vision, integrity, fighting spirit slowly and surely demonstrated them. It is a great story of a human fight and victory.

A Hero of Industrial Progress<sup>1</sup>By Allan Nevins<sup>2</sup>

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SUPPOSE an educated Frenchman, German, or Scandinavian were bidden to choose from this year's American biographies the title of greatest interest to the world. He would perplexedly regard the new lives of Cleveland, Olney, and Robert Bacon. If trained in economics he might pause over the biography of Francis A. Walker. He would cast a glance at the books on Jefferson Davis and Samuel Adams. He would wonder who Caleb Cushing was. In the end he

<sup>1</sup>Reprinted by permission from *New York Evening Post*, November 26, 1923. The caption is ours.

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would be likely to point an emphatic finger at Frank B. Copley's "Frederick W. Taylor, Father of Scientific Management."

It is less than twenty years since Taylor, after many struggles, found two plants in Philadelphia willing to develop fully the system which had just been partly tried and rejected at the Bethlehem works. It is less than nine years since he died, with labor vehemently attacking his system and the general public quite ignorant of its tremendous import. Taylor will be remembered in Europe as well as America for his discovery of high-speed cutting tools alone, which has more than doubled the output of machine shops throughout the world. But his development of a plan of scientific management and his demonstration of its applicability to manifold human activities entitle him to a place among the few men who have profoundly altered the history of industry. His plan embraces three elements: the scientific selection of the worker, the establishment of the most efficient processes, and the cordial cooperation of management and worker in performing them. He never denied that the mechanism of his plan could be perverted. A selfish management could use it to speed up production without increasing the rewards of labor. But Taylor always insisted that it ceased to be scientific management the moment it was not used to elevate rewards as well as lower labor costs.

Mr. Copley reveals in Taylor a personality of amazing force, originality, and persistency, and, it may be added, of much eccentricity. He was born in Germantown of the mixed Puritan and Quaker ancestry, which lies back of so many outstanding American figures. His father was a gentleman of fortune and leisure, a lawyer who never practiced; but the boy at once showed stern strenuousness. At Phillips Exeter he worked so hard to head his class that his eyes weakened and college became impossible. He promptly took a job in a machine shop, and in 1878 became a journeyman machinist. As a common laborer he entered the Midvale plant, and within a few months rose to be gang boss. Promotion soon made him master mechanic, and within six years he was chief engineer. On a working day that began at 6:30 A.M. he never spared himself, and often worked overtime and Sundays. He used to study from 9 P.M. till midnight, and never had more than four or five hours sleep. No work was too dirty, and he once won notice by