



*Lillian M. Gilbreth*

# **Lillian Moller Gilbreth**

## **1878-1972**

By James N. Landis

In 1966, well into her eighty-ninth year, Dr. Lillian Moller Gilbreth became the first woman to be elected to the National Academy of Engineering—for her the last, except for the Hoover Medal that same year, of a series of "first woman evers," which began in 1900 when she became the first woman ever to be a University of California commencement speaker. Number One on the membership roster of the Society of Women Engineers, she urged women to enter the engineering profession decades before engineering schools were working with any vigor toward this end. She was a strong advocate of removal of age barriers in the hiring of workers and considered compulsory retirement to be based upon an outgrown psychology that fails to put the health and happiness of workers above the adjustable mechanics of the system within which human beings work.

She was honored as few women have been, and through it all she retained an innate simplicity that is a distinguishing characteristic of a truly great human being. Asked late in life what in her career she considered her most important achievement, she replied without hesitation, "My work for the handicapped—that is the one that has done the most good."

Dr. Gilbreth's achievements are even more remarkable in the light of her sheltered youth. Born in Oakland, California, on May 24, 1878, she was the oldest of six sisters and three brothers in the home of affluent parents where children arrived with proverbial

silver spoons in their mouths. Children were taught the old-fashioned virtues in the Moller home, including obedience to parents, responsibilities for younger children, and that boys were not supposed to do girls' work and vice versa. Education was respected, but college was not for young women except those who would have to earn a living. It was taken for granted that no daughter would ever have to earn a living though no lady, of course, should ever be idle. However, Lillian keenly desired a college education. She was graduated from the University of California with a Bachelor of Literature degree and Phi Beta Kappa in 1900 and stayed on for two more years for her Master of Literature degree.

In 1904 she married a self-made construction engineer, Frank Bunker Gilbreth, the pioneer of motion study, with no idea that not only was she to become a leader in the engineering world, but was also to become mother of six sons and six daughters. One daughter died of diphtheria in 1912.

It was her specific talent for psychology that would enable her to contribute early in the field into which cooperation in her husband's work plunged her. Both Gilbreths recognized need for greater use of psychology in some of the work engineers performed. Her thesis on "The Psychology of Management" was submitted to her alma mater, but she was told that a Doctor of Philosophy degree could not be awarded without a year spent in residence as a doctoral candidate. This was impossible for a mother busily engaged raising a family at the same time. Through Frank's help, her thesis was published in installments between 1912 and 1913 in the magazine of the Society of Industrial Engineers and as a book soon thereafter, by Sturgis and Walton. Mr. Walton ruled there could be no word about the fact it was written by a woman, and it was published under the name of L. M. Gilbreth.

Frank Gilbreth next set out to help her get a doctoral degree. A contract awarded to Frank to install scientific management at a plant near Brown University brought them in contact with Dr. Faunce, President of Brown University, who was personally interested in psychology and its application to management. At Brown University in 1915, Lillian became a Ph.D. Although Frank,

then enroute from Germany, was not there to see his wife receive this honor, the children were; and a few days later another daughter was born.

Interest in the psychology that underlies all industrial human relationships, plus interest in the motions involved in industrial practices, made work for the handicapped a natural outlet for the talents of both Gilbreths. Industrial accidents had long been inflicting physical disabilities on many human beings, but World War I increased the number and urgency of these problems. Thousands of service men in Europe and America were soon facing handicaps for the remainder of their lives with, in many cases, psychological blocks accompanying their physical disabilities. The Gilbreths faced the challenge of amputees and others. Often, with the help of motion studies, they were able to show how work formerly thought possible only for two-legged or two-handed men could be done by one-legged men, or by skilled one-handed men.

Dr. Gilbreth's first step alone toward the place she would win for herself in international management circles was taken five days after her husband's death, in 1924, when she sailed, as they had planned to sail together, for Prague, for history's First International Management Congress, which they had helped organize. Here she read the jointly prepared paper he was to have read, presided over the session where he was to have presided, and was made a member of the Masaryk Academy. Then she returned home to face the facts of life—the first of which was a home in which eleven children were growing up and would need forty-four years of college education and heavy financial necessities for a long time. She wrote down as the first item in her plan for the future, "Provide a home, a living, and love for the family," followed by, "Teach Frank's work," and a third item about finding and pushing projects that would affect the health and efficiency of human beings in industry.

Anyone who knew the Lillian Gilbreth of her later years knows how successful she was in fulfilling those three promises she made herself in 1924. Her first sixteen-week study course was under way the following January in the motion-study laboratory Frank and she had established in their Montclair home. During the next six

years, it was followed by six other such courses in which representatives from Belgium, England, and Germany were trained in the laboratory side by side with representatives from American companies. By the time the seventh course was under way, she had been called upon as a consultant often enough to know that some American businessmen, at least, were ready and willing to use a woman's professional competence in management problems. She had been assured that the psychology she brought into the solution of management problems was resulting in changed attitudes, among both employees and employers, and had made her work profitable financially to business and industry. With motion-study laboratories now established at several colleges, she felt free to discontinue the courses in the home laboratory and devote more of her time to consultant work.

In 1935 she was appointed on a part-time schedule as Professor of Management at Purdue University, continuing there until 1948. She was able to become more selective in the jobs she accepted, preferring those in which psychological understanding was an asset and those in which upper management echelons were interested in achieving technical efficiencies without loss of the dignity, health, or happiness of workers. The interest in helping the disabled achieve satisfying work and the human dignity of supporting themselves would stay with Lillian Gilbreth as long as she lived. She helped enable industry to use the skills of highly gifted workers who, without the application of motion study and psychology to their problems, might have become a drain upon the nation's resources instead of being the national asset they actually became through utilization of their valuable resources. Moreover, individual homes as well as industries reaped happy results from her work when she found ways, which spread over America and Europe, to improve efficiency in the kitchens of both the able-bodied and the physically handicapped in wheelchairs.

The combining of psychological understanding and efficiency improvement was the specific realm to which Lillian Gilbreth brought superb qualifications. She became known and respected in domestic and international engineering and humanitarian groups-as well, probably, as any of her peers of either sex.

Between 1929 and 1966 she made literally hundreds of addresses, at their invitations, to technical organizations, civic groups, service clubs, hospital and rehabilitation teams, and universities, in the United States and abroad: Australia, Canada, England, Germany, Holland, India, Italy, Japan, Mexico, New Zealand, Philippines, South Africa, Sweden, Switzerland, Taiwan, and Turkey. To many of them she had become an American symbol of the art of human relationships. A woman of high gifts and remarkably without antagonisms, she was a bearer of international good will in scores of industrial centers.

Beginning in 1930 with Herbert Hoover's Emergency Committee for Employment, followed by later services on Hoover's Organization for Unemployment Relief, she served five Presidents on committees dealing with civil defense, war production, and rehabilitation of the physically handicapped. Over a decade of service was rendered to the Girl Scouts in national positions and service to numerous other humanitarian organizations. She authored or coauthored ten books. Several books and numerous articles were written about her. She received twenty-three doctorates, more than a dozen honorary memberships in professional societies, and some of the most distinguished medals and awards given by the engineering profession. Among the latter are the first (1931) award of the Gilbreth Medal created by the Society of Industrial Engineers, the Gantt Medal (with Frank B. Gilbreth, posthumously), the Wallace Clark Award, and the Washington Award of the Western Society of Engineers. In 1949 she received the Gold Medal of the National Institute for Social Sciences "for distinguished service to humanity" and, in 1961 (again with her husband posthumously), the Frank and Lillian Gilbreth Industrial Engineers Award of the American Institute of Industrial Engineers. This softspoken woman became accepted as American's First Lady of Engineering.

In 1966, soon after becoming a Member of the National Academy of Engineering, the Hoover Medal was bestowed on her by a Board of Award consisting of representatives of the American Society of Civil Engineers, the American Institute of Mining and Metallurgical Engineers, the American Society of Mechanical En

gineers, and the Institute of Electrical and Electronic Engineers. The citation accompanying the Hoover Medal constitutes a fine encapsulation of this notable lady's work and position in engineering:

Renowned engineer, internationally respected for contributions to motion study and to recognition of the principle that management engineering and human relations are intertwined; courageous wife and mother; outstanding teacher, author, lecturer and member of professional committees under Herbert Hoover and four successors. Additionally, her unselfish application of energy and creative efforts in modifying industrial and home environments for the handicapped has resulted in full employment of their capabilities and elevation of their self-esteem.

Lillian Gilbreth's life, as lived joyously, fully, and generously, was one of activity for good. She died on January 2, 1972; until the day of her retirement, past ninety, in December 1968, she remained a doer and a worker wishing always to find the best way and to share her best.

