

Reorganizing systematic work

While the motion study work of the Gilbreths is commonly linked with Frederick Taylor's time studies and grouped within the various "laws and principles" of scientific management, in actuality there is much difference between the two. The components of what originated as the "Taylor system" and later became scientific management, changed how workers were paid, introduced a new division of labor, and expanded and strengthened the role of management. The use of stop watches to measure and set the proper times for tasks was important, but only as part of the overall system. The Gilbreths' motion studies were more focused on how a task was done, and how best to eliminate unneeded, fatiguing steps in any process.

But within that singular focus was a wide range of expression. The Gilbreths' studied physicians and the way in which operations, and operating room procedures were organized. Although the results offered by Frank Gilbreth at a meeting of the American Medical Association in 1915 were ignored by the medical hierarchy, they resurfaced in the late 1930's, as the AMA embraced the value of motion study. The Gilbreths' recommendations about the organization of instruments laid out in regular and consistent patterns and the standardization of techniques for surgeries were eventually accepted by the medical practice.



In the aftermath of World War I the Gilbreths' studied ways in which amputees could be re-integrated into the work force. Lillian Gilbreth would return to this during the 1950's when she helped analyze the movements of mothers and housewives disabled by polio and other diseases, with the goal of making them as self-sufficient as possible.



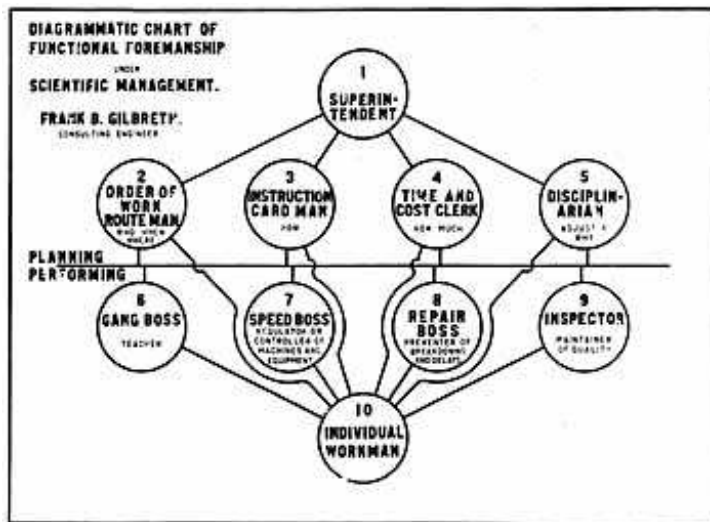
But the Gilbreths' primary focus was work, and workers. Reorganizing systematic work drew upon Frank Gilbreth's experience as a mason; it was also the most reliable source of income. Most manufacturers were interested in increasing profits while also keeping their workers happy, and the Gilbreths' system was designed to do both things.

Frank Gilbreth's early work in motion study consisted of re-organizing the typical work flow for bricklaying, and focused on eliminating unneeded movements. His solutions were simple but revolutionary to a trade that had changed little over 4,000 years; he brought the bricks closer to the mason, helped reduce the amount of bending and lifting required to lay and brick, and used a moveable scaffold to allow steady progress on the construction of brick buildings.

As the Gilbreths expanded the scope of their motion study from the trade of bricklaying to the manufacturing process as a whole, so did the influence of Lillian Gilbreth expand within their work. Her training in the nascent field of industrial psychology informed much of the Gilbreths' recognition of the

role of the worker in any work reorganization. Unlike Taylor, who held an antagonistic and patronizing view of the laborer of the day, both Gilbreths were more sympathetic to their concerns. Frank Gilbreth had belonged to a union and was disposed to consider that the cooperation of the worker was necessary if any "scientific" reorganization was to succeed. It is in large measure due to Lillian's influence and training that the Gilbreths' form of scientific management always had a more developed view of the worker, and his or her interests, than Taylor's simplistic view of a worker as driven solely by pay.

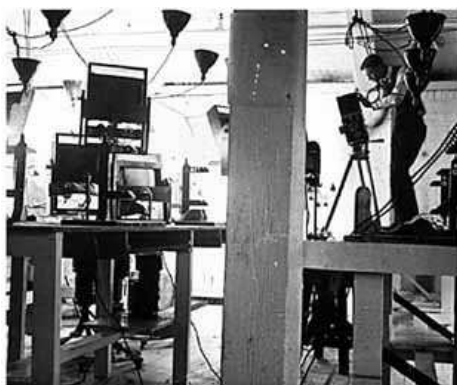
Frank Gilbreth's early motion study technique, used during his analysis of bricklaying, relied on a visual study of the work, laid out in detailed pictures and notes. Very soon, however, Gilbreth was using photography as a documenting tool to aid his visual memory. From there he began to use a stereoscope camera to record the differing positions of workers as they completed a task. It was only a short step from sequences of stereoscopic images to using motion picture film and cameras to record the entire sequence of a work activity.



The Gilbreths' only complete installation of scientific management, at the New England Butt Company during 1913-14, relied heavily on the use of cameras to record work process in order to eliminate unnecessary and inefficient movement. The resulting "micro-motion" films, as Frank Gilbreth dubbed them, served two purposes. One was as the visual record of how work had been done, and the Gilbreths and their team studied these films in order to make improvements.

The micro-motion films also served the purpose of training workers; after

instituting new procedures for work practices, the Gilbreths would then film a number of workers performing the same task. They would winnow these films down to the best workers, or select individual clips representing a particularly "best way" to perform one step in the work process. These films would be screened both for workers and management, and narrated by Frank Gilbreth, went a ways towards securing the cooperation of the workers.



One can only imagine the effect of the Gilbreth operation on a group of workers in a factory during the second decade of the twentieth century. Motion picture technology, though widespread, and available as cheap entertainment, is certainly not known for taking as its subject common laborers and their tasks. But there, appearing on the factory floor, are motion picture cameras, and technicians, and

Frank Gilbreth, director. Compared to Frederick Taylor's solitary man with a stopwatch, the Gilbreths' enterprise seems more like a circus. If both systems were designed to return the same result - more efficient work in less time - the Gilbreth system had the advantage of treating the worker far differently. Peter Leibhold, project specialist at the Smithsonian's National Museum of American History, theorizes that the effect of all this was to make the worker feel like a "star."

Source: European Telework Development, Italy <http://www.telelavoro.rassegna.it/>

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