

Primary Source Analysis on the Films of Frank Gilbreth

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Frank B. Gilbreth was one of the well-known popularizers of the scientific ways of management. He had worked under the leadership of Fredrick W. Taylor, a very successful innovator and contractor. Taylor was well known for estimating the efficiency of his workers by determining the time they took to perform a task. This approach, however, brought about a lot of conflict between his management and the workers. The situation led to Frank Gilbreth looking into better management solutions that could resolve the worker-management strife. As a result, Frank Gilbreth and his wife, Lilian Gilbreth, made hundreds of films with the aim of documenting and analyzing the workers' efficiency. The primary purpose of the films was a "quest for the one best way" for any given employee to do any given job. Frank Gilbreth and his wife Lilian created the films between the years 1912 and his death in the year 1924. Some of the films by Frank Gilbreth can be found at Purdue University and the Library of Congress (Curtis 85).

Rationalization and Specialization of Labour

The scientific management approach swept through America mostly during the 20th century as industries tirelessly made reforms to improve on production efficiency. One of the crucial aspects that required the industrialists' attention was the rationalization and specialization of labor. Taylor's "time study" was proved to be ineffective and inaccurate in the attempt to assuage the social and economic conflicts in the industries. Frank Gilbreth came up with the "motion study" approach that made use of pictures, films, and other visual technologies to bring about scientific solutions to the industrialists. The motion study approach is appreciated by many as a breakthrough in studying the work efficiency of employees. This approach not only solves management disputes but also increases work efficiency and eliminates waste (Curtis 87).

Collection of Data

The most significant idea created by Frank Gilbreth in his use of films and photographic technology was how this technology could be used in the extraction of analytical workers' data. To determine how films were used to provide relevant information, I had to critically and closely view the Gilbreth films and their areas of application. The main question I had to ask myself was what work was accomplished by this form of film technology. To start with, Frank Gilbreth performed what he termed a "micro-motion study," through which he documented and measured the tasks performed by a worker. For instance, if Gilbreth filmed a worker collecting and organizing bricks, he would subject the

film to repetitive viewing to determine the kind of tasks and duration of movement performed by the worker's left hand. He could then perform the same procedure for the right hand and record all the findings on a data sheet. He could then analyze the data he had gathered into what he referred to as a "simultaneous motion chart," which could mathematically carry out comparisons between the workload of the right and left arms (Gilbreth and Lillian 18). If, in any case, the work done by the two arms was not equal, Frank Gilbreth could come up with ways to symmetrically divide the tasks equally between the two arms (Curtis 90). Evidently, this idea helped to reduce fatigue and improve productivity.

Improve Productivity and Promotions

Frank Gilbreth and his wife Lillian also embraced the use of photographic technology to improve productivity and promotions in the industry sector. The methodology works best for both the managers and the workers. Frank Gilbreth's films helped both the trained and the untrained achieve their targets. The most prominent achievement of Gilbreth films in improving productivity is that they were able to standardize the object under study. Contrary to Taylor's time study approach, which required the managers and experts to conduct as many time study tasks as possible as the employee worked, the films recorded the worker's most perfect performance, and the record was used as the standard object of study (Curtis 94). Taylor's time study approach faced some drawbacks, such as the dynamic human interaction variables and inaccuracy regarding the expert's timing techniques. The standardized workers' performance films could then be used by the managers to conclude promotions and ways by which to improve productivity (Gilbreth and Lillian 27).

Problem-Solving

Another theme illustrated in Frank Gilbreth's films is the use of photographic media to perform problem-solving tasks. According to Gilbreth, the micro-motion study was a beneficial way of resolving problems. The filming and recording of worker movements by the use of photographic and cinematographic technology were essential to the experts, managers, and workers as they statistically formulated an efficient operational environment. Gilbreth contributed towards industries adopting a very productive work design that included the use of formal scientific management skills. However, the application of motion study in a firm does not guarantee its success. The purpose of films is to only act as secondary sources of information that display the vulnerabilities and problems in the work design. The films help the managers and experts generate a graphical representation of what is useful and ineffective to the production of the firm (Curtis 96).

Visualization

Visualization also stands out as one of the significant achievements that Frank Gilbreth made through

the scientific management approach. According to Lilian Gilbreth's, visualization is the process of analyzing the present to come up with future solutions. However, only the trained personnel could be used to observe and visualize future events. Through this technique, Frank Gilbreth's films represent the manager-worker hierarchy. The article by Curtis states that the ability to see and visualize is what primarily distinguishes between a regular worker and a manager. A section of Lilian Gilbreth's "The Psychology of Management," published in 1914, illustrates her idea of a master planner. She indicates that observation was the first step to visualization, and the art of the observer imagining was ideal for the visualization process (Gilbreth and Lillian 40).

Through visualizations, the industry experts were able to come up with excellent work designs that favored both the managers and workers. An excellent example of the use of images and films by Frank Gilbreth is the cycle graphs. Cycle graphs were images of workers as they carried out their activities with small incandescent bulbs on their fingers. These images helped Frank Gilbreth determine the duration and direction of the worker's tasks through a process he termed "chronocyclegraphs." Frank Gilbreth first applied his photographic technology and scientific management approach at the New England Butt Company. He laid cameras to aid in the analysis of job duration, conditions, and motions (Curtis 100).

Despite the success of the industrialists and reformers, he faced numerous challenges in his revolutionary work. First, the lighting properties of his films and images were inferior. Most of them have a white background that produces excess light, making them uncondusive for study. Secondly, some of his analyses were just mere estimates. For example, despite tilting the camera to an appropriate angle, Frank Gilbreth could not accurately measure distance. However, this technology also had some strengths, such as the chronometer that was placed on the camera to measure time accurately. In conclusion, the original films of Frank B. Gilbreth brought about a significant resolution in reducing the socioeconomic conflicts between managers and workers through the strategies evident in this paper.

Works Cited

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