Rediscover Work Simplification

By Ben B. Graham

Work Simplification has generated billions of dollars through effectiveness and efficiency for organizations that focused on their people and gave them tools for continuous improvement. Over the past two decades, the glamour of electronics has seduced many organizations into treating their people as expenses rather than resources. For those organizations whose leaders truly believe that their people are their most valuable resource, the tools of Work Simplification are still available – and better than ever.

In 1946, ASME did something that was even then a long time in the making. They established a set of symbols as the ASME Standard for Operation and Flow Process Charts. Twenty-five years earlier Frank and Lillian Gilbreth had presented "Process Charts - First Steps in Finding the One Best Way" at the Annual Meeting of ASME in 1921. By the time the symbols were standardized they had evolved into a solid set of five symbols that covered every aspect of work, in any work environment, that can be used with very little confusion. The first process charts appeared as a series of symbols strung down a page in sequential order. This was (and still is) a simple and effective way to track the flow of a person or a piece of material through a work process.

○ **Operation**. An operation occurs when an object is arranged or prepared for another step, assembled or disassembled or intentionally changed.

⇨ **Transportation**. A transportation occurs when an object is moved from one location to another.

□ **Inspection**. An inspection occurs when an object is verified for quality or quantity in any of its characteristics.

D **Delay**. A delay occurs when an object waits for the next planned action.

▽ **Storage**. A storage occurs when an object is kept and protected against unauthorized removal.

In practice, the operation symbol is filled in □ when representing an intentional change to an object. This way, the "value–added" steps stand out. Frank Gilbreth used this symbol and referred to it as the "Do Operation".

In 1932 Allan Mogensen founded Work Simplification, which is defined as the organized application of common sense. Mogensen used the process chart (among other tools) to organize and study work and he drew upon the common sense of the people who did the work for improvement ideas. Mogensen defended participative improvement with these words, *"The person doing the job knows far more than anyone else as to the best way of doing that job, and therefore is the one person best fitted to improve it."* It is this human element of work simplification that distinguishes it from most other improvement techniques. It is predicated on people who do the work being involved in the work improvement. It does not treat people, products and information as inputs and outputs, using accounting terminology. It regards people as a treasured resource, the safekeepers of the Corporate (or organizational) memory, which is the most vital factor in successful continuous improvement! Mogensen described the process chart as follows. *"In order to achieve measurement, tools are needed and the most important of these is the process chart." "The process chart is the lifeblood of work simplification. It is an irreplaceable tool. It is a guide and stimulant. It takes time to properly utilize but there is absolutely no doubt that it works."*

Mogensen began conducting Work Simplification Conferences at Lake Placid in 1937 and continued them for nearly 50 years! (Lillian Gilbreth was part of the original staff returning each year until the mid sixties.) Ben S. Graham was a student at Mogensen's 1944 Conference. He was unique in his class in that he did not come from a manufacturing environment. He learned the methods of work simplification and adapted them from the machine shop into the office while directing the paperwork simplification effort at The Standard Register Company. There he developed the horizontal process flow chart to accommodate multiple information flows. He also embraced an employee team approach to process improvement which is summarized in this statement he made in 1958. *"Participation by the worker in developing the method eliminates many causes of resistance and assures enthusiastic acceptance. This is more important than all the techniques put together."* He subsequently joined Mogensen's staff as the resident expert in paperwork simplification.

Graham also introduced two variations of the operation symbol that were incorporated into a revised ASME Standard in the early 70s. They are used to show "value-added" steps in information processing.

- **Origination**. An origination represents the creation of a record or a set of papers.
- **Add/Alter**. An add/alter represents an addition or change of information on an existing record or set of papers.

A few of the organizations that have embraced work simplification in the past include Texas Instruments (Former CEO Pat Haggerty described work simplification as "TI's most effective program for fostering personal involvement at all levels of the organization while yielding tangible benefits to the company."), Maytag (Former CEO Daniel J. Krumm stated "Work Simplification plays an integral part in Maytag's total cost-reduction efforts and makes a significant contribution year after year."), Procter & Gamble (In 1983, realized nearly 1 billion dollars in first year savings as a result of work simplification), Ford (Ford-Connersville annual first year savings increased from $400,000 to $10 million during 11 years of applying work simplification. Savings in administrative processes grew from $820,00 to 1.5 million in 3 years.), Standard

Register (Introduced work simplification to the office environment, the first to offer business process improvement to clients to support the sales of new information systems), and the US Navy (Over a period of 14 years, about 250 projects produced a typical annual return over $150,000 per project.)

These days, processes change so fast that many organizations have failed to keep up. Their work is undocumented and as changes are made the complexity mounts. The simple and effective approach of Work Simplification has more to offer than it ever had. However, its use is not widespread. It appears that many organizations are focusing their attention on purchasing solutions for their business rather than mastering their work themselves. Where the purchased solutions lead to downsizing, the corporate memory is discarded leaving the organization dependent on those from whom they purchased their processes.

The Work Simplification approach utilizes the corporate memory rather than discarding it. It counters increasing complexity with continuous improvement and enables the work force to be the masters of their processes. It is on the program at many universities and it is being applied in increasing numbers of organizations across the US and Canada; in South America, Europe and Australia as these companies seek to regain control of their operations.

New methods for studying work are introduced on a regular basis. Usually they focus effectively on one or another aspect of improvement but they often fail because they do not deal rigorously with the work itself. This is a good time to look back and discover again a simple tool that visually displays processes in a universal language that can be readily understood by anyone who wants to understand.

Today, if you are pursuing six sigma or lean manufacturing; if you are using kaisan or value stream mapping, if you are managing your supply chain, developing a b2b strategy, establishing an electronic commerce presence, managing day to day internal operations or documenting your processes for certification or audit, understanding the fundamental steps in your work processes will help you get those things done. Work Simplification helps you get there…faster, cheaper and better!

Suggested Reading

Mogy, an Autobiography
Allan H. Mogensen with Rosario 'Zip' Rausa
Idea Associates, Chesapeake, VA, 1989

Common Sense Applied to Motion and Time Study
Allan H. Mogensen
McGraw-Hill Book Company Inc., New York, 1932

Work Simplification for Improved Business Controls and Operation of All Functions
Reprint of a series of articles from "Paperwork Simplification"
Ben S. Graham
The Standard Register Company, Dayton, OH

Process Charts - First Steps in Finding the One Best Way to do Work
Frank B. Gilbreth and Lillian M. Gilbreth
Presented at the Annual Meeting of The American Society of Mechanical Engineers, New York, 1921

Process Charts
ANSI Y15.3M - 1979
American National Standard
The American Society of Mechanical Engineers, New York, 1980

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