

Early Works in Management

Written by **Dr Prince Eferé** – for Trans-Atlantic College, London

Contents of this Paper

1. *Introduction*
2. *Pioneers of Modern Management*
3. *The Classical School*
4. *NeoClassical (transitional) School*
5. *The Behavioural School*
6. *Conclusion*
7. *Self-Assessment Questions*

1. Introduction

Modern management as we know has evolved over many years. Management has become one of the most important areas of knowledge at present, which permeates into many different subjects in human endeavour.

Although management principles are said to have been applied in different parts of the world as early as 5,000 years ago, this paper will examine only a few of the early works and contributors in **modern** management.

2. Pioneers of Modern Management

Although management contributors under the Classical School are usually considered as the earliest management theorists, there are several other contributors that predated those of the Classical School. Some of these pioneers of modern management are examined below.

(a) **Robert Owen (1771 – 1858)**

Robert Owen was born in Newtown, Montgomeryshire in Wales, United Kingdom, to Robert Owen (Snr) who was a saddler, ironmonger and the postmaster of the village. Influenced by both his father and brother who were both saddlers, Robert Owen worked as an apprentice saddler with several people and later established his own business and in 1790,

formed partnership business with two other Scotsmen James McConnell and John Kennedy. In 1792, he was appointed as the manager of the Piccadilly Mill, a spinning factory owned by Mr Peter Drinkwater, where he became well known for his efficiency and outstanding management skills.

Robert Owen was considered as kind man, who treated his staff very well. He kept proper business records and the business became successful.

Some of Robert Owen's contributions to management are he:

- Showed respect and dignity towards the staff
- Introduced better working conditions
- Raised the minimum wage for child labour, as he also started working at a grocery shop at the age of 9 years
- Reduced working hours
- Provided meals for his staff.

Though he had no known formal university education, he studied very widely on his own.

(b) **Andrew Ure (1778 – 1857)**

Unlike Robert Owen, Andrew Ure was very well educated and became known as one of the first person to provide **formal teaching of management principles** at Anderson's College in Glasgow, Scotland.

Andrew Ure was born in Glasgow and studied medicine at the University of Edinburgh. He worked as an army surgeon and later settled in Glasgow, where he became a member of the Faculty of Physicians and Surgeons in 1803. He was later appointed as Professor of Natural Philosophy (specialising in Chemistry and Physics) at Anderson's College (now the University of Strathclyde) in Glasgow.

He introduced a framework for the formal teaching of management principles.

(c) **Charles Babbage (1791 – 1871)**

Another great contributor in the development of modern management is Charles Babbage. The exact place where Babbage was born is unclear, but some believe that he was born in Walworth (Surrey), now London. Others think that he was born in Teignmouth in Devonshire. His father was Benjamin Babbage (a banker) and his mother was Elizabeth Teape.

Charles Babbage first attended Trinity College but later transferred to Peterhouse College, University of Cambridge and graduated with an MA in Mathematics in 1817. He was elected a fellow of the Royal Society and later became a Lucasian Professor (chair) of mathematics at the University of Cambridge from 1828 to 1839, a post that was previously held by Issac Newton.

Some of the many contributions of Charles Babbage are:

- He developed a detailed plan for the 'Calculating Engine', the 'Difference Engine' and the 'Analytical Engine'. It was these principles that led to the invention of the computer. Thus, he is known as the father of computing. He could not complete the

building of the machine himself because the government refused to fund the project.

- His scientific principles also led to the development of the study of a branch of management called operational research, which is the quantitative aspects of management.
- He developed mathematical code breaking
- He also developed mortality tables, which are still used by the life assurance industry.
- In 1826 he also developed the table of logarithms from 1 to 108000
- He founded the Astronomical society in 1820, the British Association for the Advancement of Science in 1831 and the Statistical Society in 1834.

He later lived and died in London.

(d) Augusta Ada Byron (Lady Lovelace) – (1815-1852)

Born in Piccadilly, London, Augusta Ada Byron was the daughter of a famous poet Lord George Gordon Byron and her mother was Anne Isabelle Milbank (Lady Byron), a mathematician. Ada married William King, the Earl of Lovelace, so became the Countess of Lovelace (Lady Lovelace).

She became interested in mathematics and when at the age of seventeen, she was introduced to Mrs Mary Somerville, a translator (who encouraged Ada in her mathematics studies) Ada was even more determined to study.

She was particularly excited when she heard about Charles Babbage's work on 'calculating engine', 'difference engine' and 'analytical engine'. What happened was that in 1841, Babbage had reported his developments at a seminar in Turin, Italy. An Italian named Menabrea then summarised and published Babbage's work in French. Inspired by what she had learnt, Ada translated Menabrea's summary into English and added her own notes, which included a prediction that Babbage's engine, if developed, could:

- Compose complex music
- Produce graphics
- Can be used for both practical and scientific purposes

Ada later suggested to Babbage on writing a plan on how his futuristic engine might calculate Bernoulli numbers (these are certain very important sequences in mathematics, that were developed by Jakob Bernoulli (1654- 1705). Basically, though unknown to her, Ada developed the world's first computer software.

In recognition for her contributions, the US Department of Defence developed a computer software in 1979 and named it 'Ada'.

Ada died at the age 36.

3. The Classical School

Writers discussed under the classical school are the most talked about early contributors in modern management. The general emphasis under the classical theories is that of efficiency, bureaucracy, scientific and administrative management. An overview of some of the contributors and their work is provided below.

(a) Henri Fayol (1841-1925)

Henri Fayol, a French industrialist is regarded as the founder of the classical school and modern management in general. He developed the framework for the study of management, as he was the first to investigate into managerial behaviour and provided a systematic approach to management study.

Fayol believed that such a formal, systematic and organised approach to management, combined with scientific forecasting was bound to yield positive results for the organisation. He also established his 14 Principles of Management, which are discussed in the chapter on Principles of Management.

Henri Fayol laid down the foundation for further works in the development of management. His contributions are generally referred to as Administrative Management.

(b) Frederick Winslow Taylor (1856-1915)

Frederick W Taylor is the originator of the Scientific Management Theory. Taylor designed work methods and broke down the different aspects of the job into smaller components. He then timed the workers to see how long it would take each of them to complete a component of the job. They were then promised that the quicker and more components they completed the more wages they were paid. The result was a staggering increase in productivity of the workers at the Bethlehem Steel Company, where he carried out his time and motion study.

Basically, Taylor believed that humans are rational people ("the rational man") who are motivated by money and economic needs.

More discussion on Frederick W Taylor can be found in the chapter on Motivation and Job Satisfaction.

(c) Frank Gilbreth (1868 – 1924) & Lillian Gilbreth (1878 – 1972)

This was a husband and wife team, and were associates of Frederick Taylor. Frank Gilbreth, who was a bricklayer, building contractor and management consultant was born in Fairfield, Maine, USA. He was a lecturer at Purdue University. While his wife Dr Lillian Gilbreth was born in Oakland, California. She studied literature and then psychology at the University of California and Brown University. Like her husband, she also lectured at Purdue University, where she became a professor of management.

Frank Gilbreth was particularly interested in standardisation and simplification of work methods. In the construction industry, he noticed that all the workers used different techniques in laying the bricks. Thus, he sought to standardise and improve bricklaying techniques. By using a camera to film and monitor the time each worker took to complete the required task, in the "time and motion study", and improving work methods, output was increased from 1,000 to 2,700 bricks per day. He also invented improved scaffolding techniques.

Lillian Gilbreth is known as the first lady of management. After her husband died, she continued the work they started and contributed enormously to the development of management thinking.

- She designed an ideal kitchen layout for people with disability, particularly those with heart disease.
- She contributed to the development of time management
- She was among the first to recognise the effects of fatigue and stress on time management
- With her husband, they created job standardisation, job simplification and incentive wage plans
- She was the first female member of the American Society of Mechanical Engineers
- She also became the first female professor of the school of engineering.

The Gilbreths founded the management consultancy firm called the Gilbreth Inc.

(d) **Henry L. Gantt (1861 – 1919)**

Another contributor to the classical theories of management is Henry Gantt, who is known for the invention of the **Gantt Chart**. The Gantt Chart is a graphical representation of the duration of tasks against the progression of time.

Thus, Gantt Charts are useful tools for planning and scheduling projects in the following ways:

- It allows you to assess how long a project should take
- It lays out the order in which tasks need to be carried out
- It helps to manage the dependencies between tasks
- It determines the resources needed

Henry Gantt introduced minimum wage, a pay incentive system and bonus schemes for people on fixed wages. His emphasis was to reward the hardworking, rather than penalising the lazy workers. Quality of leadership and management was also important to Gantt.

(e) **Max Weber (1864-1920)**

Also known as the founder of modern sociology, Max Weber is recognised for the contribution of the **Principles of Bureaucracy** in management.

Weber asserts that a bureaucratic organisational structure was the most sensible and logical management structure for large organisations. He said that such structures are derived from legal or rational authority that is based on law, regulations, rules, procedures, etc. Thus, he feels that the authority of superiors over their subordinates are derived from legal authority.

However, Max Weber feels that for bureaucracy to be efficient, it: -

- Has clearly defined and specialised functions,
- Should use legal authority,
- Is hierarchical in structure;

- Has written rules and procedures,
- Has technically trained bureaucrats,
- Appoints people to certain positions based on technical expertise,
- Has a promotional system that is based on competence,
- Has clearly defined career paths for the employees.

4. NeoClassical (transitional) School

The following contributions to management are known as those who belong to the neoclassical (transitional) school, as their theories seem to be in the midway between those of the classical school and those of the behavioural school.

(a) Mary Parker Follett (1868-1933)

Her work referred to as administrative management, Mary Follett's contributions generally emphasises the need for an integrated organisational system, where people worked as a team or group. She feels that this will lead to more productivity and greater job satisfaction, rather than the 'solo worker' scientific management theory of Frederick Taylor. She advocated:

- employee empowerment
- flatter organisational structures
- constructive use of conflict in management and staff relations

Follett believed that labour harmony could be achieved by the proper use of conflict. That there are four major ways of resolving conflict, namely:

- a) the voluntary submission by one party
- b) a victory of one party over the other
- c) a compromise; and
- d) an integration – which is finding a solution that satisfied both parties, without either a compromise or a domination.

She favoured the last method. She also believed that a leader in a group situation normally influences the group and is also influenced by the group.

Mary Follett also developed the concepts such as:

- The universal goal,
- The universal principle, and
- The law of the situation.

The **universal goal** of organisations is a combination of individual efforts that work towards the same goals of the organisation.

The **universal principle** is that there should be a circular or reciprocal response in organisational activities and communications. Basically, she advocated a feedback (control) system in the organisation.

The **law of the situation** is there is no single best way of doing things in management, and that the particular situation will dictate what to do.

(b) Chester I. Barnard (1886-1961)

Another transitional work in management was produced by Chester Barnard who became president of the New Jersey Bell Telephone, USA in 1927.

In his book **“Functions of the Executive”**, Barnard stated that as much as people seek to satisfy their individual needs, in the course of pursuing the organisational goals, they also like to work together in the organisation, in order to achieve things, objectives or goals, they could not achieve, by working on their own.

Chester Barnard also highlighted the extent to which managers’ instructions are accepted or adhered to by their staff. He then developed the concepts of **strategic planning** and the acceptance theory of authority.

The acceptance theory states that the degree of authority that a manager can exercise, depends on how much employees are willing to accept it. Thus, he states that the extent to which employees are willing to accept an authority is dependent on the following factors:

- The staff understand exactly what management want them to do,
- The staff are physically able to carry out the instructions,
- The staff believe that the instructions are in line with the organisational goals and objectives,
- The staff believe that the instructions are not contrary to their personal goals and objectives.

The theory adds that every employee has what is known as a **“zone of indifference”** within which they will be willing to accept instructions without challenging authority. Therefore, the level of acceptance of authority would increase, if management could devise strategies to induce the staff, in order to broaden the employee’s zone of indifference.

Barnard stated that there were three main functions of the executive, namely:

- To establish and maintain effective communication systems in the organisation;
- To employ and retain capable and efficient staff; and
- To motivate the staff.

5. The Behavioural School

The behavioural theories of management developed primarily because it was felt that the classical approach focussed too much on systems and focussed too little on the people (the workers) themselves. This, it was felt, was leading to workplace disharmony and insufficient productivity of the organisation, as managers continue to encounter frustration and difficulties, because the workers are not always willing to perform as managers predicted.

The feeling basically was that the ‘people’ aspect of the organisation was ignored by the classical school.

(a) Human Relations Movement

The human relations movement emerged from the behavioural school as it was felt that the best way to foster employee harmony and to increase productivity in the organisation was for managers and their staff to interact to create a good relationship; and that the opposite, would lead to demoralisation and inefficiency in the organisation.

Elton Mayo (1880-1949)

Elton Mayo is one of the pioneers of the human relations movement, and created the concept of "**social man**".

By using scientific methods, Mayo carried out his famous Hawthorne studies at the Hawthorne Plants of the Western Electric Company in Chicago. The conclusion from the Hawthorne experiments is that employee performance increased where:

- Workers had good relationship within themselves and with management
- Workers worked in groups, rather than working on their own
- There was recognition for the good work that they do.

Elton Mayo and his colleagues are known as **human relations theorists**.

A more detailed discussion of Mayo's research can be found in the chapter on Motivation and Job satisfaction.

(b) **Behavioural Scientists**

As an extension of the research by Mayo and his colleagues, other researchers with formal training in psychology, sociology and anthropology carried out much more sophisticated scientific research into human behaviour and productivity at work. These researchers became known as **behavioural scientists**.

Some of the best-known **behavioural scientists** are:

- (i) Abraham Maslow
- (ii) Douglas McGregor
- (iii) Frederick Herzberg
- (iv) Clayton Alderfer
- (v) David C. McClelland

All of these are examined in great detail in the chapter on motivation and job satisfaction.

Kurt Lewin (1890 – 1947)

Referred to as the founder of modern social psychology, another behavioural scientist whose contributions have greatly influenced management is Kurt Lewin. He was born in Mogilno in Prussia Germany (now part of Poland). After studying several different areas, including biology and psychology, Lewin completed his doctorate degree (PHD) in 1916 at the University of Berlin, specialising in experimental study of associative learning. He served as a lieutenant in the German army during the First World War. Kurt Lewin moved to the Stanford University, USA as a visiting professor in 1932, where he published several books.

One of his most important contributions in management studies is his "**field theory**". Lewin's field theory is that human behaviour is determined by the totality of the individual's situation, and that there are a whole range of mutually interdependent factors that influence this behaviour. To be precise, the theory states that human behaviour or actions are influenced by the individual psychological traits and the environment or surroundings that he finds himself.

Lewin's theory has influenced several other actual field researches on human behaviour.

Conclusion

There is no doubt that those modern management contributors continue to influence management theory and practice in our day.

Self-Assessment Questions

- 1. To what extent does the classical school differ from the behavioural school?*
- 2. Do you think these early writers have made significant contributions in the study of management?*
- 3. How important do you think are the contributions of the pioneers?*
- 4. Which of the writers do you think made the most significant contribution? Justify your answer.*