People have been managing work for hundreds of years, and we can trace formal management ideas to the 1700s. But the most significant developments in management theory emerged in the 20th century. We owe much of our understanding of managerial practices to the many theorists of this period, who tried to understand how best to conduct business.

Frederick Winslow Taylor was born on March 20, 1856, in Germantown, Philadelphia, Pennsylvania, USA. He was a mechanical engineer. He is a Father of Scientific Management. And also, he popularized as Father of Industrial Engineering and Efficiency Movement. Besides, he contributed to the different works, for example, managers and workers, rhetorical techniques, scholarly debate about increased efficiency moving pig iron at Bethlehem’s Iron and Steel, management theory, relations with ASME (American Society of Mechanical Engineers). He published several books, for instance,

1. Shop Management (1903),
2. The Principles of Scientific Management (1911),
3. A Treatise on Concrete, Plain, and Reinforced: Materials, Construction, and Design of Concrete and Reinforced Concrete (1911)
4. Concrete costs (1912)

And wrote some of the articles, such as

1. Notes on Belting (1894) in Transactions of the American Society of Mechanical Engineers, Vol. XV
2. A Piece-rate System (1895) in The Adjustment of Wages to Efficiency
3. Shop management (1903) in Transactions of the American Society of Mechanical Engineers 24

Finally, he died on March 21, 1915 (aged 59) in Philadelphia, Pennsylvania, USA.

He started the Scientific Management movement, and he and his associates were the first people to study the work process scientifically. They studied how work was performed, and they looked at how this affected worker productivity. Taylor’s philosophy focused on the belief that making people work as hard as they could was not as efficient as optimizing the way the work was done.

In 1909, Taylor published "The Principles of Scientific Management." In this, he proposed that by optimizing and simplifying jobs, productivity would increase. He also advanced the idea that workers and managers needed to cooperate with one another. This was very different from the way work was typically done in businesses beforehand. A factory manager at that time had very little contact with the workers, and he left them on their own to produce the necessary product. There was no standardization, and a worker's main motivation was often continued employment, so there was no incentive to work as quickly or as efficiently as possible.
Taylor believed that all workers were motivated by money, so he promoted the idea of "a fair day's pay for a fair day's work." In other words, if a worker didn't achieve enough in a day, he didn't deserve to be paid as much as another worker who was highly productive.

With a background in mechanical engineering, Taylor was very interested in efficiency. While advancing his career at a U.S. steel manufacturer, he designed workplace experiments to determine optimal performance levels. In one, he experimented with shovel design until he had a design that would allow workers to shovel for several hours straight. With bricklayers, he experimented with the various motions required and developed an efficient way to lay bricks. And he applied the scientific method to study the optimal way to do any type of workplace task. As such, he found that by calculating the time needed for the various elements of a task, he could develop the "best" way to complete that task.

These "time and motion" studies also led Taylor to conclude that certain people could work more efficiently than others. These were the people whom managers should seek to hire where possible. Therefore, selecting the right people for the job was another important part of workplace efficiency. Taking what he learned from these workplace experiments, Taylor developed four principles of scientific management. These principles are also known simply as "Taylorism".

**Scientific Management Theory**

Scientific management theory is a theory of management. It synthesizes and analyzes workflows. Its major purpose is improving especially labor productivity, economic efficiency. It was an old effort which is to apply science to the engineering of the procedure and to management. However, there is a given a definition. For example:

*Scientific Management is an art of knowing exactly what you want your men to do and seeing that they do it in the best and cheapest way.*

— Frederick W. Taylor

Firstly, its name adopted as "shop management" and "process management", then took this name. Its other name is Taylorism or Essentials of Scientific Management or Aspects of Scientific Management. Although Taylor is a pioneer of this theory, another seven leaders extended Taylor's effort. They were Henry Laurence Gantt, Carl Georg Lange Barth, Horace King Hathaway, Morris Llewellyn Cooke, Sanford Eleazer Thompson, Frank Bunker Gilbreth, and Harrington Emerson.

**Features of Scientific Management**

According to Taylor, we can find some important features in Scientific Management Theory. Here has described those important features. Such as:

- **Universal**: Its principles are applicable to all kinds of organizations, business, non-business, and all levels of management. Therefore, they are all-pervasive or universal.
- **Flexible**: Here available some flexible features. For example, dynamic guidelines, non-static rules, sufficient room for managerial discretion, Modification and improvement
- **Cause & Effect Relationship:** It indicates what will be the result of particular actions. So, if one is known, the other can be detected.

- **Aims at Influencing Human Behavior:** Human behavior is not simple and predictable. It always tries to deal with human behavior so that employee can able to give the best result.

- **Equal Importance:** For achieving the goal of the organization, we have to give equal priorities to all things. These principles are the best examples of equal importance.

- **Scientific Selection, Training, and Development of Workers:** In the organization, workers must select, train and develop through scientific way.

- **Equal Division of Responsibility between Management and Workers:** Each business environment has to ensure the equal division of responsibility between management and workers.

**Techniques of Scientific Management**

For ensuring any method or process, need proper technique. Principles of scientific management theory by Taylor have effective techniques to implement. There are included those techniques. Such as:-

1. Work-Study (time study, method study, motion study, and fatigue study)
2. Development of Functional Foremanship
3. Standardization of Tools and Equipment
4. Scientific Selection, Placement, and Training
5. Introducing Costing System
6. Mental Revolution

**Objectives of Scientific Management**

The major objectives of Scientific Management Theory by Taylor are a maximum improvement of workers. This improvement shows on efficiency and effectiveness performance. Such development is the revolution in management procedure and employee’s actual performance.

If the procedures and principles of scientific management theory by Taylor apply, it can huge change on the following things. For instance:-

- Prevent the wastage of time.
- Reduce the cost of production.
- Secure the labor in industry.
- Increase the efficiency of the workers.
- Develop the relationship between workers and managers.

**Principles of Scientific Management**

Frederick Winslow Taylor mentioned core principles of management in his *Principles of Scientific Management* book. These principles refer to the scientific management theory by Taylor. Such as:-

1. **Science, not the Rule of Thumb:** The basic principles of scientific management theory by Taylor is the adoption of a scientific approach to decision making. Even abandons the all unscientific approach from managerial activities. So, we can say that these principles suggest *thinking before doing.*
2. **Harmony, not Conflict**: An organization constitutes by two groups i.e. ‘workers’ and ‘management’. They must create the ‘Give and Take’ relationship in the workplace. Therefore, Taylor emphasized on Mental Revolution which means a change of attitude of both groups based on this principle. They should share the opinions and ideas of each other.

3. **Co-operation, not Individualism**: It shows the importance of each other (management and workers). Management should reward and appreciate the employees for their helpful suggestions. At the same time, employees also cooperate with the management for the improvement of the organization.

4. **Development of Each and Every Person to his/her Greatest Efficiency and Prosperity**: Employees should be properly trained and selected in a scientific manner. And it is essential for each organization. For implementing this task, Taylor arranged some techniques, for instance, work-study, time study, motion study, fatigue study and method study.

5. **Maximum, not Restricted Output**: Maximum productivity is the basic purpose of an organization. In this case, Taylor has emphasized the production maximization in his principles.

**Functions of Scientific Management**

From Taylorism, we can find some significant functions. These functions help positively the administrators in their organization's leading. Such as:-

- According to the skills and abilities, an employee must be selected.
- Incentives and wages have to install for enhancing their output and encouraging them.
- Implemented those methods which are based on the scientific tasks.
- Carefully observe on eradicating interruptions when plan runs.
- In an organization, leadership should develop and standard.

**Criticism of Scientific Management**

Although it appreciates in the organizational process, but it has severe criticism. The criticism of scientific management theory by Taylor divide into two categories.

**Workers Viewpoint**

- For increasing productivity, replace the machine instead of the man. Therefore, it may be an unemployment tool.
- Exploitation thinking arises in workers. Due to this they are not engaged in creative working.
- These principles enforce on over speeding in the work, resulting in adverse effect on the health of employees.
- Due to extreme specialization, the employees are not capable to take a drive on their own. Their position decrease mere cogs in the wheel. As a result, job becomes dull. Employees disappoint in working.
- Workers feel that these principles make to weak of Trade Union. So, workers don’t attract these principles.

**Employer’s Viewpoint**

- It is an expensive system.
- Here enforces on the work, study, standardization, and specialization. As a result, it is a time-consuming process.
- This procedure is one kind of deterioration of quality.
**Unit-1**

**Henri Fayol – Administrative Management Theory**

**Henri Fayol** (29 July 1841 – 19 November 1925) was a French mining engineer, mining executive, author and director of mines who developed general theory of business administration that is often called Fayolism. He and his colleagues developed this theory independently of scientific management but roughly concurrently. Like his contemporary, he is widely acknowledged as a founder of modern management method.

Fayol was born in 1841 in a suburb of Constantinople (current Istanbul). His father was an engineer in the military. The family returned to France in 1847, where Fayol graduated from the mining academy "École Nationale Supérieure des Mines" in Saint-Étienne in 1860.

In 1860 at the age of nineteen Fayol started working at the mining company named "Compagnie de Commentry-Fourchambault-Decazeville" mining engineer. He was hired by Stéphane Mony, who had decided to hire the best engineers from the Saint-Étienne Mining School. Fayol joined the firm as an engineer and trainee manager. Fayol succeeded him as manager of the Commentry Mine and eventually as managing director of Commentry-Fourchambault and Decazeville. During his time at the mine, he studied the causes of underground fires, how to prevent them, how to fight them, how to reclaim mining areas that had been burned, and developed a knowledge of the structure of the basin. In 1888 he was promoted to managing director. During his time as director, he made changes to improve the working situations in the mines, such as allowing employees to work in teams, and changing the division of labor. Later, more mines were added to his duties.

In 1900 Fayol became a member of the Comité Central des Houillères de France, member of the board of the Comité des forges and administrator of the Société de Commentry, Fourchambault et Decazeville. Eventually, the board decided to abandon its iron and steel business and the coal mines. They chose Henri Fayol to oversee this as the new managing director. Upon receiving the position, Fayol presented the board with a plan to restore the firm. The board accepted the proposal. When he retired in 1918, the company was financially strong and one of the largest industrial combines in Europe.

Based largely on his own management experience, he developed his concept of administration. In 1916 he published these experience in the book *Administration Industrielle et Générale,* (General and Industrial Management') at about the same time as Frederick Winslow Taylor published his *Principles of Scientific Management.*

**Henry Fayol’s Contribution to Management**

Henri Fayol Contributed in following areas of Management

1. Classification of business functions
2. classification of managerial functions
3. Qualities required in managers
4. General principles of management
1. **Classification of business functions:**

(i) Technical activities (relating to production and manufacturing)

(ii) Commercial activities (relating to buying, selling or exchange).

(iii) Financial activities (relating to search for and optimum use of capital i.e. finances)

(iv) Security activities (relating to protection of the properties and personnel of the enterprise)

(v) Accounting activities (relating to a systematic recording of business transactions, including statistics also).

(vi) Managerial activities (relating to functions of planning, organising, commanding, coordinating, controlling etc.).

![Activities of Industry Diagram]

**Fig. 2.1: Division of the Activities of Industrial Organisations**

2. **Classification of managerial functions:**

   In the following excerpt from *General and Industrial Management*, Fayol identifies five functions of management

   ‘To manage is to forecast and **plan**, to **organize**, to **command**, to **coordinate**, and to **control**. To foresee and provide means examining the future and drawing up the plan of action. To organize means building up the dual structure, material and human, of the undertaking. To command means maintaining activity among the personnel. To coordinate means binding together, unifying, and harmonizing all activity and effort. To control means seeing that everything occurs in conformity with established rule and expressed command.’

1. **Planning:** Managers should draft strategies and objectives to determine the stages of the plan and the technology necessary to implement it.

2. **Organizing:** In addition to planning Managers must organize and provide the resources necessary to execute said plan, including raw materials, tools, capital, and human resources.

3. **Command (Delegation):** Managers must utilize authority and a thorough understanding of long-term goals to delegate tasks and make decisions for the betterment of the organization, encourage and direct personnel activity.
4. **Coordination**: High-level managers must work to integrate all activities to facilitate organizational success. Communication is key to success in this component.

5. **Controlling/Monitoring**: Managers must compare the activities of the personnel to the plan of action. This is the evaluation component of management ensures that personnel follow management’s commands.

3. **Qualities required in managers**

Fayol was the first person to identify the qualities required in a manager. According to him, there are six types of qualities that a manager requires. These are as follows:

(i) **Physical** - The manager as a leader should be healthy and free of any chronic disease that could hinder his work. He should have vigor and dynamism. He should have good communication skills both spoken and written. He should be skilled and tactful in handling situations. He should be able to discharge his duties untiringly. They are high-achievers, energetic and maverick.

(ii) **Mental** - Manager’s mental quality refers to those related to the mind or intellect. His mental powers include his ability to understand and learn. He should be able to go deep down the problem and come up with many alternative solutions. In other words, he should be resourceful. The manager is quickly adaptable and can adjust himself to new or changing circumstances. Whenever necessary he accommodates himself to superiors, subordinates, and others. He acts in harmony with standards and principles set by the society or company. He has the ability to undergo a gradual change in behavior to conform to societal patterns. Emotional stability is an essential quality of managers. They deal with difficult situations tactfully.

(iii) **Moral** - Fayol is emphatic on moral quality of the manager. This quality calls for willingness to accept responsibility. Managers have initiative and take lead in doing things in the best interest of the organization. They are able to originate new ideas and methods, and think and act without being urged or forced. Manager’s moral quality also includes their firmness and fairness in dealing with others. Integrity is another element in the moral characteristic. In addition, safety of company assets is his responsibility.

(iv) **Educational** - Managers should have educational qualities that can be acquired by training and experience. They should have understanding and familiarity of other matters not directly related to his job. His general knowledge and common sense make his education more worthwhile and productive. For business managers B.Com, B.B.A, MBA, C.A., ACMA degrees have gained momentum in the modern business world.

(v) **Technical** - Managers are expert in their fields. They have thorough knowledge of their work far better than their subordinates. Their approach towards the work is analytical, deep, result-oriented, logical, and least risky. Before making any decisions they conduct thorough research and investigation.
(vi) **Experience** - Experience enrich the managerial qualities. They work and learn and use experience in dealing with the routine and unexpected situations.

Fayol observed that the most important ability for a worker is technical and the relative importance of managerial ability increases as one goes up the scalar chain. He recognised a widespread need for the principles of management and managerial teaching.

He held that managerial ability should be acquired first in school and later in the workshop. In order to acquire managerial knowledge, he developed the principles of management to be taught in academic institutions.

**Business Qualities**

Henri Fayol emphasizes other qualities which are business centered.

(i) **Managerial**

The manager is the person who can plan, organize, hire, train, lead, and control. He sets objectives, formulates, policies, and procedures, determines activities, delegates work, guides, communicates, provides feedback, and measures the performance against the predetermined standards.

(ii) **Financial**

The manager should possesses financial knowledge and be able to determine the sources and uses of funds. He should know what and how much business needs be financed out of capital, loans, or retained earnings.

(iii) **Commercial**

Commercial knowledge includes production, marketing, banking, insurance, transportation, and storage know-how and proficiency, that a manager must possesses.

(iv) **Accounting**

The manager should possesses accounting know-how too-so that he could not be misguided by his subordinates involved in it. He should know accounting principles, controlling techniques, and able to make and understand financial analysis.

(v) **Security**

The manager is the trustee of company assets. He should see to it that they are properly used and not wasted. He is the safeguard of organization assets. He is also concerned with the physical and financial security of his subordinates.

4. 14 Management Principles by Henri Fayol

14 management principles by Henri Fayol are universally accepted worldwide as guidelines for managers to do their job according to their responsibility.

1. **Division of Work**

Dividing the full work of the organization among individuals and creating departments is called the division of work. Division of work leads to specialization, and specialization helps to increases
efficiency and efficiency which results in improvements in the productivity and profitability of the organization.

2. Balancing Authority and Responsibility

Authority must be equal to Responsibility. According to Henri Fayol, there should be a balance between Authority (Power) and Responsibility (Duties). The right to give orders should not be considered without reference to responsibility. If the authority is more than responsibility then chances are that a manager may misuse it. If responsibility is more than authority then he may feel frustrated.

3. Discipline

Outward mark of respect in accordance with formal or informal agreements between a firm and its employees. Discipline means respect for the rules and regulations of the organization. Discipline may be Self-discipline, or it may be Enforced discipline. No slacking or bending of rules, not allowed in any organization. The works must respect the rules that run the organization. To establish discipline, good supervision and impartial judgment are needed.

4. Unity of Command

According to this principle, a subordinate (employee) must have and receive orders from only one superior (boss or manager). To put it another way, a subordinate must report to only one superior. It helps in preventing dual subordination. This decreases the possibilities of “Dual subordination” which creates a problem is a function of managers.

5. Unity of Direction

One head and one plan for a group of activities with the same objective. All activities which have the same objective must be directed by one manager, and he must use one plan. This is called the Unity of Direction.

He must use only one plan for all the marketing activities. Unity of direction means activities aimed at the same objective should be organized so that there are one plan and one person in charge.

6. Subordination of Individual Interests to the General Interest

The interest of one individual or one group should not prevail over the general good. The individual interest should be given less importance, while the general interest should be given the most importance. If not, the organization will collapse. The interest of the organizational goal should not be sabotaged by the interest of an individual or on the group.

7. Remuneration

Remuneration is the price for services received. Pay should be fair to both the employee and the firm. If an organization wants efficient employees and best performance, then it should have a good remuneration policy. This policy should give maximum satisfaction to both employers and
employees. It should include both financial and non-financial incentives. Compensation should be based on a systematic attempt to reward good performance.

8. Centralization

It is always present to a greater or lesser extent, depending on the size of the company and the quality of its managers. However, in decentralization, the authority is distributed to all the levels of management. No organization can be completely centralized or decentralized. If there is complete centralization, then the subordinates will have no authority (power) to carry out their responsibility (duties). Similarly, if there is complete decentralization, then the superior will have no authority to control the organization.

Therefore, there should be a balance between centralization and decentralization. The degree to which centralization or decentralization should be adopted depends on the specific organization, but managers should retain final responsibility but should give subordinates enough authority to do the tasks successfully.

9. Scalar Chain

The chain of command, sometimes called the scalar chain, is the formal line of authority, communication, and responsibility within an organization. The chain of command is usually depicted on an organizational chart, which identifies the superior and subordinate relationships in the organizational structure. Or it is the line of authority from top to bottom of the organization. This chain implements the unity-of-command principle and allows the orderly flow of information. Under the unity of command principle, the instructions flow downward along the chain of command and accountability flows upward. More clear-cut the chain of command, the more effective the decision-making process and the greater the efficiency.

10. Order

A place for everything and everything in its place’ the right man in the right place. There should be an Order for material/things and people in the organization. Order for things is called Material Order and order for people is called ‘Social Order’. Material Order refers to “a place for everything and everything in its place.” Social Order refers to the selection of the “right man in the right place”.

There must be an orderly placement of the resources such as Men and Women, Money, Materials, etc. Human and material resources must be in the right place at the right time. Misplacement will lead to misuse and disorder.

11. Equity

While dealing with the employees a manager should use kindliness and justice towards employees equally. Equity is a combination of kindness and justice.

It creates loyalty and devotion in the employees toward the organization. The equity principle suggests that the managers must be kind as well as equally fair to the subordinates.

12. Stability of Tenure of Personnel
Although it could take a lot of time, Employees need to be given fair enough time to settle into their jobs. An employee needs time to learn his job and to become efficient.

The employees should have job security because instability leads to inefficiency. Successful firms usually had a stable group of employees.

13. Initiative

Without limits of authority and discipline, all levels of staff should be encouraged to show initiative. Management should encourage initiative.

That is, they should encourage the employees to make their own plans and to execute these plans. This is because an initiative gives satisfaction to the employees and brings success to the organization.

It allows the subordinates to think out a plan and do what it takes to make it happen.

14. Esprit De Corps

Esprit de Corps means “Team Spirit”. Therefore, the management should create unity, co-operation, and team-spirit among the employees.

They should avoid dividing and rule policy. Harmony, cohesion among personnel. It’s a great source of strength in the organization. It is a quality in every successful business.

Criticism:
The contribution of Henry Fayol in the field of management thought is very important. He was the first person who pointed out the functions of management separately. However, in spite of such importance, his theory of management is not beyond criticism.

The management theory of Henry Fayol is criticised in the following aspects:

1. Higher Level Management

The most important criticism regarding Fayol’s concept is that he has analysed management mainly from the view point of the top level managers. He considers that the top level managers only plan vital role in making an enterprise successful. But, practically it is not true.

He has not considered the role and significance of the lower level managers of the organisation. It should be remembered that the operative employees work under the supervision and control of the lower level managers who actually get things done through the group activities of their subordinate workers.

2. Less Emphasis on Human Aspect

Fayol has not given proper emphasis on the utilisation of human resource. In his management theory human relation aspect is neglected. Administrative theory does not pay adequate attention to workers. Workers are treated as biological machines or inert instruments in the work process.

3. Negligence of Joint Management
There is no place for joint management in Fayol’s concept of management. Modern age is the age of joint management. At present the workers also participate in management through their trade union leaders.

4. Controversial Universality of Management
Fayol opines that the elements, principles and methods of management indicated by him are applicable to all types of enterprises—trading or non-trading. But the principle of universality of management is very controversial. Because the principles of management depend on time, place, and situation of application and these are changed accordingly.

5. Ineffective in Culture-bound Management
In recent times there is a tendency to establish culture-oriented management. Henry Fayol states that his principles can be changed, extended and rectified according to need and situation. If it can be done, the general theory does not have its utility and effectiveness.

6. Historical value
Fayol’s theory was relevant when organisations operated in a stable and predictable environment. It seems less appropriate in the unstable environment of today. For example, present-day managers cannot depend entirely on formal authority and must use persuasion to get the work done. Similarly, the theory views organisations as power centres and do not recognise the role of a democratic form of organisation.