

MANAGEMENT

PRINCIPLES AND APPLICATIONS

UNIT-1, 1.1

PART-XV

EVOLUTION OF MANAGEMENT THOUGHT

The periods presented are approximate.

TABLE:

<i>Sl. No.</i>	<i>Management thought</i>	<i>Period</i>
1.	Early contribution	Upto 19 th century
2.	Scientific Management	1900-1930
3.	Administrative/ Operational Management	1916-1940
4.	Human Relations approach	1930-1950
5.	Social System Approach	1940-1950
6.	Decision Theory Approach	1945-1965
7.	Management Science Approach	1950-1960
8.	Human Behaviour Approach	1950-1970
9.	System Approach	1960s onwards
10.	Contingency Approach	1970s onwards

Another classification of management thought and approaches is in the form of classical, neoclassical, and modern. Classical approach includes scientific management and administrative/operational management. Neoclassical approach includes human relations approach and some relevant part of social systems approach, decision theory approach, management science approach, and human behaviour approach. Modern approach includes systems approach, contingency approach, and some relevant portion of the above approaches not included in neoclassical approach. However, this classification is time-specific because what is modern in today's context, may not remain the same in future.

EARLY CONTRIBUTIONS

Before the systematic study of management which started close to 19th century, contributions in the field came from a variety of sources. For example, the concept of organisation and administration existed in Egypt in 1300 B.C. Confucius's parables included suggestions for proper public administration and admonitions to choose honest, unselfish, and capable public officers long before Christ. Kautilya has offered sound principles of state administration in 320 B.C. Roman catholic church introduced the concept of staff personnel in church administration which was further carried on by military organisations. The cameralists, a group of German and Austrian public administrators and intellectuals, emphasised systematic administration as a source of strengths during 16th to 18th centuries. These contributions provided some insights about how resources could be utilised more effectively. However, these contributions were outside the field of business and other economic organisations.

In the field of business organisations, some stray contributions have come from Robert Owen, James Watt, Charles Babbage, and Henry Town. While Owen emphasised personnel aspects in management and advocated a number of benefits to employees, others concentrated on developing concepts relating to effective utilisation of resources at the shop-floor level. Their contributions came bit by bit and in haphazard manner and have failed to stimulate to study management as a distinct discipline. However, their ideas created an awareness about managerial problems. By the end of 19th century, a stage was set for taking systematic study of management and the beginning was made by Taylor in the early part of 20th century which took the shape of scientific management.

TAYLOR AND SCIENTIFIC MANAGEMENT

The concept of scientific management was introduced by Frederick Winslow Taylor in USA in the beginning of 20th century. This concept was further carried on by Frank and Lillia Gilbreth. Henry Gantt, George Berth, Edward Felen, etc. Scientific management was concerned essentially with improving the operational efficiency at the shop-floor level. Taylor has defined scientific management as follows:

"Scientific management is concerned with knowing exactly what you want men to do and then see in that they do it in the best and cheapest way."

Since Taylor has put the emphasis on solving managerial problems in a scientific way. often, he is called as father of scientific management' and his contributions as the principles of scientific management. Though his contributions have become traditional in present day context, still the label scientific management is used for his contributions. It does not mean that present-day management thoughts and practices are not scientific. In fact, management as a science has been taken much later than the contributions of Taylor.

Taylor joined Midvale Steel Company in U.S.A. as a worker and later on became supervisor. During this period, he continued his studies and eventually completed his M.E. (Master of Engineering). Subsequently, he joined Bethlehem Steel Company. At both these places, he carried experiments about how to increase the efficiency of people. Even after his retirement, he continued to develop scientific management. On the basis of his experiments, he published many papers and books and all his contributions were compiled in his book 'Scientific Management. Taylor's contributions can be described in two parts:

- a) elements and tools of scientific management and b) principles of scientific management.

Elements and Tools of Scientific Management

Taylor conducted various experiments at his work-places to find out how human beings could be made more efficient by standardising the work and better method of doing the work. These experiments have provided the following features scientific management:

1. Separation of Planning and Doing:

Taylor emphasised the separation of planning aspect from actual doing of the work. Before Taylor's scientific management, a worker used to plan about how he had to work and what instruments were necessary for that. The worker was put under the supervision of a supervisor commonly known as gang boss. Thus, supervisor's job was merely to see how the workers were performing. This was creating a lot of problems, and Taylor emphasised that planning should be left to the supervisor and the worker should emphasise only operational work.

2. Functional Foremanship: Separation of planning from doing resulted in development of supervision system which could take planning work adequately besides keeping supervision on workers. For this purpose, Taylor evolved the concept of functional foremanship based on specialisation of functions. In this system, eight persons are involved to direct the activities of workers. Out of these, four persons are concerned with planning:

- (i) route clerk,
- (ii) instruction card clerk,
- (iii) time and cost clerk and
- (iv) disciplinarian.

The remaining four persons are concerned with doing aspect of the work.

These are:

- (i) speed boss,
- (ii) inspector,
- (iii) maintenance foreman, and

(iv) gang boss.

All of them give directions to workers on different aspects of work. This is against unity of command principle as shown in Figure.

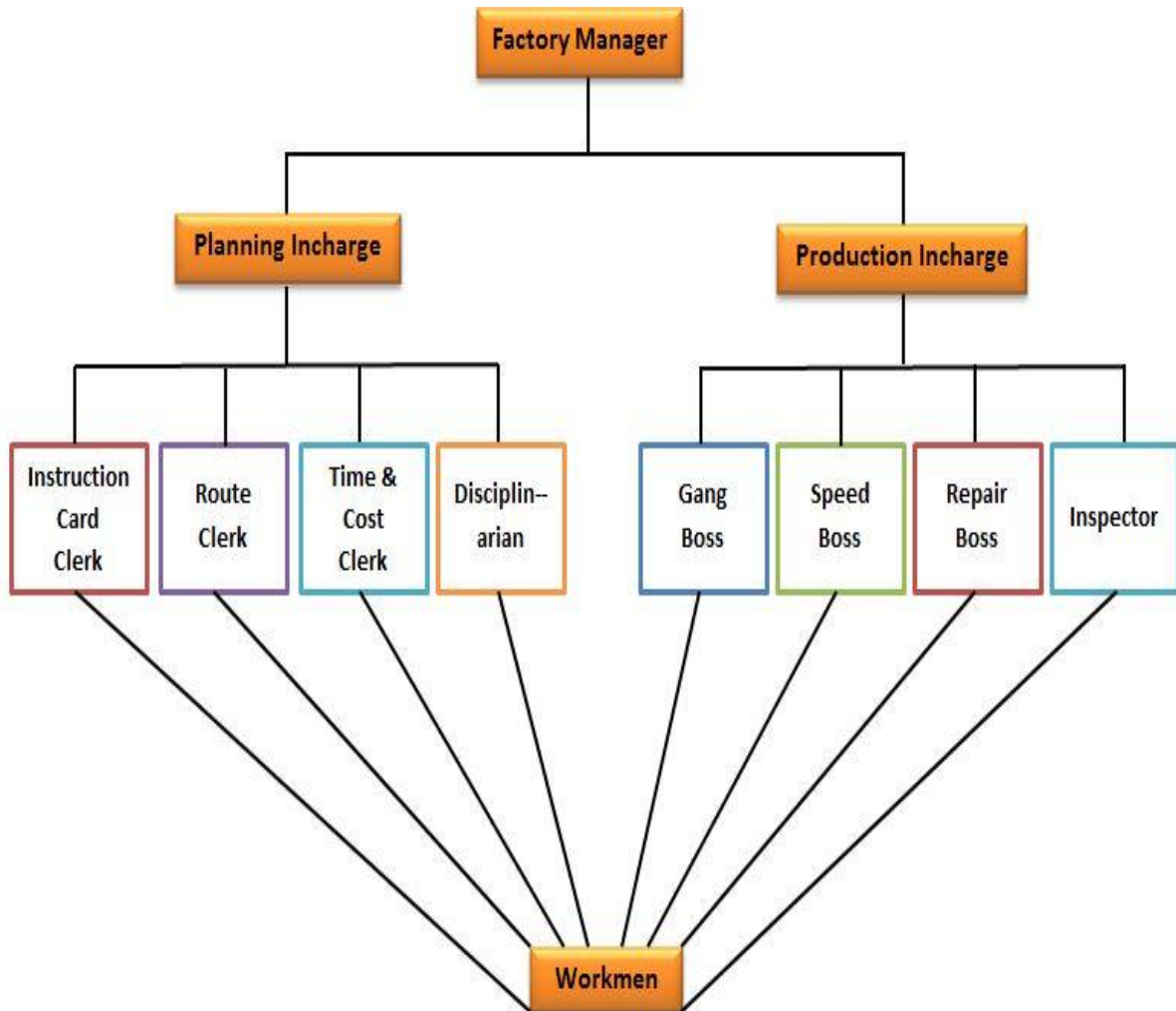


Fig.-Functional foremanship

3. Job Analysis:

Job analysis is undertaken to find out the one best way of doing the things. The best way of doing a job is one which requires the least movements, consequently less time and cost. The best way of doing the things can be determined by taking up time motion-fatigue studies. (i) Time study involves the determination of time a movement takes to complete. The movement which takes minimum time is the best one. This helps in fixing the fair work for a period. (ii) Motion study involves the study of movements in parts which are involved in doing a job and thereby eliminating the wasteful movements and performing only necessary movements. Elimination of unnecessary movements in doing work reduces time taken in performing a work

and also the fatigue of workers. (iii) Fatigue study shows the amount and frequency of rest required in completing the work. After a certain period of time, workers feel fatigue and cannot work with full capacity. Therefore, they require rest in between. When the rest is allowed, they start working with full capacity. Thus, job analysis, as given by Taylor, suggests the fair amount of a day's work requiring certain movements and rest periods to complete it.

4. Standardisation: As far as possible, standardisation should be maintained in respect of instruments and tools, period of work, amount of work, working conditions, cost of production, etc. These things should be fixed in advance on the basis of job analysis and various elements of costs that go in performing a work.

5. Scientific Selection and Training of Workers:

Taylor has suggested that workers should be selected on scientific basis taking into account their education, work experience, aptitude, physical strength, etc. A worker should be given work for which he is physically and technically most suitable. Apart from selection, proper emphasis should be given on the training of workers which makes them more efficient and effective.

6. Financial Incentives:

Financial incentives can motivate workers to put in their maximum efforts. If provisions exist to earn higher wages by putting in extra effort, workers will be motivated to earn more. Taylor himself applied the concept of differential piece rate system which was highly motivating. According to this scheme, a worker who completes the normal work gets wages at higher rate per piece and one who does not complete gets at lower rate. Thus, there is considerable difference in wages between those who complete the work and those who do not complete. To make the differential piece rate system work, Taylor has suggested that wages should be based on individual performance and not on the position which he occupies. Further, the wage rate should be fixed on accurate knowledge and not on estimates.

7. Economy:

While applying scientific management, not only scientific and technical aspects should be considered but adequate consideration should be given to economy and profit. For this purpose, techniques of cost estimates and control should be adopted. The economy and profit can be achieved by making the resources more productive as well as by eliminating the wastages. Taylor has clarified by giving examples of how resources are wasted by not following scientific management.

8. Mental Revolution:

Scientific management depends on the mutual co-operation between management and workers. For this co-operation, there should be mental change in both parties from conflict to co-operation. Taylor feels that this is the most important feature of scientific management because in its absence, no principle of scientific management can be applied.