

manager of his business. Summary, the roles of entrepreneur and manager.

29.4 NATURE (CHARACTERISTICS) OF MANAGEMENT

The salient features which highlight the nature of management are as follows:

1. Management is a Universal Process The basic principles of management are universal in character. They apply more or less in every situation. Henry Fayol pointed out that the fundamentals of management are equally applicable in different organisations, business, government, military and others. The functions of management are performed by all managers. Management is needed in all types of organisations. Every manager performs the same basic functions irrespective of his rank or position.

The managerial job is basically the same at all levels of organisation and in all types of institutions. Management is an essential ingredient of all organised endeavour. "Management is essential in all organised cooperation, as well as at all levels of organisation in an enterprise. It is the function not only of the corporation president and the army general but also of the shop foreman and the company commander"¹. Management is pervasive.

2. Management is Purposeful Management exists for the achievement of specific objectives. It is a means directed towards the accomplishment of predetermined goals which may be economic or non-economic. All activities of management are goal-oriented. The success of management is measured by the extent to which the desired objectives are attained. Management has no justification to exist in the absence of objectives. Goals provide justification for the existence of an organisation.

3. Management is Creative Management makes things happen which would not otherwise happen. The manager seeks to secure the objectives with highest efficiency at minimum possible cost. The job of management is to make a productive enterprise out of human and material resources. It gives life to materials, machinery, money and

1. Koontz and O'Donnell' : *Principles of Management*, p. 6.

manpower. The basic purpose of management is the optimum utilisation of resources. Effectiveness and efficiency are the yardsticks against which managerial performance is appraised.

4. Management is an Integrative Force The essence of management lies in the coordination of individual efforts into a team. Management reconciles the individual goals with organisational goals. As a unifying force, management creates a whole that is more than the sum of individual parts. It integrates human and other resources. Management is an integrated process as its elements are intertwined.

5. Management is a Group Phenomenon Management involves the use of group effort in the pursuit of common objectives. It is a distinct activity concerned with getting things done rather than 'doing' itself. Management exercises important influence upon human behaviour in organised action. People join groups to achieve what they cannot achieve individually. Group activity is found in all areas of human activity, e.g., business, military, education, religion, etc. Management is an essential activity whenever people come together to achieve some common goals.

6. Management is a Social Process Management is done by people, through people and for people. It is a social process because it is concerned with interpersonal relations. Management is a human process—one manages men and women not things. Managers do not build products, they build people who in turn build products. People are at the centre of the management process. It is not possible to conceive management in relation to things or machines but only in relation to the people who are employed to operate or use such things. Thus, human factor is the most important element in management. According to Appley, "Management is the development of people not the direction of things". A good manager is a leader not a boss. It is the pervasiveness of the human element which gives management its special character as a social process.

7. Management is Multidisciplinary Management has to deal with human behaviour under dynamic conditions. Therefore, it depends upon wide knowledge derived from several disciplines like engineering, sociology, psychology, economics, anthropology, etc. The vast body of knowledge in management draws heavily upon other fields of study. According to Massie, the chief characteristic of management is the integration and application of the knowledge and analytical approaches developed by numerous disciplines. Therefore, management is interpreted as multidisciplinary.

8. Management is a Continuous Process Management is a complex, dynamic and on-going process. The cycle of management continues to operate so long as there is organised action for the achievement of group goals. It is a series of continuing actions that constitute the process of managing. The cycle of management continues as long as the organisation continues to exist.

9. Management is Intangible Management is an unseen or invisible force. It cannot be seen but its presence can be felt everywhere in the form of results. However, the managers who perform the functions of management are very much tangible and visible.

10. Management is both a Science and an Art Management is a combination of art and science. It is an art because it involves the application of knowledge and skills for

- (vi) In some companies chief executive positions are occupied by persons having no family ties with the owners.
- (vii) Growing awareness of social responsibility and business ethics.

29.10 LEVELS OF MANAGEMENT

The management structure of an organisation may be divided into three broad categories as shown in Fig. 29.3.

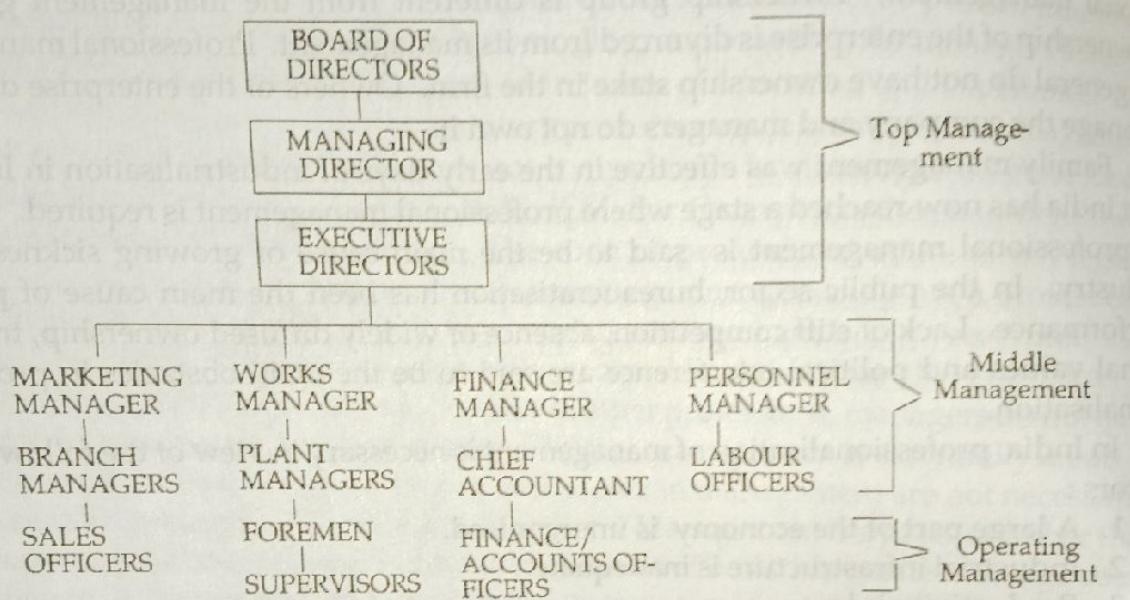


Fig. 29.3 Levels of Management

1. Top management
2. Middle management
3. Supervisory or operational management

Top Management Top Management consists of the board of directors and the chief executive officer. Board of directors comprises the elected representatives (directors) of the shareholders. It is basically an organ of review and control and is accountable to the shareholders. Chief executive officer is known by different names, e.g., chairman, managing director, general manager, president, etc. In some companies a group of persons serves collectively as the chief executive. Chief executive is concerned with the overall management of the company and maintains coordination between different departments/divisions of the company.

Top management has overall authority and responsibility for successful functioning of a company. It is the institutional level concerned with long range planning and monitoring organisation's relationship with its environment. Its main job is to ensure that the enterprise survives as an autonomous and productive entity and that it operates smoothly as an integrated unit to achieve its various goals. To be specific—the main functions of top management are as follows :

1. To provide a basic sense of direction to the activities of the company by setting its long range mission and by translating it into a clear set of objectives,

29.11 MANAGERIAL SKILLS

Skills refer to specific abilities or qualities for performing certain tasks in an appropriate manner on a sustained basis. These often involve application of knowledge and expertise to tackle particular situations with confidence. Skills are not inherent in people but are acquired and developed through education, training and experience.

In order to perform the managerial job effectively, a wide range of skills is required. These skills are described below:

1. Conceptual Skills These are the abilities to think in creative and abstract terms, to visualise and understand the future, to organise and translate abstractions into ideas and concepts and to discern relationships and interactions among the parts of a system. Conceptual skills are required to identify and diagnose problems, to understand the overall organisational interests and needs, to determine organisational goals and strategies and to plan major changes in an integrated manner.

2. Analytical Skills These refer to abilities to break down a complex problem or situation into its components, to clinically examine its dimensions, to proceed in a logical and step by step manner, and to clinically examine the various aspects of a

specific issue. Analytical skills are needed for problem solving and decision-making, for managing complexity, for evaluating performance and for arriving at judgements.

3. Behavioural or Inter-Personal Skills These represent the abilities to understand the behaviour of people, their problems, needs and feelings in work situations, to interact and communicate with them, to motivate people, to provide leadership, to build effective teamwork and to resolve conflicts. Behavioural skills are needed to direct, coordinate and control the activities of subordinates.

4. Administrative Skills These involve abilities to act in a pragmatic manner, to get things done by implementing plans, to mobilise and organise resources, to harmonise and coordinate diverse activities and to regulate performance in an orderly manner.

5. Technical Skills These refer to job knowledge and expertise, ability to apply methods and techniques in a job, to provide technical guidance and instructions to subordinates, etc. The nature of technical skills for a manager is two fold. First, the manager should have developed some expertise in the work being done. Secondly, he must know which technical skill should be employed in a given situation.

It is important to note that the skills given above are needed by managers at all levels of an organisation. However, the relative importance of different skills varies from one level to another. For example, at top and middle levels, conceptual and analytical skills are more important. This is because decisionmaking is the main task at these levels. On the other hand, technical skills are most significant at the supervisory level where day-to-day guidance has to be provided to workers. Behavioural and administrative skills are more or less equally important at all levels of management. This is shown in Fig. 29.4.

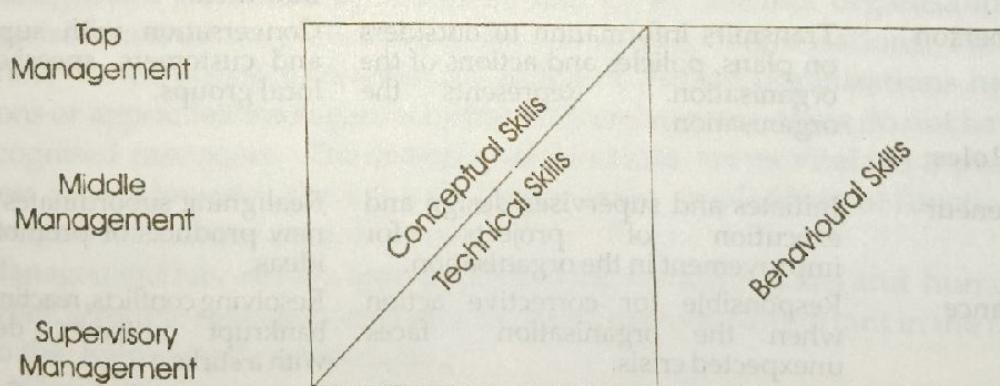


Fig. 29.4 Skill Mix at various managerial levels

29.12 MANAGERIAL ROLES

While performing his job, a manager may have to play several roles. Role implies an organised set of observable behaviours attributed to a specific position. As applied to the manager's job, a role means the capacity in which the manager acts. In a detailed study of managerial activities, Mintzberg identified three categories of managerial roles, namely interpersonal, informational and decisional. Mintzberg argued that all managers have formal authority and status given to them by the organisation. Authority and status give rise to interpersonal relationships with subordinates, peers and superiors. These in turn provide managers with information for making decisions. Thus, managerial roles are interdependent and interact to form an integrated whole.

A summary of managerial roles is given in Table 29.3.

Table 29.3 Roles of A Manager

Role	Description	Example
Interpersonal Roles:		
1. Figure head	As the symbolic head of his organisation, a manager must perform routine duties of a social or ceremonial nature. This role is associated mainly with senior managers.	Receiving official visitors, welcoming new recruits, signing letters to retiring employees, attending subordinates' weddings, taking clients to lunch, etc.
2. Leader	Hiring, training, guiding and motivating subordinates.	Virtually all managerial activities involving subordinates.
3. Liaison	Building and maintaining external relationships or outside contacts to obtain favours and information.	Keeping in touch with local community, suppliers, clients, etc.
Informational Roles:		
1. Monitor	Seeks and receives information to develop thorough understanding of organisation and environment. Emerges as a nerve centre of information.	Reading periodicals and reports, observational tours questioning subordinates, mail.
2. Disseminator	Transmits information to other members of the organisation.	Formal reports, memos and phone calls to other managers regarding activities in the organisation or local community, keeping superiors informed.
3. Spokesperson	Transmits information to outsiders on plans, policies and actions of the organisation. Represents the organisation.	Conversation with suppliers and customers, speeches to local groups.
Decisional Roles:		
1. Entrepreneur	Initiates and supervises design and execution of projects for improvement in the organisation.	Realigning subordinates' jobs, new products or promotional ideas.
2. Disturbance handler	Responsible for corrective action when the organisation faces unexpected crisis.	Resolving conflicts, reacting to a bankrupt customer, dealing with a strike.
3. Resource allocator	Allocates human, material and monetary resources.	Approving budgets, confirming business schedules.
4. Negotiator	Represents the organisation in bargaining and other major negotiations.	Bargaining with the trade union, negotiating freight rates, contract with supplier, deal with a consulting firm.

29.13 ESSENCE OF THE MANAGERIAL JOB

For several decades, management thinkers have been trying to spell out the essence of the managerial job. Some experts consider it as planning, organisation, direction and control of organisational activities to achieve certain goals. Others regard it as achieving efficient results on a sustained basis. According to Peter F. Drucker the essence of a manager's job is that he is responsible for the efforts of his subordinates. On the other hand a non-manager (e.g. a clerk) is responsible only for his own efforts. A manager

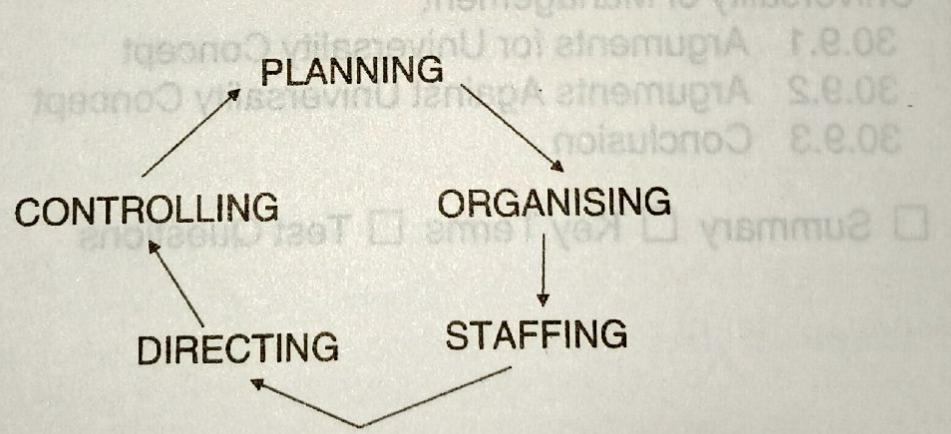


Fig. 30.1 The Management Process

30.2 MANAGEMENT FUNCTIONS (ELEMENTS OF MANAGEMENT PROCESS)

Elements of management process are known as managerial functions. Different experts have conceptualised managerial functions in different ways. Henri Fayol, who pioneered the management process approach, identified the functions of management as planning, organising, commanding, coordinating and controlling. Ernest Dale classified managerial functions into planning, organising, staffing, directing, controlling, innovation and representation. Luther Gullick used the acronym (keyword) POSDCORB which stands for the functions of planning (P), organising (O), staffing (S), directing (D), co-ordinating (CO), reporting (R) and budgeting (B). Harold Koontz and Cyril O'Donnell have adopted the conceptual framework of planning, organising, staffing, directing and controlling. These five functions and their parts are given in table 30.1.

Table 30.1 Managerial Functions and Sub-functions

Function	Sub-functions
Planning	Forecasting, decision making, strategy formulation, policy making, programming, scheduling, budgeting, problem solving, innovation, investigation and research;
Organising	Functionalisation, divisionalisation, departmentalisation, delegation, decentralisation, activity analysis, task allocation;
Staffing	Manpower planning, recruitment, selection, training, placement, compensation, promotion, appraisal, etc.;

Directing
Controlling

Supervision, motivation, communication, leadership, activating, etc.
Fixation of standards, recording, measurement, reporting, corrective action.

Innovation implies creative thinking designed for change and improvement. It is a part of the broader function of planning because planning is carried out not only to ensure survival but progress of the enterprise too. Budgeting is also a sub-function of planning as it includes allocation of resources. Representation implies acting as a spokesperson of the company. It cannot be considered as a managerial function because only the chief executive has the authority to formally represent the company. The functions of management which constitute the management process are described below :

Planning Planning is the process of determining the organisational objectives and the formulation of strategies, policies and programmes for achieving them. Planning is future-oriented because it involves charting out the desired future direction for the organisation's activities. Planning is a mental or intellectual process. It provides a framework for performance. Plans become the guides by which (a) the organisation obtains and commits resources required to reach its objectives, (b) members of the organisation can pull together in the direction consistent with the organisational objectives, and (c) progress toward the objectives is monitored so that corrective action may be taken if the progress is unsatisfactory. Plans may be made for the organisation as a whole or for any one of its subunits. Plans may be long-term or short-term in nature.

Planning provides answers to the following questions : (i) Where are we now ? (organisation's strengths and weaknesses), (ii) Where we want to go ? (objectives framed in the light of environmental opportunities and threats), and (iii) How are we going to get there ? (plans designed to achieve the objectives). The planning process consists of the following steps :

1. Evaluating the environment and resources of the organisation.
2. Establishing organisational objectives.
3. Developing strategies and other plans to achieve the objectives.

Organising Once organisational objectives and the plans to reach them are established managers design and develop an organisation that can successfully implement the established plans. Different objectives may require different types of organisations. Organising is the process of designing the structure of organisational activities, authority responsibility relationships among the members. It consists of the following activities :

- (a) determining and defining the activities required to achieve the established objectives;
- (b) grouping these activities into logical and convenient units;
- (c) assigning the activities and duties to specific positions;
- (d) delegating adequate authority to the concerned persons;
- (e) fixing responsibility for proper performance; and
- (f) coordinating horizontal and vertical relationships throughout the structure.

Staffing Staffing is the process of determining the manpower requirements of the organisation and of filling the various managerial and nonmanagerial positions with competent people. It involves fitting the right person to the right job on a sustained basis and strengthening the human resources of the organisation. As a managerial

function staffing is concerned with deployment and development of the human resources essential for the effective use of physical and financial resources so as to achieve the organisational objectives. An organisation requires people to assume predetermined roles, to carry out activities and to produce results in accordance with the established plans. Staffing was earlier considered to be a part of organising. But in recent years, it has come to be recognised as a distinct function of management due to the key role of human resources in organisations. Staffing consists of the following activities :

1. *Manpower Planning* It implies the estimation and determination of the manpower requirements of the organisation. It serves as the basis of the staffing function. The manpower requirements of an organisation are determined on the basis of the range of activities to be performed, production and sales budgets, production technology, the degree of differentiation, estimated employee turnover, etc. In addition to the number of personnel required, the quality of personnel in terms of their skills, knowledge, experience, etc., is determined on the basis of job analysis.
2. *Recruitment* It means exploring the internal and external sources of manpower. Management must develop and nurture the sources from which prospective job incumbents could be selected for the organisation.
3. *Selection* It involves choosing the right candidates for each job. Job specifications, selection procedures and selection techniques are devised and administered for this purpose. Different jobs may require different techniques and procedures of selection. Tests and interviews are very important techniques. But great care is essential for selecting candidates out of all the applicants.
4. *Orientation* When the selected candidates join the organisation, they need to be acquainted with the existing staff, policies and rules of the organisation, etc. This familiarisation and socialisation process is known as orientation or induction.
5. *Placement* It involves assigning specific jobs to the new employees. While placing employees on jobs, the job requirements should be matched with the knowledge, skills, experience and attitudes of the candidates.
6. *Training and Development* Some of the new employees may be initially trained on the job or by rotating them among different jobs. Training and development programmes are designed and implemented to improve the knowledge, skills and attitudes of executive and non-executive employees.

Performance appraisal, compensation, promotion, maintenance, etc., are other parts of the staffing function. Staffing is a line function and it is the responsibility of every manager. However, in large organisations much of the staffing function is handled by the personnel department which contains specialised and professional experts in the management of personnel. Modern experts prefer to call the staffing or personnel management function as Human Resource Management.

Staffing function has become increasingly important over the years. People represent the most important asset of an organisation. An organisation staffed with good quality human resources in terms of their skills, capabilities and attitudes enjoys a differential advantage over other organisations. Staffing policies and practices play a significant role in achieving such a distinctive or competitive advantage. Good executive talent is scarce in India. An imaginative and dynamic staffing can enable an

organisation to face this problem to a large extent. Staffing expenditure constitutes a significant proportion of the total cost of an organisation. Effective staffing enables the organisation to obtain optimum return on the investment in staffing. The way staffing function is handled shapes the attitudes, orientations and performance of employees. Management must establish and institutionalise sound traditions on staffing so that the organisation is always able to attract, develop and retain good quality human resources.

Directing It involves the implementation of plans by mobilising individual and group efforts through motivation, communication, leadership and supervision. Directing may be defined as the process of activating the efforts of employees towards the achievement of organisational objectives. It involves working directly with people. For getting the employees to perform, management has to use several techniques.

Controlling It is the process of regulating the ongoing activities of the organisation to ensure that they are in conformity with the established plans and produce the desired results. Through the controlling function, management can keep the organisation on its chosen track. The process of control involves the following steps :

- (a) Establishing standards of performance.
- (b) Measuring current performance.
- (c) Comparing actual results with the established standards.
- (d) Detecting deviations from the standards.
- (e) Taking corrective actions for significant deviations.

30.3 MANAGERIAL FUNCTIONS AND OPERATIVE FUNCTIONS

Managerial functions should be differentiated from the operative functions of business. Operative functions include production, marketing, financing, personnel, etc. Operative functions are also known as the functional areas of business. Operative or organic functions differ according to the nature and size of business. For instance, there is no production function in a retail store. On the other hand, managerial functions are essential in all organisations irrespective of their nature and size. Every operative function of business requires planning, organising, staffing, directing and controlling. Each manager in charge of a functional area performs all managerial functions.

The relationship between various functions of management may be described by an analogy. If management is a human body, planning constitutes its brain, organisation is its nervous system, direction makes up the respiratory organ, and control stands for the eyes.

Table 30.2 Managerial and Operative Functions

Managerial Functions	Operative Functions
1. Planning	1. Purchasing
2. Organising	2. Financing
3. Staffing	3. Personnel
4. Directing	4. Production
5. Controlling	5. Marketing

32.1 INTRODUCTION

Current managerial thinking can best be understood in the light of its historical development. Similarly, the future of management theory and practice can best be foreseen through an understanding of its past and present. Analysis and understanding of the historical development of management is much more than a lesson in history. Much can be learnt about the present position and future status of management by investigating its evolution. The analysis of management thought over the 20th century is necessary for gaining an insight into the different streams of ideas that have contributed to the development of knowledge on management. Knowledge of the history of management is useful as it provides a balanced and right perspective on the theory and practice of management. Therefore, this chapter analyses the historical development of management through the major approaches along with a description of the main ideas and contributors in each approach.

32.2 PRE-SCIENTIFIC MANAGEMENT ERA (PRIOR TO 1880)

The art of management has ancient roots. The moment people began to live and work together, organisation and management came into existence. Therefore, management is as old as human civilisation. The Egyptian pyramids and the Great Wall of China amply demonstrate that large projects requiring managerial skills were undertaken thousands of years ago. Early civilisations throughout the world, e.g., Sumerian Priests, the Chinese Civil Service, the Roman Catholic Church, provide concrete examples of the ancient roots of management.

Although the art of management is ancient, the study of management as a science began especially after the Industrial Revolution. The development of the steam engine and other mechanised equipment led to the factory system. Continuous innovations in the fields of science and technology created increasing need for large and complex organisations and trained managers. Concentration of huge quantities of raw materials and large number of workers in factories, wide distribution of large output all required coordination and a systematic approach to management became essential.

Robert Owen (1771-1858) improved working and living conditions of workers in his cotton mills in Scotland. He introduced the systems of feedback and motivation to improve productivity. Owen stressed that investment in workers (vital machines) was much more profitable than investment in machinery and other physical resources. *Charles Babbage* (1792-1871) advocated division of labour, mechanisation and profit-sharing. He invented an analytical machine which was the forerunner of the modern computer. According to Babbage good management which directs and controls machines and workers is the most indispensable element in successful business. *Captain Henry Metcalfe* (1847-1917) stressed "new system of control". According to him the art of management should be based on systematically recorded observations and experiences. On the basis of these observations management should make certain cost estimates and prepare details of work. Managers should convey these details to foremen and workers in the form of time cards and material cards. *Henry Robinson Towne* (1844-1924) suggested that a good manager should be an administrator, an engineer and a statistician all combined into one. His main emphasis was on exchange of experience between workers, and managers of several different organisations.

Thus, early contributions to management thought were made by management practitioners and writers. Management practitioners wrote about their experiences and attempted to generalise these into some principles. Writers or scholars tried to develop management principles and procedures by deriving knowledge from sciences like engineering, mathematics, economics, political science, philosophy, psychology and sociology. Despite significant contributions of several pioneers, no coherent body of management thought was developed during the pre-scientific management period.

Modern management thought has developed through several stages. These stages may broadly be classified into classical, neo-classical and modern theories. Neo-classical theory may further be divided into human relations and behavioural approaches. Likewise, modern theory may be divided into quantitative approach, systems approach and contingency approach. Thus, the history of management may be traced through six approaches :

1. Classical approach,
2. Human relations approach,
3. Behavioural science approach,
4. Quantitative approach,
5. Systems approach, and
6. Contingency approach.

Each of these approaches has been labelled according to the dominant new thought introduced in it. However, each prior approach was carried forward and influenced the next approach.

32.3 CLASSICAL APPROACH (1880-1930)

The classical approach to management was evolved in the early part of the 20th century. To some extent it is accepted and practised by many managers even today. The main points of the classical approach are as follows :

1. From the experience of managers in different organisations, principles can be developed to serve as guidelines for the future executives ;
2. These principles have universal application with slight modifications to suit varying situations ;
3. These principles can serve as the basis for formal education and training in management ; and
4. Theoretical research is helpful in developing a science of management.

The classical approach to management is concerned primarily with the structure and activities of formal organisations. Issues such as division of work, hierarchy of authority and span of control are considered most important for effective management.

The classical approach provides a convenient framework for analysing the managerial job as well as for education and training of would-be managers. It focusses attention on the functions and skills of managers and highlights the universal nature of management. It also provided a foundation on which the science of management has been built upon. It isolated major areas of concern to the working manager.

The classical approach has, however, been criticised on several grounds : *First*, it is based upon oversimplified assumptions about human nature. It offers a mechanistic framework and undermines the role of human factor. *Secondly*, it lacks scientific precision and its principles are ambiguous and contradictory proverbs. *Thirdly*, there

is a danger in relying blindly on past experiences because very few management situations are alike. *Lastly*, the classical approach overlooks the environmental dynamics and its impact on management.

Over time, three separate branches of the classical approach have developed—bureaucracy, scientific management and administrative theory.

32.3.1 Bureaucracy

Max Weber (1864-1920), a German social scientist, analysed the formation and administration of public bureaucracies, which happen to be the oldest forms of organisations. Weber evolved an ideal type of bureaucracy as a conceptual model for analytical purposes. His model is characterised by the following features:

1. Division of Work There is high degree of specialisation or division of labour in a bureaucratic organisation. Tasks are divided into very specialised jobs and each member performs his specialised function in a predictable manner.

2. Rules and Regulations Detailed and rigorous rules and regulations are laid down to specify and govern the work behaviour, rights and duties of jobholders. There is rigid adherence to prescribed rules designed to ensure consistency and predictability in work performance. Behaviour is subject to discipline and control within the framework of rules. In addition, procedures are laid down for orderly performance of tasks.

3. Hierarchy of Authority A clearly defined hierarchy is created by downward delegation of authority. There is distribution of formal positional authority to give commands needed for discharging duties at various levels. Each position in the hierarchy covers an area over which it has complete jurisdiction in terms of competence and authority. Each superior exercises supervision and control on his subordinates with provision for appeal to higher authorities in the prescribed manner.

4. Technical Competence Selection and promotion of job-holders are based on their technical competence. Qualifications are prescribed for each job/position. Special training is given to provide knowledge of rules and administrative procedures.

5. Recordkeeping Every decision and action is recorded in a wide array of written documents and preserved in its original as well as draft form.

6. Impersonal Relations Relations among the members of a bureaucratic organisation are impersonal and formal. Superiors adopt an impersonal attitude in dealing with their subordinates.

Weber visualised bureaucracy as an ideal pattern of organisation because it embodies the advantages of precision, efficiency, competence, objectivity, unity, conformity, discipline and order. According to Weber, bureaucracy provides an ideal way for harnessing the human and mechanical energy. Real life organisations, both private and public, exhibit varying degrees of bureaucracy. Generally, the degree of bureaucratisation is higher in governmental and military organisations than in private business and voluntary organisations. Weber sought to improve the performance of socially important organisations. His model has contributed to organisational thinking but it has been criticised due to its inflexibility and its focus on impersonal efficiency rather than on human values and needs.

32.3.2 Scientific Management

Scientific management grew out of the need to increase productivity. At the beginning of the 20th century skilled labour in the United States was in short supply and it was necessary to improve the efficiency of workers. Frederick Winslow Taylor (1856-1915) is regarded as the 'father of scientific management'. He was a brilliant engineer and management scientist in the USA. He worked at Midvale Steel Works, Simonds Rolling Mills, and Bethlehem Steel Company in the USA for several years. He was sad to see the haphazard and wasteful ways of doing jobs in these organisations. He was convinced that there was a science of doing things in physical work at the shop-floor level. In order to develop scientific and systematic ways of doing things and to optimise efficiency, Taylor conducted a series of experiments. His objective was to provide a scientific basis for designing and performing jobs. He advocated a detailed scientific study of each job to determine the best way of doing it. He believed that management is a true science resting on well-recognised and clearly-defined principles. He put forth his ideas in his books 'Principles of Scientific Management' and 'Shop Management'.

Principles of Scientific Management

The basic principles of scientific management are as follows :

1. *Develop a True Science for Each Element of a Worker's Job to Replace the Old Rule of Thumb Method* Each element of a job and the motions required to perform it should be scientifically analysed to determine and use the most efficient ways of doing it. Intuition, experience and hit-or-miss methods are replaced by scientific methods.

2. *Job Specialisation or Division of Labour Should be a Part of Each Job* Every worker should concentrate on one function so that he can become a specialist in it. Taylor suggested an almost equal division of the work and the responsibility between the management and the workers. Manager should take over all work for which they are better fitted than workers. He asserted that management should assume exclusive responsibility for planning and workers should assume responsibility for doing, i.e., performing work as per the instructions of management. In this way Taylor distinguished the roles and responsibilities of management from those of workers.

3. *Scientific Selection, Training and Development of Workers* Proper selection of employees best suited for the job would improve productivity. Scientific training should be arranged to develop each employee to his greatest efficiency and prosperity. First the qualifications required for each job should be clearly specified. These should be used as the basis for selection and training of employees. When a worker works on a job for which he is both physically and mentally fit, he can earn higher wages and mental satisfaction.

4. *Close co-operation between Management and Workers* to ensure that work is being done in accordance with the principles of scientific management. Harmonious relationship between management and labour is necessary for complete harmony of interests. Taylor advocated a complete *mental revolution* on the part of both managers and workers. Managers should adopt an enlightened attitude and share the gains of productivity with workers. Workers on their part should work with discipline and loyalty.

5. *Maximum Output in Place of Restricted Output* Conflict between management and labour arises mainly on division of surplus. Taylor suggested that the best way to resolve the problem is to increase the size of the surplus so that each side can have a larger share. In other words, Taylor believed that management and labour had a common interest in increasing productivity.

TAYLOR'S PHILOSOPHY

1. Science, not rule of thumb
2. Harmony, not discord
3. Cooperation, not individualism
4. Maximum output, not restricted output

Techniques of Scientific Management

In order to implement the above principles, Taylor and his associates developed the following techniques :

1. *Time Study* Time study or work measurement is designed to establish the standard time required to carry out a job under specified conditions. It involves analysis of a job into its constituent elements and recording the time taken in performing each element. Taylor suggested the use of time study to lay down 'a fair day's work' so as to avoid guesswork and uncertainty on the effort and productivity expected of each worker.

2. *Motion Study* It is a systematic and critical study of the movement of both the worker and the machine so as to identify and eliminate unnecessary and wasteful movements.

3. Scientific Task Planning It is the technique of forecasting and picturing ahead every step in a long series of separate operations, each step to be taken in the right place, of the right degree and at the right time, and each operation to be performed at the optimum efficiency. It provides answers to questions like what work is to be done, how it is to be done, where it is to be done, and when it is to be done. More efficient routing systems and work scheduling were developed for effective planning of work.

4. Standardisation and Simplification Under scientific management, predetermined standards are laid down regarding the task, materials, methods, time, quality and cost, and working conditions. Standardisation helps to simplify work, to ensure interchangeability of parts, to ensure uniformity of operations and to facilitate comparisons of efficiency.

5. Differential Piece Rate System Stressing the need for scientific determination of remuneration for workers, Taylor suggested that a direct link should be created between remuneration and productivity for motivating workers. For this purpose, he developed the differential piece rate system of wage payment. Under this system two piece rates are laid down : one, low rate for those failing to achieve the standard output and the second higher rate for those achieving or exceeding the standard output. Suppose the two piece rates are Re. 1 and Rs. 1.50 respectively. Standard daily output laid down through time and motion studies is 10 units. The daily wages of two workers A and B who produce 8 and 12 units will be calculated as under :

$$A's \text{ wages} = 8 \text{ units} \times \text{Re. } 1 = \text{Rs. } 8$$

$$B's \text{ wages} = 12 \text{ units} \times \text{Rs. } 1.50 = \text{Rs. } 18$$

Due to significant difference in wages, A and other inefficient workers will be under pressure to reach the standard output. B and other efficient workers will be encouraged to keep their output above standard. Differential piece rate system is thus better than the straight piece rate system under which the rate per piece is the same for all workers.

6. Functional Foremanship According to Taylor, one supervisor cannot be an expert in all aspects of work supervision. He suggested the system of functional foremanship in which eight supervisors supervise a worker's job. Four of them are concerned with the planning of work in the factory office and the other four are involved in the execution of work at the shop floor. The eight foremen and their respective duties are given below (Fig. 32.1).

(i) **ROUTE CLERK** The route clerk lays down the sequence or path that each operation is to follow, for the completion of a particular job. He decides the exact route through which every piece of work should travel from machine to machine. Workers are expected to do their work strictly according to the route specified by the route clerk.

(ii) **INSTRUCTION CARD CLERK** The job of instruction card clerk is to prepare detailed instructions according to which workers have to perform their jobs. These instructions relate to matters like the speed of work, tools and fixtures to be used, technical specifications of work, etc.

(iii) **TIME AND COST CLERK** The time and cost clerk frames the time-table for doing various jobs and maintains the records of the cost of work.

(iv) SHOP DISCIPLINARIAN The main function of the shop disciplinarian is to enforce rules and regulations and maintain discipline among workers. He deals with cases of unauthorised absence from duty, insubordination, violation of established rules and regulations, etc.

(v) GANG BOSS The gang boss is concerned with all preliminary work before the actual operation. He has to assemble the necessary tools and equipment and also arrange the facilities in the plant. He is also expected to explain to workers how to set the work in the machine in the most accurate and quickest manner.

(vi) SPEED BOSS The speed boss is responsible for ensuring that the work is done well in time. In order to get the work completed in the specified time, he should see that the workers operate at the right speed and in accordance with the specifications laid down in advance.

(vii) REPAIR BOSS His job is to ensure that each worker keeps his machine clean and free from rust, and that he oils and treats the machine properly. In order to keep all machines and tools in perfect working order, it is necessary that all standards established for care and maintenance of machines and their accessories are rigidly maintained.

(viii) INSPECTOR It is the responsibility of the inspector to see that the work is performed in accordance with the quality standards laid down by the office.

(7) High Speed Steel Taylor conducted systematic experiments to improve the operational efficiency of tools and equipment for pig iron handling, shovelling iron ore and

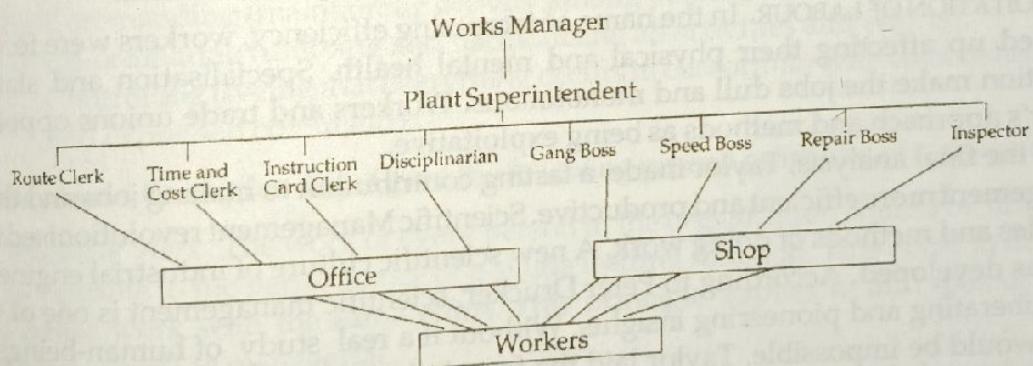


Fig. 32.1 Functional Foremanship

coal and for metal cutting. He developed high speed steel for metal cutting and designed better shovels. These improvements led to tremendous increase in labour productivity besides reducing physical strain and effort on the part of workers. Taylor developed slide rule and other work-saving implements.

In addition to Taylor several persons like Henry L. Gantt, Frank Gilbreth, Lillian Gilbreth, and Harrington Emerson made significant contributions to the scientific management movement. They refined and expanded the basic ideas propounded by Taylor.

Critical Evaluation Taylor's ideas caught the imagination of several individuals and organisations in the USA and Europe. Scientific management led to tremendous increase in productivity and wages. However, his scientific approach to every aspect of management created suspicion in the minds of workers and trade unions. They feared that working harder and faster might eventually lead to exhaustion of all

32.3.3 Administrative Management Theory

As organisations grew and became more complex, need for systematic understanding of the overall management process was felt. Managers became more concerned with management of organisations than with improving the efficiency of individual jobs. They tried to identify the functions of a manager with emphasis on co-ordination of resources towards the achievement of stated objectives. This stream of the classical approach is known as *administrative theory* or *functional approach* or *management process approach*.

One of the first and foremost contributors to administrative management theory was Henri Fayol (1841-1925), a French industrialist. Fayol started his career as a mining engineer and later became a chief executive. He published his famous book *Administration Industrielle et Generale* in 1916. It was published in English under the title *General*

(and expressed command).

Management Principles Fayol gave the following general principles of management :

1. *Division of Work* The work of every person in the organisation should be limited as far as possible to the performance of a single leading function. This helps to do more and better work with the same effort. This principle applies to all types of work, technical as well as managerial.
2. *Authority and Responsibility* Responsibility is a natural consequence of and a corollary to authority. The two are coextensive and, therefore, a parity should be maintained between them. Authority is not to be conceived of apart from responsibility. Wherever authority is exercised responsibility arises.
3. *Discipline* It implies respect for rules and agreements designed to secure obedience. It must prevail throughout an organisation to ensure its smooth functioning. Discipline requires clear and fair agreements, good supervision and judicious application of penalties.
4. *Unity of Command* An employee must receive orders and be accountable to only one boss. It is necessary to avoid conflicting orders and to ensure order and stability in the organisation. As soon as two supervisors wield their authority over the same person, uneasiness makes itself felt.
5. *Unity of Direction* There should be one head and one plan for a group of activities having the same objective. This is essential to ensure unity and coordination in the

enterprise. Unity of command cannot exist without unity of direction but does not necessarily flow from it.

6. *Subordination of Individual to General Interest* Efforts should be made to reconcile individual interests with common interests. When there is conflict between the two, the interests of the organisation should prevail over individual interests. This requires continuous and exemplary supervision and fair agreements.

7. *Remuneration of Personnel* The amount of remuneration and the methods of payment should be just and fair and should provide maximum possible satisfaction to both employees and employers.

8. *Centralisation* According to Fayol, the question of centralisation and decentralisation is a matter of finding the optimum degree for the particular concern. The degree of concentration of authority should be based upon optimum utilisation of all faculties of the personnel. It should be determined on the basis of individual circumstances in each case.

9. *Scalar Chain* Scalar chain refers to the chain of superiors ranging from the ultimate authority to the lowest level in the organisation. It should be ordinarily followed but should not be carried to the extent it proves detrimental to the organisation. To prevent the scalar chain bogging down action, Fayol gave the concept of 'gang-plank' as shown in Fig. 32.2.

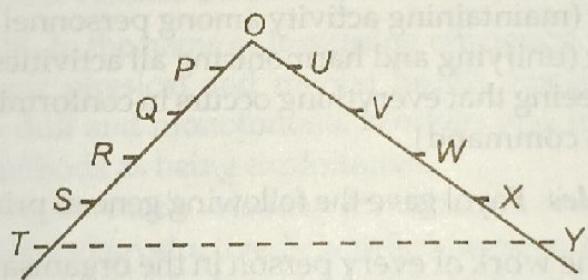


Fig. 32.2. Scalar Chain and Gang-Plank

In this figure, it is shown that if T wants to communicate with Y , usually message will flow from T to O via S, R, Q and P and from O it will come down to Y through U, V, W , and X . But if it is essential to communicate immediately, a gang-plank (dotted line) may be created between T and Y without weakening the chain of command. This gang-plank allows the two employees to deal directly with each other. But each must inform his superior of any action taken by him.

10. *Order* This principle is concerned with the arrangement of things and the placement of people. In material order, there should be a place for everything and everything should be in its proper place. Similarly in social order, there should be an appointed place for everyone and everyone should be in his or her appointed place. This kind of order requires precise knowledge of human requirements and resources of the concern so that a proper balance may be created between them.

11. *Equity* Equity implies that employees should be treated with justice and kindness. Managers should be fair and impartial in their dealings with subordinates. They should adopt a sympathetic and unbiased attitude towards workers. Equity helps to

Principles of Management

create cordial relations between management and workers which are essential for the successful functioning of every enterprise.

12. *Stability of Tenure of Personnel* Employees cannot work efficiently unless job security is assured to them. Time is required for an employee to get used to new work and succeed in doing it well. An employee cannot render worthwhile service if he is removed from the job before he gets accustomed to it. Therefore, management must strive to minimise employee turnover.

13. *Initiative* Employees at all levels should be given the opportunity to take initiative and exercise judgement in the formulation and execution of plans. Initiative refers to the freedom to think for one self and use discretion in doing work. It develops the interest of employees in their jobs and provides job satisfaction to them.

14. *Esprit De Corps* It implies unity of effort through harmony of interests. Fayol believed that unity of command and oral communication are the most effective means for achieving esprit de corps.

Some principles of Fayol such as division of work, authority and responsibility, centralisation, scalar chain and order focus on rational structuring of the organisation while other principles such as discipline, remuneration, equity, initiative and esprit de corps relate to rational functioning of the organisation.

Fayol warned that these principles are flexible guidelines rather than hard and fast laws. They should be used with discretion rather than blindly.

32.5 BEHAVIOURAL SCIENCE APPROACH

The Hawthorne Experiments revealed the work organisation to be a social system and stressed the need for understanding social and psychological aspects of the work situation. Later researchers investigated the human resources issue in management with the help of sophisticated research methods. They began refinement, extension and synthesis of the human relations approach in 1950. These efforts led to the development of behavioural sciences approach or *human resource approach*.

Behavioural science approach is an extention of the human relations approach. It focuses on the study of attitudes, behaviour and performance of individuals and groups in organisations. It has an interdisciplinary orientation in the sense that under it concepts, theories and models of psychology, sociology, and anthropology, are used to understand human behaviour and performance. These sciences are called behavioural sciences and hence the name behavioural science approach.

The basic assumptions and propositions of the behavioural science approach are as follows :

1. An organisation is a socio-technical system.
2. A wide range of factors influence work and interpersonal behaviour of people in organisations.
3. Several individual differences in the needs, attitudes, perceptions and values of people exist in organisations. These differences and their changing nature over time must be recognised.

4. There should be a fusion between human needs and organisational goals.
5. Some degree of conflict in organisations is inevitable and even desirable in certain cases.

The term 'behavioural science' means a field of study concerned with scientific investigation, analysis and understanding of human behaviour. Psychology is the study of individual human behaviour. Sociology is the study of human behaviour in groups. Anthropology is the study of physical, biological and cultural influences on human behaviour.

Contributions of Behavioural Scientists Abraham Maslow, Douglas McGregor, Mary Parker Follett, George Homans, Rensis Likert, Kurt Lewin, Frederick Herzberg, Chester Barnard, Chris Argyris, Victor, Vroom, Keith Davis and other behavioural scientists made significant contributions to knowledge on organisational behaviour. The main areas of their research and contributions are as follows:

- (i) Theories of motivation involving study of human needs and motives.
- (ii) Small informal groups and their dynamics.
- (iii) Interaction between 'organisation structure, human behaviour and work performance.
- (iv) Impact of technological changes on group behaviour.
- (v) Communication patterns and their significance in organisations.
- (vi) Influence of traditional coercive controls on behaviour of people.
- (vii) Organisational change and development, status systems.

Behavioural science approach focusses on human behaviour in organisations. It is an improved and refined version of the human relations approach.