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THE FUNDAMENTALS OF TOP MANAGEMENT

THE FUNDAMENTALS OF TOP MANAGEMENT

by RALPH CURRIER DAVIS

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THE FUNDAMENTALS OF TOP MANAGEMENT

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To My Grandson

CHARLES LOVETT PALMER, III

CONTENTS

Preface xix

1. **Basic Management Problems** 1

The Background of Modern Management—The Beginnings of a Science of Management—The Nature of Scientific Management—The Importance of a Philosophy of Management—Organized Society and Management—Business Objectives and Standards of Conduct—Executive Leadership—Business Policies—Business Functions, Physical Factors, and Personnel—Organization Structure and Business Procedure—Organization Morale—The Fields of Organization and Operation

2. **Standards and Standardization** 21

The Nature and Importance of Standards and Standardization—Standards and the Organic Functions of Management—The Requirements of Standards and Units of Measurement—Types of Standards and the Concept of Tolerance—Classification of Business Standards—The Introduction of Standards—The Development of Standards—Organization and Control of Standardization—Standards Maintenance—Periodic Review of Standards—Difficulties in Standardization

3. **Business Plans and Planning** 43

The Nature of Plans and Planning—The Objectives and Requirements of the Plan—The General Characteristics of the Plan—Planning and the Logic of Reflective Thinking—Planning and the Principles of Logic—The Scientific Method—Preliminary Analysis and the Principle of Limiting Factors—Research and the Development of Plans—The Development of Tentative Solutions of Business Problems—The Analysis and Testing of Proposed Plans—Classification and the Development of Significances—The Development and Application of the Final Solution—Intelligent Compromise—The Application of the Plan—Plans for Planning—Planning and the Initiative—Planning and the Time

Factor—Administrative and Operative Planning—Planning and Quantitative Time—The Continuity of Planning and Plans Changes—Organization and Procedure for Planning

4. Business Objectives and Ethical Standards 90

Business Objectives and Organized Society—The Importance of Business Objectives in Management—The Classification of Business Objectives—Primary Service Objectives—Collateral Service Objectives—Secondary Service Objectives—The Characteristics of Objectives—Ultimate and Immediate Objectives—Limited and Unlimited Objectives—Elastic and Inelastic Objectives—Tangible and Intangible Objectives—External and Internal Objectives—Principles of the Objective—Analysis and Determination of Objectives—Business Ideals and Standards of Business Conduct—General Nature of the Problem—Ethics of the Business Executive—The Practical Value of Standards of Business Conduct—The Functions of Ethical Standards—The Development of Ethical Standards in Business—Management's Responsibility for Adequate Standards of Business Conduct—Public Relations and Business Ethics

5. Executive Leadership and Management 127

The Meaning of Executive Leadership—Theories of Leadership Development—Kinds of Business Leadership—Changing Economic Situations and Business Leadership—The Basis of Executive Influence—The Character and Use of Authority—The Directness of Leadership Influence—Executive Characteristics and Abilities—Executive Selection and Development—The Law of the Situation—The Meaning of Management—Executive Leadership and the Management Function—The Organic Functions of Management—The Relations Between Managerial and Operative Functions—Administrative Management—Administrative Management and the Board of Directors—Operative Management—The Classification of Executives—The Quality of Managerial Activity—The Principles of Executive Leadership—Criteria of Competent Executive Leadership—Executive Leadership in an Industrial Society

6. Business Policy 172

The Nature and Importance of Policy—The Functions of Sound Policy—The Characteristics and Requirements of Sound Policy—Policy and the Objective—Simplicity in Policy—Stable, Flexible Policies—Comprehensive Policies—

Complementary and Supplementary Policies—Classes of Business Policies—Principal Phases of Policy-Making—Organization for Policy-Making—The Principle of Participation—The Basic Importance of Policy

7. Business Functions and Functionalization 202

The Significance of Business Functions—Organic Business Functions—Functional Differentiation and Integration—Functional Devolution and Evolution—Similar Functions—Complementary Functions—Cross-Functionalization—The Law of Functional Growth—Marginal Theory of Functionalization—Functional Analysis

8. Responsibility 238

The Functions of Organizing—The Nature and Importance of Responsibility—The Division of Responsibility—Functional Similarity, Organization Structure, and the Division of Responsibility—Requirements for the Division of Responsibility—Gaps, Overlaps, Splits, and Areas of Free Action—The Personnel Factor and the Division of Responsibility—Diminishing Individual Importance—Functional Grouping and the Division of Responsibility—Organizational Elements and the Division of Responsibility—The Optimum Unit of Operative Supervision—The Optimum Unit of Executive Supervision—Graicunas' Theorem—Supervisory Units and Organization Structure

9. Authority, Decentralization, and Accountability 281

The Nature of Authority—Authority and the Democratic Process—The Distinction Between Authority and Power—The Coincidence of Responsibility and Authority—The Classification of Authority—The Division and Placement of Authority—The Delegation of Responsibility and Authority—The Process of Delegation—Limitations of the Right to Delegate—Principles of Delegation—The Decentralization of Function, Responsibility, and Authority—The Advantages and Disadvantages of Decentralization—Principles of Decentralization—Authority and Other Executive Relations—Authority, Rank, and Position—Accountability

10. The Line Organization 323

The Organizing Process—Executive Leadership and the Line Organization—Considerations in Organization Structure and Form—Factors Determining Organization Structure—Organization Structure and the Law of Functional Growth—The Development of the Line Organization—Or-

ganizational Elements and the Line Organization—Organizational Problems and the Small Business—The Grouping of Primary Operative Functions—Major Organizational Echelons or Service Levels—The Basic Relationship Governing Echelons—Minor Organizational Echelons or Service Levels—Line Executive Requirements—The Effect of Growth on Line Executive Requirements—The Effect of Structural Changes on Executive Requirements and Costs—Other Conclusions Concerning Structural Changes—The Second-in-Command—The Characteristics of a Primary Line Organization—Advantages of Simple Line Structure in Small Organizations—Disadvantages of Simple Line Structure in Large Organizations—The Basic Importance of Line Organization

11. Staff Organization 369

The Nature of Staff Organization—Staff Objectives—Staff Functionalization and Costs—The Principle of Functional Emergence—Stages of Staff Evolution—Staff Organization and the Basic Functions of Management—Tests of Staff Organization—Basic Staff Duties—Technical Staff Organization—Staff Investigation and the Theory of Limiting Factors—The Staff Planning Function—The Basis of Technical Staff Organization—Organization for Technical Staff Facilitation—Coördinative Staff Organization—Coördinative and Technical Staff Relationships

12. Staff Organization (*Continued*) 413

Top Management Staff Organization—Line Responsibility for Plans—Military Organization and the General Staff—Classification of Staff Executives—Unity of Command and the Integrity of the Line Organization—Staff Release of Orders and Instructions—Staff Leadership and the Line Organization—Functional Emergence—Location of Dissimilar Staff Functions—Secondary Staff Executives—Staff Parallelism—Headquarters Staff Functions—Layering and Communications—Bureaucracy and Empire Building—Line and Staff Rotation—Limitation of Staff Economy—Assurance of Effective Staff Service

13. Staff Organization (*Continued*) 456

"Functional" Organization—Taylor's Shop Organization—Organization Growth and Functional Organization—Functional Organization and Centralized Staff Control—Advantages of Functional Organization—Disadvantages of Functional Organization—Conditions Governing the De-

velopment of "Functional" Organization—Committee Organization—Committee Functions and Classifications—Committee Structure and Service—Committee Technique—Advantages of Committee Action—Disadvantages of Committee Action—The Board of Directors—The Problem of Line and Staff Relationships

14. The Attributes of Good Organization 488

The Principal Organizational Attributes—Organizational Stability—Nature and Characteristics of Stability—Considerations Affecting the Development of Stability—Executive Selection and Organizational Stability—Executive Education and Training—Promotion and Transfer—Executive Obsolescence—Organization Structure and Stability—The General Method of Approach to Stability—Organizational Flexibility—Considerations in the Development of Flexibility—Minimizing the Need for Flexibility—General Method of Approach to Flexibility—Organizational Capacity for Growth—Considerations in the Development of Capacity for Growth—Growth Characteristics—Functionalization and Organizational Growth—Growth and Optimum Organization Size—Executive Leadership and Organizational Growth—General Method of Approach to Organizational Growth—Organizational Balance—Factors and Considerations in Organizational Balance—General Method of Attack on the Problem of Balance—Organization Charts and Manuals

15. Organizational Morale 542

The Nature and Importance of Morale—Morale and Business Objectives—The Primacy of the Service Objective—The Morale-Building Process—Principal Functions of the Process—Morale Effects—Morale Factors—Morale Measurement—Evaluation of Morale Survey Results

16. Morale and the Integration of Interests 583

Communications and Morale—The Presentation of Management's Viewpoint—The Principles of Indoctrination—Educational Activities for Morale Development—Labor Relations and Property Rights—Conflicts of Interests—The Supervisor and Individual Grievances—Group Conferences and the Labor Relations Section—Union-Management Relations—Continuous Identification of Interests—The Principle of Participation—Morale Maintenance

17. Operations and the Basis of Control 628

The Organic Nature of Control—The Objectives of Control—Organization Structure, Business Procedure, and Con-

trol—Coördination—The Evolution of Control Theory in Business Organization—The Eight Control Functions—Delegation and the Decentralization of Control—Staff Organization and Control—Administrative Control and Centralization—Types of Control

18. The Preliminary Control of Operations 663

The Significance of Preliminary Control—Business Volume, Continuity, and Control—Routine Planning—The Coördination of Technical Staff Planning—The Principal Phases of Routine Planning—The Maintenance of Planning Information—Routine Planning and Clerical Economy—The Scheduling Function and Time Coördination—Factors in Scheduling—Preliminary and Final Scheduling—Administrative and Operative Scheduling—Scheduling and Standardization—The Preparation Function—Preparation, Supply, and the Function of Organizing—The Organic Nature of Preparation—Preparation and Preliminary Control—Coordination of Technical Staff Services of Facilitation—The Principal Subfunctions of Preparation—Preparation and the Time Objective—The Dispatching Function—Dispatching and Decentralization—Dispatching and the Closeness of Control—Phases of Dispatching—The Organizational Significance of Dispatching

19. Concurrent Control of Operations 698

Significance of Concurrent Control—Direction—The Organic Nature of Direction—Performance Characteristics of Direction—Technical Orders and the Function of Direction—The Line Organization and Direction—The Problem of Overdirection—Direction and the Technique of Order Giving—Supervision—The Contributions of Good Supervision—Supervisory Difficulties—Employee Attitudes and Supervision—Conditions of Effective Supervision—Training, Direction, and Supervision—Direction, Supervision, and the Technique of Handling Men—The Function of Comparison—The Principal Phases of Comparison—Comparison and the Provision of Returns—Comparison and the Accumulation of Results—The Evaluation of Completed Action—Reporting the Status of Accomplishment—The Function of Corrective Action—Principal Phases of Corrective Action—Disciplinary Action and Control—Top Administrative Control

20. Business Procedure 744

The Nature of Business Procedure—The Requirements and Attributes of Business Procedure—Structural Attributes of Good Procedure—Procedural Stability—Procedural Growth —Procedural Balance—The Classification of Business Procedure—Managerial Procedures—Technical Staff Procedures —Coördinative Staff Procedure—Procedures for Organizing —Operative Procedure—Procedural Instruments—Orders and Instructions—Standard Practice Instructions—Communications—Business Reports—Business Records—Procedural Investigation, Analysis, Design, and Installation

21. Summary and Conclusions Concerning Management 785

Bibliography 811

Author Index 815

Subject Index 817

FIGURES

1.	Basic Management Factors and Problems	8
2.	Capital and Labor	16
3.	The Application of Service Standards	30
4.	Logical Relationships in Planning	53
5.	Planning and the Organic Functions of Management	75
6.	A Plan for Analyzing a Specific Problem	77
7.	"Normal" Activity	80
8.	An "X-Day" Program	83
9.	Manufacturing-Assembly Diagram for Model X	85
10.	Continuity in Planning	87
11.	General Relations Between Ultimate and Immediate Objectives	109
12.	Presentation of an Award of Merit	113
13.	Leadership and the Development of an Industry	139
14.	Relative Effectiveness of Positive and Negative Leadership	144
15.	Managerial and Operative Functions	159
16.	Managerial Time Spans	161
17.	Leadership Functions and Organizational Levels	162
18.	Top Executive Conservatism	163
19.	Policy Committees in Large-Scale Organization	193
20.	A Page from a Policy Manual	195
21.	Basic Functions and Functional Relationships	214
22.	Staff Personnel Functions	221
23.	Fayol's Bridge	230
24.	Executive Contacts and Managerial Complexity	278

25. A Small Job Shop Organization 334
26. An Industrial Organization 336
27. The Devolution of Primary Line Organization Structure 350
28. Fractional Service Levels 352
29. Basic Organizational Form 387
30. Basic Organizational Structure for Staff Planning 400
31. Basic Organizational Structure for Staff Facilitation 403
32. The Organic Functions of Control 407
33. Basic Organizational Structure for Staff Control 409
34. Basic Organizational Structure for Top Management 416
35. Control Section, The Koppers Company, Inc. 419
36. Organizational Planning and Personnel Management 421
37. Organization Chart, Standard Oil Company of California 422
38. Basic Structural Form of Staff Parallelism 440
39. Staff Organization, General Motors Export Division, July, 1929 442
40. Taylor's Shop Organization 459
41. Relationship of Responsibility, Authority, and Accountability 463
42. A Weekly Conference of Manufacturing Executives 471
43. The Growth of a Small Business 521
44. A Morale Survey 575
45. The Problem of Morale Variation 580
46. A Plan for Continuous Morale Surveys 581
47. Retirement and Recognition of Service 621
48. Objectives, Organization Structure and Procedure 632
49. The Development of Management Control Theory 639
50. Organizational Levels and Control 651
51. Centralized and Decentralized Control 655
52. Decentralized Staff Control 658
53. Centralized Staff Control 660
54. Example of Form for Routine Planning Information 671

55. Deviation Tendencies in Planned Performance 720
56. The Relation of Control to Product Planning and Production 741
57. A Page from a Procedural Manual 773
58. A Procedural Flow Chart 782

PREFACE

The purpose of this book is to present a fundamental statement of business objectives, policies, and general methods that govern the solution of basic business problems. The content has been organized to give maximum assistance to business executives and management educators. It is arranged to facilitate the presentation of the fundamentals underlying executive leadership. It examines the bases of effective thinking that condition the formulation of executive decisions. It reviews some solutions that have been applied effectively to basic business problems. It outlines the foundations of a management philosophy.

A sound philosophy of management is necessary for the continuance of the free enterprise system. It is a requisite, therefore, for the continuance of a high standard of living and other material benefits of a highly developed industrial economy.

Management is defined in this book as the function of executive leadership. A distinction can be made between a business mechanic and a professional executive. The former may be defined as one who has learned his executive trade chiefly in the "school of hard knocks" by the process of trial and error. He may be able, at present, to do a very effective job. His effectiveness may decline rapidly when broad, basic changes in economic, political, and social conditions render much of his practical experience obsolete. The professional executive is one who has developed, in addition, a sound philosophy of management. He is accordingly one who has a broad, fundamental basis for effective thinking in the solution of managerial problems. He should be able to exercise an effective leadership with respect to the organizational groups under his command. He should be able to exercise a leadership of ideas concerning business and management, with respect to the community and

the social groups of which he is a part. A superior business leadership without a sound philosophy of management is unlikely.

Economic, political, and social changes since the 1929–32 depression have shown clearly the need for a managerial philosophy that is acceptable to the public. Many punitive laws and regulations affecting business operations have been passed since then. They have accelerated, in some instances, the trend toward higher degrees of socialism. American business leaders are committed to policies based on the concepts of free enterprise and free competition. These conditions rest on the right of private property and the customer's freedom of choice in the market place.

The general public, during this period, has admired executives for their abilities as business mechanics. It has lacked confidence in their abilities as economic leaders. This has been due partly to the lack of a management philosophy that is generally known, understood, and accepted by executives and the public. It accounted for much managerial ineffectiveness during World War II. One does not operate a plant with 1000 employees in the same way that one does a plant with 10,000. Some executives lacked the background to do otherwise. The required results were usually accomplished, but by excessive effort and at great expense. Many of the well-known physical disabilities of the modern executive are due partly to a lack of understanding of the problem of organizing. There are other reasons why a sound philosophy of management is the most practical part of an executive's equipment.

The philosophy presented in this book is the author's, of course. He takes full responsibility for it. It is representative, however, of the best thought of business leaders, both past and present. It is hoped that it will be a stimulant to further thinking by all students of management, both academic and executive.

RALPH CURRIER DAVIS

Columbus, Ohio
January, 1951

THE FUNDAMENTALS OF TOP MANAGEMENT

CHAPTER 1

BASIC MANAGEMENT PROBLEMS

The Background of Modern Management

A science of management and a profession of executive leadership in business are characteristic of an industrial economy. Many management principles have ancient origins, nevertheless. Man is a gregarious animal. Since the beginning of time he has associated himself with others for the accomplishment of some common purpose. Any group of individuals so associated has problems in coordinative and coöperative relationships. They must be worked out satisfactorily if the objective of the activity is to be accomplished successfully.

The basic principles of business management are the basic principles of executive leadership anywhere. The manner of their application must be modified and adjusted to meet the requirements of modern business problems. It is not surprising that business has borrowed some of its basic principles from older political, military, and religious forms of organization.[1] It must be remembered, nevertheless, that some industrial executives are smart business mechanics rather than professionally trained leaders. They have often acquired an incomplete knowledge of these principles, together with rule-of-thumb methods for their application, by some process of managerial trial and error. This approach to the solution of business problems can be time-consuming and costly. Its continued use may jeopardize the competitive success of a business organization. There are easier

[1] James D. Mooney and Alan C. Reiley have given a good historical discussion of organization in their book, *Onward Industry*.

and better ways of executive leadership. It is the purpose of this book to examine the fundamentals underlying them.

The background of industry has only general significance before the Industrial Revolution. Ancient construction and production projects frequently employed large congregations of workmen. The structure of economic organization was relatively simple, however. Managerial problems were correspondingly simple. Operative processes and equipment were crude. There was only craft specialization. The control of operations had to do largely with the direction and supervision of slave labor and slave craftsmen. Ages passed after the dawn of civilization before it was realized that free labor employed by free enterprise and motivated by positive incentives is more effective and economical than slave labor motivated by the negative incentive of fear.

There was a slow, general trend during the Middle Ages toward free enterprise and free labor. It was accelerated by the Black Death in the fourteenth century. Serfdom was the common condition of labor in medieval England. The plague, together with the rise of free cities, was instrumental in breaking it down. England began the development of world trade and world empire in the sixteenth century. The rate of change in the world of business was beginning to accelerate.

The development of modern industrial economics began, however, with the so-called Industrial Revolution. This term refers, in its limited sense, to the period from 1765 to 1785, approximately. Certain mechanical inventions revolutionized operating methods in the British textile industry during this period. There was a rapid and extensive transfer of knowledge and skill from the textile craftsman to textile machines. There was the concurrent development of an efficient prime mover, a better steam engine, by James Watt. It accelerated the application of mechanical power to machinery. These developments were improved and extended to other industries. The industrial revolution, in a broad sense, has never ceased. It can never cease so long as we continue to have technological progress.

Many of our modern management problems had their genesis in these early textile developments. The short-run effects were detrimental to the personal interests of the textile craftsmen. There was

a reduction in their economic and social status with the breakdown of their crafts. There was widespread technological unemployment and destitution because of the labor-saving, cost-reducing abilities of the machines. There was the usual time lag between the increase in per capita production due to technological progress, and increased per capita consumption due to lower prices. The division of labor became more highly refined with increasing consumption. The breakdown of the ancient crafts caused a loss of craft interest in work. The size and complexity of the machines increased with continued technological developments, requiring greater applications of power. Very large capital expenditures were necessary to make them. The hand tools of the craftsmen were simple and inexpensive by comparison. The effect was to divorce the workman from the tools of his trade. He had, as a result, less and less opportunity to become an independent owner and operator in his industry. This made him more and more dependent on the owners of capital for the sale of his services. The rapid rise of industry placed great power in the hands of industrialists, whose use of it was not properly regulated in the public interest. It was abused, as usually happens when individuals are granted large, unrestricted powers. Other difficulties resulted from the Industrial Revolution. Many modern managerial problems, such as opposition to technological change, "feather-bedding," the use of economic or political force by employees to compel acceptance of their demands, and others, can be traced to them.

The long-run advantages of technological development more than offset its disadvantages. Both the advantages and the disadvantages tend to be associated with large-scale organization that often is an effect of such developments. Increasing per capita production is the basis of an increasingly higher standard of living. There is an increase in the economic and social status of the manual laborer when he becomes a semiskilled machine operator. The large mechanized industry often creates many small service industries. There are more opportunities for the able individual to become an independent businessman than ever existed in the Middle Ages. A continuing need for cost reduction creates a need for increased division of labor and more specialization. It has created new crafts and professions that did not exist as late as a century ago. There are

many additional advantages of technological progress. A free economy based on the right of private property has been an important cause of them.

The United States began its life with the American Revolution in the field of politics, and with the Industrial Revolution in the field of economics. It has taken the lead in many areas of technological progress, particularly in the field of mass-production techniques. Technical improvements in methods and equipment have been the order of the day in manufacturing and other industries. The steady increase in per capita production and distribution of goods and services that has resulted has given us a very high standard of living. It is the envy of many less fortunate countries. Yet American business leadership appears to have achieved a position of high respect for its technical ability, rather than one of high confidence in its economic and social statesmanship. It lacks frequently the enthusiastic, whole-hearted support of its rank and file. The situation suggests that progress in the field of management has been greater in its mechanical aspects than in its leadership phases.

The Beginnings of a Science of Management

The beginning of a science of management took place during the last decades of the nineteenth century. A number of progressive American manufacturing executives, such as Henry Towne, James Mapes Dodge, William Sellers, and others, had been impressed with the lack of rational approaches to management problems. They had been writing and talking about them. Frederick W. Taylor had completed his apprenticeships as machinist and patternmaker. He had held various operative jobs at the Midvale Steel Company in Philadelphia, and had acquired executive status. He had begun his studies of various operative management problems. In France, Henri Fayol also had been impressed with the need for a more logical approach to such problems. His interest in them was based on his experiences as a highly successful general executive in the mining and metallurgical industries. These experiences were augmented by tours of duty in governmental posts.

Fayol and Taylor can be credited with the most significant contributions to the initial development of a science of management. Fayol's contributions were in the field of general administrative

management, as would be expected from the nature of his experiences.[2] Taylor began as an operative employee, served as a minor supervisory line executive, and became a major technical staff executive at the Midvale Steel Company. Later he engaged in work as a managment consultant and author, with an intervening tour of duty as a staff executive for the Bethlehem Steel Company. His contributions were in the field of operative management, particularly staff operative management because of the nature of his background and experience.[3] The subsequent development of modern management has been based on the foundations they provided. Additional progress has been made, of course, by managerial trial and error, as a result of the mistakes of many practical executives.

Frederick W. Taylor is regarded in the United States as the "father of scientific management." Some of his early associates and followers, such as Carl Barth, Wallace Clark, H. L. Gantt, A. Hamilton Church, Dwight Merrick, and Sanford Thompson, have a permanent place in managerial history in their own right by reason of their original contributions. Harrington Emerson should be placed in a separate category. His philosophy of management was apparently an independent development. It was quite influential in its time.[4] These men may be regarded as the pioneers in American management. They have been followed by an impressive array of contemporary thinkers in the field who have done much to modify, extend, and formalize our understanding of business objectives, policies, functions, factors and effects, and to continue the development of a science of management. An evaluation of their contributions, however, must wait on time.

The Nature of Scientific Management

There is still considerable misunderstanding among some people concerning the nature of scientific management and what it purports to do. They feel that it is some formulistic, highly complicated system for running business organizations, based on theories that may not be quite practicable. It is supposed, in some vague way, that it may have something to do with engineering, since the term "scien-

[2] See his monograph, *General and Industrial Administration.*

[3] See F. B. Copley's biography, *Frederick W. Taylor.*

[4] Harrington Emerson, *Twelve Principles of Efficiency.*

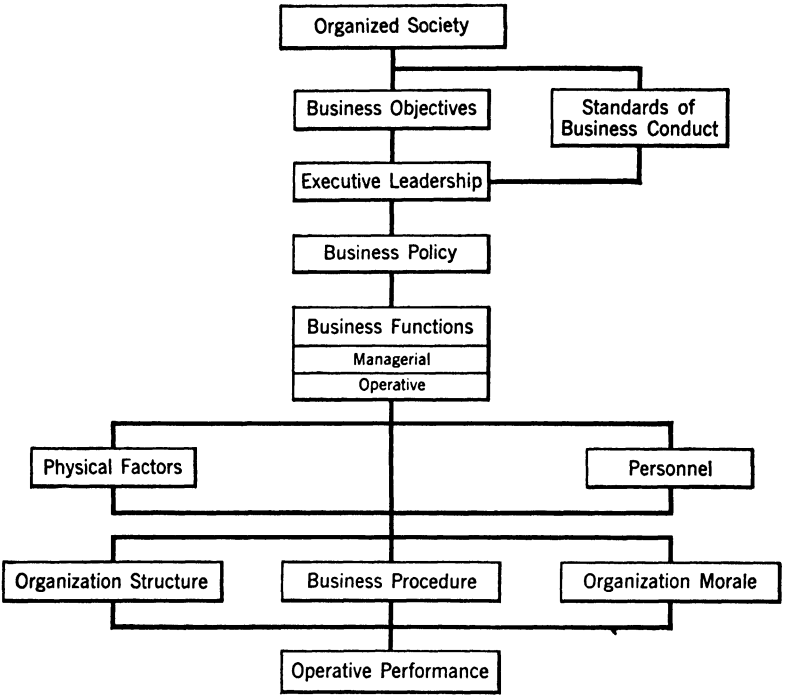

FIG. 1. Basic Management Factors and Problems.

Organized society in an industrial democracy is the source of all sanctions for the operation of all business, whether private or public. Private business receives its sanction through the right of private property. This is merely the right of individuals to hold and use property for the benefit of their personal interests, but with due regard for the public interest. Organized society may modify this right at its pleasure. It does so frequently through legislative action by its elected representatives, and the interpretation of this legislation by the courts. Some modification becomes necessary as our industrial economy becomes more complex. Any modification of the right of private property tends, on the other hand, to result in the development of state capitalism in some degree. When the state acquires complete control of the use of property, it makes little difference who holds title to it. An individual's freedom of action and control of his destinies depend on the right of private property.

It is necessary for the maximum practicable decentralization of the right to use material resources. Such decentralization is necessary for the maintenance of life, liberty, and the pursuit of happiness. The maintenance of this right to the maximum practicable degree is an important condition affecting the maintenance of a democratic industrial society. In general, that government is best that governs least. But what is "least" today is quite a bit more than it was in Jefferson's day.

The above concept is significant in the theory of business organization. The ultimate source of executive authority is organized society. It is an extension of the right of private property. It is received ultimately by delegation from organized society, through ownership, to the executive who is responsible for the management of the business organization and its operations. The executive is not eliminated under state capitalism. He may have greater power and authority and greater rewards relatively than under private capitalism. The penalties also may be greater—and permanent. There are other disadvantages that account for a notable lack of enthusiasm for advanced socialistic developments. However, when any important executive or group of executives misuses its authority to the detriment of the public interest, or the private interests of important groups of citizens, it may make necessary further business regulation by government. There is a consequent further modification of the right of private property. The executive may have contributed to a further breakdown of the economy that he wishes to maintain.

This has been recognized, of course, by many business leaders. The practical effects of this recognition are found in the appointment of "business czars," the increasing tendency to use public relations executives as executives rather than highly paid propagandists, and in many other modern developments.

Business Objectives and Standards of Conduct

Business organization in a modern industrial society is inevitably charged with a public interest. This is true of business organization generally, as well as of the large corporation. Business objectives, in consequence, must be given a primary position in any discussion of management.

A theory of business objectives must go back to some theory of "value." A value, of course, may be any satisfaction of a need or a desire for which an individual or group is willing to make some sacrifice. An objective may be any such values. Economic values are those that can be exchanged for other desired values. Business objectives may be any values that the business organization is required or expected to acquire, create, preserve, or distribute. They may be tangible or intangible. They may, in fact, have various characteristics that will be discussed later.

It is sufficient here to note that business objectives may be broken down into three general classes: primary, collateral, and secondary. The business organization is an economic institution. Its primary mission is to supply the public with whatever goods or services it desires at the proper time and place, in the required amounts having the desired qualities, and at a price that it is willing to pay. The sum total of all economic values supplied by all industries to all customers everywhere approximates the total material benefits enjoyed by a modern industrial society. The income of the individual business organization is derived chiefly from sales. Business spends many millions of dollars annually on market research, customer research, product research, and even pure research in various fields. The objectives of such research are obviously better facts concerning what the customer wants, how he wants it and why, together with information that will enable business to meet his needs and desires more economically and effectively. It is a practical recognition of the fact that the economic benefits which business supplies to its customers are necessarily its primary service objectives.

Collateral business objectives are those that the business organization is expected to accomplish in some reasonable degree, without any material or unnecessary sacrifice of its primary service objectives. This classification includes chiefly those personal and social objectives that enter into or are affected by the operations of the business organization. Personal objectives are values that individuals and groups within the organization, or associated closely with it, seek to acquire for and distribute among themselves. The term includes good wages for operative employees, good salaries for executive employees, good dividends for investors, and other values, both tangible and intangible. It should include also the interests of

other groups such as dealers, suppliers, and bankers, when they are associated with the particular concern. Its executives must make business decisions with reference to them. The collateral social objectives of business include certain broad, general values that are deemed necessary to the well-being of society and are affected by business activity. They affect the interests of broader groups than those having personal business objectives. Business activity must be conducted with due regard for them. But business is primarily an economic institution. It serves the public interest as such. Its collateral objectives must rank with but after its primary service objectives. It would cease to be an economic institution if its economic objectives were subordinated permanently to military, political, religious, or social objectives.

Secondary business objectives include those values that are needed by the organization for the accomplishment of its primary and collateral objectives. They have to do chiefly with economy and effectiveness. These values are not necessarily secondary in importance. They are secondary in incidence of service to the public. They rank, therefore, after primary and collateral objectives. Their accomplishment frequently presents difficult internal problems for management.

Business should conduct its activities in conformity with accepted standards of proper business conduct for political as well as moral reasons. The larger the business organization, the more this becomes necessary. Standards of business conduct are criteria of the extent to which a given business activity is compatible with the public interest. They condition our relations with customers, employees, investors, and others. They are difficult to determine, because the public interest is broad and sometimes vague. Therefore they are merely those criteria that at the moment are generally accepted as proper measures of correct business conduct. Acceptance tends to be based on the system of values that is currently in effect. What are acceptable values is in part a product of the ideology that is held currently by a majority of the people. Hence standards of business conduct tend to be relative like any ethical criteria. They may be established by custom, law, court decisions, administrative rulings of governmental agencies, voluntary codes of trade associations, or other means. The public's ethical concepts concerning

what are proper economic values and relationships usually change slowly. They generally rest on some moral code that is based on the dominant religion. Legislative action reflecting these changes tends accordingly to be slow. The evolution of standards of business conduct also proceeds slowly, as would be expected. Problems in the field of business ethics are highly important, nevertheless, for reasons that will be discussed later. The evidence of its importance is the large amount of time and money that is spent in the development and maintenance of good public relations.

Executive Leadership

Business, under a condition of competitive free enterprise, must accomplish its objectives in a manner that is satisfactory to its customers and the public. The concern that does not do so usually has difficulty in surviving. It depends on the patronage of its customers for its continued existence. They are not always articulate in stating their needs or desires. They do not always make known their dissatisfaction with present company service. They can and do exercise a veto in the market place, over a period of time, with respect to the goods and services offered by the concern. The consuming public, through its political representatives, has regulatory powers with respect to the economic services offered by business. The legislators may act promptly, if enough voters are interested. It is evident that primary service objectives are not self-determining. It is the responsibility of the organization's executives to determine, as best they can, what they are or should be. If their decisions are usually correct, the organization may succeed. Otherwise, it may fail. Some groups that are associated with the enterprise may be quite vocal in stating what they believe their legitimate interests to be. Their objectives are collateral, however.

Objectives represent values. The latter do not create themselves. They are created by work. It follows that business functions also are not self-determining, since they are derivatives of business objectives. The decisions concerning what functions should be performed, and how they should be related to one another, again must be made by the organization's executives. The responsibility for other determinations governing group action falls on these executives. It is evident that decision-making is an important part of the work of management. An understanding of decision-making requires a distinction

between leadership, the leader, and the work of leading. Leadership is the principal dynamic force in organization that stimulates, motivates, and coördinates the organization in the accomplishment of its objectives. A leader is one who accepts responsibility for the successful achievement of the organization's objectives, and is able to get the support of its members in the accomplishment of these objectives. The work of leading is management. It must be done in a manner that is satisfactory to the group that is being led. Otherwise, the leader will not have its voluntary support. Every executive should be a leader. The term executive includes, therefore, every employee whose principal responsibility has to do with directing and supervising the work of others. It includes, accordingly, all executive employees from and including the president to the lowest supervisor who is an exempt employee. Everyone has seen executives who have little leadership ability. They may be able to do a good job of managing, but only so long as the rate of change in the situation of their organization is slow. The problem of executive leadership in business organization is one of vital importance to the public, as well as to investors and operative employees.

Business Policies

One cannot sit in a business conference of any importance without hearing some reference to a "policy" problem. The basic importance of policy soon becomes evident. Some fundamental differences of opinion as to what a policy is and does also may become evident.

A policy is basically a statement, either expressed or implied, of those principles and rules that are set up by executive leadership as guides and constraints for the organization's thought and action. Its principal purpose is to enable executive leadership to relate properly the organization's work to its objectives. It therefore guides the organization's thinking concerning what should be done, how it should be done, who should do it, where action should take place, and similar questions. It governs decisions, based on previously approved plans, concerning the provision of the conditions that are an underlying prerequisite for effective action. It guides the coördination of action after it has been initiated. Consequently it is a fundamental consideration in planning, organizing, and controlling business activities.

Policy problems are found in all divisions and at all levels of the business organization. Hence, there are many classes of business policies. A general understanding of them is necessary because of the fundamental nature of policy problems.

Business Functions, Physical Factors, and Personnel

Business objectives have been defined as values that the business organization is required or expected to acquire, create, preserve, or distribute. Values can be created only by work. The utility of an economic good or service is its ability to provide the customer or the organization with certain values that are needed or desired.[5] Its principal attributes are those of time, place, form, and possession. The creation of customer utilities makes possible the satisfactory accomplishment of the organization's primary service objectives. Business functions, however, include all activities that are necessary for the creation of primary, secondary, or collateral utilities. It will be shown in later chapters that the concept of economic utility underlies the design of organization structure and procedure. Large amounts of time and money are spent annually in the investigation, analysis, and study of business functions for such purposes. These expenditures are necessary in a competitive society. They assure continuous improvement in the effectiveness and economy with which business objectives are accomplished.

Business functions may be classified broadly as managerial and operative. Management is the function of executive leadership. Managerial functions involve the work of planning, organizing, and controlling the activities of others in accomplishing the organization's objectives. The performance of this work involves the direction and supervision of others in the creation and distribution of those utilities that the organization provides. It is chiefly mental labor. It always involves some manual work, if only that of signing some document. It will be shown later that the work of management can be broken down into various significant phases. An obvious basis of classification, for example, is the distinction between administrative management and operative management. The former is the work of managing the activities of individuals and groups in the

[5] The business executive usually talks about values rather than utilities. This practice will be followed in subsequent discussions for reasons of simplicity and usage. Usually it involves no serious inaccuracies.

accomplishment of group objectives over a period of time. The latter is the work of managing the activities of individuals and groups in the accomplishment of specific project objectives with reference to a specific time objective. The accomplishment of group objectives depends, of course, on the prior accomplishment of project objectives. In business organization, the group may be a unit, a department, or some larger organization element. The following simple distinction has reasonable accuracy. Administrative management is largely group management. Operative management is largely project management. A further distinction will be made later between line management and staff management.

Operative functions are those activities that enter directly and immediately into the creation of utilities, either primary, collateral, or secondary. They are "making" or "doing" functions. Their performance does not involve any significant responsibility for the direction and supervision of the work of others. This work is chiefly manual labor at the bottom level of the organization. It always involves some mental work, if only a simple operative decision. It is the work of the operative employee, such as the clerk in the office, the mechanic in the shop, and the salesperson in the department store. The problems of business functions and functionalization are quite complicated in larger organizations.

The accomplishment of the organization's economic mission requires the provision of various physical factors in performance. What they are depends on the requirements for the effective, economical performance of the particular business functions. The characteristics of the factors that are available may modify the method of performing them, however. They include such items as land, buildings, machinery, tools, materials, money, and any other physical implementation of these functions. They are capital items, either current or fixed. It is the function of capital to supply them. The progress of peoples toward higher standards of living is dependent largely on the formation of capital and its application to productive purposes. Without the implementation supplied by capital, individuals can produce little more than a bare subsistence. The application of capital items to business functions extends and amplifies the productive abilities of employees, both executive and operative.

The term "personnel" refers to the human factor in organization.

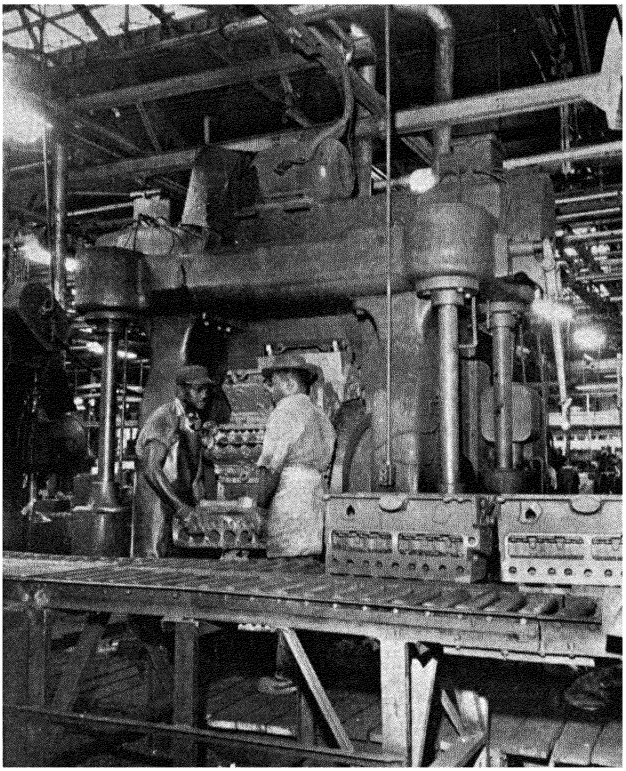

FIG. 2. Capital and Labor. (Courtesy, *The Chrysler Motors Magazine.*)

It includes in business everyone who may be considered to be a member of the organization, from the chairman of the board to the janitor, individually and in groups, temporarily or permanently. An organization member is obviously anyone who accepts an obligation for the performance of certain assigned functions and discharges this responsibility satisfactorily. What is satisfactory is determined basically by the performance requirements of organizational functions. These requirements are determined by the characteristics of the values that must be created for the accomplishment of business objectives. The qualifications of individuals for jobs must be determined basically by job requirements. The determination of job requirements depends on functional analysis. The initial determina-

tion and application of resulting criteria of satisfactory performance is the responsibility of executive leadership. An executive cannot be held accountable for results unless he has the authority to make decisions concerning what should be done, how it should be done, who should do it, when it should be done, and what constitutes satisfactory performance. This concept confers no dictatorial powers on the executive, however. The requirement for an initial executive decision does not involve a unilateral final decision where collateral objectives are concerned. The employee, whether executive or operative, is usually a citizen. He has a private property right in his services. It underlies his rights of individual and collective bargaining. It cannot be abrogated by unilateral executive action. A basic condition of any contractual relationship is a meeting of minds that has been accomplished without duress. It should govern the actions of both capital and labor. Any action by one that tends to break down the right of private property of the other tends to result in a breakdown of its own rights. Government must intervene eventually to protect the public interest.

The effectiveness of leadership depends, furthermore, on good organizational morale. The importance of the individual's functions may be reduced by mechanization, specialization, and the division of labor. Functions still do not perform themselves. They are performed by people, working singly or in groups. Their interest in the organization and its work, their loyalty to their executives, their coöperation with their associates, and similar values are important in organizational effectiveness. They are effects of good moral. They depend on an integration of personal and organizational objectives. This makes possible the willing subordination of personal interests to organizational requirements. This cannot be accomplished by unilateral executive action. The dictator can accomplish such subordination only by force. It can be effective for a time, but not indefinitely. It is a practical requirement for morale development, therefore, that the executive must promote the legitimate interests of his subordinates. To this end, he should confer willingly with them concerning the conditions and terms of their employment.

These requirements will be discussed further in later chapters. It is sufficient to note here that intelligent compliance with them strengthens the leadership position of the executive. It does not

cause his position to deteriorate. Management participation by subordinate employees does not require "management sharing" with them. The latter condition of management violates the principles of delegation. It tends, consequently, to break down the leadership position of the executive within the business organization. It is incompatible with the public interest, therefore, in either a socialist or a nonsocialist economy. It is particularly inappropriate in a democratic industrial society based on the right of private property.

Organization Structure and Business Procedure

Organization structure and business procedure are functional phenomena in business organization, as noted above. The characteristics and requirement of functions and functional relationships are determined basically by the requirements for the satisfactory accomplishment of objectives. They are modified by the characteristics and requirements of personnel and the physical factors with which they are implemented.

The term "organization" may refer to any group of individuals that is working toward some common end under leadership. It may be good, bad, or indifferent. These individuals should be selected with regard for the abilities required to perform assigned tasks. They should be implemented properly for the performance of these tasks. A good organization usually is one in which coöperation is willing as well as effective. A successful organization is a good organization that is securing effective and economical achievement of its objectives under competent executive leadership.

Organization structure is a relationship between certain functions, physical factors, and personnel. It is based on a grouping of functions in accordance with their similar characteristics and significances. It is set up for the purpose of promoting coöperation and facilitating the effective exercise of executive leadership. Clerks may be grouped in an office on the basis of the significant likenesses in their assignments. They may work under the direction of a unit chief. He may report to a section head who reports to a department manager. The latter reports to some higher authority. This structural arrangement is obviously set up for this purpose. The importance of organization structure rests largely on the fact that it is an instrument of command. It implements and extends the abilities of the principal dynamic factor in the accomplishment of business

objectives, the executive.

A business procedure also is a structure of relationships between functions, physical factors, and personnel. It is set up, however, for the purpose of coördinating and facilitating the accomplishment of some type of project. It is based, therefore, on the complementary and sequential characteristics of functions, physical factors, and personnel as they enter into such accomplishment. An inventory control clerk may draw certain information from his records and enter it on a purchase requisition form. This is an initial step in a purchase procedure under certain conditions. The form may be given to his section chief for approval. It may then pass through subsequent steps in some logical order. It ends finally on the desk of a buyer in the purchasing department. Each step in the purchase requisition procedure has presumably resulted in a logical build-up of utilities in the requisition. They provide the buyer with certain informational values which are needed for efficient purchasing.

Coördination is a vital phase of control. It may be defined as the function of relating activities with respect to time and order of performance. These considerations are determined by the requirements for the satisfactory completion of a project. The latter may be any definite undertaking. It is evident that the purchase requisition procedure, in the preceding example, facilitated purchase control as well as the work of buying. Any procedure facilitates control. A specification of a business procedure is an operational plan, or a phase of one. A primary operative project is one whose accomplishment results directly and immediately in the creation of values (utilities) that are salable to the public. The creation of such values takes place at the operative level of the organization. The accomplishment of organizational objectives is a cumulative result of the accomplishment of operational objectives, both primary and secondary, over a period of time. Managerial procedure relates activities on various organizational levels. The ultimate purpose is an effective, economical accomplishment of organizational objectives. Procedure has other basic significances that will be discussed later.

Organization Morale

The basic importance of morale in organizational effectiveness has been noted above. It is generally recognized. The record of business leadership has been unimpressive, nevertheless, insofar as mo-

rale development and maintenance are concerned. It may be due in part to the intangible nature of this factor. Organizational morale is basically a mental condition of groups and individuals that determines their attitudes. It conditions greatly the quality of their coöperation, their acceptance of leadership by the organization's executives, and the effectiveness with which they accomplish their service objectives. It is therefore a basic factor in the success of any organization. It is difficult to develop and control because of its intangible nature. It can exist in an infinite number of degrees, from very high to very low. Anything that affects the relations between organizational and personal objectives may be a morale stimulant or depressant. Morale can drop quickly to a dangerous level before any outward physical manifestations of this condition appear. Leadership is always a basic morale factor. Consequently, the quality of the organization's morale is a test of its executive leadership.

The Fields of Organization and Operation

Management is the function of executive leadership. It is the work of planning, organizing, and controlling the activities of the organization in the accomplishment of its objectives. These basic management functions are concerned with an effective, economical use of factors, forces, and effects in business problems. The solution of these problems requires criteria of the proper quantities, qualities, costs, and relationships between them. Management cannot perform its functions properly without adequate standards.

There are many broad, basic economic, political, and social problems that affect the operation of an industrial economy. They affect fundamentally the work of management. Most of the internal problems of management fall within the fields of business organization and operation. These problems break down into detailed difficulties in such professional fields as personnel, purchasing, accounting, marketing research, and others. Any thorough discussion of them must be left to professional texts in such fields. This book is concerned chiefly with the general management fundamentals that underlie organizational and operating problems everywhere. It will follow the general specifications that have been outlined in this chapter.

CHAPTER 2

STANDARDS AND STANDARDIZATION

The Nature and Importance of Standards and Standardization

Dictionaries define a standard as that which is established by authority, custom, or general consent as a model, criterion, or rule of measurement. It usually reflects the present state of development of the particular art or science. It may or may not be the result of scientific investigation, analysis, and synthesis.

Business standards are criteria that enable us to relate functions, physical factors, and personnel to business objectives by means of policy. They are necessary for measuring, proportioning, and maintaining business factors, forces, and effects in proper condition and relation to one another. Measurement is a process of evaluation in terms of accepted criteria. The evaluation, in business organization, is in terms of an effective, economical accomplishment of a business objective. These terms have to do with the quantity, quality, expense, and time of accomplishment. They may be tangible, as in the case of a salable product, or intangible, as in the case of morale. Standardization is merely the function of determining and maintaining standards.

It is obvious that there can be no measurement in the absence of satisfactory units of measurement. These units may be any logical or convenient subdivision of the particular factor, force, or effect. They should be capable of expressing all the degrees in which the value or attribute may exist, and with the required accuracy. The history of the development of any science has been associated with the need for the development of new or refined units of measurement. There was a time when simple fractions of an inch were suffi-

ciently accurate for manufacturing purposes. With improvements in the art and science of manufacturing production, it became necessary to measure attributes of linear dimension in thousandths of an inch. It is common practice today to produce, in quantity, highly finished metal surfaces whose linear accuracy is measured in ten-thousandths of an inch. Greater accuracy is possible, of course. Someone had to originate the unit of sound, the decibel, before sound could be measured accurately. A collateral problem is the development of instruments for the application of appropriate units of measurement to a particular attribute. There is little practical significance in one one-hundred-thousandth of an inch as a unit of linear measurement until we have some instrument that can discriminate accurately between such small increments of length. This is equally true in the case of intangible factors, forces, and effects. Minimum levels of intelligence for jobs or occupations could not be specified until someone had invented means and measures of intelligence.

Standards are the result of investigation, analysis, codification, and classification of experiences with some set of phenomena. They are necessary to evaluate the factors, forces, and effects involved. The latter cannot be proportioned and related properly for optimum results without standards. This statement applies to the phenomenon of organized business activity. The need for standards is universal.

Standards and the Organic Functions of Management

The need of executives for managerial criteria also is universal. Such standards enable them to improve the quality of their leadership performance. Managerial standards are criteria of a proper performance of management functions. The organic management functions are the creative planning, organizing, and controlling of the work of others. They must be performed under the general conditions that have been specified previously.

Creative planning is the function of originally determining an effective, economical basis of action for the achievement of specified objectives. It seeks to develop answers to such questions as what should be done, how it should be done, where action should take place, who should be responsible for it, what significant factors

must be supplied, and other questions of a like nature. It requires, therefore, a determination of the factors, forces, and effects in an anticipated business situation. It must evaluate their probable influence on the situation. It must proportion them in some combination that will probably produce maximum results.[1] It supplies decisions concerning the kind, extent, degree, and relationship in which they must exist for such results. Creative planning always involves some extension of the past through the present into the future. The quality of the thinking involved depends obviously on the accuracy and appropriateness of the standards, units of measurement, and measuring instruments that are available. The latter may be physical or statistical, or both.

Organizing is the function of creating or providing those basic conditions and relationships that are a prerequisite for effective, economical execution of the plan. Particular conditions and relationships should be present or available before action starts on each phase of the plan. Organizing involves consequently an advance provisioning and proportioning of basic factors and potential forces, as specified by the plan. It is therefore dependent on standards and measurement.

Controlling is the function of constraining and regulating action in accordance with the requirements of the plan. The definition implies the need for standards. Subordinate groups should be supplied with criteria for the local determination of the conditions for effective, economical accomplishment. There must be criteria of relative progress in the completion of the mission. They will facilitate coördination of action. There must be standards and units of performance by which the results of action on each phase of the plan, as well as the final results, can be evaluated. Corrective action

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[1] A. Hamilton Church wrote: "Design is the prescriptive function. It prescribes in advance, shapes, sizes, properties. It sets up standards in regard to product. It specifies intentions. It is the original source of action, and the final arbiter in determining what action shall be taken. All other functions exist for the purpose, and only for the purpose, of carrying out the behests of design."—*The Science and Practice of Management*, p. 45.

According to H. P. Dutton, "Measurement and standardization go together. One major object of measurement is prediction, and both measurement and prediction are immensely simplified if known and fixed quantities can be substituted for variable ones in the equation or expression of cause and effect."—*Principles of Organization*, p. 93.

is not likely to be effective without them. The availability and accuracy of standards affect greatly the closeness of control that is practicable. They are therefore an important consideration in the determination of the degree of centralized control that is desirable. Standards enter into and effect control in many other ways.[2]

Delegation ends in functional definition at the level of operative performance. The broad general plans of administrative executives at top management levels are reduced to concrete forms by subordinate line and staff executives. The "line" is the hierarchy of function, responsibility, and authority between ownership and primary operative performance. Staff assists line in the performance of its duties. Plans are transmitted by staff agencies to various groups who must coöperate in organizing the situation. These agencies release information concerning plans to lower organizational levels. The ultimate expression of creative planning is found in primary operative performance. For this reason it requires the application and use of appropriate standards at this level. Primary operative performance tends to be routine and repetitive, whether mental or manual. In consequence, standards at this level tend to be physical. It is evident that the influence of standards and standardization is all-pervasive in business organization and operation.

The Requirements of Standards and Units of Measurement

Standards and units of measurement must meet certain requirements. Some of them are determined by the requirements of the particular problem. Others are general. They apply to any situation. The principal general requirements have to do with the following characteristics: Standards must be (1) reasonably stable, (2) reducible to permanent form, (3) reproducible, (4) representative, (5) applicable, (6) universal within the limits of the problem, and (7) free from ambiguity.

Standards must have reasonable stability. Their accuracy and effectiveness are likely to suffer with continuous, rapid change. They are criteria of optimum conditions and relationships under given circumstances. Rapid change tends to break down standards, even

[2] W. H. Leffingwell noted in the twenties that "standardization, in and of itself, is not control, but without it scientific control is impossible."—*Office Management*, p. 67.

when they are flexible. Stable standards require stable conditions. Standards must also be flexible. Unstable standards reduce managerial and operative effectiveness. There was a change of policy during World War II from one of continuous improvement of weapons to one of intermittent improvement based on the concept of block changes. It was found necessary in wartime to have some minimum stability in product and process. The broader influence of this requirement can be seen in the field of politics. Those who desire a highly centralized governmental control of economic, social, and political activity often want a revolutionary rate of change. They usually prefer a stable situation after they have achieved control.

Any standards should be classified, codified, and recorded in written form. This should be done as they are developed and adopted. It is the purpose of standardization not to freeze or prevent progress, but rather to prevent the loss of whatever gains have been made. Standards are essentially conservative. They act much as a ratchet wheel that permits forward but prevents backward movements. A record of standards is necessary also to facilitate providing the organization with information concerning them. It should be possible to reproduce the standard with whatever accuracy is required. Otherwise, it may be impossible to produce instruments that will measure with sufficient accuracy the attribute to which the standard relates. The standard should of course represent the best current knowledge and practice, since its purpose is to conserve progress. It should be possible to apply the standard quickly and economically in any problem of measurement to which it relates. This usually requires some transfer of technical skill and knowledge to the measuring instrument. The spherical qualities of lead shot, for example, can be determined quickly, accurately, and at little expense by rolling the shot down inclined planes that have been accurately leveled and aligned.

A standard should be applicable to the measurement of the particular attribute in all situations and under all conditions of the particular problem in which it may exist. Data concerning the force and effect of the attribute under different circumstances may not be readily comparable otherwise. It will be more difficult to interpret and apply the data than it would if there were a universal standard with universal units of measurement. The requirement holds for all

kinds of standards. It is most readily seen in the case of physical standards. Technical progress in the development of new products and processes is constantly pushing us into areas that have been explored only partially. It is not uncommon to find that certain standards and units of measurement, which were thought to be basic and universal, cannot be applied with sufficient accuracy. It may be more than a case of refining existing standards. Research may have discovered certain characteristics of the attribute that had not previously been suspected. Existing standards may not reflect them at all in such a case.

A standard that is basic and universal may still require refinement. The units of measurement in which it is expressed should be able to determine with sufficient accuracy all the degrees in which the attribute or thing may exist within the limits of the problem. Greater refinements in products, economic and mechanical processes, and organizational relationships usually require a more accurate proportioning of the factors, forces, and effects that are involved. This requires further refinement in units of measurement, as noted previously. These units should not be ambiguous. They should give definite, unequivocal answers when applied properly. The answers should convey the same meaning to all persons at all times under like circumstances. Standards must therefore be defined clearly, be discrete, and be susceptible to division to the extent demanded by the requirements for an accurate solution of the problem.

Types of Standards and the Concept of Tolerance

One of the ideas in back of the establishment of a corporate entity is continuity of operation. The primary objective of any business organization, corporate or otherwise, is economic service for some portion of the consuming public. The fundamental correctness of this concept cannot be diminished by the failure or refusal of some business, labor, and political leaders to recognize and accept it. Any development of a system of business standards must begin with it.

Business standardization has always had its inception in the concept of a service objective, as a matter of fact. Engineers who have been concerned with industrial research and design have distin-

guished in their thinking among three types of standards—ideal, engineering, and working standards. Ideal standards represent the ultimate in the development of the product or process, insofar as the engineer is able to envision it with some degree of accuracy. It is only possible, sometimes, to reproduce on paper an ultimate product or process that has been designed to these standards. It is possible, sometimes, to produce a laboratory model, but not to manufacture the product in commercial quantities at a price that the public will pay. The engineering standard represents the best practice that is commercially practicable in the present state of the particular manufacturing art. It is a function of various economic factors and forces, such as the price class in which the concern operates and the condition of competition in the industry. It is, of course, a function of the applicable design standards and principles that have their genesis in the physical sciences.

These standards concern very directly the quality, quantity, and cost of the goods and services that will be available to the public, immediately and ultimately. Accordingly, marketing research plays an important part in their development. Ideal design standards depend on analyses of ultimate business objectives. There is a need for information that will enable us to determine the requirements of such objectives. It is one justification of long-range research programs. Engineering and working standards are related to immediate business objectives. They must represent what the customer wants now that we can make for him within the limits of his purse. There is no service or profit in making something that he does not want, at a price that he cannot afford.

The working standard is the engineering standard modified by "tolerance." The latter term means merely the permissible amount of variance from the engineering standard. It is not possible, except by chance, to meet any standard for any attribute, exactly, in any situation for any appreciable period of time. The attribute of length may be specified as x inches for some item or product. We may use highly accurate modern equipment for producing this attribute. We may assign to it our most skilled mechanic. The actual dimension of the item may not deviate from the specified x inches by more than one millionth of an inch. It varies by this much, nevertheless. It is probable, of course, that the actual dimension will

vary from the specified dimension by far more than this amount, particularly if the item is made by mass-production methods. The concept of tolerance recognizes this condition and seeks to control it. It may not affect the utility of the item if the actual dimension varies from the specified x inches by as much as two thousandths of an inch either way. Quality is meaningless if it adds nothing to the ability of the good or service to give the customer the desired satisfactions. Quality that the customer does not need and for which he is unwilling to pay is an economic waste. Tolerance establishes the maximum variance from a particular standard that will not sacrifice seriously the utility of the item. It gives the standard flexibility in its particular application without sacrificing its effectiveness.

The above discussion has been in terms of attributes of physical factors, forces, and effects. It has been realized, no doubt, that the same basic ideas of ultimate, immediate, and working standards apply to nonphysical forces as well. This includes the concept of tolerance.[3] Management involves the work of planning, organizing, and controlling the application of human as well as physical forces to the achievement of business objectives. Hence any classification of business standards must be sufficiently broad to include them both.

Classification of Business Standards

A classification of standards that deals primarily with physical factors, forces, and effects, therefore, has limited managerial value. A classification of business standards should include all the criteria of all the forces, factors, effects, and relationships of all kinds with which the executive must deal in the performance of his management functions. It should derive its validity from the primary service objectives of business organization and operation. It should provide criteria for evaluating, proportioning, and relating the basic business factors that enter into or directly affect the accomplishment of this objective. The following classification of standards has been developed with these considerations in mind:

1. *Standards of service,* including criteria of:
   a. End values of the particular good or service.

[3] H. P. Dutton gives a good statement of this point in his *Principles of Organization,* pp. 106–108.

   b. Attributes of its component parts or elements.
   c. Ethical standards of business conduct.
2. *Standards of policy and function,* including criteria of:
   a. Organization structure.
   b. Business procedure.
3. *Physical standards,* including criteria of:
   a. Physical factors of general environment.
   b. Local factors of condition.
4. *Personnel standards,* including criteria of:
   a. Characteristic attributes required of individuals and groups.
   b. Morale standards.
5. *Performance standards,* including criteria of the results of:
   a. Project accomplishments.
   b. Group accomplishments.

Standards of service underlie all other classes of standards in the business organization, except constants and standards that are necessary for basic research. The latter are associated, through application, with the remaining classes of business standards. Service standards give us the criteria by which we test the final product in a manufacturing plant before shipment to the customer. The product is the logical starting point for a standardization program for this reason. Department store organizations have their sales clerks shopped to check the quality of the service that the customer is receiving. The professional shopper must have some criteria of good, fair, and poor customer service. Such stores buy much merchandise on brand, technical, or other specifications. They have service standards by which to check the causes of complaints and returned merchandise. Merchandising executives are necessarily quite conscious of the relation of service standards to the service objective. They are in direct contact with the customer. They are accustomed to talk in terms of the "values" that they make available to the retail customer at a competitive price. Service standards go back directly to primary service objectives. They depend on definitions of the values that the company has undertaken to render to the public for a price. They are quality standards. They extend, in a manufacturing plant, from the finished product, through the ma-

jor assemblies, subassemblies, and component parts, down to and including the raw materials from which the parts are made. It is usually not possible to make a first-class product from third-rate material. Service standards, then, are criteria of the utilities that the company's goods or services should have. These utilities must en-

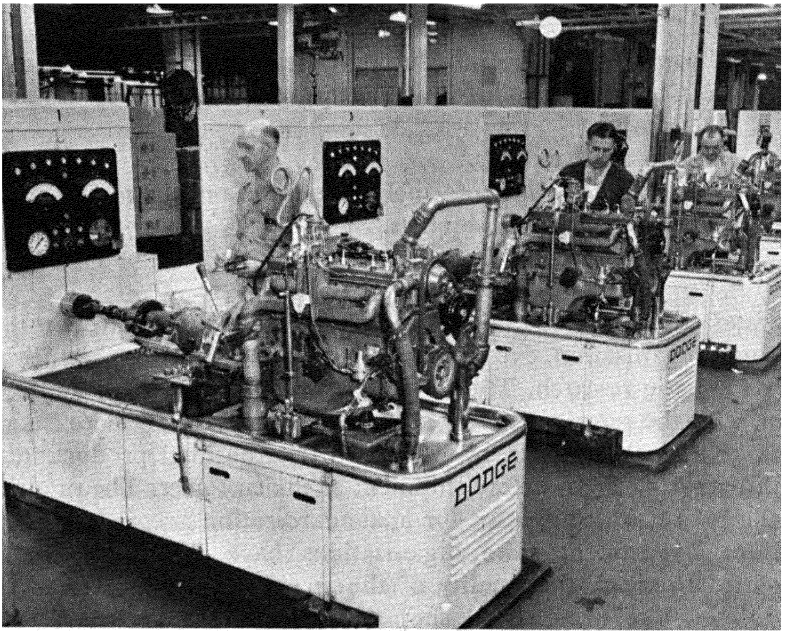

FIG. 3. The Application of Service Standards. (Courtesy, *The Chrysler Motors Magazine.*)

able the customer to enjoy the desired satisfactions for which he has paid.

The objectives of the business organization include collateral social objectives. Primary, secondary, and personal objectives must be accomplished in a manner that is compatible with these social objectives. Criteria of ethical business conduct must be considered in determining service objectives and the methods by which they shall be accomplished. Otherwise, there may be a serious deterioration of public, custon.er, labor, or other relations.

Function is work. Values do not create themselves. They are created by work, either mental or manual, or both. Standards of function are criteria of correct work characteristics and relationships. What makes them correct are the requirements of service objectives for effective, economical accomplishment. Functions are grouped in units, branches, sections, departments, divisions, and other organizational components. They may be line or staff, depending on whether they are expected to contribute values to the customer, the organization or its members. A basic consideration governing such grouping is the principle of functional similarity. These components must be related to one another by means of an appropriate organization structure. An example is given in Fig. 26. Such a structure is expected to facilitate coöperation, the exercise of executive leadership, and the development of various desirable organizational attributes. The extent to which functions are developed and differentiated depends on estimates of the nature and volume of work required to accomplish the service objectives. A result of analyses based on such considerations may be an organization manual. It will probably state the mission of each organization group in the company. It will specify the organizational objectives, functions, responsibilities, authorities, accountability, and cross relations for each executive in charge of each group. The manual probably will be illustrated by organizational charts for the principal components of the organization. These charts and manuals become functional standards of organization structure when they have been approved by the proper line authority. They have the force and effect of a standing order. They must be observed and applied, within whatever limits of "tolerance" are prescribed for them.

Group accomplishment is based on the accomplishment of operative projects. Organizational objectives cannot be accomplished satisfactorily unless the program of operative projects for the period has been executed economically and effectively. Consequently, much time, money, and thought are given to the development of managerial and operative procedures. A business procedure may be any relationship between complementary functions and the final objective of a project. The steps in the procedure are the order in which these functions must be performed for maximum results. The nature and objectives of the functions in each step, and their re-

quirements for proper performance, are indicated. The personnel and physical factors required for each step are stated or the source of information concerning them is given. Other information that is necessary for the effective and economical execution of the project is provided. A managerial procedure may be line or staff. It may fall in the fields of administrative or operative management. It should represent the one best method of doing the job, insofar as we are able to determine it in the present state of the art. The results of a procedural study are often written up in the form of standard practice instruction. Some people call it a standard office procedure. The label is not important, except for the possible confusion of terminology. It becomes a procedural standard of function, by any name, when approved by proper line authority. Like the organizational manual, it acquires the force and effect of a standing order.

Policy is a basic business factor. It is a statement of principle and rule of action. Its purpose is to facilitate the relation of functions, and their attendant human and physical factors, to objectives. The term policy usually refers to managerial principles and rules. There are principles of operative performance, of course. But it is not customary to refer to them as policies. Policies are frequently stated in connection with organizational or procedural directives. They are brought together, classified, and codified in policy manuals in large concerns. They supply criteria by which proposed or completed activities may be evaluated subjectively. An approved policy may therefore be regarded as a standard.[4]

Physical standards of condition are criteria of the kind, extent, degree, and combination in which the various physical factors must be present for effective and economical performance. They do not include those physical factors that are an integral part of the good or service itself. They include the physical factors that condition the performance of business functions, either primary or secondary. The materials from which a product is made in a factory must be standardized and specified. The characteristic attributes of the

[4] As J. O. McKinsey wrote: "Modern business administration tends more and more to become a standardized routine. In a large organization, such standardization is essential to the maintenance of a unified business policy, and to the coördination of the activities of the several departments; and coördination means subordination to a common head."—*Budgetary Control*, Ronald Press, 1922, p. 10.

product are derived, in part, from the attributes of the material from which it is made. They condition the utilities in the finished product. It is for this reason that we have classified quality standards for primary materials as a type of service standard. The material moves through the steps or operations that are peculiar to its processing. It is formed into a finished product, or a component thereof. One operation may be done on a type of machine that is capable of performing properly the specified mechanical function. This machine has been "set up" correctly for the particular operation. This means that the machine has been equipped with the right tools and attachments for the work. It has then been properly adjusted for the operation. The "tooling" may include a "fixture" that holds the material in correct relation to the tool while the machine performs its mechanical function. These and other devices that are associated with the operation are obviously physical factors that condition the performance of the machine's mechanical function. The machine itself is a physical factor. The operation of the machine is affected by the quantity and quality of the light that is available at the point of work on the machine. When the operation has been completed on the batch of material it is moved to the next operation, probably by means of some modern materials-handling equipment. This next step may be a "bench operation." This means merely that it is primarily manual, rather than mechanical—the man is the principal productive factor, rather than the machine. A glance at him will probably show that he is equipped with various hand tools and devices. These are physical factors that condition the performance of manual functions. None of these physical factors enter into and become an integral part of whatever good or service is being produced. They enter into and condition the performance of functions that create utilities in these goods or services. These factors of condition may be general; they affect the performance of all functions within a considerable area. They may be local; they affect only specific functions at the point of their performance. The functions they condition may be managerial or operative, line or staff. The attributes of these physical factors are determined by the requirements of the functions to which they are related for proper performance. These factors must be standardized accordingly. General standards of condition rest basically on organiza-

tional standards of function. Local standards of condition rest basically on procedural standards of function.[5] The proper performance of functions depends on the proper provision of these physical factors in the right kind, degree, extent, and condition. Such factors represent productive capital. One of the first steps in improving the accomplishment of business objectives is usually that of bringing up the required physical factors in performance to the standards of condition that represent good practice. The requirements of primary service objectives, in terms of quantity, quality, time, and expense determine ultimately what constitutes optimum results, and therefore good practice.

Personnel standards are criteria of the characteristics and abilities required of individuals and groups for the proper execution of their normal work assignments. They are criteria of the personnel requirements of the job in terms of intelligence, attitudes, personality, background, training, experience, and other necessary human attributes. The individual should have them to qualify for the assignment. Functional requirements must be determined by functional analysis. Job analysis is the type that is commonly used to determine the human attributes required for the proper performance of general work assignments. Psychological tests may be used to determine attitudes, aptitudes, and suitability for the work. Human beings cannot be standardized. It is possible, however, to determine criteria that will assist in proportioning and adjusting the human factor to the work to be done. These criteria are frequently included in job specifications.

Performance standards are criteria of the results that should be obtained by the performance of designated functions as directed. Such results must be measured in terms of specified objectives to determine whether or not they are adequate and satisfactory. These terms are the quantity, quality, and expense of whatever values are required, relative to time. They must be expressed in measurable units. Results partially or completely close the cycle of mental and physical action proceeding from creative planning, through organ-

[5] Copley has attributed the following statement to Taylor: ". . . In proportion to the definiteness, determinateness, and high development of your standards [of condition] must be the definiteness, determinateness and high development of your system." —*Frederick W. Taylor*, p. 262.

izing, controlling, and executing, to some accomplishment of the original objective. They rest on the preceding standards of service, function, policy, physical conditions, and personnel. They can be no better than the standards on which they are based. Performance standards do more than enable us to measure the degree to which actual performance has been satisfactory. They supply criteria of results that may be expected under specified conditions. They assist in predicting and preplanning performance.[6] They enable us to express objectives in concrete, measurable terms. They facilitate executive, staff, and self-coördination thereby. They facilitate the stimulation of performance by means of incentives. They perform other services. Such standards have to do with project performance and group performance. Project performance standards are criteria of the results that should be produced by each significant operation, step, or stage in the execution of the project. They include criteria of the end results of the completed project. An example is the production standard in a factory for a particular operation on a certain part. It may be expressed as a certain number of pieces per hour that should be produced. This is also one measure of supervisory management, since it is responsible for getting out production. An example of a financial standard is the standard cost figure for this same operation. It is also a project standard of operative management.

Project results cumulate into group results over a period of time, as we have seen. We must, accordingly, have group standards of performance. An example of a group performance standard at the operative level is the desirable percentage ratio of the number of standard hours of work produced to the total actual hours of work clocked for corresponding jobs in a department. It is an administrative measure of management, however. It has nothing to do directly with the completion of any particular project. It is rather a quantitative measure of the economy and effectiveness with which an operative executive has utilized the services of the group of operatives under his command during a certain period of time. Administrative

[6] As Webster Robinson noted: "Standards of performance, the first element of the forecasting mechanism, establish a level of efficiency which past experience and analysis have shown the business to be capable of reaching and maintaining." —*Fundamentals of Business Organization*, p. 155.

measures of indirect and supervisory personnel utilization are provided by standard ratios of such personnel to direct labor. A financial group measure is the departmental budget on which the executive must work. His budget variances at the end of the period indicate his utilization of expense factors, relative to time, in the accomplishment of his assigned objectives. These service objectives may be expressed in terms of standard hours of work scheduled for his department, adjusted for delays due to interferences with performance that are beyond his control. There are also administrative measures of quality, progress, and other aspects of successful accomplishment. Project standards of performance are the bases of group performance standards. The results obtained by an individual in completing a step in the execution of a project are cumulative with those of his fellow operatives into unit, section, branch, department, division, company, and corporate results.

The Introduction of Standards

It is evident from the above discussion that the starting point of all standards development must be whatever goods or services are supplied to the public. They are the concretions of some accomplishment of the organization's primary service objectives. All factors and forces in the organization's situation must be proportioned, related, and coördinated with one another in a manner that will make possible an effective, economical achievement of these objectives. Management is unable to meet this requirement completely in most cases. There are usually economic, political, and social forces that are beyond its control. It is still true, nevertheless, that standards of policy, function, condition, personnel, and performance derive their characteristics and validity from service standards.

There is a point of diminishing returns in the development of standards, as in everything else. It costs money to develop and refine standards. There is nothing in the scientific method that says that all standards must have exact accuracy to the third decimal place. It requires only that the solution shall produce a result that is satisfactory within the quality limits of the problem. It is unscientific, as well as uneconomic, to produce a quality in a good or service for which the public has no need or desire, and for which accordingly it is unwilling to pay. This concept conditions our thinking con-

cerning the requirements of standards of service, and therefore concerning all other standards that enter into the management of a business.

The Development of Standards

Executive leadership in business has a social as well as an economic responsibility for improving the living standards of the public. It is believed that this responsibility is inherent in its managerial function in an industrial society. This includes responsibility for educating the public concerning the desirability of new goods or services that have become available. It is part of the sales and advertising functions of business. It is associated with the functions of research, design, and development of new goods and services.

It is noted, in connection with Fig. 13, that a business or industry tends to go through certain typical stages of development. These have been called the pioneering stage, the stage of exploitation, and the stage of stabilization. The pioneering stage is the stage in which a new good or service is being developed. The stage of exploitation is the stage in which the good or service has been developed to the point where it is commercially salable and markets for it are being exploited. The stage of stabilization is the stage in which the maximum practicable limits of service, at each point in time, have been reached. The secular growth of the organization would tend to parallel the secular growth of population thereafter, provided that the concern maintained its relative competitive effectiveness. The cycle may be repeated, if the organization can develop other goods or services for which there is a potential demand that is relatively large and continuing. This cycle may have a very great effect on the kind and ability of leadership required by the organization. It may have an equally great effect on the various standards that the organization must develop and maintain. The quality of the good or service during the pioneering stage may be relatively crude. It may be the best that can be provided in that stage of the particular business art. There is little demand for any better quality. Anything that the public gets may be better than it has been able to enjoy previously. There is little competition to enforce any quality demand that might develop from customers. Standards are correspondingly crude. They are likely to be experience standards initially.

This means that they are likely to be codifications of criteria which executives and key employees have been carrying around in their heads for years, plus such standards as may be developed through analyses of past performance records. Furthermore, they are "drifting standards." Progress has been made by trial and error in the development of managerial and operative functions as well as in the product. In consequence, experience standards drift toward higher levels of economy and effectiveness.

The rate of change in the development of product, process, markets, organization, and other factors in the particular situation is much faster during the period of exploitation. It is represented by the tangent dV/dT in Fig. 13. This tangent is a measure of the upward pull of progress. The public demand for the particular goods or services is developing rapidly. Competition has weeded out the less efficient concerns. The remaining organizations have grown larger and more complex. The need for standards that will make it possible to plan, organize, and control a rapidly developing, complex situation probably has been recognized.

The development of staff organization, during the stage of exploitation, results in more specialized groups headed by people who have some professional training.[7] They have some understanding of a scientific approach to the solution of problems in their fields, and the requirements for a sound application of it. They recognize the increasing necessity for rational standards, developed through research, to replace the experience standards in use. The latter usually do not permit a close, accurate proportionment and relation of performance factors for optimum economy and effectiveness. Higher levels of standardization based on research result from this recognition.[8]

The tendency in American industry is toward decentralization, rather than centralization of responsibility and authority. Generally the intent is to emphasize single accountability. The executive

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[7] The distinction between line and staff organization will be developed later. It is sufficient here to note that a primary line organization leads directly from top management to specialization in creating or distributing salable values. Staff does not. It assists the line. It is attached to the line at some level but is not a part of it.

[8] L. P. Alford stated this idea as a principle: "Specialization tends toward standardization."—*The Laws of Management*, p. 100.

who is completely accountable for the results of operations under his command must be given whatever authority is necessary for the discharge of this responsibility. It includes at least the initial rights of decision and command concerning the methods by which these results shall be achieved. Each subordinate executive is responsible, accordingly, for developing the best methods for his operations. He has the right, of course, to make use of any available staff that can assist him in the discharge of this responsibility. It follows that he is primarily responsible for developing standards for the proper performance of the managerial and operative functions of his organization. It develops, sooner or later, that each executive is devising methods and standards for his organization, but without regard to their effects on other groups in the company. It may happen that results are not comparable between groups because they have used different standards for measuring the same thing. Other difficulties arise. It may be discovered that standards in use are inadequate because the responsible executive does not have the training, time, or staff for standards development. It becomes necessary eventually to set up a staff organization to facilitate, coördinate, and control the work of standards development and maintenance. The provision of staff does not relieve the executive of responsibility for the standards used by his organization. He is obligated to protest when a standard does not serve his group adequately. The executive and the staff group that sets the standard must report to a common superior at a higher level.

Standards development tends to go through certain general stages with the development of an industry, as indicated above. These stages may be summarized as follows:

1. Recognition of a need for better standards.
2. The development of experience standards.
3. The development of rational standards with the development of technical staff functions.
4. Organization for standards work.
5. Control of standards development.
6. Provision for standards maintenance.
7. Provision for periodic review of standards.

These stages may of course overlap one another.

Organization and Control of Standardization

The staff organization required for standards work should be as simple as possible. Each staff group should be charged with responsibility for the development of the methods and standards that are necessary in its field of specialization. A standards committee may be necessary to coördinate thinking with respect to the joint requirements of proposed standards. It may be practicable in a large concern to set up a department for the development of certain types of standards when there is enough of this work to make it economical. This is usually not practicable in a small organization.

The control of standards development should be handled by policy and procedure. It should be required that requests for changes in standards whose application affects groups outside of a department be submitted to the appropriate staff executive for analysis. The primary production standards in most plants are a good example. Usually no change in them may be made by line supervisory executives without the concurrence of the time-study department. Conversely, new standards developed by the time-study staff should have the concurrence of the line executives affected. It may be required that requests for changes in standards or for the development of new standards whose costs exceed some predetermined amount must also be submitted to the standards committee for concurrence. Disagreements between line and staff executives concerning the propriety or accuracy of standards must be referred to the committee or a higher line executive for decision. The committee should have the right to request reports that will show how a particular class of standards is operating. It should be able to recommend action to the superior line executive in areas where standards changes or developments appear to be necessary. It should be able to take other action that will enable it to coördinate thinking concerning standards development and maintenance.

Standards Maintenance

Standards have a tendency to deteriorate with the passage of time. This is obvious in the case of physical standards. Considerable time and money may be spent in providing artificial lighting conditions in an office or factory to meet good lighting standards. These conditions will deteriorate obviously unless light reflectors are

cleaned, burned-out bulbs replaced, and other ordinary maintenance measures taken. The level of lighting may drop below the standard level. An inferior standard, in effect, is substituted for a good standard if nothing is done about it. Many concerns have developed procedures for the periodic inspection of physical factors and conditions to prevent the deterioration of standards through neglect.

It is difficult to maintain standards that have differing degrees of quality. Uniformity in the quality of standards is more desirable than a high average level of quality in which some standards are very high and some are very low. The latter condition is usually impracticable. The bad standards tend to drive out the good.[9] Any upgrading of standards should be made generally, gradually, and uniformly.

Periodic Review of Standards

Both physical and nonphysical standards suffer from obsolescence as well as depreciation. Most American industries are progressing Whatever is good practice in a certain area of operations this year may be poor practice next year. It may become obsolete the year after. Conditions and practices may be stabilized in other areas. Standards may be stable there in consequence. It depends on the rate of progress of the organization. It is desirable, in any event, that standards of all classes be reviewed periodically. We should make certain that they reflect the best current practice and are still applicable to the area in which they are to be used.[10]

Difficulties in Standardization

The development and maintenance of effective standards for managerial and operative performance is a difficult as well as an

[9] L. E. Bryant has said: "It should be noted that it is practically impossible to maintain high standards in juxtaposition to poor standards. Throughout an industrial establishment there is a leveling tendency with respect to standards —a Gresham's Law."—H. S. Person (ed.), *Scientific Management in American Industry*, p. 196. See also E. D. Jones, *The Administration of Industrial Enterprises*, p. 155.

[10] Alford's Law of Standardization says: "Every standard should be subject to revision from time to time in order that it shall continue to reflect the available and applicable knowledge of the art."—*The Laws of Management*, p. 111.

important problem. Many people prefer to keep on doing the same old things in the same old way. This is usually the path of least resistance, but not the path of progress in a competitive society. Such people usually oppose standards programs. A sound standards program promotes progress. It does not freeze it. To develop, maintain, and improve standards costs money. Some executives may oppose a standards program because of the expense. The ultimate as well as the immediate benefits of the program should be evaluated in determining its economy. There is such a thing as overstandardization, however, It may produce organizational and procedural rigidities, as well as unnecessary expense. There are other problems that must be solved. They will be discussed subsequently in connection with the work of planning, organizing, and controlling operations. It is sufficient to note here that the quality of management is limited to a considerable degree by the quality of its standards.

CHAPTER 3

BUSINESS PLANS AND PLANNING

The Nature of Plans and Planning

Management is the function of executive leadership. Planning is one of its organic functions. A business plan is a specification of the factors, forces, effects, and relationships that enter into and are required for the solution of a business problem. It provides, as such, a basis for economical and effective action in the achievement of business objectives. It may or may not be committed to writing. A plan is "the tangible evidence of the thinking of the management."[1] The function of planning is obviously the work of developing a plan. It is largely mental work that is concerned with problem-solving thought. It has to do, therefore, with determining what should be done, how it should be done, where action should take place, who should be responsible for it, and why. The performance of the planning function always involves some degree of futurity.[2] The higher the organizational level on which it is performed, the greater the degree of futurity that is involved. The accuracy of foresight tends to vary inversely with the time span covered. The quality of business plans and planning is an important determinant of business success. Its difficulty as well as its importance tends to increase with organization size.

[1] J. O. McKinsey, *Adjusting Policies to Meet Changing Conditions*, A.M.A. Gen. Mgt. Series No. 116.

[2] A. Hamilton Church said that "planning is, in essence, the exercise of foresight. Specifically, it consists in adjusting the relation of things before they happen. In this sense, almost every business step involves planning in some degree."—*The Science and Practice of Management*, p. 485.

The Objectives and Requirements of the Plan

The immediate objective of planning is a basis of action for the accomplishment of certain other business objectives. A statement of the plan should facilitate an understanding of the mission. It should enable the organization, or some element of it, to accomplish its mission successfully on the basis of the information that it supplies. The function of a written statement of a plan, therefore, is to supply the necessary information. It should state the nature of the mission and its objectives.[3] It should specify their accomplishment in terms of quantity, quality, time, and expense. It should provide criteria of satisfactory accomplishment or indicate where they may be obtained. Other business standards are usually necessary for planning. They are necessary, too, for the subsequent work of organizing for and controlling the execution of the plan. Sales forecasts that are reasonably accurate are also a requisite of successful planning. The organization's executive leaders must have some notion of the volume of business that must be handled during a coming period. They should know what it involves in terms of quantity, quality, time, and expense. The anticipated volume should be broken down into programs showing the kinds of goods or services required in terms of dollar and physical amounts, relative to time objectives. There must be some quality standards to assure the satisfactory serving of the customer's needs and desires. There should be standard costs, expense ratios, or other expense criteria for relating the values that must be distributed to the cost of producing them. Adequate business standards are necessary to determine the best proportions of the factors, forces, and effects in a business problem, and the correct relations between them. Such determinations are necessary for plans that will give the organization effective, economical bases of action.

A plan and a policy are related but different concepts. A policy basically is a principle, and/or a rule for its application, that is intended to serve as a guide for the thought and action of the organization. It relates functions, factors, and personnel to objectives. A plan, in consequence, usually includes some statement of the

[3] L. Urwick lists various characteristics of a good plan in his book *The Elements of Administration*. The first characteristic (p. 34) is "that it is based on a clearly defined objective."

applicable policies, or indicates where they may be found. The plan should therefore state and define adequately the principal subfunctions of the activity. These phases are necessarily the basis of any program that is set up for the accomplishment of the particular objectives. Any required changes in the present forms of organization structure and business procedure should of course be specified. This may necessitate the specification of new or changed requirements or physical factors. This should be provided for each phase of the plan, together with information that will permit the procurement or provision otherwise of these factors. Some specification of personnel requirements also may be necessary.

An effective execution of a plan is not likely to take place except under competent, effective leadership. This tends to become more and more true as the organization grows larger. The validity of the statement depends also on the complexity and importance of the mission. A good plan usually designates the leadership for each phase of the program. This leadership is normally the leadership of the organization element that is responsible for the execution of the particular phase. It is frequently designated for this reason by organization position. The name of the individual who happens to hold the particular executive job at the moment is less significant. He should be relieved of his assignment if he is not competent. There should be, in any event, clear-cut, accurate definition of his duties, responsibilities, and authority as they relate to his phase of the mission. It is often the case that they already exist in the form of job specifications and standard practice instructions. In such a case they need only to be incorporated in the plan by specific reference.

Time is usually of the essence of accomplishment in business activity. The business plan as a rule specifies the time requirements for the various phases of the mission and the time relationships between them. It is generally necessary to specify them in terms of quantitative rather than chronological time. Planning always involves futurity. Top administrative planning frequently involves a time span covering a number of years. As we go down the various organizational levels, approaching the point of primary operative performance, the required degree of futurity in planning decreases. Planning at the point of primary operative performance tends to

be minor and involves practically no futurity. It is evident that business planning must considerably precede organizing. It may precede execution by a long period. The planning of a new line of durable consumers' goods, for example, may precede its introduction to consumers by one or more years. The planning of a construction program often precedes the need for additional capacity by five or more years.[4] The accuracy of forecasting and planning, however, tends to vary inversely with the time span that must be covered by the plan. It is necessary for this reason to express time requirements and relationships in plans quantitatively. The conversion of quantitative time into chronological time is a function of scheduling. The latter is a phase of control. It can precede execution only by a relatively short time span if it is to have the required accuracy.

It may be necessary to specify in the plan the characteristics of and requirements for any other factors that enter into and affect the accomplishment of the particular mission. What they are is determined by the requirements of the mission. The detail in which they are specified is determined by the organizational level at which planning takes place. Business planning at the top administrative level necessarily is very broad and general. Detailed planning is delegated to lower echelons, within the limits of delegated responsibility and authority that have been set up in the general administrative plan.

The General Characteristics of the Plan

There must be some basic characteristics of every good plan, because it should conform to certain general objectives and requirements. The preceding discussion of such objectives and requirements indicates that the principal general characteristics are the following: objectivity, logical soundness, futurity, flexibility, stability, comprehensiveness, clarity, and simplicity.

It has been noted that statements concerning the values that constitute the objectives of the mission should be definite, clear,

[4] F. B. Rentschler, board chairman of the United Aircraft Corporation, has stated that when the Wasp Major was conceived in mid-1940 there was not a plane that could use it. "This engine accounted for approximately half of the volume of business on its books in 1949." See articles in *Investors Reader*, December 7, 1949, published by Merrill Lynch, Pierce, Fenner & Beane.

concise, and accurate. They should not be colored by bias or emotionalism resulting from undue emphasis on personal objectives within the organization. Otherwise, the plan may be satisfactory to certain organization groups, but unsatisfactory to the customers. It is likely, in such a case, to be unsatisfactory to everyone eventually. It is evident that planning should be based on objective thinking. This means that it must be factual, logical, and realistic with respect to the requirements of the mission and its various undertakings. The resulting plan cannot have the quality of objectivity otherwise. Subsequent effective execution of the plan depends on an intelligent understanding of it by those who are responsible for putting it into effect. Such an understanding is difficult to gain unless there has been logical development of the basis of action and it has been presented logically in the plan. Effective planning rests on the logic of effective thinking, as well as on its objectivity.

A plan is always a forecast of some future action. It states the course and mode of action that are thought to be best for the solution of a problem that has arisen or is expected to arise. A plan must have the quality of futurity, therefore. Otherwise, it has little value as a basis of action. It follows that the ability to plan business activities economically and effectively depends on the ability to foresee, with reasonable accuracy, the nature and requirements of future events affecting the industry and the business organization. The ability to forecast is quite limited, even though the science of economic statistics has developed greatly. The opinions of many well-known politicians, business executives, and economists concerning the business future at any stage of any business cycle are a matter of record. They can be examined in the back files of metropolitan newspapers. They frequently are almost as ambiguous as the pronouncements of the oracle at Delphi. The ratio of hits to misses for most business and public leaders is not too remarkable. This is not an argument against planning or a criticism of the efforts made by leaders to plan. Planning is a basic function of leadership anywhere. Plenty of it is done in business. But the limitations of the human mind to foresee the business future, and therefore to plan accurately, must be recognized. The accuracy tends to decrease as we progress from the point of operative performance to the levels of top administrative management, because of the in-

creasingly greater time span that must be covered. It is necessary in consequence to decentralize detailed planning. It is probable that the ability to plan accurately and in detail always will be limited to a short time span in advance of the time objective of a particular project. Yet some long-range planning in business is necessary. Short-range planning must be based on it. Otherwise, it represents merely expedient action.

This means that a good business plan usually must have certain other qualities in addition to objectivity, logical soundness, and futurity. It is evident, for one thing, that the plan must have the quality of flexibility. A flexible plan is one that can be adjusted smoothly and quickly to the requirements of changing conditions without serious loss of economy or effectiveness. A plan should be sufficiently broad and fundamental to permit such adjustment. It may require provision of alternative courses of action to meet possible changes that may arise. It should provide "tolerances" to permit reasonable deviations from a planned course of action without risking a breakdown of the plan. Areas of free action should be provided when the nature of the required action within the area cannot be anticipated with sufficient accuracy. The action in such areas is covered by specifications of general objectives and policies, with a minimum of detail concerning procedure. The flexibility of a plan may be nullified, of course, by lack of flexibility in the personnel which is responsible for its execution. It may be necessary, therefore, to designate leadership requirements for the individuals who will exercise executive leadership. The higher the level of operations, the more necessary it usually is that these individuals have the required breadth of understanding, background, experience, vision, mental alertness, and other qualities of superior leadership. It is also true that the flexibility of a plan may be nullified by lack of proper control of the subsequent action. Prompt adjustment to the requirements of changing situations is not likely to be made unless current interferences with the execution of the plan are reported promptly. This takes us into the realm of control. These and other considerations affecting the development of flexible plans will be discussed later. The need for flexible plans increases as we advance from the point of operative performance toward the top administrative levels. The possible flexibility in operative plans is at a mini-

mum at the point of execution. The possible time span in planning is approaching zero as a limit.

The quality of stability is related to but different from the quality of flexibility in plans. A stable plan is one that will not have to be abandoned or subjected to fundamental modifications because of changes in the long-time trend of the company's situation. It may be affected by population trends, basic trends in technological developments in the particular business field, and other long-range developments that affect the secular trend of the business. It is apparent that there can be no such thing as complete stability of business plans. On the other hand, some stability is necessary. A business plan may be regarded as a tool of management. Familiarity with the characteristics and potentialities of a tool is a condition of its skillful, effective use. An organization whose plans change materially from day to day because of expediency is not likely to enjoy an effective, economical accomplishment of its objectives. Plans are likely to have more stability when there is a stable organization. Fundamental soundness accompanied by a minimum of necessary detail is also a consideration. There are many other factors that condition this quality in plans.

A plan should have comprehensiveness, as implied by the preceding discussion. It should cover adequately all action that will be required of individuals and organization elements for the satisfactory accomplishment of the objective. It should not, however, specify the nature and conditions of the action in such detail as to be unduly restrictive. Otherwise, an unnecessary loss of initiative and freedom of action may result. It must enable the executives in each echelon of the organization to coördinate the action on the lower levels for which they are responsible. These requirements are not as contradictory as they may appear at first glance. The tendency to decentralize managerial functions and responsibilities varies directly with the size and complexity of the organization. Greater detail can be specified in business plans as we approach the point of operative performance.[5]

The statement of a plan should be as free from ambiguities as possible. Accountability for results of the subsequent application

[5] Henry S. Dennison has a good comment on this point in his book, *Organization Engineering*, p. 154.

of the plan may be vitiated if it lacks clarity. Quick, decisive action may be inhibited. Necessary verbal interpretations of the plan made under the pressure of emergency situations can cause serious difficulties. A good plan is clear and comprehensive, but as simple as possible. A simple plan is one that provides for the accomplishment of its objective with the fewest number of factors, forces, and effects in the situation, and with the fewest number of relationships between them. Unnecessary complexity compounds the difficulty of organizing the situation, of executing the plan subsequently, of controlling its execution. Executive and operative personnel on lower organizational levels usually have less background, maturity, and experience, and often less intelligence. The process of promotion, in most business organizations, is and should be based on individual merit. In consequence, it is a selective process. The responsibility for execution devolves necessarily on the lower echelons of the organization. Simplicity in plans, for these and other reasons, is a virtue in all fields of human activity where extensive organized action is required.[6]

A business plan should be reasonably economical. Effectiveness in the achievement of objectives cannot be the sole consideration, since the resources of any organization are limited. Competition limits, over a period of time, the values that may be gained by the organization through the successful accomplishment of its service objectives. Economy is necessary, therefore, for a reasonable satisfaction of personal objectives beyond short-run gains. This holds for a business organization, an industry, or a nation. There is no such thing as a nonprofit operation, except in theory. An economic

[6] General Service Schools, U.S.A., says in *Command, Staff and Tactics* (p. 142): "A plan contemplating a systematized attack throughout the battle comprises methodical and detailed instructions as to the part each unit and branch is to play in each phase of the action. Such a plan is prepared well in advance and requires accurate and detailed information of enemy dispositions. . . . It may also be employed when the attacking troops are imperfectly trained or the subordinate staffs and leaders are not experienced. Otherwise, such a plan is avoided as it is complicated and tends to discourage initiative, restrict maneuver, and limit success. A plan, simple and easy of execution, is devised and is adhered to with tenacity. A complicated plan, or one involving difficult maneuvers, offers too many chances for mistakes and errors. After troops are engaged in action, changes in the original plan are difficult and dangerous." This statement becomes a good argument for simplicity in business plans under competitive conditions in a free economy, when it is translated into business terminology.

operation, whether great or small, is either a profit operation or a loss operation, except perhaps for short periods of time. It is possible of course to transfer surpluses from one segment of an economy or enterprise that is operating profitably to another that is not. A glance at any break-even chart will show that a condition of no profit and no loss is merely a point in operations relative to volume and costs. There is no executive leadership with sufficient ability to hold these factors continuously in such exact adjustment that there is no profit or no loss over an extended period of time. There is no reason why it should. Capital is productive, if applied properly. The continued growth and development of industry depends on profits. A continuing loss for an operation as a whole merely means that more values are being expended to create certain other values than the latter are worth. A profit needs no justification, therefore, if earned fairly under competitive conditions. It is argued sometimes that some of the values produced at a loss are desirable social intangibles. Nevertheless, an industry that continues to operate at a loss probably will end in bankruptcy. A nation's standard of living depends on the ability of its industry to produce more values than it consumes. A nation that continues to operate under deficit financing probably will eventually suffer a lowering of its standard of living. The business executive, accordingly, has both a social and an economic obligation to plan business operations so that business objectives may be accomplished economically as well as effectively.

Planning and the Logic of Reflective Thinking

The social, economic, and business importance of business planning tends to increase with the level on which it is performed. Planning on the top level of the business organization should be fundamental, far-reaching, and basic. The nature of planning changes as we go down toward the level of minor operative management. Its scope, extent, and importance tend to decrease as we approach the point of execution of the plan. Some responsibility for creative planning always attaches to any executive position, regardless of how minor it may be. A supervisory executive in charge of a small group of operatives in a factory has an obligation to study continuously the operations for which he is responsible and to contribute to their improvement. This is one reason why many

manufacturing organizations have provided practical training courses in motion economy and work simplification for their shop supervisors. Creative planning is a basic function of any executive, despite variations in its scope and importance at different executive service levels. Limited responsibility for planning their individual work assignments may be delegated to professional operatives or skilled craftsmen.

Planning involves mental work. It is difficult to do well at any business level. It becomes more difficult as we depart from the level of operative planning and approach the level of administrative planning. The reasons for this have to do with futurity, intangibility, complexity, and other factors. They have been noted previously. Oliver Sheldon said that "the work of administration is primarily the immensely difficult task of sitting and thinking. Modern business suffers exceedingly from the lack of such thought. For some men, deliberate and constructive thinking is an intolerably burdensome pastime."[7] Henry Ford, Sr., concurred with the following pithy remark: "Thinking is the hardest work there is, which is the probable reason why so few engage in it."[8] The importance and difficulty of business planning are such that their relation to the logic of reflective thinking deserves more than the cursory examination that can be given here.[9]

The process of reflective thinking is complex. Its relation to business planning is important and should be understood. A graphic analysis of the principal factors, forces, and effects in the process is shown in Fig. 4. Like any graphic summary it sacrifices some accuracy to simplicity. It is intended merely to facilitate the development of a practical understanding of the process as an aid to better planning.

Intelligence is the basic requirement for any planning. It is an intellectual activity. Studies by psychologists do not show clearly, however, that there is a hierarchy or gradation of intelligence in

[7] C. H. Northcott and others, *Factory Organization*, Pitman, 1928, pp. 25–27.

[8] F. L. Faurote, *My Philosophy of Industry—Henry Ford*, p. 25.

[9] The logician uses the term reflective thinking to designate problem-solving thought. It is the mental process by which past experiences, either mental or physical, are combined with facts concerning the present situation to provide solutions for present or future problems. The term distinguishes this process from such mental phenomena as "reverie," "rationalization," and others.

the business organization which corresponds to the hierarchy of responsibility and authority.[10] This may indicate emphasis by the

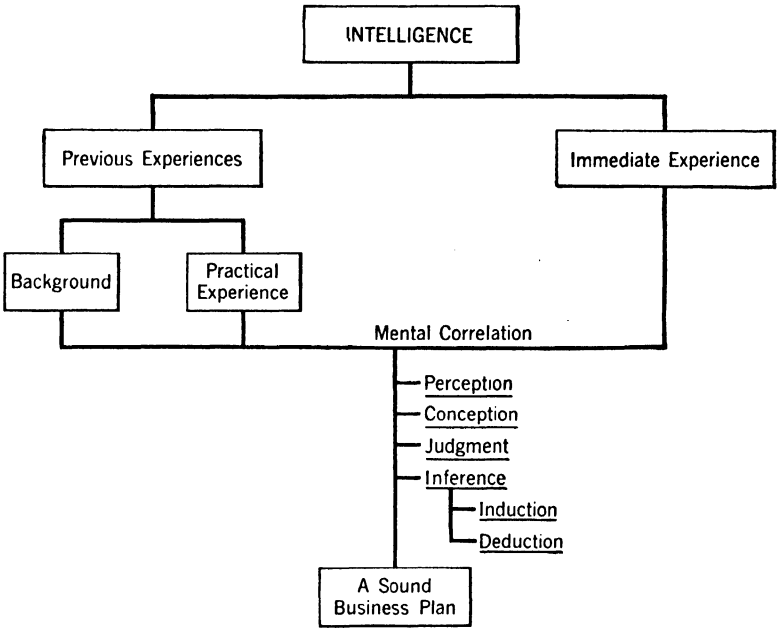

FIG. 4. Logical Relationships in Planning.

promotion process in large organizations on personality, experience, know-how in handling current problems, knowledge content, and leadership attributes other than mental capacity. But one would expect such a hierarchy of intelligence. The division of executive work shifts in the direction of creative planning as we approach the top of large organizations. This lack of correlation between intelligence and leadership responsibility, if it exists, may account for the poor quality of business planning that is sometimes encountered. It may be, however, that the psychologists have not taken due account of certain characteristics of business organization structure that will be noted later.

[10] See Morris Viteles, *Industrial Psychology*, p. 126, and Myles Mace, *The Growth and Development of Executives*, p. 86. Ordway Tead feels, however, that the person of greater intelligence will probably make the better leader; see his *The Art of Leadership*, p. 128.

Logicians and psychologists have offered various definitions of intelligence. It is, in general, the mental capacity to engage successfully in intellectual activities involving problem-solving thought. It is indicated by the ability to profit by previous experiences, either mental or physical, in the solution of present or anticipated difficulties. It can exist in an infinite number of degrees up to some maximum. Sufficient mental capacity for the solution of a problem must exist in the responsible executive or his associates. Otherwise, no sound plan is possible. The capacity of a jug is significant chiefly with respect to the contents it can hold. A good brain with nothing in it would have no present ability to solve anything. Psychological tests of illiterates have occasionally discovered individuals who have been almost in this situation. The above definition of intelligence indicates that some body of previous experiences is necessary for effective thinking. In business, these previous experiences consist chiefly of background and practical experience. The term "background" generally refers to some body of principles, points of view, general methods of attack, knowledge of general factors in the situation, and similar knowledge. Some individual or group in the business organization usually makes a study of the background of a major problem before attempting to develop a plan for its solution. The importance of the problem, the expense that will be incurred, the degree of originality involved in determinations, time limitations in emergency situations, available professional personnel, and other considerations may limit the expenditure of time and money for research and study. Knowledge of the previous experiences of others with similar problems is desirable. There is no economy in duplicating the background work that other competent individuals have done previously. Today some help can usually be found in professional texts, the journals of professional societies, previous company reports on similar problems, and similar sources. Generally, however, a number of local factors, forces, and effects are involved in the particular situation. They must be understood if an effective solution of the problem is to be devised. Knowledge of what constitutes the best methods for handling them is also local, as a rule. These methods usually involve some modification of the general method of attack on such problems anywhere. Knowledge of the general objectives, principles, and procedures underlying a

solution of the problem should be part of the executive's background. Knowledge of local objectives, rules, and specific methods for handling the problem locally is part of the local executive's know-how. It is quite as important as general background. It is the product chiefly of practical experience. A man who has nothing but background is a theorist. A man who has nothing but practical experience is a business mechanic. A professionally trained executive is one in whom there is an effective integration of these two general types of experiences, combined with adequate intelligence regarding the types of problems with which he must deal. It is obviously impractical to expect any major or general executive to know everything about everything. The requirements of the situation are met by conferences of coördinate executives and by supplying such subordinate specialized staff as may be necessary.

The development of a sound solution involves some process of correlating previous experiences with those immediate experiences that are associated with the particular problem. The general process of correlating experiences has been broken down by the logician into certain subprocesses or phases. Perception is merely the process of interpreting sensations. Someone places a paper on the desk in front of us. We see that it is a report of some kind. We note certain figures that are underlined in red. We know that the underscoring indicates significant variances in the particular situation. Conception is the joining of percepts and experiences to form concepts or ideas. On the basis of our knowledge and experience, an examination of the variances indicates their nature and probable importance. We know also the factors and forces that affect them. If not, it will be necessary to find out. Judgment is the process of associating concepts and experiences to determine the significance of their relationships in the problem. The variances that have been underscored in the report refer to difficulties or failures in the handling of certain phases of some business problem. The relationships between them necessarily are significant. A determination of them, based on previous ideas and judgments concerning the variances, leads to certain inferences. The process of inference has to do with the derivation of conclusions from judgments concerning possible solutions of the problem. It breaks down into two principal phases. Induction is the process of deriving logical explanations and suggested solutions

from previous judgments. It involves reasoning from particular facts and circumstances to generalizations concerning the proper handling of the problem. Deduction proceeds from generalizations to particular consequences. It is the process of testing the validity and truth of conclusions through an examination of the probable consequences, insofar as they can be determined. It may be possible for the executive to perform completely the processes of induction and deduction as he studies the report at his desk. It may be, on the other hand, that his previous experiences with the kind and type of problem are not adequate. The facts that have been presented in the report may be insufficient to permit him to arrive at a definite decision. In such case, his study of the report may lead to the assignment of certain staff projects requiring considerable investigation. The final result, in any event, should be a sound plan for the solution of the difficulty. It should represent a basis of action that will permit the accomplishment of business objectives with the requisite economy and effectiveness. It may be based on much work by many individuals and groups. This work may be expressed in the form of reports or the minutes of conferences. The final plan may nevertheless be considered to represent the final decision of the responsible executive, for which he may be held accountable. He may delegate responsibility for such portions of the work of planning as he sees fit. He cannot abdicate his responsibility for sound planning of the work of his organization without forfeiting his right of executive leadership.

Planning and the Principles of Logic

It is evident that the principles of psychology and logic underlie the effectiveness of business planning. The psychological laws of association, for example, certainly affect fundamentally the development of ideas. These laws have to do with frequency, vividness, recency, and effect. The Law of Frequency merely says that a repeated experience is more likely to be recalled than one which has occurred less frequently. We are therefore more likely to assign a problem to a man who has handled similar situations repeatedly than to one who has not. He has probably had more experiences that bear on it, and is more likely to recall them in connection with the present problem. The Law of Vividness says that the more vivid

an experience, the more likely it is to be recalled when a similar stimulus is received. The violence of a response, either mental or physical, increases with the intensity of the stimulus. The vividness with which we recall a pertinent experience depends largely on the strength of the impression it made on us. The interpretation of sensations, as was noted above, initiates certain thought processes that lead to possible solutions of the particular difficulty. The knowledge and know-how gained in attempts to solve problems of a particular type become part of our background and experience, whether or not the attempts were successful. The strength of our responses to a situation depends usually on the magnitude of the difficulties that must be overcome. It depends also on the associated possibilities of serious consequences. We are more likely to call the person who has had previous successful experiences in handling tough problems when we select the leader for a serious problem situation. The selection involves more than intelligence, knowledge, know-how, and personality. An experience that is associated with the successful solution of a difficulty is more likely to be recalled in a similar situation than one which is not. It acquires an intensity and vividness by reason of such association. This is a practical statement of the Law of Effect. The Law of Recency says that the more recent the experience, the more likely it is to be recalled. It tends to be more vivid in our memory. The "synoptic resistance in the neural path," as a psychologist might express it, tends to increase with the passage of time. The practical executive would probably say that a candidate who has had no recent experiences with the particular problem may be too "rusty," even though his background, training, and experience may be otherwise satisfactory.

The practical executive also applies the principles of logic whether he has studied them or not. He cannot think effectively unless he does. The Laws of Inference may be used as an example. This term usually refers to the Laws of Identity, Relatedness, Contradiction, Excluded Middle, and Sufficient Reason. The process of reasoning involves the passing, in mental review, of the concepts and judgments which have been developed. They are correlated with such other experiences as we may have at our command, including facts and principles that have been acquired previously. The process includes the determination of the meaning of their

relationships and the drawing of conclusions as they relate to possible solutions of the problem. The Law of Identity says that the meanings of concepts and judgments and their relationships must remain constant throughout the thinking process. They must retain their identity, in other words. Otherwise, any inductions or deductions will lack logical consistency. One sometimes hears in a conference an analysis of a problem that starts off with certain assumptions concerning the meanings of the facts in the case, and ends with certain conclusions whose validity requires the attachment of different meanings to the same facts. This is frequently the result of failure to define the particular meanings and use them consistently. It may grow out of failure to examine closely the relationships between the facts and principles involved. The Law of Relatedness expresses the following proposition: If two experiences are significant, insofar as a particular problem is concerned, there must exist some significant relationship between them. The relationship should be determined clearly and accurately, if it is significant. Otherwise, the result may be a violation of the Law of Contradiction, which says that the characteristics of the relationships between our experiences cannot be contradictory. While these relationships may have different characteristics in different situations at different times, they cannot have contradictory characteristics in the same situation at the same time. Furthermore, the Law of the Excluded Middle says that conclusions concerning the significance of the relationships between our experiences must be either true or untrue. There can be no middle ground between opposite assertions concerning the same thing at the same time under the same circumstances. Most of our knowledge is relative rather than absolute. A proposition may be accepted as true, however, when it is based on sufficient actual experiences that tend to support it. This is a practical meaning of the Law of Sufficient Reason. It may not be possible, of course, to secure absolute proof of the soundness of a proposed plan in advance of its application. We may not be able to obtain this proof except by a pragmatic test of results.

The practical executive applies, sometimes without realizing it, certain fundamentals of logic and psychology in planning. This is true necessarily to the extent that he thinks effectively in developing business plans. It is also true that a person usually does a thing

better if he knows what he is doing and why. A course in "effective thinking" is sometimes found in the executive cadet training programs of large corporations. It is usually based on some combination of logic and psychology. Most executives have heard of the famous slogan of the International Business Machines Corporation, "THINK." It is posted in a surprising number of plants of other corporations. Effective thinking, of course, is not everything in the development of sound business plans, but it helps. It may be that there is too little correlation between executives' positions and their capacity for problem-solving thought. At least, they are trying. Our present high living standards suggest that they must have done rather well.

The Scientific Method

An analysis of the stages in reflective thinking contributes to an understanding of the process of business planning. We go through these stages or phases in some manner in arriving at the solution of a difficulty. Such analyses have been made by various students of business.[11] They go back to the fundamental thought processes that were diagrammed in Figure 4. Graham Wallas expressed an interesting analysis in popular terminology. He believed that the principal phases of reflective thinking are preparation, incubation, illumination, and verification.[12] Preparation is the stage in which one gets information concerning the present problem, marshals previous experiences, and adds such new facts and experiences as may be necessary. Incubation is obviously the stage in which the ideas are "hatched." It recognizes that part of the thinking process appears to take place below the level of conscious thought. Some psychologists deny the existence of a subconscious mind. Be that as it may, it is still a "convenient fiction." Almost everyone has had the experience of arriving at a stage in the solution of a business problem beyond which he seems unable to go. Perhaps he throws the problem aside in disgust, and goes about some other business

[11] H. G. Schnackel, for example, considered that the following are the principal phases: recognition of the problem, analysis of the problem, the recall of related experiences, analysis of the recalled experiences, the selection of that which is relevant, the formation of a hypothesis, and the verification of the hypothesis. See *The Art of Business Thinking*, p. 68.

[12] Graham Wallas, *The Art of Thought*, p. 81.

that is unrelated to it. It happens, frequently, that when he takes up the problem at some later time, the solution comes easily. Sometimes it comes when he is doing something that has no bearing on the problem. There have been instances in which a person has awakened in the night with an idea clear in his mind for which he had been groping for days. Some mental process had been taking place below the level of consciousness. It suggests that time is often an element in the process, and that it may not pay to force the process in an attempt to obtain an early solution of a business problem. An emergency in which time is of the essence may force our hand, of course, but the need for an early solution frequently is exaggerated. We are in Wallas' stage of illumination when the needed idea breaks through to the level of conscious thought. The development of a solution should proceed from there in accordance with the principles of reflective thinking. Ability to achieve a strictly logical solution of a business problem frequently is limited by the play of outside emotional forces, however. The final stage of verification means just what it says. Our thinking processes are not exactly accurate. It is always desirable to test our hypotheses to the extent that time permits, to make certain that the final proposal really is the most effective and economical solution of the problem.

It is necessary to make an analysis of the stages in reflective thinking. The development of a general method of approach to the solution of any type of business problem must be based on it. The term "scientific method" refers to any orderly method that seeks to apply the logic of effective thinking to the solution of some type of problem. It is, therefore, a development of the fundamental stages of reflective thinking. Scientific management is merely the application of the scientific method to the solution of business problems. It is not necessarily a complicated method requiring the use of expensive and complicated gadgets.

The author has found the following to be a helpful analysis of the principal steps in the scientfic method. It is based, of course, on the preceding considerations.

1. Recognition of the problem, and the general determination of the difficulties involved.
2. Preliminary observation and analysis, and the determination of the limiting factors in the situation.

3. The development of tentative solutions (working hypotheses).
4. The testing of the proposed solutions, including:
   a. Determination of the tests required for verification of the solutions.
   b. Collection and classification of the required information.
   c. Analyses and study of the data.
5. The development of the correct solution.
6. The final testing of the solution.
7. Intelligent compromise.
8. The installation and activation of the agreed plan.

Preliminary Analysis and the Principle of Limiting Factors

Nothing will be done about a problem until the existence of the particular difficulty has been recognized. Nothing may be done then until someone has the courage to "stick his neck out," as we say in the vernacular. There is often much inertia in an organization. A business problem usually develops because of failure to achieve some business objective economically and/or effectively. Such failure is necessarily due to some factor, force, or effect in the situation that limits the organization's ability to achieve the particular objectives. Something of the nature, location, scope, and severity of the difficulties must be known before the limiting factors can be determined. This may require an initial survey of the problem. There are people in every business organization who do not know enough about their responsibilities to realize that they are not doing a good job, and why. We may not be able to rely entirely on their reports. For this reason, we occasionally find problems that have existed too long, to the detriment of the organization. There are other reasons why an initial survey of the problem may be necessary.

We attempt, in the stage of preliminary observation and analysis, to get a better "fix" on the problem. It usually involves further collection and analysis of information concerning the problem with respect to its nature and requirements. The purpose is to get a more complete and accurate picture of the objectives that should be achieved and the causes of the failure to achieve them. The difficulties that are being experienced indicate the limiting factors in the problem in most cases. These factors affect the performance

of certain functions in the organization. The resulting malperformance of these functions leads to failure to produce and distribute economically and effectively certain values that are needed either by the organization or by its customers. This failure is the difficulty that constitutes the problem. It may be necessary to obtain more information concerning the force and effect of the particular factors in the problem. It may be desirable to learn how similar problems have been handled by other concerns. We may find that the present available knowledge of the factors, forces, and effects in the problem is insufficient. We may not know enough about the principles that relate them to one another and to the objective, and about their application under the conditions of the problem. This may lead to the establishment of a research project of some kind. It depends on the importance of the problem. It may be necessary to proceed with the work of planning a solution of the problem, on the basis of present knowledge and experience, without waiting for the completion of the research project. Research is time-consuming and the results are often unpredictable. Time is usually an important value in business.

Research and the Development of Plans

The previous background, training, and experience of the staff, together with the information in the report and record files, may be sufficient for the purposes of the particular work of creative planning. It may extend over quite a period of time. It may, however, consist chiefly of staff analyses based on present information, coördinated by such line and staff conferences as may be necessary to secure a meeting of minds concerning a satisfactory solution. It happens frequently that such a solution cannot be developed on the basis of the knowledge that is at present available. It may require an extension of old knowledge to get new facts about the new factors, forces, and effects in the situation. We may need additional information concerning the principles that relate them to one another and to the objective. The function of developing such new knowledge is the function of research, either economic or physical.

Planning, therefore, may depend on the results of previous research. Its necessities may stimulate further research. Competition

may force the hand of business leadership that has lagged in servicing either its customers, its employees, or its investors. The significance of research is its ability to produce new knowledge that will permit greater achievement of business objectives. Competition for the customer's patronage has to do, over a period of time, with providing more values of a better quality at a lower price. But investors and employees also are interested in the greater satisfaction of their personal objectives. Consequently progress requires the provision of more and better values for the use of the organization in the accomplishment of its mission. There must be continuous improvement in operating economy and effectiveness. This requires new ideas based on new knowledge. Business has recognized this fact. It has spent many millions of dollars in providing extensive research facilities in its organizations. It has supported research projects of all kinds at university and independent research agencies. This condition does not require "perfect competition," a concept that is not practicable except in theory. It does require a state of competition that is reasonably free.

Research is not immediately a part of planning, even though planning may depend on the results of previous research. It cannot be determined at the time an important research project is activated what results will be accomplished, or when. Business planning, however, usually has to be accomplished with respect to definite time objectives. The research people can be told when the desired new information must be available if it is to be of any use in planning for a coming business period. The information that has been developed up to that date can be made available at that time. It may not be sufficient for the design of new goods or services. It may be necessary then to proceed chiefly on the basis of information that was available previously. The research project may eventually be completed successfully, to the great benefit of the company and the public. But the company cannot at the moment make use of information that has not yet been developed.[13]

The problem faced by a manufacturing organization in develop-

[13] Jackson Martindell regards the quality of a corporation's research activities as a criterion of the excellence of its management. He comments on the ratio of volume of new products to old; see *The Scientific Appraisal of Management*, chap. 12.

ing a line of new models for a coming year is a good example. The work of product planning requires coördination of the sales, production, finance, and other major divisions of the business. Previous customer research or physical research in its laboratories may have indicated possibilities of supplying economically certain additional values to the public. The laboratory may have been working on the development of additional facts and the extension of known principles that will furnish a basis for the design of an improved product. The completion of the new product design must lead by some time the introduction of the new models to the public. This time span must be sufficient to permit the completion of subsequent phases of planning, organizing, and producing. Some very serious losses may result if the organization overruns greatly the advertised time at which the new models will be available to the public. The laboratory may complete its project before design begins. If it does, the company will have only reports of facts and principles, and possibly a laboratory model that demonstrates the feasibility of the new application of principles. A laboratory model is usually not salable. Much time must still be spent in designing a product that the public can use and will buy. Product design may be regarded as a phase of current business planning, even though it may precede the marketing of the new product by a year or more. It is evident that product research cannot be so regarded.

The Development of Tentative Solutions of Business Problems

The preliminary work of investigating and analyzing a business problem generally does not conform to the definition of research that was given previously. It is concerned chiefly with the preliminary collection, classification, and analysis of available information concerning the problem that will permit the development of some provisional solutions of it. It is not immediately concerned with the development of new knowledge. However, it may require the use of the same basic methods of determining causal relationships.[14]

[14] A formal statement of these methods was made by John Stuart Mill in 1843 in his *System of Logic*. The following summarizes it briefly. The Method of Agreement: If two or more cases in which a given phenomenon occurs have only one circumstance in common, a casual relationship probably exists between the phenomenon and the particular circumstance. The Method of Difference: If a given circumstance is present in one case in which an effect is noted, and is

A hypothesis is merely a name for a logical explanation. It relates the facts in the situation to a conclusion regarding the causes of the problem and the probable solution of the problem. It is based on inductions from facts obtained by preliminary observation and analysis. These facts may disclose significant similarities between present and past experiences as they relate to the problem. They suggest possible solutions. The development of tentative solutions of business problems has to do with the development of working hypotheses.

The principle of multiple hypotheses says that the best solution is more likely to be found if two or more possible solutions have first been set up tentatively. This tends to control any tendency to jump to conclusions because of a real or fancied pressure of time. We may be losing ground to competition or losing money for other reasons. As a result, there may be danger that we shall set up a possible solution that looks good to a majority of the staff, and, in the vernacular, "go down the line for it." We throw our energies and resources in back of an untested hypothesis which may lead to further losses. When we have set up more than one hypothesis, tests of the soundness of one solution may throw light on the soundness of another. The process of setting up multiple hypotheses tends further to clarify the nature and requirements of our objectives. The best method of handling a particular problem frequently turns out to be a combination of the best features of a number of possible solutions.

The problem of administrative planning is a good example of this. Administrative management is essentially "group manage-

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absent in another in which the effect is not noted, the circumstance probably is the cause of the effect. The Joint Method of Agreement and Difference: If several instances in which the phenomenon occurs have only one circumstance in common, while several others in which it does not occur have nothing in common except the absence of the circumstance, then the circumstance is the cause or effect of the phenomenon. The Method of Concomitant Variation: Whenever variations in one phenomenon are accompanied by variations in another phenomenon, the two probably are causally related, one being the cause or effect of the other. The Method of Residues: If certain effects are known to be the effects of certain causes, and they are subtracted from the total situation, the remaining effects are the results of the remaining causes. It will be seen that these methods, or principles, like most basic principles, are distillations of common sense. Their application to business problems may or may not require the use of complicated techniques.

ment." Operative management is essentially "project management." Administrative management is concerned primarily with the work of planning, organizing, and controlling the activities of an organization for the accomplishment of its objectives over a period of time. The work of "top management" is largely administrative. It involves a greater degree of futurity than operative planning. The accuracy of forecasting tends to vary inversely as the time span that must be covered. It requires, in consequence, a general determination of our economic position with respect to cyclical and secular trends. It should be made with respect to general conditions in our business and industry, as well. It would be unwise to take any great business risks on the basis of a single possibility, unless an emergency situation forces us to gamble. The various possible developments that may take place over the period covered by the plan should be determined. A decision should be made concerning our policy should each of the possibilities develop. Two or more provisional plans may be set up on the basis of our analyses of the probabilities in the coming situation. Each plan says, in effect, that if a particular set of circumstances develops, this is what we should do, this is how we should do it, this is why we should do it this way, etc. Detailed answers to these questions are not required, except for the plan that is to be activated immediately. This plan should be sufficiently broad and basic to permit movement in the direction specified by any of the plans as the situation develops. The basis of subsequent action may be a modification of the initial plan. It may include features of the alternative plans to adjust it to the actual conditions that have developed. The adjustments should not be major. An unstable situation may develop unless administrative plans are broad and fundamental.

Operative planning of a creative nature also may involve the use of multiple hypotheses. Operative management is concerned primarily with the work of planning, organizing, and controlling the activities entering into the accomplishment of some project. Motion and time study in manufacturing is concerned with certain phases of process planning. An operation in the fabrication of some piece part of an assembly may employ a number of people. The methods used by two or more good operatives may be studied, if the manufacturing cost of the operation is sufficient to warrant it. Each opera-

tive's method may be regarded as a hypothesis concerning the best method of doing the job. A combination of the best elements in each method frequently is much better than the method used by any one operative. More results of better quality at lower cost are often made possible without more effort from the employee.

The Analysis and Testing of Proposed Plans

Working hypotheses must be analyzed to establish the criteria by which they can be tested. We must determine whether or not each proposal meets the requirements of a sound solution. The analysis of a plan is a deductive process. Each phase of the plan represents a generalization about a sound solution. Deductive reasoning is a mental process by which the mind passes from some generalization which has been verified, or accepted tentatively as true, to the specific consequences that result from it.[15] It is the basis of testing.

Many mistakes in business planning appear to be due to violations of the principles of deductive analysis. They often result from the real or alleged pressure of time. These principles, again, are merely distilled common sense. A few examples will illustrate their basic significance. The Principle of Probability may be stated as follows: If one or more of the premises expresses a probability rather than a certainty, the conclusion can represent only a probability. One hears frequently, in a conference, the statement of the basis for a proposal that at best can be only a strong probability. The executive who makes it may end his discussion, possibly after some heated debate, with certain categorical statements. They imply that the results to be achieved by the plan are practically a certainty. The final results, if his point of view prevails, may show that they are not. The Principle of True Deduction says: Valid reasoning requires that the conclusion must flow from a logical relationship between the premises on which it rests. A true conclu-

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[15] The basic element in deductive reasoning is called the syllogism by logicians. It is a logical relationship between major, middle, and minor premises that leads to a conclusion. The major premise usually is some generalization, law, or principle that is set up in the hypothesis. The minor premise is a fact in the problem that is to be related to the major premise so that a conclusion may be drawn. The middle term relates the major and minor terms to form the conclusion. Some of the intervening steps can usually be skipped in arriving at a conclusion. But deductive reasoning still depends on this basic form.

sion, in consequence, requires valid reasoning from true premises. A conclusion may be valid but untrue. A corollary of this principle says that it is possible to make an unsound application of any sound principle. The principle is rendered none the less sound. It is merely the application that is unsound. An effective but unsound application of a sound principle may be effective temporarily, but the results necessarily are unsound. Hitler proved this on a grand scale during World War II. Unwitting violations of a principle sometimes occur in business. They are due usually to failure to verify the premises on which some important conclusion rests. This observation leads to the Principle of Objectivity: The deduced consequences of a solution should be verifiable. Otherwise there is no reasonable assurance of its correctness. Complete verification is not always possible. Morale and other personnel problems are an example. The Principle of Empiricism states that a business plan is merely a proposed solution of the problem of accomplishing a business objective. The solution most likely to be correct is the one whose observed effects satisfy most closely the requirements for the proper achievement of the objective. The Principle of Empiricism is the principle of testing by exposure to experienced facts. Manufacturing practice in the development of a new product furnishes an example of its application. An engineering product design is a plan for a new product or for a change in an old one. It is usually a phase of a general plan for the further development, manufacture, and distribution of a line of products. The plan represents only a strong probability until it has been tested thoroughly, regardless of the professional competence of the designing engineers. So prototypes, pilot models, and pilot lines are built. The product is tested in laboratories or proving grounds. Limited production may be undertaken in a pilot plant. The new line may be tried out in a limited territory. All these activities may cost the company many thousands of dollars. They represent chiefly a practical application of the principle of empiricism. There are other principles of deductive analysis.[16] The above example should be sufficient to show the basic significance of these principles in business planning.

[16] The above principles, in the opinion of the author, are the ones that are violated most frequently. The following, however, are important. The Principle of Parsimony: That hypothesis is most likely to be correct which requires the

Classification and the Development of Significances

The origin of the method of developing significant facts and relationships by classification is lost in antiquity. Its validity rests on the following generalization: The significant differences in the characteristics of related phenomena probably are due to fundamental forces or causes which underlie all phenomena of the same general kind. It is the function of classification to bring out the distinguishing differences between items or groups of items in an array of data, to the end that the determination of their characteristics and relationships may be facilitated. It brings out, in a business problem, the nature of the relationships between business factors, forces, and effects, and objectives. It is necessary to collect and classify information concerning the problem, on the basis of the requirements of the various solutions proposed. The information collected may have been abstracted by subordinates from existing records and forwarded in routine reports. It may, on the other hand, have resulted from major research projects. The method of investigation is usually determined by the technical staff group in the organization that has the staff responsibility for the development of a solution. It is dictated largely by the techniques that are available in the particular professional field. Its selection is affected by such considerations as the limitations of time, cost, and personnel, and the initial points of attack on the problem that are desirable. It is obviously affected by the requirements of the problem as to the kind and amount of information that is desired, the accuracy that is necessary, and the relationships that must be investigated. The determination of the method of classification to be used is basically a statistical problem. The kinds of facts to be collected are a function of the factors, forces, and effects in the situation and their relation to the objective. Sufficient pertinent facts to disclose all aspects of the situation should be collected, not just the facts that tend to justify the preconceived notions of a satisfactory solu-

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fewest number of assumptions for the logical deductions of the required consequences of a correct solution. The Principle of Related Generalizations: There are frequently certain generalizations that are related to but are not part of the particular hypothesis. Conclusions drawn from such related generalizations should not lead to suggested effects which tend to contradict the results that are expected from the proposed solution.

tion. It should be remembered also that the accuracy of the facts conditions the quality of the subsequent judgments which rest on them. There should be some provisions for a reasonable check of the accuracy of the data.

Problems having to do with the collection and classification of data enter into the general problem of business planning. They may considerably affect the quality of subsequent plans. The responsible line executive usually delegates responsibility for them. The delegation is made through subordinate line executives to staff personnel in the field that is chiefly involved. The reasons for such action will become apparent later when we examine various problems associated with line and staff organization.

The Development and Application of the Final Solution

The development of a superior solution for a problem requires the determination and synthesis of the best elements in the various possible solutions that have been suggested. It involves new judgments and inferences based on the information that has been collected and classified previously. It may include groups of facts which are causes or effects of the same phenomenon but are not immediately related to one another. Reference was made previously to an operation or step in the manufacture of a part for an assembled product. A motion-and-time-study example was given previously. The best operation elements of the methods used by two or more employees were analyzed and synthesized to develop a method for the operation that was superior to any then in use. Such a development is frequently the result of the application of the Principle of Converging Evidence: If inductions from each of a number of related groups of facts lead to the same generalization, then that generalization probably is true.

The basic idea is simple enough, but it may be difficult to apply. The staff executive under whom the plan was developed may have too much pride in his brain child. He may overlook the fact that a business plan, at best, can represent only a probability insofar as its economic aspects are concerned. It seems to cause some executives almost physical pain when their proposals are knocked down. Time is an important value in business. It is necessary frequently for top management to set deadlines for the completion of a plan or of

certain phases of it. Time limits may impose a limitation on thorough thinking in this or other phases of the planning process. Sometimes these deadlines are unnecessarily tight. The result may be the development of a plan that is based to some extent on hasty conclusions. Some poor planning is due to mental laziness. Some people are unwilling to do the mental work that is involved, or do not have the mental capacity. Perhaps they should not be in important executive positions, since planning is a basic executive function, but sometimes they are. Lack of mental courage also may be a cause. Some executives seem to feel that the admission of certain weaknesses in their plans may cast doubt on their ability. This depends, of course, on the nature, intelligence, and ability of their superior executive. An open, objective mind is usually appreciated by a competent general executive. The process of reflective thinking can be warped, furthermore, by the effects of earlier indoctrination. If an executive has worked his way up over a period of years, it may be that ideas about sound objectives, policies, and procedures for the organization have been thoroughly ingrained in him by his previous superiors. This is necessary, in some degree, for organizational effectiveness. It can, on the other hand, result in "cast-iron" thinking. The effect is well known. Most progressive concerns take definite steps to counteract it. There is also the executive whose preoccupation with his personal interests militates against the maintenance of an open mind and an objective attitude. He is interested in the organization's contributions to the public, investors, and employees only after his own interests have been satisfied. The author has encountered very few executives of the latter type; they killed their usefulness to their company in most cases, and were released. There are other reasons why plans developed by professionally trained staff executives do not always produce the desired results.

Obviously it is dangerous to activate a business plan until it has been tested to a degree that gives reasonable assurance of its success. Top administrative plans frequently involve time, effort, and money in critical amounts. It may not be possible for top executives to have at their command all the facts necessary for an exact solution. The high degree of futurity in administrative plans and the general nature of the ultimate objectives may limit their ability to

test them. Other difficulties restrict their ability to obtain complete, accurate facts. This is one reason why such plans must be broad and general. Progressive concerns do, nevertheless, test their operative plans as thoroughly as practicable. They test models of new products under all conceivable conditions to make certain that they will provide the customer with the satisfactions that he desires, as specified. They test consumer preferences and customer acceptance of these products. Other aspects of their plans are tested. Such testing costs money. But it is usually cheaper to find out for yourself that the public will not underwrite your plans than to have it veto them by lack of patronage after these plans have been activated.

The final testing of the plan frequently involves a limited application of the solution under controlled conditions. The desired effects of the plan may, for example, be internal. It may have to do largely with the development and installation of changes in organization structure and managerial procedure. The experimental installation may be made in a department in which conditions are typical of those throughout the organization. Its chief should be a man who is intelligent and coöperative. The local organization will be briefed on the nature and importance of the plan. Its operation under actual or simulated conditions will be observed. The changes necessary for the best results will be determined and made before the plan is installed generally. Simultaneous installation of an untested procedure throughout an organization could result in failure of the plan, with consequent losses of time, money, and morale.

Intelligent Compromise

It was suggested previously that "intelligent compromise" should be considered a phase of the scientific method when applied to business planning. Management is becoming a profession. It is not based directly on the "exact" physical sciences, however. The "one best method," insofar as the field of management is concerned, is the one that will get the most results of the requisite quality for the least money, and have them available when and where they are needed. It is not usually the method that is theoretically perfect. It is more likely to represent some compromise between complexity and scientific accuracy on the one hand, and simplicity, under-

standing, and coöperation on the other. It may be modified in an attempt to adjust legitimately the personal interests of personnel to the service objectives of the organization. Plans do not execute themselves. They must be executed by the organization's personnel.

A number of solutions for a business problem may be offered. This is usually the rule rather than the exception in business conferences. Each individual may honestly believe that his solution best serves the interests of the company, and at the same time conserves his own personal interests. There may still be ample opportunity for differences of opinion after the various proposals have been tested. It may not be possible even then to determine, with accuracy, what synthesis of the various proposals is best. People cannot be expected, furthermore, to execute a plan with the desired economy and effectiveness if they do not understand or believe in it. It is often necessary to modify plans, at some theoretical sacrifice of accuracy, in the interests of simplicity, understanding, and acceptance. If we designate the perfect plan as the 100 percent plan, the idea may be expressed as follows: A 70 percent plan that everyone can understand and accept has a better chance of success than a 90 percent plan that no one understands. Acceptance would be meaningless, of course, in such a case. A 70 percent plan that can be initiated promptly has a better chance of success than a 90 percent plan that is initiated too late. The 100 percent plan probably is theoretical and impracticable under actual conditions. But the need for intelligent compromise does not condone vacillation.[17]

Intelligent compromise is a legitimate step in the development of any plan. It has to do chiefly with the development of agreement concerning methods, but without the sacrifice of what are believed to be sound objectives and principles. Appeasement is not legitimate. We cannot compromise sound objectives and principles. Ap-

[17] Edward D. Jones probably had this thought in mind when he quoted von Moltke as follows: "But surround a commander with a number of independent men—the more numerous, the more distinguished, the abler they are and the worse it will be—let him hear the advice now of one, now of another; let him carry out, up to a certain point, a measure judicious in itself, then adopt a still more judicious but different plan, and then be convinced by the thoroughly sound objections of a third adviser and the remedial suggestions of a fourth—it is a hundred to one that though for each of his measures excellent reasons can be given, he will lose the campaign."—*The Administration of Industrial Enterprises*, p. 232.

peasement leads to agreement by sacrificing them. It brings disaster when diametrically opposed social, political, or economic philosophies result in diametrically opposed scales of values and sets of principles. World history during the past quarter of a century furnishes ample proof of this statement. Appeasement is no more successful in business than it is in politics.

Short of appeasement, however, intelligent compromise may add to rather than subtract from the effectiveness of a business plan. Again it is easier to point this out than to do it. Effective intelligent compromise depends on a community of ideas concerning what constitute sound objectives, principles, and general methods of approach. Such a condition is in large part an effect of an acceptance of common doctrines but not necessarily common procedures. Scales of values are a product of indoctrination to a considerable degree, even when they are physical. This was recognized by labor politicians during the days of the Wagner Act. Attempts were made by means of legislative and administrative measures to prevent an employer from presenting his point of view concerning controversial matters directly to his employees.

The problem may be summarized as follows: Basic soundness is more important in business planning than perfection of detail. Successful execution depends largely on competent, aggressive, determined, and prompt action, if the plan meets the requirement. Compromise is sound if it gains such support under the conditions specified above.

The Application of the Plan

When the plan has been tested and accepted, the final step obviously is the general application of the solution to the particular business difficulty. This is the linking phase between the basic managerial functions of planning and organizing. It involves the development of an installation program. An important decision may have to do with the selection of the initiating departments. They may be the departments in which the greatest savings can be made in the least time, or other considerations may determine this. It is not necessarily the department in which the plan was first tested. Staff responsibility for the development of the plan may have been placed originally in a technical staff department. It may

Creative Planning: The original determination of an economical, effective basis for the accomplishment of certain objectives. It involves:

Difficulties

A survey of interferences that limit ability to accomplish objectives.

Objectives

A determination of the values that are not being created or distributed with the desired economy and effectiveness.

Limiting Factors

An investigation of the particular factors, forces, and effects whose improper use or control interferes with execution and causes the difficulties.

Working Hypotheses

The development of tentative solutions of the problem. They are competing approaches that may yield the answers to such questions as what should be done, how it should be done, where it should be done, who should do it, and why, with respect to the correct handling of each limiting factor.

The Plan

The testing of the various hypotheses and the development of the final plan.

The Program

The determination of projects and the order of their execution. It is based on the principal phases of the plan and the correct order of their completion.

Organizing: The work of creating or otherwise providing the basic conditions underlying the execution of the plan. Each phase of the work of organizing must be completed before action is started on the phase of the plan to which it relates. It involves:

The Installation and Activation of the Plan

Controlling: The constraint and regulation of action required for the execution of the plan.

Executing: Managerial and operative action by subordinates in accordance with the requirements of the plan. It results in some degree of achievement of planned objectives.

FIG. 5. Planning and the Organic Functions of Management.

be expected to continue to exercise a leadership of ideas during the installation period. There is, however, a question of line and staff relations during installation or activation of the plan that must be resolved. These and other questions of staff planning will be discussed when we consider technical staff organization. The general relations between creative planning, organizing, controlling and executing have been summarized in Fig. 5.

Plans for Planning

Some staff departments or divisions must currently or recurrently produce certain types of plans. The development of these plans may require a high order of creative thought. They have a fundamental similarity. Otherwise, the responsibility for their development would not be assigned to the particular department. They may, nevertheless, differ widely from one another with respect to specific characteristics and requirements. Engineering departments, personnel departments, or other departments handling problems of a professional nature may have problems of this kind. Most of the key personnel of the department has probably had some formal professional training in the particular field. Even so, a "plan for planning" may be desirable for the guidance of subordinate staff executives and professional operatives in the department. Its purpose is to assure that such personnel will employ a sound, fundamental, logical approach to the solution of the particular kinds of problems. It is a device for stimulating a flow of sound ideas concerning possible solutions for a certain type of problem. It is not a specification of the correct method for solving a particular problem. It may supply a basis for the development of such a method in a particular case. It consists usually of a series of questions that are arranged in logical order with reference to the general type of problem under consideration. These questions act as "thought starters." When applied intelligently to a particular set of difficulties, they may indicate the need for additional information, as well as the method of approach. Plans for planning tend to be timeless, if the questions are fundamental. They may, however, be "thought finishers" rather than "thought starters" if they are too detailed or if the user has insufficient intelligence, background, or training to permit effective use of them. Lists of thought-provoking questions

1. ..... Close the mind resolutely to all thought of solution till 2 and 3 are completed.

2. Define problem...
   - Ideals; must be satisfied ..... No compromise
   - Desirables ..... Can compromise
   - Undesirables ..... Can compromise
   - Intolerables ..... No compromise

   → Consult with those acquainted with problem, but reserve right to doubt

3. Assuming problem solved...
   - Is demand now urgent?
   - Can market be developed?
   - Effect on employment
   - Economic and social effect
   - Steps for social protection

   → Is attack on problem justified?
   → Decision: Go ahead; state reason / Quit; state reason

4. Lines of attack....
   - Past experience... Of self / Of others (Acquaintances / Literature) → Avoid till all other avenues have been followed to bitter end
   - Applied science ..... List possibilities
   - Pure science ..... List possibilities
   - New research ..... List possibilities

5. Tentative solutions...
   - Written description and sketch of every scheme
   - Include every scheme, regardless of practicability

6. Eliminative analysis...
   - Make vertical list of schemes
   - Make horizontal list of determining items (factors in problem)
   - Evaluate each scheme under each determining item
   - Indicate absolutely condemning features, discarding schemes affected
   - Indicate bad but less serious features, discarding in order of undesirability
   - Select least undesirable scheme (never try to select best scheme)
   - Weigh selected scheme against item 2
   - Try to prove selected scheme inadequate

7. Decision....
   - Go ahead
   - Search for better solution

FIG. 6. A Plan for Analyzing a Specific Problem.

(George M. Eaton, in *Mechanical Engineering*, May, 1933.)

can be found in almost any current issue of any management magazine. They are based on this general idea. They are not always arranged in a logical order. They are usually aimed at a particular management field. They do not pretend to provide a general method of solving a particular type of problem in a certain industry. They represent a "shotgun" approach. The example in Fig. 6 suggests the basis for developing a plan for planning.[18]

Planning and the Initiative

There are many business planning problems, in addition to the difficulties that have been noted previously. Some of them affect planning in any kind of organization anywhere. One of these has to do with the relation between planning and the initiative.

The Principle of the Initiative may be stated as follows: The ability to plan, organize, and control an action depends on the ability to acquire and maintain the initiative. It enables one to select the most favorable situation in which to take action. It insures better coördination, since it permits greater control of the situation, and enables action to take place as planned. It legitimately reduces the effectiveness of competition by forcing competing organizations to use expedient measures to meet unexpected offerings of superior values in goods or services to the company's customers. Such measures usually are less effective and more expensive. The principle tends to limit the planning of competing organizations to short range, localized actions. It has other advantages.

The application of this principle must be made with due regard for the public interest. Otherwise one must accept the risk of punitive action by some governmental regulatory body. The initiative may be gained legitimately by unexpected offerings of more values at the same cost, the same values at lower cost, new values, increased services, or any other benefits that are compatible with the public interest. It is gained by the application of the principle of surprise. It may be gained illegitimately in various ways. A group of employers, for example, could gain the initiative in the distribution

[18] See also General Service Schools, U.S.A., *Command, Staff and Tactics*, pp. 167–168, for an example of a plan for estimating a military situation. The management audit questions beginning on page 281 of Jackson Martindell's *The Scientific Appraisal of Management* are really part of a plan for management evaluation.

of their goods or services by entering into a conspiracy with certain labor unions to limit the right to work within a certain geographical area. Such action limiting competition would not be in the public interest and should be prosecuted by a regulatory agency.

The initiative, once gained, must be maintained. Once lost, it is difficult to regain. The difficulties of some well-known concerns can be traced to the time when they lost the initiative in their particular economic fields. No great business success can be gained by a concern that is always on the defensive against competition. The problem of gaining and maintaining the initiative is, therefore, of vital importance. Its successful solution obviously depends on the soundness of the initial planning.

Planning and the Time Factor

It was noted that creative planning involves forecasting in some form and degree. Forecasting is necessary for the determination of time objectives. Coefficients of seasonal variation and secular trends can be determined, but not with accuracy. There is such a thing as the business cycle, but it has no regular periodicity. There are business indexes, such as dollar liabilities of business failures, inverse yields of high-grade bonds, industrial stock prices, residential building contracts, production of certain durable consumers' goods, and others, that tend to be barometers of the general business cycle. They do not always move in the same order and at regular time intervals. Their action is affected by governmental intervention in economic or political situations, executive and public optimism or pessimism, arbitrary action by important business or labor groups, and other unpredictable factors. The accuracy of forecasting varies inversely with the time span covered. It is not possible to make exact, quantitative predictions of the volume of business at some future point in time, for either a company, an industry, or the United States as a whole. Some forecast must be made, nevertheless.

Business planning for the immediate future must begin with the sales forecast. This forecast indicates the amount of goods and services that the organization should be prepared to supply to its customers during a coming period. A manufacturing organization may be given a sales program for the coming month and for two or three thereafter. It may make an annual forecast at the beginning of the

manufacturing year. The estimate for the coming month, then, is an end result of three or four earlier forecasts. It should therefore be quite accurate. The principle of overlapping forecasts is applied to long-range equipment programs and other planning problems. It is a principle, however, that the accuracy of planning and the effectiveness of a plan vary inversely with the period of time over which the plan must extend without revision.

Administrative and Operative Planning

This principle offers little support for highly centralized planning, either state or corporate, except in small organizations. It gives little support also to those individuals who feel that any

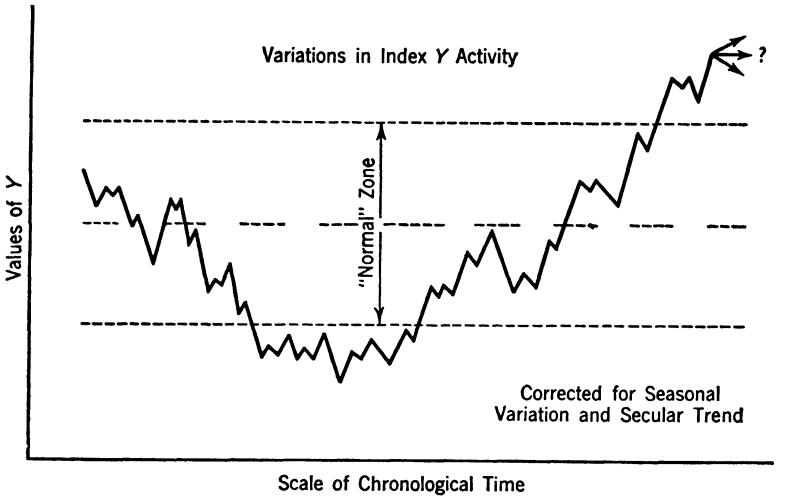

FIG. 7. "Normal" Activity.

extensive business planning is not worth while because it does not lend itself generally to exact determinations by means of mathematical formulas. It is possible to determine by statistical means whether general business activity, or a certain kind of business activity, is above or below a "normal" zone. What is the "normal" zone is a matter of judgment. The judgment should be based on the statistical concept of a "standard deviation" from the secular trend. Measures of the activity should usually be corrected for seasonal

variation. It is possible also to form a judgment, on the basis of a study of national, industry, and company statistics, as to whether the cyclical trend of the particular activity is up or down, and the probability of a continuance of this trend. A policy decision that will serve as the basis of planning for the period can then be made.[19] The general approach is suggested in Fig. 7.

The distinction between administrative and operative planning illustrates the nature of the problem. Administrative planning is concerned with the determination of bases of action over a period of time for the organization and its various elements. The comptroller may work from sales forecasts, the "break-even" chart for the company, expense estimates by the head of each organizational component, and other data, in developing expense budgets. He is likely to explain his estimates in terms of a "flexible budget." The bulletins of the National Association of Purchasing Agents indicate from time to time that the general policy of industrial purchasing agents is a 30-, 60-, 90-day, or some other coverage for particular classes of materials, depending on the current outlook for business. Such a policy in a particular concern has nothing to do directly with any purchase order for a specific quantity of purchased materials that must be delivered at a specific time. It is usually based on an estimate of the business situation as it affects general business, the industry, and the company in the immediate future. It is concerned with the needs of the organization, or of certain of its elements, for the particular class of materials and the inventories that appear to be desirable in the light of the estimates. It provides an important guide for logistical planning and subsequently for administrative control of procurement. It does not require anyone to make a categorical pronouncement to the effect that the current business cycle will reach its peak at 2 P.M. on Friday, at which time it will be a specified percentage above its present level. Such a pronouncement obviously would be worse than foolish.

Operative planning is concerned with the determination of bases of action for the accomplishment of specific projects or undertakings. The time periods within which specific projects must be ac-

[19] The Chamber of Commerce of the United States in 1948 issued a pamphlet entitled *Action Against Depression*. It was intended to provide businessmen with a simple approach to the problem of estimating the business situation.

complished usually are shorter than those covered by administrative planning. Specific projects should be programmed within a time period covered by related administrative plans. Otherwise, effective administrative control of the subsequent situation may be quite difficult to maintain. The accuracy of quantitative time determinations increases as we approach the point of primary operative performance. They should be made, nevertheless, in connection with administrative or operative planning at any level. They are necessary for control purposes.

Planning and Quantitative Time

A business plan is a specification of the factors, forces, effects, and relationships that enter into and are required for the solution of a business problem. It supplies a basis of action for the achievement of certain objectives. Time is an important factor in accomplishment, and in itself is a value. It may be necessary for the function of planning to lead action by a considerable period of time. It is frequently necessary to plan for a succession of like activities, rather than for one that may never be repeated. Planning is concerned, accordingly, with the determination of the quantitative time requirements of the plan.

Control is the function of constraining and regulating action with respect to the accomplishment of designated objectives in accordance with a plan. This definition says nothing as to the nature and quality of the plan. It may be complete or fragmentary. It may exist in writing or merely in the head of some executive. It may be soundly conceived and well thought out, or it may be determined hastily, on the spur of the moment, when need for immediate action presents itself. There can be no control of group activity, good or bad, unless there is some sort of plan.

One important reason for applying constraints and regulations is to assure well-coördinated action. It is necessary for the accomplishment of objectives with the maximum of economy and effectiveness possible under the plan. Coördination of action involves the relation of activities with respect to time and the order of performance required for successful accomplishment. Time coördination therefore requires the determination of time objectives either for the programs of organizations and their elements, or for the

procedures for completing specific projects. The distinction is, of course, between administrative control and operative control. Quantitative time requirements and relationships, as set up in the plan, must be converted into chronological time objectives for the program or project. Otherwise, there will be no adequate basis for coördination. It is a responsibility of the scheduling phase of control.

The general relation between administrative planning and control can be illustrated by the "X-Day" programs that were used in

"X-Day"

Org. Group	-120	-90	-60	-30	+30	+60
A						
B						
C						

Scale of Quantitative Time

FIG. 8. An "X-Day" Program.

military planning during World War II. The general characteristics of such programs are presented in Fig. 8. The general method of approach can be applied in any organization that is large enough to have important problems of administrative management. "X-Day" is the date on which primary operative action is to be initiated. The action by each organizational group 120, 90, 60, and 30 days before "X-Day" is outlined in the squares at the right of the particular group. The action during this preliminary period has to do largely with planning and organizing. Nothing can or should be shown on such a chart except summarized general specifications of group missions and their objectives. It must be supported by more complete analyses and specifications. They should be set up in terms of basic fundamentals, rather than in detail. It is the responsibility of each organizational group to draw up its own administrative and operative plans within the general framework that has been established. Planning becomes more operative and less administrative as

the work of planning goes down through the organization. The extent to which creative planning can or should be decentralized depends on the managerial laws of centralization. They will be discussed later. Plans made on lower levels are subject, in any event, to technical coördination and administrative approval at a higher organizational level which has general responsibility. The chart in Fig. 8 sets up the basic phases of a program. It is simple to determine a deadline for the accomplishment of each phase when a target date has been set for "X-Day." It is necessary only to convert the quantitative time relationships into chronological time. What would "X-Day" be in the field of business organization? It might be the day a manufacturer expects to introduce a line of new models to the public.

The general relation between operative planning and control, in terms of quantitative time, can be illustrated by the manufacturing-assembly diagram shown in Fig. 9. We shall assume that it is a simplified version of a chart for one of the models that a manufacturer intends to introduce. Model X is an assembly of five parts. Parts 1, 2, and 3 are brought together first in a subassembly, S.A. Parts 4 and 5 and the subassembly are brought together and joined mechanically in the final assembly operations, F.A., to form the completed product, Model X. The lines at the right of the chart indicate the normal time required to fabricate the parts for a lot of 25 units, and to assemble them. The Principle of Simultation is being applied in order that the overall manufacturing time may be reduced to a minimum. This principle says that the overall time required for the completion of an undertaking tends to approach the time of the longest phase as a limit, with increasing simultaneous performance of the phases. In the case of Model X, a minimum manufacturing time contributes to better customer service, higher turnover of working capital, and the accomplishment of other important objectives. It will be seen that the chart is a graphic representation of a general plan for manufacturing a product, Model X, with respect to time and order of performance. There are detailed production plans for making each part, subassembly, and assembly. They supply the lacking details concerning how the part or assembly shall be made, where it shall be made, what materials shall be used, the unit requirements for these materials, what machines, tools, and

other physical factors will be required, and similar information. A simplified example of a plan of work is shown in Fig. 54. The time scale in Fig. 9 merely shows the time requirements and relationships for a lot of 25 units of Model X. Again, it is a simple matter to convert quantitative time requirements and relationships into

Part No.	Model Requirements	Quantity for Standard Order
P.1	2	50
P.2	1	25
P.3	2	50
P.4	4	100
P.5	1	25

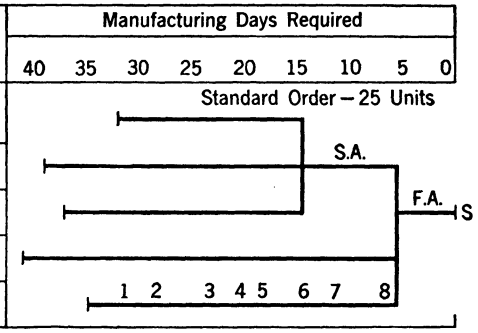

FIG. 9. Manufacturing-Assembly Diagram for Model X.

chronological time objectives when we know the date that an order must be delivered to the storeroom or shipped, or both.[20]

The Continuity of Planning and Plans Changes

The business situation is usually fluid and complex. It changes continuously. The requirements of the situation for a satisfactory achievement of service objectives tend to change correspondingly, even though the objectives themselves may not. Periodic reviews and revisions of plans generally are necessary to prevent them from becoming obsolete. Planning tends in consequence to be a dynamic rather than a static function. Its performance tends to be continuous rather than discontinuous. Occasional changes are inevitable. Business organizations and methods should have sufficient flexibility to permit their adjustment to changes in plans without serious loss of economy or effectiveness.

[20] Charts of the kind illustrated in Figs. 8 and 9 are based usually on analyses of previous practical experiences. They are not theoretical. It is often necessary to modify the schedules developed from them for a specific project or program for reasons that will be discussed in connection with the subject of control. The statements above are sufficiently accurate for purposes of discussion at this stage in the development of the general subject.

Stability of operations depends, however, on the stability of the plans. It follows, of course, that administrative plans should be broad and fundamental. They may continue to provide a satisfactory general basis of action unless rapid, drastic changes in the requirements of the situation take place. Otherwise, it may be possible to confine changes in plans to modifications of subordinate operative plans. Only the most minor adjustments can be made in an operative plan when the time and place of execution arrives. The problem is one of control, rather than of planning. The plan is right, or it isn't. We take a loss, or we don't. It may be possible to make a major change in the particular operative plan before a similar project is undertaken in the future. It is generally not practicable to make a major change for a project that is in process of execution. The costs of making the change may be greater than the losses resulting from the action planned upon.

The frequency with which changes in plans must be made is a function of the frequency with which emergency situations tend to result. It is a function also of the rate of change in the situation. It depends likewise on the quality and thoroughness of the original planning. Frequent changes in plans result in unstable operations. They make more work for subordinate executives. The latter are required to make new reports on problems on which they reported previously, but on a different basis. They frequently do not understand the part that such reports play in administrative planning. They may not understand the nature of the planning process, for that matter. Frequent plans changes and requests for reports may appear to subordinates as evidence of lack of leadership competence on the part of higher executives. The result may be loss of confidence in the organization's executive leadership. There is always a consequent loss of morale. The writer had an opportunity to observe this effect during World War II, when some junior staff officers came to the conclusion, privately of course, that some of their general officers did not "know the score." This may have been the case in a few individual instances, but not generally. The writer also has observed the same reaction in private industry. The pace in normal times usually is slower. It is possible in private industry to explain simply and clearly the principles and procedures that are used in planning. It is not always done, however. Subordinate

executives and operatives can be informed concerning significant general changes in the company's situation. No security regulations limiting the provision of such intelligence are in effect. It can be shown why some continuity in planning is necessary. The lead time required for planning tends to increase with the level on which it is performed. This tends to prevent accuracy in administrative

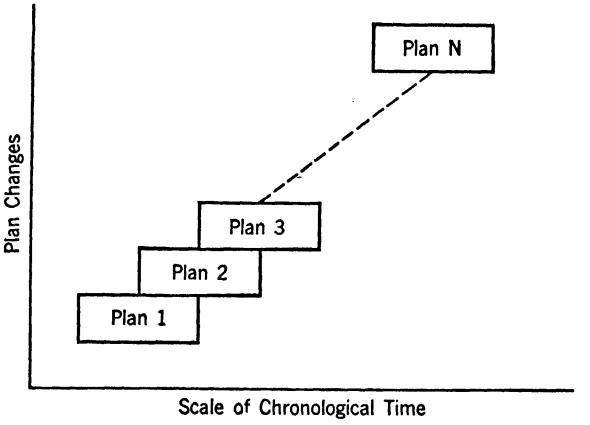

FIG. 10. Continuity in Planning.

planning on higher echelons, for reasons that have been noted previously. Periodic reviews of plans are necessary in consequence. Each new plan is based on the preceding plan for solving the particular problem. This point is illustrated in Fig. 10. Plan 2 is usually a major modification of Plan 1. It carries over much of the information in the earlier plan. Plan N is the lineal descendant of the initial planning. If an attempt were made to eliminate the time and expense of intermediate planning, the results might be disastrous. If final planning were begun too near the deadline date for initiating operations, the quality of planning might suffer from the pressure of time and expedient decisions. Competition might catch the company without adequate plans and take the initiative away from it.

Application of the fundamentals of sound planning should reduce the frequency, expense, and effects of plans changes. However, such changes cannot be eliminated. They are, in part, an effect of progress. Their introduction should be controlled, nevertheless, to

assure the minimum interference with operations and to guard against unnecessary expense. Some authorized procedure for making and introducing changes is desirable in any industry. A common example in the manufacturing industry is the engineering change-order procedure.

Organization and Procedure for Planning

The successful application of planning principles and policies depends obviously on practical experience. It depends also on an understanding of certain problems that will be discussed later. The discussion of planning organization and procedure will be deferred, therefore, until we take up the problem of technical staff organization. It may, however, be appropriate at this point to indicate the general nature of the problem.

We noted previously that administrative planning is planning for group accomplishment over a period of time. Operative planning is planning for project accomplishment. The success of the group during the particular time period usually depends on the successful accomplishment of various projects that have been assigned to it. Operative plans are or should be derivatives of administrative plans. The work of developing these plans is usually far more than the responsible executive can handle himself, unless the organization is very small. He must delegate to his subordinates as much of this work as possible to spread the load and get the advantage of specialized knowledge. These subordinates may be classified generally as "line" and "staff" executives. The former have direct responsibilities for the accomplishment of primary service objectives. The latter are expected to render competently advice or assistance that is needed by the "line." Staff assistance in planning is supplied chiefly by "technical" staff individuals and groups. They have specialized background, training, and experience that enable them to make special contributions to the development of plans. The delegation of responsibility and authority for planning relieves an executive of none of his responsibility and authority. The technical staff may advise and assist in the development of plans. It may assist in organizing for their execution. But the principal line executive is still responsible for results. Delegation and abdication are not synonymous.

Some control of planning must be established on the basis of the principal phases of the work of developing the particular plans. The general order of this work for different groups on different levels should be established by basic "plans for planning." The function of control must be concerned with the mental and physical work that precedes execution, as well as with execution itself. If we are late in completing the work of creative planning, the subsequent work of organizing and executing the program or project will be late also, unless somehow we can pick up the lost time. Otherwise, we shall fail to accomplish designated time objectives and the particular business mission may fail.

CHAPTER 4

BUSINESS OBJECTIVES AND ETHICAL STANDARDS

Business Objectives and Organized Society

A business plan was defined earlier as a specification of the factors, forces, effects, and relationships that enter into and are required for the solution of a business problem. Its development requires consideration of the basic business factors, and many major and minor subfactors, that may be peculiar to the particular business situation. The extent of the detailed consideration depends on the nature of the plan. It depends also on the organizational level on which the plan is being developed. It may, for example, be a general administrative plan for the entire organization. It may be, on the other hand, a detailed operative plan for the execution of a minor project. The plan is expected, in any event, to supply an effective and economical basis for the accomplishment of specified objectives. It is evident that the business objective is of primary importance. It must be the starting point of thought and action in the conduct of business operations.[1] It is necessary, therefore, to analyze its nature and importance. Its requirements should be specified with respect to quantity, quality, time, and expense.

An objective may be any value or values that are needed or desired by any individual or group, provided that the latter is willing to make some sacrifice or effort to obtain them. A value may be

[1] W. B. Cornell states the Principle of the Objective as follows: "Prerequisite to the starting of any business enterprise, or to the carrying on of any activity by the concern as a whole or by any unit of it, a clear complete statement should be made of the objectives in view."—*Organization and Management in Industry and Business*, p. 39. Henry S. Dennison feels that "no leadership is necessary where no sudden changes of objectives are required."—*Organization Engineering*, p. 41. This, it is believed, is a questionable proposition.

any satisfaction of a need or desire. An economic value may be any satisfaction for which an individual or group is willing to exchange other values. A need or desire develops from a fundamental urge that the individual wishes to satisfy. Such urges are the bases of fundamental tendencies to act. Some of the more common are the gregarious tendency, the pugnacious tendency, the sex tendency, and the play tendency. There are others. The ultimate basis of value, then, is mental. The scale of values of individuals and groups is determined largely by their philosophy. Indoctrination, in some form, is an important environmental influence in the determination of value concepts.[2] It is evident that values may be tangible or intangible. They may be legitimate or illegitimate. It depends on the extent to which they conform to current concepts of right and wrong as crystallized in law. They may have other characteristics. Business objectives may be any values, therefore, that the business organization is expected to acquire, create, preserve, or distribute. To be legitimate, they must be in conformity with the public interest. An analysis of business objectives should include a study of the assumptions on which our value concepts rest.

It was also noted that the basic sanction under which American management operates is the right of private property. This is basically the right to hold, control, and use property in the personal interests of individuals or groups, but with due regard for the public interest. It is the basis of the decentralization of economic and political power to individuals and groups. It is the basis of freedom and a high standard of living. The right of an employee to sell his services, individually or in concert with others, obviously is a private property right. The "free enterprise" system likewise is based on the right of private property. Society has delegated to individual citizens the right to own and use physical property for the production and distribution of goods and services to the public. The owners of this property, whether stockholders or small businessmen, are obligated to provide the needed values in increasing quality and

[2] Dictatorial socialist governments have recognized this fact, particularly since World War I. It is one reason why they have attempted to control the church, except where a close working relationship already existed. A democratic society based on the right of private property requires self-indoctrination through normal educational processes. It cannot permit authoritarian indoctrination. This will be discussed later in connection with morale.

quantity at competitive prices. They may and do delegate their responsibility to executive employees.[3] Their right to a profit depends, nevertheless, on the ability of the business organization to discharge this responsibility properly. The executive can exercise only the authority that is delegated by the owners. It is an extension of their private property rights. Such rights generally underlie the maintenance of individual freedom. Individual liberty depends on the decentralization of control of the means of sustaining life and the pursuit of happiness. Socialism, on the other hand, substitutes state capitalism for private capitalism. Socialist governments are forced eventually to circumscribe the liberties of their citizens. They find that the individual is a basic "means of production" who must be controlled, theoretically, in his own interests.

There is also a theological concept of private enterprise and the right of private property. It may be summarized as follows: The individual is fashioned in the image of God. Hence he is important as an individual. He has a personal responsibility and accountability to God for the moral quality of his conduct. Accordingly he has an inherent right of decision that will enable him to comport himself in conformity with the requirements of moral law. Otherwise, he cannot be held personally accountable for the proper discharge of his moral responsibilities. This right must be exercised with due regard for the comparable rights of others. This accountability is to a higher authority than any temporal power. The highest form of political organization, therefore, is a representative government in which the ultimate source of temporal authority is the body politic. The highest form of economic organization is the free private enterprise that is based on the right of private property. This concept emphasizes personal responsibility. It permits free association and delegation. It denies to the individual the right to abdicate personal responsibility to a group leadership of personal interests.[4]

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[3] This concept has been modified in large corporations by the use of the proxy device to perpetuate boards of directors and top management in office. This is discussed by Adolf Berle and Gardiner Means in *The Modern Corporation and Private Property* (see pp. 2, 5, 6). It has been accompanied by the rise of the professional executive and by changes in the character of competition. There has also been increasing control of business activities by governmental agencies.

[4] George E. Sokolsky has given a good popular statement of this concept

It must be recognized that the tendency during the past twenty years has been in the direction of extending government control of business. This is not the same as increased public regulation that is made necessary by the increasing complexity of an industrial society. The distinction, of course, is similar to that between an umpire and a player in a game. The government, in the latter case, takes over and performs some of the functions of private ownership and management. The executive in private industry loses some authority because of the loss of some rights of decision and command. It is not merely directional guidance of the use of executive authority as a result of regulation of private business in the public interest. Since executive authority in private industry is derived from the right of private property, progressive extension of governmental control of business activity obviously leads to state capitalism. Individual title to property becomes meaningless when government acquires complete control of its use. This trend has been accelerated in recent years by some politicians who offer special economic advantages to special economic groups in return for political support. The resulting economic unbalances and rigidity usually make it necessary to correct consequent economic distortions by the further imposition of economic controls.

This trend makes it necessary to consider business objectives in relation to monopolistic state capitalism as well as competitive private capitalism. There are certain similarities in both economic systems, whether they have to do with the controlled industries that operated under Fascist Italy and Nazi Germany, the present state trusts of Soviet Russia, or the nationalized mines and railroads of England. The business organization remains primarily an economic institution, but its operations are increasingly affected by political influences as the development of socialism progresses. Management functions become more rather than less important, because of the tendency toward the development of a corporate state. Executives appear to have more authority, rather than less, in advanced forms of state capitalism. Their authority is derived from a right of public property, rather than private property, and they are officers of the state. There is some evidence that their emoluments may eventually

in a syndicated column under the title "Private Responsibility" (Columbus, Ohio, Sunday *Dispatch*, August 20, 1950).

be as great or greater, relatively. It is quite certain, however, that the penalties for failure may be more severe than they are under private capitalism. The advocates of each system contend that it will provide the public better with economic goods and services. Hence the primary objective of the business organization tends to remain the same—economic values that will satisfy public needs and desires. But it ceases progressively to be an economic institution as political and social objectives are imposed and elevated above economic objectives. The economy and effectiveness of the business organization deteriorate. The standard of living of the people deteriorates accordingly.

The average American citizen enjoys a very high standard of living, largely as a result of the "free enterprise" system. He is aware of this fact. Increasing regulation of business undoubtedly will be necessary as our industrial society becomes increasingly complex. The subsequent discussions assume, nevertheless, that American business will continue to be based on the right of private property.

The Importance of Business Objectives in Management

Management is the function of executive leadership. Its principal phases are creative planning, and the organizing and control of the activities of subordinate groups in the accomplishment of business objectives. Planning specifies the kind and extent of the factors, forces, and effects, and the relationships between them, that will be required for satisfactory accomplishment. We must know the nature of the objectives and their requirements before we can determine what must be done, how it must be done and why, where action should take place, who should be responsible, and similar problems. Organizing creates the conditions that must be present before the execution of the plan can be undertaken successfully. A large manufacturing organization may spend many millions of dollars for changes in plant layout, methods, organization structure, and various physical conditions, for initial tooling, initial inventories, training, and other expensive activities. These expenditures sometimes must be made before it is able to produce and sell a nickel's worth of whatever product is specified in its plans for the coming manufacturing year. Organizing cannot be done intelligently without

knowledge of the objectives of the mission. Control has to do with the constraint and regulation of activities entering into the execution of the plan. Control must be exercised in accordance with their characteristics and requirements as set up in business plans. It is evident that control must also be exercised with respect to the proper accomplishment of planned objectives.

Large sums of money are spent annually by business organizations in an effort to determine the general public interest, customers' interests, and employee interests that must be served. Some concerns study supplier interests and investor interests. Various investigatory techniques have been developed for securing such information. The intent of management in using such techniques is obviously to get a more accurate, factual fix on the objectives it must achieve.

The Classification of Business Objectives

It is apparent that a reasonably accurate determination of sound business objectives is a complex problem. Since management is the principal leadership function in business organization, responsibility for a proper determination at every organizational level is one that the executive cannot avoid. The complexity of the problem is due to the fact that the business organization is expected to supply values which will satisfy a great number and variety of interests. It is necessary, therefore, to classify business objectives so as to distinguish their characteristics and requirements, and the relationships between them. Such a classification should logically precede a classification of the functions of the business organization. The only sound reason for the performance of any business function is the necessity for the creation and distribution of some values that are needed or desired by someone or some group, somewhere.

Mooney and Reiley have offered a very fundamental approach to this problem. Their classification recognizes the significance of spiritual values. It may be summarized briefly as follows:

A. Basic classification[5]
   1. Values that relate to the aim and purpose of life itself (chiefly religious).

[5] James D. Mooney and Alan C. Reiley, *Onward Industry*, pp. 3–4.

2. Values that relate to the actual necessities of this present existence (chiefly temporal):
   a. Psychic values growing out of man's nature as a social being.
   b. Economic values having to do principally with physical necessities of man's existence (some psychic values may become economic).

   The necessity for these material values, both psychic and economic, determines largely, but not entirely, the nature of:

B. Industrial objectives[6]
   1. Primary: These values comprise only the basic necessities of life, such as food, shelter, and clothing.
   2. Secondary: These values include the comforts, conveniences, and luxuries that are desired and finally demanded by a growing civilization.

The business organization is primarily an economic institution. Its primary objectives, therefore, must be certain economic values that it is expected or required to create, acquire, preserve, or distribute. The distinction between spiritual and material values in life has practical value for the practical executive, nevertheless. The reader will recall the Biblical injunction: "Render unto Caesar the things that are Caesar's and unto God the things that are God's."[7] It implies the necessity for a basic classification of values that will distinguish clearly between those that are primarily spiritual and those that are primarily temporal. The first are those that are needed or desired for a life in the hereafter; the second, those that are needed or desired in this life. It implies also that some significant relationship must exist between these values. Unless they are atheists, most people accept the idea that the basic requirements for the accomplishment of spiritual objectives must be met in this life. Spiritual values are therefore the primary determinants of moral law. The latter, in countries where there is freedom of religion, tend to be a primary determinant of acceptable standards of proper business conduct. Continued violation, by any important group in

[6] *Ibid.*, p. 343.
[7] Matthew 22:21.

the furtherance of its own personal interests, of ethical principles that have broad public acceptance tends to arouse general public resentment. This may lead to further governmental regulation and control. It may tend to break down further the basic right of private property. It may prevent the development of good organizational morale, good public relations, and good governmental relations. These are practical problems for any practical executive. Consequently, an understanding of the significant relationships between spiritual and temporal objectives is necessary for an understanding of certain important business problems. It may have an important bearing on continuing business success.

The business executive necessarily is immediately interested in the economic objectives of the business organization, and in certain objectives that are associated closely with them. He usually has an immediate responsibility for their accomplishment. These objectives may include, in some degree, all the "values that relate to the actual necessities of this present existence." The author has found the following classification of them to be helpful in solving problems of business organization:

1. Primary service objectives
   a. Organizational objectives
      General, major, minor, and individual.
   b. Operational objectives
      Intermediate and final.
2. Collateral service objectives
   a. Personal objectives
      Group and individual.
   b. Social objectives
3. Secondary service objectives
   a. Economy and effectiveness in the creation of primary and collateral service values.

Primary Service Objectives

The business organization is an economic institution. It is created primarily for the purpose of supplying the public with any goods or services for which it has a legitimate need or desire. Enjoyment of the right of private property implies an obligation on the part of organized business to supply the public with goods and

services of the desired quality in the desired quantity, when and where they are needed, at a price that the public can afford to pay. The extent to which it is practicable and possible to comply with the requirements of this responsibility depends usually on current economic and political conditions. Consideration must be given, furthermore, to a reasonable accomplishment of collateral business objectives. The sum total of all the goods and services produced and distributed by all industries everywhere must approximate closely the sum total of the economic values that support an industrial society. Therefore, this obligation to serve the economic needs of the public is primary. It has been recognized as such by outstanding business leaders.[8]

The primary service objectives of a particular business organization are the economic values with which it must serve the customer. When the housewife buys a washing machine, she does not buy a collection of parts and subassemblies that have been joined mechanically in a final assembly. She buys primarily a service. She wants certain values—relief from the physical work of washing by hand, a saving in time that she can employ in more pleasant pursuits, savings in the household budget, clothing that is at least as clean as can be obtained by hand laundering, aesthetic values in the machine that will satisfy her pride of ownership, and a great many others. The price must be reasonable with respect to the desired values, or there is no sale. The manufacturer of the washing machine employs product engineers. Their job is to design a product that will meet the requirements for the reasonable satisfaction of the housewife's needs and desires with respect to a home washing service. The determination of these requirements is an economic problem. It is probably based on the studies made by marketing experts and economic statisticians in the company's sales division. It will be necessary, when the product design has been determined, to plan how the product will be made, where it will be made, what equipment will be needed for the successive operations in the manufacture of parts and subassemblies, and to make similar decisions.

[8] George W. Wolf, president of the United States Steel Export Co., for example, has expressed it as follows: "The final purpose of organized industry and commerce is to place at the disposal of man the largest possible amount of needed and desired economic goods." See the bulletin of the National Association of Purchasing Agents dated September 6, 1948.

They may be made initially by a staff group, known possibly as the process design or industrial engineering department. Such decisions by staff product and process planning departments must usually have the concurrence of the executives who are responsible for making the product. A great deal of organizing must follow planning. There are materials and parts to be bought. There is tooling to be made or purchased. A great many additional activities must be carried on. All these activities may require large sums of money that the treasurer must provide. There is no point in carrying further our examination of the washing machine example, since this is not a book on industrial management. It is sufficient to note that eventually, if it is successful, the operating organization of the manufacturing division will build a washing machine that will have the requisite utilities.[9] It will ship it to some dealer, who will sell it to the housewife. Her husband, of course, will merely write the check. Every executive and operative employee of the company will have been involved in accomplishing this final result. The reason is obvious, of course: The primary service objective of the washing machine company's organization must be certain values in a home washing service that the housewife needs or desires. The utilities that have been built into the washing machine must enable the housewife to enjoy these values more than she will those secured through the use of any competing machine. Otherwise, the organization will not get, through the dealer, a share of her husband's check. All members of the organization may lose, if this happens too frequently. The ultimate control of business, in a democracy, rests with the customer. He has the right of freedom of choice in the market place.

It follows, since the accomplishment of primary service objectives involves all groups and individuals in some manner and degree, that these objectives must break down into subclasses of organizational and operational objectives. Organizational service objectives are primary values that must be contributed by an organizational element to the larger group of which it is a part. They are inte-

[9] The economists do not agree exactly in their definitions of the term "utility." It is defined, for our purposes, as the ability of a good or service to satisfy a need or desire. The creation and distribution of utilities are affected basically by the factors of time, place, form, and possession.

grated with other values produced by the larger group. They become eventually a contribution to customer interests for which the company expects to be paid. General organizational service objectives are values that must be contributed by the whole organization to the customer over a period of time. Major service objectives are values that must be contributed to the total situation of the whole organization by a major organizational group, such as a division. Minor service objectives are values that must be contributed to the total situation of a major organizational group by a minor organizational group, such as a department, branch, or section. Individual service objectives are values that must be contributed to the total situation of a minor organizational group by each individual in it. Budgetary control, in the field of financial management, is concerned largely with secondary organizational service objectives. Nevertheless, it makes direct use of the concept of primary organizational objectives. Budgetary standards are derived from sales analyses. They are adjusted to conditions anticipated in the light of sales forecasts. They are set up in terms of organizational components. Budgetary control may not go below the departmental level in a particular organization, however. We may specify, in qualitative terms in a job specification or organization manual, the contribution expected from a particular job. We may compare the total performance of an individual during a period with "standard" performance for the period, and express the relationship as a ratio. The person who is holding the particular job has an individual service objective. He should understand it, and the obligation that it creates. It is the economic justification of his place on the payroll. Organizational objectives play an important part in administrative control. They are the basis of comparisons between actual and planned performance by organizational groups and by time periods.

The accomplishment of organizational objectives is usually the result of a cumulation of values that have been contributed by the completion of a number of business projects. These projects are usually set up in a program for each organizational group. Their end values may be primary or secondary. This distinction depends on the incidence of service to the customer. They are primary values if they are provided directly by the "line" organization to the customer. They are secondary values if they are provided by "staff" to

the line, or to other staff elements of the organization. They enter indirectly, through the activities of the line organization, into the business of serving the customer. The distinctions between primary and secondary values involve distinctions between line and staff organizations that will be discussed later. In either case, a business project may be any definite business undertaking. It has for its purpose the acquisition, preservation, creation, or distribution of certain specific values, either primary or secondary, at whatever organizational level they may be required. It is possible to accomplish the objectives of a business project completely. The project then ceases to exist. It is generally not possible to accomplish organizational objectives completely. Otherwise, the organization would have no further excuse for continued existence. A program for a time period is merely a step in the accomplishment of the organization's ultimate objectives.

Every organization must have various procedures for the conduct of its business. The term "procedure" means fundamentally a structure of relationships between functions, physical facilities, and personnel as they enter into the accomplishment of project objectives. These functions may be performed concurrently or sequentially. The order and manner of their performance are determined by the requirements for the satisfactory accomplishment of the particular objectives. The procedure should result in a cumulation of values that will represent successful accomplishment. Operative and managerial procedures are related but fundamentally different. A primary operative procedure in the men's clothing industry, for example, might be set up as follows: Step 1—Procure a bolt of the correct type and style of cloth. Step 2—Make the correct number of "lays" (layers) of cloth, as specified. Step 3—Lay out patterns on top "lay" and mark. Step 4—Cut out patterns with an electric cutter's knife, etc. This relation of steps or "operations" may be broken down into substeps or "elementary operations." It is evident that the procedure, as stated, is a structure of relationships between the work of cutting out the component parts of men's garments, the cutters who perform this work, and the materials, working conditions, implementation, and other physical factors which they must have to do this work properly. The procedure presumably represents the best way of performing this work. It is applied to a "batch" of work—a

specified number of sleeves or other components that are required for the manufacture of an order of coats or suits. The "batch" is a minor primary operative project. The component parts will be joined mechanically by subsequent power sewing machine operations to form coats or suits. Eventualy the customer will buy a garment that will satisfy his needs and desires at a price that he is willing to pay. This assumes that the patterns are correct, the work is done properly, and other requirements of effective and economical production are met. Economy and effectiveness do not just happen. They must be built into the product at each step in its manufacture. There should be standards of quantity, quality, time, and expense for each significant step in the completion of the project. They are criteria of the economy and effectiveness with which certain required utilities should be built into the product at that step. A utility for the customer is, of course, a value for the company. The values that must be built in at each step are the intermediate objectives of the project. The cumulation of these intermediate values into an end value represents accomplishment of the final objectives of the project.

During some time period, such as a week or a month, the primary operative employee completes a number of assigned projects. The cumulative total of end values obviously represents his contribution to the accomplishment of the minor service objectives of his group. The cumulative total of the contributions of all the operatives in the group represents its contribution to the accomplishment of the major service objectives of the larger group of which it is a part. The cumulative total of the contributions of the major divisions of the business must represent the extent of the accomplishment of the general service objectives of the organization that were set up at some time in advance of the period. The same reasoning applies basically to staff operatives and organizational elements, as well as to the line.

Collateral Service Objectives

Collateral objectives are values that the business organization is expected to supply, in whole or in part, to groups that are a part of or are associated with it. These values should not be supplied to an extent that results in a material or unwarranted sacrifice of the com-

pany's primary objectives. Failure to supply economically and effectively the portion of the public which it provides with economic goods and services results in some degree of failure of the organization. It may result in the failure of everyone in it, if it is sufficiently serious and if it continues. The values that are distributed to groups within or associated with the organization must be taken eventually from the consumer's dollar.

Collateral service objectives may be broken down into two major classifications: collateral social objectives and collateral personal objectives. Collateral social objectives include any broad, general economic values that are deemed necessary to the well-being of society and are affected directly and materially by business activity. They are values that affect the interests of broader groups than customers, employees, stockholders, suppliers, and bankers. Business may reasonably be expected to coöperate in their acquisition, preservation, creation, or distribution, since they are affected directly and materially by business activity. Most business organizations, for example, are not primarily in the social insurance business. Nevertheless, they are required to act as agents of the government in the collection of social security taxes from their employees, in addition to paying such taxes themselves. They are not primarily governmental financial agencies. Nevertheless, they are required to make and pay into government treasuries payroll deductions for income tax purposes. Executives may grumble because of the complexity and additional expense of such collateral activities. They do not object seriously, provided the bases of competition are not altered greatly, the cost can be absorbed without serious effect on profit margins, and/or there is no serious reduction of consumer purchasing power. There is no reason why they should, since modern business in an industrial economy has a public obligation that grows out of its vital relation to the public interest. The notion of collateral social objectives is not peculiar to business organization. The management and operation of any basic kind of organization, whether political, military, religious, or social, may be similarly affected.

Collateral personal objectives are just what the term suggests—values that individuals and groups within the organization, or associated directly with it, seek to acquire for and distribute among themselves. Again, personal objectives cannot be the primary objec-

tives of the business organization. The values distributed must eventually come in large part from the consumer's dollar. C. F. Taeusch said in 1931: "The objective of professional activity is and should be service, whereas the objective of business is and should be profit."[10] The writer cannot concur with this statement. He prefers to define a profit as a reward to capital for the successful acceptance of a business risk in the rendering of an economic service. If this is the case, the objective of business is a service. A profit is a personal objective of businessmen. It is a badge of merit, provided that it is earned fairly under competitive conditions. Further, it is an economic and social necessity, since it is an important factor in the process of capital formation. The latter is a necessity in any form of economic and social organization, whether based on private capitalism or state capitalism. Private capitalism must cease to exist when it is no longer able to obtain sufficient risk capital from private sources. The profitable operation of private industry is particularly important in a democratic industrial society. The existence of a democracy depends largely on the existence of the right of private property. It was noted previously that the latter's continued existence is conditioned on the superior economy and effectiveness of private business in providing the public interest with economic goods and services. For this reason H. L. Gantt seems to have been closer to the mark when he said, in 1919: "The community needs service, regardless of who gets the profits, because its life depends on the service it gets." The businessman who says that profits are more important to him than the service that he renders "has forgotten that his business system had its foundation in service, and as far as the community is concerned has no reason for existence except that service it can render. A clash between these two ideals will ultimately bring a deadlock between the business system and the community."[11] The same thing could be said about organized labor's desire for monopoly wages, or about any other organized group interest for that matter.

The business executive has both an obligation and a necessity for the reasonable satisfaction of the personal objectives of groups

[10] C. F. Taeusch, *Policy and Ethics in Business*, pp. 280–281.

[11] H. L. Gantt, *Organizing for Work*, p. 5. See also F. W. Taylor, *Principles of Scientific Management*, p. 139.

within or associated with his organization. Satisfaction must be made, however, with due regard for the primary service objectives of the organization. The groups within the organization are of course the owners and their employees. The owners may be a large number of small stockholders. The employees may be either executives or operatives. Organizational effectiveness depends greatly on good morale. The latter depends largely on the satisfactory integration of perosnal objectives with the primary objectives of the organization.

There is a principle of the Primacy of Organizational Objectives: When collateral objectives are elevated above and imposed on primary service objectives, the mission of the organization is changed fundamentally. It may accordingly fail to accomplish its primary objectives. The business organization would cease to be an economic institution if its primary service objectives were dominated completely by military, political, religious, or social objectives. It may fail when any important group within it, whether capital, management, or labor, succeeds in subordinating the organization's primary service objectives to their personal interests. Morale deterioration is both a cause and an effect of such action. It is a corollary that the primacy of organizational service objectives is usually conceded without question during periods of great emergency that threaten the continued existence of the organization.

Secondary Service Objectives

Secondary service objectives are values that are needed by the organization, or particular organization elements, to enable it to accomplish its primary and collateral objectives with the required economy and effectiveness. The maintenance department of a factory or a department store performs the necessary and important function of maintaining certain working conditions, including physical facilities, in accordance with whatever maintenance standards have been set up. The purpose of maintenance standards is chiefly a reasonable assurance that the organization will have good physical conditions of work. Effective and economical accomplishment of its work depends on such conditions. Most employees, whether executive or operative, desire good working conditions. Accomplishment of the immediate objectives of maintenance work does not directly

satisfy the needs and desires of either the customer or the employee. It contributes indirectly to their satisfaction, however. The maintenance department is a staff organization in most business concerns. A staff department is usually a service organization. It is a function of staff to provide the organization with the values it needs for the satisfactory accomplishment of its objectives. Secondary objectives become more and more the objectives of staff departments, with continued organization growth.

The Characteristics of Objectives

There are general characteristics of objectives that may critically affect the accomplishment of any of the basic classes of objectives noted above. A broad basis for administrative planning, organizing, and controlling requires an understanding of them. It is necessary, therefore, to make a further classification of business objectives with respect to such characteristics, as follows:

1. Ultimate and immediate organizational objectives.
2. Intermediate and final procedural objectives.
3. Limited and unlimited objectives.
4. Elastic and inelastic objectives.
5. Tangible and intangible objectives.
6. External and internal objectives.

Ultimate and Immediate Objectives

Ultimate service objectives may be defined as those fundamental service values that the organization must provide over an indefinite period of time, regardless of current changes in the character of the demand of the groups which it serves. A basic requirement of business organization is a maximum distribution of goods and services at a minimum cost and price with respect to the quantities and qualities desired by the consumer. These requirements must be met in a manner that will be consistent with fair treatment of the various collateral interests involved. More goods and services of better quality will be placed in the hands of more people in the lower-income groups if these requirements are met. Investors should get better dividends with greater regularity, and the capital gains that result from organization growth. Employees, both executive and operative, should obtain better jobs with better incomes. These basic requirements cannot be met except through good manage-

ment. They are affected only temporarily by seasonal or cyclical variations in business, or variations in current ideologies that may affect the thinking of our citizens. Every permanent industry must supply basic values for which there is a continuing need. They are its ultimate objectives. Their determination is the basis for continued progress and organizational planning for growth. Success in accomplishing them is reflected partially in the secular trend in the industry.

It is not necessary to rely entirely on abstract reasoning to assure ourselves that there are ultimate objectives and that they are basically important. In its February, 1934, issue of its *Automobile Buyer's Guide* the General Motors Corporation stated the basic values desired by the automobile buyer at that time. They had been determined by its Customer Research Staff. The Kaiser-Fraser Corporation stated the basic values that it offered to automobile buyers in its national newspaper advertising in January, 1948. A comparison of these two statements is given below. It is quite interesting when one considers that they are separated by a time span of fourteen years and that one concern was not in existence at the beginning of the period. It will be seen that the principal differences in these

ULTIMATE SERVICE OBJECTIVES OF THE AUTOMOBILE INDUSTRY

General Motors Corporation[12]	*Kaiser-Fraser Corporation*[13]
Dependability, Operating economy, Low list price	"Most For Your Money"
Safety	Driving security
Appearance	Style leadership
Comfort	"The Gliding Ride"
Smoothness of operation, Pick-up, Speed	Exceptional performance
Ease of control	Ease of control

statements are in the phraseology, and in the breakdown of certain general values into subvalues in the General Motors statement.

[12] G.M.C. *Automobile Buyer's Guide*, February, 1934.

[13] Kaiser-Fraser national newspaper advertising, January, 1948, as it appeared in the Columbus (Ohio) *Dispatch*.

A sound determination of ultimate service objectives can make important contributions to business. The best evidence is probably the fact that many successful concerns spend large sums of money on customer research, pure physical research, and other research activities in an effort to obtain a more accurate determination of them. The reason is that ultimate objectives serve as landmarks on which we can sight in setting our business course. It is not too important that we may or may not be able to accomplish them completely in the foreseeable future. We may sight on a mountain, in cruising through the woods. It is in the general direction in which we must go to reach our final destination. It may be far beyond the place where we want to make camp for the night, however. A good carburetor designer in either of the above two automobile concerns probably could tell you with considerable accuracy the ultimate efficiency of an internal-combustion engine using gasoline of current quality and octane rating. It is a bench mark in research and design. The theoretical maximum efficiency will never be achieved. As Henry S. Dennison has said: "The range and precision of man's foreknowledge will at best carry him only a few years ahead. Of necessity, then, it is the direction of progress rather than the goal of progress which is to be worked out."[14] We cannot be certain that we are progressing in the right direction, however, unless we have some knowledge of the ultimate goal.

Ultimate service objectives become more effective as determinants of the direction of progress as the particular industry passes from the pioneering stage of development, through the stage of exploitation to the stage of stabilization. The basic values that the public wants usually become clearer. The concern that can give the customer more of these values at the right price, in the form that he wants them, is the one that is more likely to progress rapidly. The additional values offered in a new product or service must be expressed in concrete rather than abstract terms. A concern may find itself offering something that the customer does not desire greatly, if these additional values are determined in kind, degree, and amount without reference to the requirements of basic service values. The usual result, of course, is a loss rather than a profit. Ultimate service objectives should change slowly, and only in response

[14] Henry S. Dennison, *Organization Engineering*, p. 188.

to fundamental changes in the needs and desires of the public. A sound definition of them gives stability of purpose to the organization. They contribute, in consequence, to organizational stability. There are other reasons why they should be an important consideration in organization and operational planning.

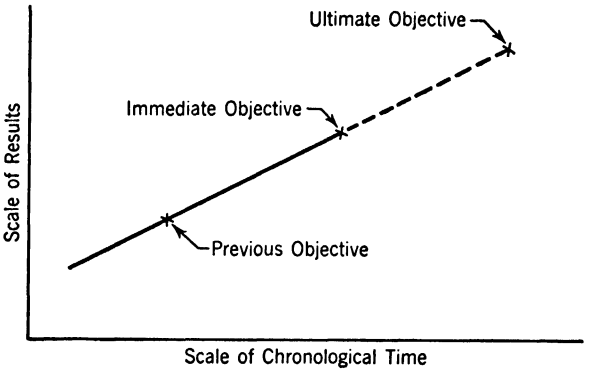

FIG. 11. General Relations Between Ultimate and Immediate Objectives.

Immediate service objectives are those values that the organization hopes to preserve, acquire, create, or distribute within a definite period in the immediate future. They differ from ultimate objectives in that they can usually be expressed in definite, tangible, quantitative terms. It is possible to achieve them completely in the immediate future. They should represent a logical stage or development in the accomplishment of ultimate objectives. They are stated or implied in the specifications of goods or services that are to be bought or produced during the quarter or the year, and in sales quotas, expense budgets, and other standards that are used commonly in business. The general relation between ultimate and immediate service objectives is shown in Fig. 11.

Limited and Unlimited Objectives

Objectives may also be classified on the basis of possible final and complete accomplishment.[15] Limited organizational objectives are

[15] Mooney and Reiley have classified objectives as "relative" and "final." Relative objectives are those which, owing to their very nature, are attainable only in a relative degree. Final objectives are those that can be attained completely.

those that are possible of complete and final accomplishment within a finite period of time. There is no reason for the continued existence of the organization when this degree of achievement has been accomplished. The organization begins to disintegrate because the common bond that has held group interests together has disappeared. The antislavery societies that existed prior to the Civil War and the prohibition societies that existed prior to the Volstead Act are examples in the fields of social and political organization. The heads of the particular groups usually relish the prestige and power that go with their position. They may wish to continue the salaries that are attached to them. They may sincerely feel that the organization still has a mission to accomplish. Generally they make an effort to continue the group's activities or to find new causes for it to embrace. The best that can be done in most cases is to hold together a skeleton of the organization that existed before the complete and final accomplishment of the ultimate objectives.

A similar situation may exist in business when a manufacturer or merchant has limited immediate objectives. This is likely to be the case if he is producing or distributing high-style goods, novelties, and fads. This type of businessman must promptly replace the objective that is being satisfied completely with a new objective, or he may be forced out of business. The writer knew, many years ago, a manufacturer of ladies' garments who learned this principle in the "school of hard knocks." This man had sent his designers to New York to study style trends in his particular field. The conclusion was that there would be a good fall market for red hunting coats for women in the price classes that he sold to. Designs were developed accordingly. Cloth was purchased and production was started. Before the coats could be marketed, Howard Carter discovered the tomb of Tutankhamen in Egypt. A fad of "King Tut" styles swept the market in this manufacturer's particular price class. The red hunting coats were difficult to move at any price. The designs had to be scrapped and new designs made immediately to meet the new demand. The manufacturer, of course, took his loss.

Unlimited organizational objectives, conversely, are those that

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See *Onward Industry,* pp. 214–215. The present author has not adopted their terminology because of certain conflicts between it and the terminology of business procedure.

are not capable of complete accomplishment in any finite period. Both immediate and ultimate objectives in the field of religious organization are unlimited because they are spiritual rather than temporal values. Business concerns that supply basic economic values usually have unlimited objectives. Even the ladies' garment manufacturer had unlimited ultimate objectives. The immediate objectives of the bread baking industry are relatively unlimited. This does not mean that at any given time a particular bakery can sell all the bread it can produce. Nor does it mean that the life of any particular bakery is unlimited. The latter considerations have to do mainly with competitive effectiveness. It merely means that the need for the basic values that constitute the ultimate objectives of most business concerns tends to be unlimited. The immediate objectives of these concerns tend to be limited. However, business objectives may differ greatly between concerns in the degree to which they are limited or unlimited. These differences often are the basis of important policy decisions.

Elastic and Inelastic Objectives

Business objectives may differ also in the extent to which they are elastic or inelastic. The economist usually defines elastic objectives as those for which demand may fluctuate widely with changing economic conditions. Inelastic objectives are those for which the demand tends to fluctuate narrowly with changing economic conditions. The demand for values that satisfy man's primary physical needs tends relatively to be quite inelastic. The need for bread is basic. It does not vary greatly from prosperity to depression. The demand for bread tends to fluctuate narrowly as a result. Objectives tend to become more elastic as the economic distance between producer and ultimate consumer increases. Steel is a basic commodity, but demand for it tends to fluctuate in prosperity and depression much more widely than does the demand for bread. Distance from the point of consumption and diversity of use make it difficult to forecast demand accurately. Furthermore, inventory requirements are a leverage factor that has a cumulative effect on demand with increasing distance from the point of consumption. The elastic and inelastic properties of objectives are factors that must be taken into account in planning the growth of the business, developing methods

for regularizing production and employee earnings, and solving many other problems.

Some feeling has developed that government should now be able to regularize the business cycle. The importance of the elastic properties of objectives in business planning would be reduced greatly in such case. The experiences of industrial countries indicate that the proponents of this concept are somewhat more than a trifle optimistic; that a cure based on governmental control, rather than regulation, would be worse than the disease.

Tangible and Intangible Objectives

It was noted earlier that ultimate objectives usually are broad, basic, and general, and therefore intangible. Some immediate organizational objectives may also be intangible. It is true, for example, that the practice of packaging fresh vegetables in cellophane tends to maintain their original quality until they are consumed by the customer. The practice produces in addition certain aesthetic values that are appreciated by the customer and therefore tend to reduce sales resistance. Some good examples of intangible secondary objectives can likewise be offered. Hence it is necessary to define broadly the terms "tangible" and "intangible" objectives.

Tangible objectives are those types of values that are reducible, with relative ease, to a quantitative, measurable form. The attributes of a product or service that give it the required utilities are obviously its quality attributes. Quality is a basic customer value, and therefore a basic value in competition. Certain dimensional attributes may be specified for a particular component part of a certain product. The permissible variation in a required dimension —the "tolerance"—may be extremely small. The writer had some contact, during World War II, with a manufacturing problem in which the dimension of a component part of a critical product that had to be manufactured in quantity had a tolerance of plus or minus 20 millionths of an inch. There was great need obviously for an instrument that could measure this dimension, an internal diameter, with speed and accuracy. The limits of error of most of the existing instruments were greater than the permissible tolerance. The need for accuracy in the particular dimension was related directly to the required performance of the finished product and

therefore to certain primary service objectives of the organization. The need for speed and accuracy in measuring such a high-quality attribute was an objective of a staff organization, the company's quality control department. It was a tangible secondary objective. There is nothing intangible about the dimension of a piece of metal, or its measurement, even if it is microscopic.

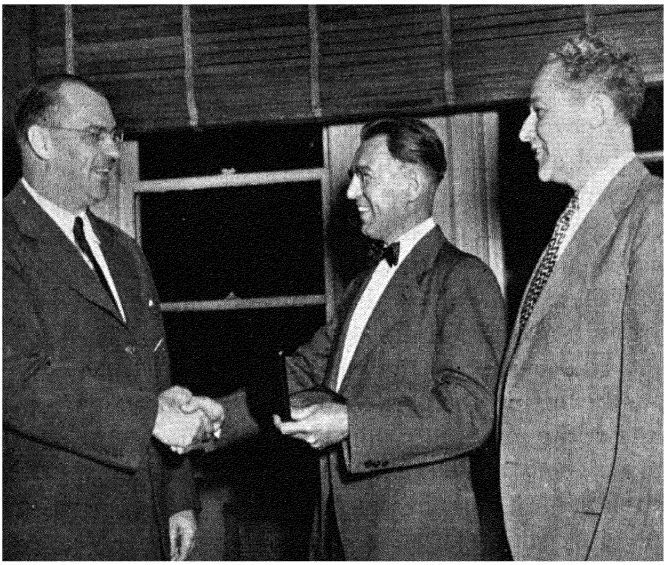

FIG. 12. Presentation of an Award of Merit. (Courtesy, Westinghouse Electric Corporation.)

Intangible objectives, conversely, are those types of values that are not reducible, with relative ease, to quantitative measurable form The criteria of a proper provision of such values tend to be qualitative. The amusement values provided by the motion-picture industry are, for the most part, intangible primary objectives. Many of the values derived by an employee from the experience of employment are intangible. It is an accepted principle in planning wage incentive plans that a maximum of intangible benefits in addition to fair monetary rewards should be obtainable through the satisfactory accomplishment of fair performance standards. These may be satisfaction of creative urges, satisfaction of play desires through reasonable group competition, a feeling of "worthwhile

ness," or other such satisfactions. Some people prefer to call them "psychical" values. Be that as it may, they are still intangible collateral objectives of the business organization that have to do with the satisfaction of certain personal interests of its employees. Since the integration of interests is the basic process in morale development and maintenance, they are important.

External and Internal Objectives

External objectives are values that must be supplied to groups outside of the organization. They are the values that are desired by customers, governmental agencies, dealers, and bankers. We have little control of them. Internal objectives are chiefly the values desired by owners and employees. We have some control of them. The distinction is important when formulating administrative policy.

Management is the function of executive leadership. The degree of effectiveness with which the business organization achieves its objectives is a measure of the effectiveness with which its leadership manages. It depends on the effectiveness with which the factors, forces, and effects in the particular business situation are employed. What the optimum relationship between them is depends on what demand for goods and services has been forecast. The determination of this relationship requires measurement and standards for measurement. But standardization begins with the objective. Much commercial and industrial research, in consequence, has to do with making objectives less intangible and qualitative and more tangible and quantitative.

Principles of the Objective

The foregoing discussion has stated some important business principles that are associated directly with the business objective. Some of the more important may be summarized as follows:

1. The objectives of the organization must be such as to command the confidence of the public and the company's personnel. Public relations, investor relations, labor relations, supplier relations, or any other business relations depend on confidence and an effective integration of interests.

2. Definite objectives whose requirements are known, understood, and accepted by the organization are a requisite for effective

coöperation and good morale. Effective coöperation involves both self-coördination and executive coördination of action for the accomplishment of group objectives.

3. An objective has the power within itself to stimulate action. A fair and worth-while objective is a challenge. Its incentive value depends on the pugnacity tendency, the play tendency, and other bases of motivation.

4. The economy and effectiveness with which business activities may be planned, organized, and controlled are limited by the accuracy with which business objectives may be determined and defined. The objective is necessarily the starting point of business thinking.

5. The quantification and written statement of those values that constitute business objectives tend to increase the economy and effectiveness of business organization and operation.

6. The growth and development of an organization, or of one of its elements, tends to be limited by its primary service objectives. The expenditures for its operation and maintenance should not be greater than the values that it produces.

a. An organization element that operates at a loss over any considerable period of time is one that uses more values for its operation and maintenance than it preserves, acquires, creates, or distributes. An organization may fail if any large proportion of its elements operate under these conditions for an extended period of time.

b. The service objectives of executive leadership are necessarily the objectives of the organization that it leads. The success of executive leadership is therefore limited by organizational objectives.

7. A complex objective is more difficult to achieve than a simple objective. There is, accordingly, a Principle of Parsimony in the selection of objectives: The selection of the fewest number of primary and collateral objectives that will adequately serve the needs and desires of customers, investors, employees, and the public promotes the success of the enterprise.[16]

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[16] Mooney and Reiley have noted that "a complex objective, or rather many specific objectives, demands not only an elaborate organization for the determination of such objectives, but likewise a highly organized machinery for rendering

8. The continued attempts of any important individuals or groups of individuals to elevate their personal objectives above their primary service objectives will militate against the success of the organization and may lead to its breakdown. This is the Principle of the Primacy of Organizational Service Objectives.

Analysis and Determination of Objectives

Various research techniques for the analysis and determination of primary service objectives have been developed by business. The investigation and evaluation of customer needs and desires is a duty of the marketing research function in business organization. This function includes various activities leading to the determination of what goods and services will be needed by customers in what quantities, when and where, and at what prices. It is complemented by the industrial research function. The latter function develops the knowledge required for the creation of the necessary utilities in goods and services. It was noted previously that many millions of dollars are spent annually for such activities. The information produced is necessary for the intelligent performance of all management functions.

Business Ideals and Standards of Business Conduct

The business organization is an economic institution. The ultimate justification of organized business under private capitalism is found in its ability to serve the public interest satisfactorily with economic goods and services. Business is expected to accomplish its primary service objectives, but with proper consideration for its collateral objectives. The manner in which business objectives are accomplished is therefore a matter of interest to the public. The standards of business conduct that guide executives in managing business organizations are matters of public concern. The public relations profession has developed in recognition of this fact.

Management is an inexact science. It may make use of the exact sciences, but it has its roots in the so-called social sciences. It suffers in consequence from a lack of general agreement concerning the exact meaning of its various terms. Hence it is necessary to define terms as they are used here.

The term "business ideals" may be defined as the moral values of

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the many decisions that are essential to the effectuation of these aims and purposes." See *Onward Industry*, p. 88.

a general social nature that may be affected by business activity. Business must accordingly be concerned with them.[17] They are related to but different from the collateral social objectives of the business organization. The latter may be defined as the broad, economic values of a general social nature that are affected by business activity. Standards of business conduct are the ethical criteria by which the propriety of certain business actions can be judged in relation to business ideals. There is nothing in the term that indicates any particular degree of business perfection. Standards of business conduct may be high or low, depending on the quality of the particular business leadership and its objectives.

General Nature of the Problem

The problem of proper business conduct has to do with considerations of "right" and "wrong" in the conduct of business activity. It is obviously an ethical problem. The field of ethics may be defined as the field of moral obligation.[18] Henry Ford, Sr., remarked that "morality is merely doing the sound thing in the best way."[19] All these ideas relate to values that are essentially intangibles. They resist quantification and exact measurement. They always have been, and probably always will be, matters for determination by qualitative judgment. Since criteria of "right" and "wrong" are qualitative and relative, the question of what constitutes proper business conduct is controversial. It is frequently the subject of heated discussions between people who are equally sincere.

Basic concepts concerning sound moral values in a society tend to change very slowly, if at all, during the average lifetime. They have their genesis largely in the religious doctrines that are generally accepted by the particular society. There is consequently a unifying influence that tends to lead to the acceptance of certain moral con-

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[17] The term "business ideals" is sometimes used in the sense of ultimate service objectives. Webster Robinson, for example, feels that "there lies at the root of every successful business a 'big idea' from which it has grown, a dream or an ideal that provided the motivating force for its establishment and that has kept it growing ever since."—*Fundamentals of Business Organization*, p. 3.

[18] E. L. Heermance defined ethics as the "art and science of social adjustment." —*The Ethics of Business*, p. 196.

E. A. Burtt said that ethics "relates to human conduct, in so far as the latter comes under our judgments of right or wrong."—*Principles and Problems of Right Thinking*, p. 379.

[19] F. L. Faurote, *My Philosophy of Industry—Henry Ford*, p. 37.

cepts by a majority of its citizens.[20] The alternative to a common moral code is serious stresses and strains within its various institutions, including business, that can cause its breakdown. Changes in public thinking concerning proper standards of business conduct can and do take place in response to changes in the social, political, and economic environment. Such changes in public thinking tend to forecast public regulation. When they concern the social obligations of business, a change in business thinking and action may be a legitimate defense against further economic rigidities resulting from further governmental regulation. It is not suggested that such regulation can be eliminated. Increasing regulation with our society's growth and increasing complexity is undoubtedly necessary. It is merely suggested that the acceptance of social obligations and the exercise of social initiative by executive leadership may hold such regulation to the necessary minimum. It may assure that it will be constructive rather than punitive. Executive initiative in the development of acceptable standards of business conduct, and voluntary conformity therewith, tends to win increased public confidence and support. Politicians are sensitive to changes in public sentiment.

It is recognized that the problem is not simple. The factors affecting it may include any factors that affect the thinking of the organization, the community, the industry, or society concerning the propriety of business policies and practices. They may include such broad general factors as custom, environment, indoctrination, leadership, competition, and many others that affect the relations between business objectives and general economic, political, and social objectives.

Ethics of the Business Executive

The problem is further complicated by the existence of various systems of ethical thought. Epicurean utilitarianism, for example,

[20] It is believed that Nazi Germany, Fascist Italy, and Communist Russia are not exceptions. As societies pass through various stages of socialism toward complete state capitalism, there is necessarily an increasing concentration of power in the hands of state officials. There is a tendency to inculcate in the minds of the people, through processes of authoritarian indoctrination, some materialistic doctrine. Although this doctrine emphasizes economic values, it tends to become competitive with religious doctrines that emphasize moral values. As such, it may supply an effective but unsound basis for ethical standards and exert a unifying influence.

holds that concepts of "right" and "wrong" flow from the possible consequences of our acts in terms of "pain and pleasure." The chief good is happiness or satisfaction for the community. Intuitive ethics rests on a belief in the power and universality of moral judgment. What is "right" or "wrong" is a function of moral judgment, based on ethical criteria that are innate. Conscience, therefore, is the primary moral force. Empirical ethics determines what is right or wrong by reference to an established system of moral law. This is usually the system of ethical thought that is sponsored, and enforced if possible, by some religious organization. Rational ethics believes that there are certain fundamental principles to which moral judgments tend to conform. It believes that ultimately they make possible logical determinations of questions having to do with "right" and "wrong." It is evident that all these systems of ethical thought are interrelated in some manner and degree. Judgments that are based on them are essentially subjective, rather than objective. They may be biased by indoctrination, emotionalism, and personal interest. The accuracy of a judgment is a function of the intelligence and background of the person who makes it. There is a tendency for people of limited intelligence and background to believe that what they want they need, and what they need is their right. Accordingly it tends to warp judgments concerning appropriate criteria of proper conduct. The effectiveness of the demagogic appeal to the personal interests and prejudices of groups has its basis, in part, in this tendency.

Most citizens and business executives are not students of business ethics. Their ethical concepts appear to be based on some combination of various systems of ethical thought. Wide divergences of opinion on valid criteria of proper business conduct are to be expected in consequence. Such criteria as have been generally accepted have been developed chiefly by trial and error over long periods of time.

The Practical Value of Standards of Business Conduct

Sound standards of right business conduct that are generally accepted by the public have practical value for the business executive as well as the public. Voluntary conformity with such standards tends to promote public confidence in the business organization and its leadership. Alfred P. Sloan, Jr., has said: "It is our hope and

ambition to so develop the confidence of the buying public in our policies and purposes, as to have it feel that whatever price car may be needed, the most outstanding value, from every standpoint, is in the General Motors Line. . . . Any manufacturer who will give to the Public a definite number of dollars worth of value, and do it constructively and honestly, will get a certain proportion of the market that belongs to that number of dollars."[21] According to his statement, honesty as well as efficiency is required in providing the public with goods and services.

Good morale among executive and operative employees is an important secondary objective in any well-managed business organization. It is the basis of voluntary coöperation, confidence in executive leadership, and other morale effects that are necessary for the satisfactory accomplishment of primary business objectives. Good morale is not likely to exist in the absence of confidence in business ethics. The same thing can of course be said for other basic kinds of organized activity.[22]

Survival in an industry may depend, nevertheless, on willingness to engage in unfair practices. This may be necessary in self-defense against similar practices by competitors, when criteria of fair business practice do not exist or are not enforced.[23] The Federal Trade Commission, the Securities and Exchange Commission, the Department of Justice, and other government agencies are charged with responsibility for assuring sound policies and practices within particular business fields. Ethical criteria have been established by federal law and consequent administrative rulings. They are intended to aid these agencies in protecting the public interest. Unethical business conduct leads to increasing political control and the danger of weakening unnecessarily the right of private property. Ethical conduct, on the other hand, develops a reputation for integ-

[21] Alfred P. Sloan, *Principles and Policies Behind General Motors*, p. 8.

[22] Edward L. Munson has said, with respect to military organization: "Without ideals that stand the test of equity, defeat tends to follow. But with such ideals, volition enters and the will to accomplish masters the instinctive [fear] tendencies. . . . Morale represents the exaltation of a sentiment and an ideal above the influence of environment as a result of sustained volition."—*Management of Men*, p. 251.

[23] T. W. Frech and Zay Jeffries have remarked: "Competition based on good values to consumers is usually constructive, but competition which is not so based is usually destructive."—*Business Ideals, Principles and Policies*, p. 48.

rity. It attracts customers to a company's goods and services because of the concern's reputation for reliability. It attracts risk capital from private sources. Free private enterprise cannot live without it. There are many other reasons why fair standards of business conduct have practical value. They protect the executive who is responsible for the conduct of a legitimate business operation, as well as the public.

There is, of course, a danger inherent in any use of standards. They can be used to freeze a particular business situation in favor of those who are at present established in it. This applies to standards of business conduct as well as to others. It has been alleged, for example, that licensing laws, based on statutory provisions for the protection of public health and safety, have been used in some localities to maintain a monopoly of the right to work in favor of certain building trades' unions. Protection of public health and safety against unfair building practices obviously is in the public interest. It is believed that the maintenance of a monopoly of the right to work is not. There is always the danger in governmental regulation that some agency may be set up to protect the private interests of important pressure groups, rather than the public interest. Voluntary conformity with accepted standards of right business conduct induces public support of executive leadership. It is necessary when the unreasonable demands of such pressure groups must be resisted.

The need for standards of proper conduct that can be accepted by an entire organization is universal. Even a criminal organization must have standards of conduct, although they are not proper. They are probably necessary to permit the minimum of mutual confidence that is required for any joint action, whether proper or improper. The contributions of ethical standards of business conduct are fundamental. There is accordingly a universal need for them in legitimate business activities.

The Functions of Ethical Standards

Any broad ethical values that may be contributed by the business organization must be created by its executive and operative employees, using the capital means provided by ownership. It must be done in connection with the performance of their normal func-

tions. The contributions of ethical standards in business have to do with the more accurate determination of "right" and "wrong" in connection with such performance. They have their own facilitative functions, however, that may be summarized as follows:

1. They foster the development of a mutuality of confidence within the business organization, since they facilitate the determination of proper business activity with due regard for the rights of all concerned.

2. They facilitate the determination of courses of business action that will permit the achievement of business objectives without danger of the loss of public confidence and patronage.

3. They facilitate the prompt, amicable adjustment of differences between individuals or groups within the industry or concern, by providing a body of criteria governing proper conduct to which assent has been secured previously.

4. They facilitate the preservation of the conditions that are necessary for equality of opportunity in business based on individual abilities and qualifications.

The Development of Ethical Standards in Business

The development of business ethics in the United States, as elsewhere, has been an evolution. It began with our birth as a nation and was based on ethical concepts that had been inherited from abroad. It has continued at an accelerated pace since the last decade of the nineteenth century.[24] The westward migrations of the American people were drawing to a close at this time. The pioneer phases of our national life were practically at an end. The necessity for independent action based on individual initiative had been diminishing relative to the necessity for group action involving large aggregates of labor and capital. There was, however, a revulsion of feeling against large corporations. It had its genesis in their abuse of the economic and political power that they had acquired from such concentrations of economic resources. It has been standard political practice since then to exploit this feeling. There has, of course, been much national and state legislation governing business

[24] C. F. Taeusch felt that we may reasonably consider the year 1890 as marking the beginning of the development of modern business ethics. See his *Policy and Ethics in Business*, p. 53.

conduct that has stood the test of time. It has contributed to the developments of standards of business conduct that have been beneficial to business as well as to the public interest.

A brief review of the history of some of this legislation will show the evolutionary nature of the development. The Interstate Commerce Act of 1887 outlawed certain practices of the railroads that were not in the public interest. The Sherman Act, passed on July 14, 1890, was designed to maintain free competition by preventing business combinations in restraint of trade. The trust-busting activities of President Theodore Roosevelt, from 1904 to 1908, dramatized the dangers of uncontrolled corporate activity and the necessity for better business morals. The Federal Trade Commission came into being in 1914. It was charged by the Clayton Act with responsibility for restraining unfair competition and developing fair trade practices. It was necessary for the government during World War I to exercise a limited control of business activities through the War Industries Board and other government agencies. A national emergency forces the subordination of the personal interests of individuals and groups to the public interest. There was increasing recognition of the importance of acceptable standards of business conduct following that war. It may have been due also to the increasing realization that business must control itself or be controlled. More and more industries developed codes of ethics under the leadership of their trade associations. Responsibility for the conditions following 1929 was placed largely on organized business, despite the fact that they were the result largely of a secondary postwar depression. Business was vulnerable because subsequent investigations disclosed unethical practices on the part of well-known business executives. They were undoubtedly a factor in the passage of the National Industrial Recovery Act in June, 1933. This act granted certain rights and privileges to organized labor. It permitted the formation of industrial codes for the regulation of an industry by an industry committee under the surveillance of the government. This act was declared unconstitutional in May, 1935. However, the principal labor provisions were carried over into the National Labor Relations Act of June, 1935. This act and subsequent interpretations by the National Labor Relations Board accelerated the growth of trade and labor unions. It provided severe

penalties for management's violation of standards of conduct in labor relations as set up in the act, but few for similar violations by professional labor leaders. It made it difficult, frequently, for an executives to exercise proper economic leadership of his employees. The result was the development of monopolies or near monopolies of the right to work in the hands of professional labor leaders. Again, there was considerable concentration of economic and political power without corresponding responsibility to the public interest. This time it was in the hands of a quasi-political leadership that was dependent for its continuance in office on the suffrage of a pressure group. There were abuses of this power, as is usually the case when such concentrations of power develop without corresponding public responsibility. The Labor-Management Relations Act of 1947 was an attempt to relieve this condition by establishing standards of proper conduct in labor relations for labor leaders and labor organizations, as well as for executives and business organizations.

Many other laws for the regulation of business have been passed since the turn of the century. Other regulatory bodies have been established for their enforcement. There are always some executives who do not recognize their obligation to the public interest. They do not conform voluntarily to acceptable standards of business conduct.

Management's Responsibility for Adequate Standards of Business Conduct

It should be noted also that there has been an increasing tendency, since the depth of the depression in 1932, for standards of business conduct to be determined for management, rather than by management with the consent of the government. This may be part of a trend toward a higher degree of socialism. As the right of private property is diminished, the right of public property necessarily is increased. As the area of private capitalism is restricted, the area of state capitalism tends to be enlarged. An increasing control of economic, political, and social activities must be expected as this tendency continues. The general public, however, wishes to retain a maximum of individual liberty and freedom of action. It would insist, if it were consistent, that its legislative representatives hold this tendency to whatever minimum is compatible with the

reasonable protection of the public interest. This may not happen, because pressure groups are vocal but the general public is not.

A socialistic trend toward an increasing amount of state capitalism is, in part at least, the result of management's errors of omission and commission. It is, in part, the effect of a lack of confidence in business leadership. This has been realized. Some industries have continued the development and refinement of their codes of business conduct. They have implemented them with "impartial chairmen." The code that such an official administers may be a derivative of company codes which were developed previously. The industrial code is the crystallization of the thinking of certain industrial leaders concerning ethical criteria governing business conduct within the industry. Its development is conditioned by public concepts of right and wrong, as well as by ideas and conditions in the industry. The objective is obviously public confidence in the industry and its leadership. Acceptance by the public depends, of course, on subsequent deeds as well as words. Some of the objectives and policies may later be crystallized in administrative rulings, legal decisions, or statutory laws, to the extent that they are accepted. Such action may be taken because of pressure by business lobbies. It may be taken independently by the legislative, administrative, or judicial agencies of government. The code begins to acquire some enforceability at law to the extent that it is resorted to.

Heermance believed that "every standard is likely to pass through four stages. We have, first, the fundamental research necessary to determine a common measure of practice; second, the formal approval of the standard as desirable; third, the education and promotion that cause it to be adopted; fourth, the stage of general acceptance."[25] The development of standards of business conduct tends to pass through the same general stages. Economic, political, and social trial and error may play a part that is quite as important as any formal research, however. It is believed that the following stages summarize the practical evolution of such standards:

1. The stage of unrestrained competition.
2. Gradual realization of the importance of constraining business activity in conformity with some criteria of right conduct.

[25] E. L. Heermance, *Can Business Govern Itself*, p. 87.

3. The beginnings of group action through associations of business executives for the development of such criteria.
4. The development of public interest and group pressure.
5. The crystallization of business thinking and the development of a voluntary code for the industry.
6. Legislative action expressing the thinking of business and other groups concerning standards of proper business conduct.
7. The self-policing of the industry, in some instances, which may or may not be done under the leadership of an "impartial chairman."
8. The policing of the industry by a governmental regulatory body, when and if the public still feels that its interests are not adequately protected.

Public Relations and Business Ethics

Many of the questions that have been raised concern the relation of the organization's interests to the public interest. Public confidence depends on whether the public feels that the conduct of the company's business is "right" with respect to its interests. The function of the public relations executive should be concerned primarily with staff advice to top management concerning ethical problems that may arise from proposed business activities. It should not be chiefly the job of "selling" whatever management wishes to do after a decision has been made. Questions of right and wrong may arise whenever and wherever there is an exchange of values. It is not suggested that the public relations executive should interfere with the work of the industrial relations executive, procurement executive, or legal counsel, or with the assigned duties of any other executive who may play a part in any internal or external exchange of values. It might be helpful, however, if he were properly coördinated when disputes arise concerning the "rights" of important groups composing or associated with the organization. This assumes that the public relations executive is something more than a publicity man—that he has some of the attributes of a business statesman.

CHAPTER 5

EXECUTIVE LEADERSHIP AND MANAGEMENT

The Meaning of Executive Leadership

The executive function is one of leadership. The manner of performance of the executive leadership function basically conditions the successful conduct of the business. Over a period of time, therefore, no organization is likely to be better than its leadership. The best evidence is the pragmatic test of results. The course of a business concern that has been going downhill often has been reversed by a change in top executive leadership. In such cases boards of directors and their financial sponsors have frequently paid very large salaries and other emoluments to a top executive of proved ability. They hope, of course, that he can lead the organization back to a successful competitive position.

The public also has an interest in the problem of business leadership. Any serious, general, and continuing deterioration in the quality and effectiveness of executive leadership in economic institutions will be followed by a serious deterioration in the standard of living of the people. There may be a considerable time lag between cause and effect. The progress of this deterioration is difficult to arrest, once it has become general. There is much evidence throughout the world to support this contention.

The importance of executive leadership in business may be obvious. There is, nevertheless, no unanimity of opinion concerning the meanings of the terms "executive" and "leadership." The difficulty in defining them was encountered in the administration of

the Fair Labor Standards Act of 1937. A question was soon raised as to who was an operative employee and therefore subject to the act, and who was an executive employee and therefore not subject to the act. There has been considerable controversy in recent years concerning foremen's unions in industry. It has dealt in part with the nature and extent of a foreman's executive status. Such questions cannot be resolved satisfactorily without sound, fundamental definitions of these terms. An examination of a sample of definitions given by any group of management authorities will reveal some interesting differences. One writer, for example, has said that "some people are beginning to conceive of the leader, not as the man in the group who is able to assert his individual will and get others to follow him, but as the one who knows how to relate these different wills so that they will have a driving force."[1] This definition would appear to deny that Stalin, Mussolini, and Hitler were leaders. It is a doubtful contention, even though we do not like that kind of leadership. According to another authority: "Leadership is the name for that combination of qualities by the possession of which one is able to get something done by others, chiefly because through his influence they become willing to do it."[2] This also defines positive leadership. However, there can also be effective negative leadership. Leadership has been defined from a psychological point of view "as the behavior of an individual who is involved in directing group activities."[3] An industrial executive working in collaboration with an educator said: "Leadership is the form which authority assumes when it enters into process. As such it constitutes the determining principle of the entire scalar process, existing not only at the source, but projecting itself through its own action throughout the entire chain, until through functional definition it effectuates the formal coördination of the entire structure."[4] Many people would question the notion that leadership is a form of authority. It is true that a delegation of responsibility and authority may be made to a leadership position before an executive is appointed to fill it. Authority is, however, a right of decision and command that

[1] M. P. Follett, in H. C. Metcalf (ed.), *Business Leadership*, p. 56.

[2] Ordway Tead, *Human Nature and Management*, p. 149.

[3] John K. Hemphill, *Situational Factors in Leadership*, Leadership Studies No. 4, Personnel Research Board, Ohio State University.

[4] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 33.

is necessary for the proper discharge of a responsibility and should be exercised for this purpose. A former public utility executive believes that executive leadership has to do with influencing individuals and groups with respect to the accomplishment of objectives requiring coöperative effort.[5] An educator and business consultant considers that an executive is "anyone who is responsible for the direction and control of others, and for the execution of work performed by them."[6] What constitutes executive leadership depends to some extent on the point of view of the individual. It depends more on various environmental factors in the leadership situation. They will be discussed shortly.

There is, fortunately, a common thread of meaning that runs through these and other definitions. It may be summarized as follows: An organization basically is any group of individuals who are coöperating to a common end under the guidance of some leadership. The particular organization may be good, bad, or indifferent from the standpoint of objectives, policies, or any other criterion. A leader may be anyone who accepts responsibility for the accomplishment of group objectives. He must usually discharge this responsibility to the satisfaction of the group. Otherwise, there may be a loss of morale and organizational effectiveness that may cost him his position. He is expected to motivate, coördinate, and direct the organization, or some element of it, in the achievement of the particular objectives. Such accomplishment implies effective group action based on a sound plan. An executive is broadly anyone who is charged with the management of affairs.[7] A business executive may be anyone who leads a business organization, or some element of it, toward the accomplishment of business objectives with some degree of effectiveness. The function of executive leadership is all-pervasive within it. This function includes the work of all employees who have personal responsibility for directing and supervising the work of others, provided that the leadership responsibility constitutes their principal assignment. Therefore, the term "executive" includes all employees who have such responsibility, from

[5] Chester I. Barnard, *The Functions of the Executive*, pp. 17, 35, 42, 55.

[6] W. B. Cornell, *Organization and Management in Industry and Business*, p. 64.

[7] The terms "administration" and "management" are synonymous in standard dictionaries.

the president down to an assistant buyer in a department store or an assistant foreman in a factory. Various grades and kinds of executive leadership within the business organization must be recognized.

Theories of Leadership Development

The need for good leadership is universal in any group that is striving for some common end. The larger the organization, the greater the need tends to be. The need for good executive leadership in large business organizations is, of course, comparatively modern. Its development has been concurrent with the development of modern industrial society. Some type of leadership has been necessary as far back as we can trace the history of man. H. A. Overstreet has classified leaders on the basis of their historical evolution as the hunter-warrior type, the priest-leader type, the politician-leader type, the seer type, and the business-leader type.[8] The evolution of each class overlaps that of the others. All of them could probably be found in various parts of the world today. The hunter-warrior leader was important during the hunting and fishing stage of man's development. Man depended largely on the free goods of nature for his living. His objective was little more than survival. The leader was the man who could successfully integrate and coordinate the activities of the group in the hunt for food, or in defense against predatory beasts and other humans. Man learned later how to domesticate wild beasts and wild grains. He passed gradually from the hunting and fishing stage through the pastoral stage, with its nomadic life, into the agricultural stage of his existence. He learned progressively how to produce wealth. He became less dependent on the free goods of nature. He was able to engage in a limited, crude amount of specialization as he became able to produce a surplus of wealth beyond his subsistence needs. Primitive crafts began to appear. Homesteads, villages, and cities gradually grew up. Exchanges of surplus goods and services developed locally at first, then eventually between cities and nations. These changes took place slowly; it is probable that we have covered at least a half million years of man's evolution in a very few minutes of read-

[8] H. A. Overstreet, in H. C. Metcalf (ed.), *Business Leadership*, pp. 47–49.

ing time. This evolution was accompanied of necessity by the evolution of other leader types.

Man had little knowledge and control of his environment during the early stages of his development. He was at the mercy of elemental forces. No doubt he wanted a supernatural leader who could protect him from forces beyond his comprehension. The personal representative of this supernatural leader would obviously be an individual of consequence who could and probably would acquire considerable prestige and power. He would and did become the custodian of such knowledge as existed. He became influential in temporal as well as spiritual matters. The head of the state, in early civilizations, was often the head of the dominant religion of the state. The Pharaohs of ancient Egypt are an example. The construction engineers and architects on a big pyramid-building job were the priests of the temple of Amen-Ra. Hitler and Stalin were in some respects modern examples of the priest-leader type. Their states attempted to substitute a state-sponsored economic and social philosophy for all religious philosophies. The priest leader and the seer type of leader may be related but they are not identical. The latter type suggests one who stimulates and motivates people through the power of great ideas. The outstanding examples are in the field of religion. Such leaders are the great moral philosophers, like Buddha, Christ, Confucius, and Mohammed, who have changed the course of whole civilizations. A leadership of ideas, on a more modest scale, is needed in modern business. The staff executive is expected to exercise a leadership of ideas within the business organization. He does not exercise a leadership of command, outside the immediate group for which he is responsible. However, his reputation as a seer in his field is frequently questioned by his colleagues.

The politician leader is expected to guide a community in the achievement of the common good. He is concerned with the integration of political group interests with the general interests of the body politic. He could not evolve into a major type of leader until the common man had acquired individual rights and interests that required integration. The statesman makes the public interest his paramount consideration. He has the courage to subordinate to the common good the personal interests of the political groups that sup-

port him. He will risk their political displeasure when necessary. The politician is likely to care for the public interest only after the interests of his constituents have been satisfied.[9] There are kinds and degrees of political leadership.

The business executive is responsible for the morale of his organization. Its development and maintenance require an integration of the personal interests of its members with the primary service objectives of the organization. A secondary phase of executive leadership is therefore political. Free competition in a democratic society requires that it be a business statesmanship. Otherwise, temporary success may be followed by a serious failure.

The business leader is comparatively modern. He is usually an executive. This type too should give proper consideration to the general public interest. It is primarily an economic leadership, however. Examples of relatively large, far-flung business enterprises can be found in medieval and ancient history. They were trading enterprises for the most part. The economic philosophy of mercantilism, which was in vogue in the sixteenth and seventeenth centuries, indicates the importance to the state and nation that was attached to them. It is obvious, nevertheless, that the business leader could not become a major leader until a nation had passed from an agricultural to an industrial economy. He developed to meet the needs of an industrial society in which the production and distribution of goods and services have been increasingly mechanized and decentralized. It is a leadership that has been made necessary by the large aggregations of capital and labor which are required. Its evolution can be dated, therefore, from the beginning of the so-called Industrial Revolution, about 1765. Our science and technology

[9] Overstreet did not think highly of the politician: "Wherever we find him, he is a mass persuader. He wins by appealing to the emotions and the prejudices of the crowd. He is a genius at mass strategy. He shapes slogans, raises platitudes into apparently momentous truths. Apparently he has no other way of accomplishing his end, for the crowd thinks, in general, not with its mind but with its emotional system. The politician-leader, too, is a kind of warrior-leader, though without spears or guns; for a chief aim of his is destruction, destruction of his political adversaries. He is, therefore, not chiefly interested in truth, but in victory. So he leads his armies to the battle of the booths. For a society which is dominantly politician-minded, the admired technique is persuasion, not truth seeking; the dominant interest is power, not constructive achievement."—*Ibid.*, pp. 48–49. There is enough truth in this indictment to make it hurt.

have kept pace as our industrial economy has expanded. Our business organizations have grown frequently to great size to keep pace with the increasing demand for more goods at less cost. The business leader has tended to acquire great power and influence in consequence. The increase in his power was not accompanied initially by corresponding increase in public responsibility and accountability. Great power unaccompanied by corresponding public responsibility has always resulted in serious abuses of the public's interests. The desire for power is like a drug, insofar as the desire for it tends to grow. History repeated itself in the case of many early industrial leaders, insofar as an increasing desire for power and abuses of it tended to develop. The transgressions of business leaders, either real or alleged, were usually followed promptly by requests for greater regulatory powers. The politician leader has not as a rule been hesitant or modest in his requests for grants of power by the public. The exercise of these powers, even when it is necessary, weakens the right of private property. It leads in the direction of greater socialism. As a result, the politician-leader type and the business-leader type tend to be in conflict in an industrial democracy. The proposition has a personal interest for the average citizen. There are no highly industrialized countries, operating under advanced socialism and highly developed state capitalism, in which a high degree of democracy and individual liberty have been retained. It seems obvious that the politician-leader type, as defined, could not long exist under state capitalism. The business-leader type could and does. The need for executive leadership is universal in any industrial economy. The hazards of economic leadership under advanced state capitalism make it most unattractive to American business leaders because of a substitution of negative for positive incentives.

Evolutionary theories of leadership development are significant for a number of reasons. They emphasize the continuing need for leadership as man's activities have become more interdependent and complex throughout the ages. It is the specific form or type of leadership that has changed in response to specific changes in human needs and desires. Force, operating through the instrumentality of such factors as military power, tradition, and indoctrination, has often retarded or stopped temporarily the evolutionary develop-

ment of a needed type of leadership. It has not been able to stop it permanently. The operation of the principle of evolutionary development of leadership appears inexorable. The rate of change in man's environment since the Industrial Revolution has been very rapid. The magnitude of change during certain decades has been the equivalent of the progress made in whole centuries before the Industrial Revolution. The principle has ceased, in consequence, to be of chiefly academic interest. The culminating impact of evolutionary change may not be felt mainly by future generations in whom the present generation has only a vague interest. A present generation may have to answer for its leaders' errors of commission and omission.

There is also the interesting question as to whether leaders are born or made, or both. Some students of leadership have offered biological theories of evolution. F. A. Woods, for example, made extensive studies of the genealogical and historical records of European ruling families.[10] He concluded that the biological evolution of leadership began with the appearance of man in warm climates. There were subsequent migrations of the more ambitious and adventurous to the colder climates north of the Mediterranean and Asia Minor. These areas were the cradles of modern civilization. The hard, rigorous conditions under which these people lived tended to weed out the weak and to leave the strong and more able. These northern people eventually returned to conquer the richer southern countries where life was easier. They installed themselves as ruling classes. They developed castes or subclasses among themselves for the purpose of perpetuating their ruling position. The vestiges of this condition can be found in India and elsewhere. People with the greatest leadership and organizing ability would tend to attain the top positions of power and authority. They would be most successful in any strife growing out of the distribution of the wealth of the conquered. Some concept of state capitalism could be expected to develop, whether or not associated with the "divine right of kings." It would give the ruling group control of the wealth of the nation, as well as of the wealth that they held personally. It would not tend toward a widespread and complete development of the right of private property. The latter is more characteristic of a

[10] *Ibid.*, pp. 15–17.

democracy. There would and did develop, however, the right of inheritance of property. Successful men would wish to unite their sons and daughters in marriage. They would wish to make adequate provision for them, and to perpetuate the position and prestige of their families. They would probably feel that the sons and daughters of successful men would beget successful sons and daughters. As a result, there would be an enhancement and intensification of desirable leadership characteristics in a certain proportion of offspring. They would foster the biological separation of upper and lower classes in the particular society. The result would tend to be a "conification" of leadership ability, in the opinion of Mr. Woods. The hypothesis is interesting. It has some validity. There are principles of genetics that apply to human beings as well as to pure-bred sheep. The inheritance of certain traits and abilities may proceed in accordance with such principles. But it does not necessarily proceed uniformly and continuously. The son of a genius in a business field may not have any ability or interest in business. Superior ability can be transmitted in different forms. It apparently can skip a generation. There is considerable nepotism in business, particularly in small, family-owned concerns. The biological theory has a practical significance in consequence.

The environmental theory of leadership development represents an opposing point of view. It holds that the innate traits and capacities required for leadership are widely distributed throughout the population.[11] It follows, if this is the case, that the development of leadership ability depends on environmental factors, rather than on biological factors. It suggests that the average man will perform successfully as a leader if he is given the necessary background, training, and experience and is placed in a leadership situation where he has an opportunity to exercise his talents. This is obviously a point of view that has a greater appeal for the rank and file of the population. It therefore has greater political value. It has also some validity. There is a wide diversity in the backgrounds of leaders in every major field. Furthermore, in every major form of organization there are various kinds and grades of leadership. The degrees in which certain traits and abilities are required for the lowest grades of leadership may not be much above those possessed

[11] For an example, see the statement of H. S. Person, *ibid.*, pp. 107–108.

by the average man. The term "leader" does imply the possession of some superior abilities, however, Many carefully selected candidates in all kinds of organizations are given an opportunity each year to qualify for the lowest leadership grades. Many of them fail to qualify. Those who do, and advance, may level off on different echelons.

Business does not care particularly which theory of leadership development is correct, or whether the correct hypothesis falls somewhere in between. The practical significance is that both notions appear to have affected the thinking of executives in some degree. They have had some effect on business policies governing the recruitment of executive trainees. There is some evidence that business executives tend more and more to be the sons of business executives.[12] Many large concerns encourage the sons of executives to make a career with them. To avoid nepotism, the newcomers may not be permitted to start in a division in which a close relative is in a position to exercise authority or influence. There is some feeling that the probabilities of success may be somewhat greater in the case of an individual who comes from "good stock" and a good environment, including the benefits of a superior education and training. He is likely to begin, at least, with a very good attitude toward the organization. The executive training courses of large concerns, on the other hand, are open usually to men without college educations who can qualify. A certain number of such men are found in these courses. A certain proportion of them may go far in the organization. It is believed that a basic factor in executive success is superior intelligence.[13] This is not an exclusive trait of college graduates. Equality of opportunity for advancement, based on merit, is good business. It is not important where the business organization finds its raw material for executive leaders. It is important that it find and develop a good quality of such material. Its

[12] F. W. Taussig and C. S. Joslyn, *American Business Leaders*, pp. 104, 113–114, 133.

[13] Ralph M. Stogdill says that "the average child or student leader surpasses the average member of his group in intelligence."—*Personal Factors Associated with Leadership*, Leadership Studies No. 1, Personnel Research Board, Ohio State University, p. 44. The correlation is not well established in business organization, however.

economic health depends on it. The economic health of business institutions is equally important to society.

Kinds of Business Leadership

It is helpful to classify executive leadership by the kind of leadership that may be needed or exercised. The principal considerations in this connection are (1) the basis of executive motivation, (2) the specific leadership demands of an economic situation, (3) the basis of executive influence, (4) the character of the use of authority, and (5) the degree of directness of leadership influence.

Executive motivation involves the relation between the personal objectives of the business leader and the service objectives of the business organization. The primacy of organizational service objectives has been noted. This principle says that both the organization and the individuals composing it may suffer seriously when important individuals or groups tend consistently to place their personal objectives ahead of the organization's service objectives over any extended period of time. Internal stresses and strains lower the effectiveness of the organization. Customer service suffers, leading eventually to the company's failure. The "Commodore Vanderbilt" type of top leadership is less common today. It still exists, nevertheless, among some business and labor leaders. Minor variants of this type are found among subordinate executives in business organizations. They are personified by the executive who does not hesitate to "undercut" either his organization or his associates if he thinks he can advance himself by doing so and can get away with it. He is a morale depressant who usually furnishes ample proof of the truth of the above principle before he is eliminated. He contrasts sharply with the increasing number of executives who take a more professional view of their responsibilities. They are not unselfish. But they recognize that personal gain should be a reward for serving the public well.

Changing Economic Situations and Business Leadership

The economic situation of an industry changes as it develops. Its growth may set up quite different requirements for executive leadership. The principal stages of an industry's development are

the pioneering stage, the stage of exploitation, and the stage of stabilization. The type of individual who founds a new industry and develops it initially is likely to be one who has had extensive practical experience in the same or an allied field of business. He may have hit on a new idea as a result of his experience and may have developed it crudely within the limits of his resources. He may have had some professional training in the applicable fields of applied science, or he may be just a smart mechanic. His contribution, in either case, is based largely on some mechanical knowledge and extensive practical experience. His organization is extremely small. He has no organizational problems of any importance. His managerial problems are largely operative. This is the stage of the "practical" business leader, the owner-manager of a small business. Some people have called him the "inventor type" of business leader. He is not necessarily an inventor, however. He must be an innovator if he is to succeed and grow. The pioneering stage in the automotive industry was the stage of the Selden patents and of thousands of small automobile manufacturers.

The public's demand for the new goods or services may increase rapidly after they have been pioneered. Business facilities must be expanded rapidly. Large numbers of people with various abilities are required. Both division of labor and specialization must be increased greatly. New organizations must be set up, new channels of distribution opened up. Problems arise in rapid succession. The founder of the business may have neither the type of mind, the background, nor the experience that will permit him to cope with them. It may, in consequence, be necessary for him to step down from the top leadership position. The situation is more likely to require the services of the entrepreneur or promoter type of business leader. The latter is frequently an individual with broad business experience and a knowledge of financial organization. He usually has a good personality, polish, prestige, enthusiasm, and sales ability. These and other qualities may enable him to convince bankers, brokers, and men with capital that the soundness and prospects of the enterprise warrant the risk of investing large amounts of capital in it, of extending large amounts of credit. He must induce successful executives to leave the relative security of their connection with an established concern. He must convince

them that the possibility of greater ultimate reward warrants the risk of connecting themselves with a growing new concern. This is the stage of exploitation. The problems involved in rendering a new economic service to the public on a greatly increased scale are being solved. The exploitation stage in the automotive industry was the stage of W. C. Durant and the formation of the General Motors Corporation. A basic consideration during this period is necessarily the accumulation and integration of large amounts of capital and labor.

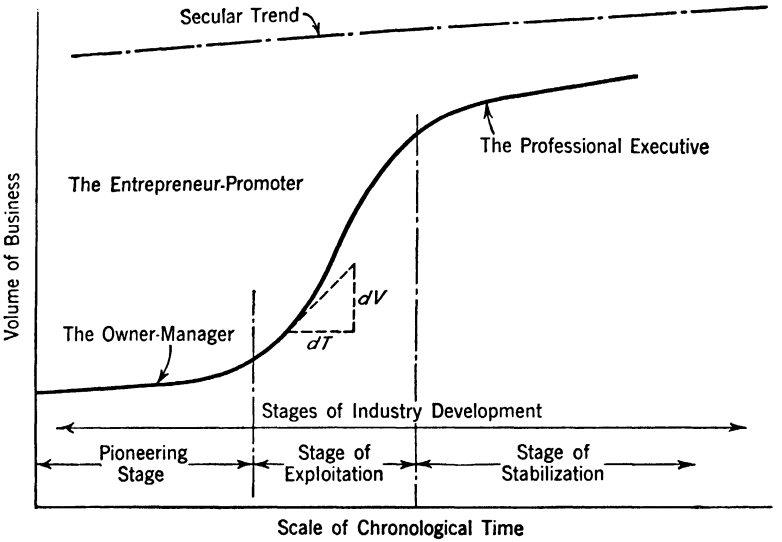

FIG. 13. Leadership and the Development of an Industry.

Problems having to do with the growth and development of operating organizations become more serious. They tend to be a function of organization size. The promoter type of business leader often does not know too much about them. The rapidly rising tide of the volume of business may cover up managerial deficiencies, however. But sooner or later the rate of improvement of the product or service begins to slow down. The weaker or less efficient concerns have been eliminated. Competition among a relatively few strong concerns tends to become extremely sharp, except during periods of great inflation. Governmental regulation may or may

not be necessary to prevent collusion in restraint of trade for the purpose of minimizing competition. It depends on the quality of the industry's leadership. Such competition requires maximum economy and effectiveness in accomplishing the service objectives of the company and industry. It places a premium on the managerial functions of planning, organizing, and controlling the company's activities with this end in view. The entrepreneur trype of business leader has probably made his contribution. It may be time for him to step aside for the professional executive who has broader, more fundamental managerial knowledge and ability. The industry has shaken down and is entering the stage of stabilization. Its growth trend may eventually approximate the secular trend of the population, unless one of its members again introduces a basic development that has far-reaching economic and social effects.

The above changes may take place over many decades. They are not academic considerations. They may be experienced within the lifetime of the current generation. It is evident that leadership requirements must change radically with fundamental changes in the leadership situation. This is a basic reason why few business leaders ever successfully ride the curve, shown in Fig. 13, from the pioneering to the stabilization stage. We think immediately of Henry Ford, Sr., and a few others, but then we begin to have difficulty in recalling others.

The economic changes associated with the business cycle, furthermore, are usually accompanied by considerable executive turnover. The type of managerial ability required to handle an overstimulated volume of sales during a period of inflation is not necessarily the type that is required to lower the company's break-even point through expense reduction during a depression. A board of directors may find it necessary to be rather ruthless in periods of great change. An organization is not likely to be much better than its leadership. An executive cannot be permitted to penalize the public and his organization by his inability to handle a situation.

The Basis of Executive Influence

Executive influence may be due to a number of factors and circumstances. Business leadership may be classified accordingly. The principal bases of influence have to do with (1) organizational posi-

tion, (2) ideas, (3) executive ability, (4) prestige, and (5) personality. The basis of influence in a particular circumstance may be a combination of these factors.

The executive's responsibility and authority are received by delegation from a higher source. Such delegations are made to a position, rather than to an individual. The duties that must be performed and the decisions that must be made are determined by the functions of the particular position. The latter are determined by the objectives of the job. The personnel requirements for the proper performance of the function should basically determine the selection of a particular individual for the job. A person holding an executive job can exercise a certain amount of leadership by virtue of his position. He can do so for a limited period of time, even though he is incompetent. Higher executives, for this reason, do not usually advance an individual even to a minor executive position until they are reasonably certain that he has the qualifications for success. The higher the echelon the longer it may take to appraise an executive's competence.

We shall distinguish later between line and staff executives of various grades. The following distinctions will be sufficient at this point: The line organization is that hierarchy of objectives, functions, responsibilities, and authorities that leads directly from the head of the organization to primary operative employees. The latter are engaged immediately and directly in creating and distributing the values that represent the firm's primary service objectives. The line organization in a manufacturing plant would extend from the president of the concern, through the executive vice-president, the vice-president in charge of manufacturing, division managers, plant managers, superintendents, and foremen to machine or bench operatives who are working directly on salable products. We shall assume that Fig. 26 is a copy of the company's organization chart. It shows various groups that are attached to the line at different levels of responsibility, but are not part of it. A brief study of the company's organization manual shows that they are set up to render specialized services to the line and other staff groups. Such service groups, many of a professional nature, have advisory rights of decision. They generally do not have rights of command with respect to the activities of the line or other organizations that they

serve. These service groups are called "staff" groups. They make very important contributions in business organization. It is evident, however, that the staff executive exercises primarily a leadership of ideas rather than a leadership of command.

Executive ability and managerial ability are synonymous terms. Management is the function of executive leadership. An individual is not usually advanced to an executive position of any grade unless there is reasonable presumption that he has the requisite managerial ability. There are some individuals in most organizations whose influence extends considerably beyond their immediate responsibilities. They are recognized as having superior ability to plan, organize, or control certain kinds of activities. Their advice is sought unofficially, even though they have no line or staff connection with the particular problem. They are sent to set up a new division when the company invades new territory. They may be pulled off their regular assignment to troubleshoot in an older division. A leadership category based on executive ability overlaps but differs from the two preceding categories.

There are people who are asked to head up organizations chiefly because of their name. They may contribute little to the success of the organization, beyond dressing up its letterhead. They are more a form of advertising than of leadership. There are other people who have been given command of business organizations chiefly because of the prestige born of previous successes. They may know little or nothing about the particular business field. They may, nevertheless, add another success to their string. When this happens, the factor of prestige usually is combined with some of the other factors noted above. Initially, prestige may have been the greatest single factor in their ability to influence the organization and its operations.

The writer noted, during World War II, a number of executives who seemed to exercise a leadership of personality, and little else. One interesting example was a former sales vice-president who had been converted to a manufacturing vice-president. He had a 100-proof personality. His job was to keep the military service as happy as possible in the face of delivery failures, quality deficiencies, and other derelictions. He greatly influenced the operations of his organization by reason of his personality and position. There are

other instances that are less dramatic but more common. It is difficult, for example, to visualize a successful sales manager with a completely negative personality.

The Character and Use of Authority

Authority is the right of decision and command. It is a requisite for the effective, economical discharge of executive responsibility. There are significant differences between business leaders that have to do with the manner in which they exercise authority. They are reflected in executive techniques. They lead to a distinction between positive and negative leadership.

An organization was defined as a group of people who are cooperating under the direction of leadership for the accomplishment of a common end. The definition said nothing about the quality of the organization. It could be good, bad, or indifferent. These people should be selected, trained, and implemented properly for the performance of their assigned duties. People usually associate themselves voluntarily with an organization when they feel that their personal interests will be promoted thereby. These personal values that they hope to gain may be tangible or intangible, or both. When people are forced to work together for a common purpose, but without such hope, then there is a condition of negative coöperation that approaches complete slavery as a limit. A negative leadership is one that accomplishes results by the threat, express or implied, of the loss of such values. Penalties are imposed for the failure of individuals or groups to conform to and carry out executive orders and directions. Such leadership relies on the negative incentive of fear, based on the subtraction of values from the total situation of the individual. It can be effective. The building of the pyramids involved the enslavement of whole nations, but the pyramids were built. The present Russian economy rests on the use of directed and slave labor.

A positive leadership, on the other hand, relies on the positive incentive of hope. It offers the individual or group an opportunity to increase the amount of the personal values they may receive above what is normally to be expected. It relates the increase in the personal values enjoyed to a corresponding increase in the primary service values contributed. It is usually more effective than negative

leadership. People will do what they are told to do, when acting under a negative leadership. They will do it exactly as they are told, when they are told, and where they are told. Why do more, when the only reward of initiative is disciplinary action in the event of a mistake? There is generally a great difference in any organization between what is required to get by without censure, and the best of which the average individual is capable. As a result, more can be accomplished through the use of positive rather than negative techniques with the same amount of executive effort. This is the idea that is illustrated in Fig. 14.

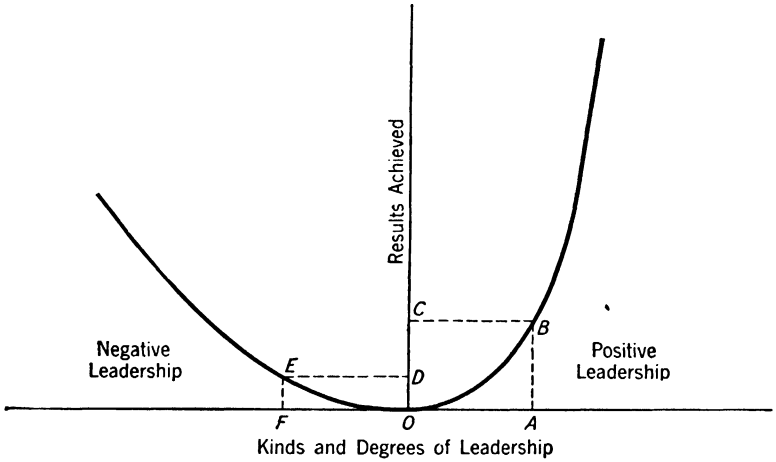

FIG. 14. Relative Effectiveness of Positive and Negative Leadership.

Negative action cannot be entirely avoided. There will always be some individuals who will not voluntarily conform to the reasonable rules and regulations that are necessary for effective, cooperative action. Negative disciplinary action will always be an occasional unpleasant duty for any executive. Time may be of the essence of successful accomplishment, in new, rapidly changing, or other situations involving acute emergencies. Decisions must be made quickly. Directives outlining the requirements of successful action must be issued promptly. Action must be initiated without delay. Compliance with directives must be enforced. There may be insufficient time for the integration of interests through group conferences. The use of some negative leadership techniques may

be required.[14] Temporary exercise of negative leadership is quite different, however, from the continued use of negative methods as a principal executive technique.

There has been a disposition on the part of some labor unions to oppose the use of wage incentive methods. There can be no objection to the unions' insistence on equitable applications of wage incentive principles. It is suggested that attempts to eliminate the use of positive incentives is a step backward, rather than forward, and is not in the public interest.

The Directness of Leadership Influence

The terms "supervisory executives" and "supervisory management" are common today in American business literature. They refer to grades of executive leadership whose work has to do largely with personal oversight and direction of operative employees. Included here are buyers and assistant buyers in department stores and foremen, assistant foremen, and group leaders in factories. They are in direct contact with the ranks of operative employees. They exercise "face-to-face" leadership in relation to them.

Top administrative executives are concerned largely with "group management" rather than "project management." As we move up through the various grades of managerial service, we become less and less concerned with the execution of current undertakings. We are concerned more with planning, organizing, and controlling the activities of organizational elements with respect to activities that will be required at some time in the future. Managerial emphasis tends to be placed increasingly on the functions of creative planning and organizing for future activities, subject to general administrative control. Such work cannot successfully be centralized in the hands of a few top administrative executives in an organization of any size. It must be delegated, with accompanying delegations of

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[14] According to Richard Lansburgh: "In new businesses, when policies are being determined, such an autocratic head is often far superior, for purposes of getting an organization going, to a group of individuals without his driving power, even though they may work along theoretically correct lines of authority and responsibility. The combination of strong driving force from the top and well-developed fundamentals of organization through the ranks is one of the best, if not the best, means of effective leadership that can be developed."—*Industrial Management*, Wiley, 2nd ed., p. 45.

responsibility and authority. Delegation proceeds down through the organization. Action on some step in the accomplishment of a planned project will be undertaken at a determined future date by operative employees under the direction of supervisory executives. It is evident that executives above the supervisory grades of operative management exercise an indirect or delegated leadership of the organization's operatives. Indirect leadership, and its techniques, become increasingly important as we approach the office of the president. It is true that every executive exercises a face-to-face leadership with respect to his immediate subordinates. The action that results immediately and directly in the accomplishment of primary service objectives is the work of the primary operative employee, however. The face-to-face leadership of the supervisory executive is correspondingly important.

The distinction between "face-to-face" and "delegated" leadership have practical connotations. Their importance can be seen by a comparison of the training courses for supervisory positions and those for positions at higher executive levels. They enter into the selection of individuals for executive advancement, the relation of executive leadership to morale, and other organizational problems.

Executive Characteristics and Abilities

The rewards for successful leadership always have been greater than the rewards for successful operative performance, and probably always will be. It is unlikely that human nature can be modified within any conceivable span of time to make it otherwise. Consequently people have always been interested in what is required to be successful. Mediocrity always wants a golden formula for success. There can be no such formula. There are too many different kinds of leadership situations and they involve a great range of leadership requirements. This is true even within a given major field of activity such as business. Top leadership positions in large organizations may require executive characteristics and abilities in high degrees that only a few people have.

It is not a question of being a great business leader, or else. A business organization, if it is large, requires many grades of executive leadership of many different kinds. It seems reasonable that there should be certain basic characteristics in a minimum degree

that must be required even of the lowest grade of executive anywhere. That may be. However, there appears to be a wide range of executive requirements, even at the lowest executive level in the same field of business. The requirements for a good supervisory executive in the manufacturing industry, for example, may vary greatly between concerns. We are reminded of C. S. Yoakum's comment: "All the traits that are to be found in leaders would be all the traits there are."[15] It is necessary, nevertheless, to get some picture of executive requirements.[16] The following list has been helpful to the writer in visualizing executive characteristics:

Intelligence	Teaching ability
Experience	Initiative
Originality	Tenacity
Receptiveness	Human understanding
Personality	Courage

A sense of justice and fair play

The organic phases of management are creative planning, organizing, and control of the activities of an organization in the accomplishment of its objectives. Planning is obviously a mental activity. It is the duty assigned certain types of staff executives. It becomes more important, relative to the other phases of management, as we approach the head of the organization. The scope of planning broadens to include the entire organization. The span of time covered increases greatly. The successful accomplishment of planning at the top underlies the continuing success of the entire organization. It would be expected, therefore, that there is a hierarchy of

[15] C. S. Yoakum, in H. C. Metcalf (ed.), *Business Leadership*, p. 190.

[16] James A. Farley thought it helpful, apparently, to draw the following picture of a "successful politician": (1) He must have a good personality. (2) He must have what we call character—that is, he must be a substantial human being. (3) He must work hard. (4) He must be able to get other people to work for and with him. (5) He must be truthful. (6) He must have native ability and he must be able to see and use ability in others. (7) He must be aggressive—but not to the point of being offensive. (8) He must have a feeling for what the people want. (9) He must be able to make decisions. (10) He must understand the meaning of the word "compromise." (From a newspaper article dated December 25, 1949, by Joseph F. Dinneen, North American Newspaper Alliance, entitled "What Makes a Good Politician? Farley, the Master, Lists Rules.") The list is significant in that it could be applied to almost any top leadership anywhere.

intelligence which tends to conform to the hierarchy of functions and responsibilities within the organization. The intelligence of the executive should be at least equal to that of his subordinates. It should not greatly exceed their mental capacity. Otherwise, his subordinates may not be able to understand his ideas. They may tend to distrust him and to regard him as "queer." It is possible at each organizational level to be too brilliant.

Mental capacity is not likely to be effective in any situation, whether operative or executive, unless it is accompanied by adequate and appropriate knowledge and know-how. Problem-solving thought involves the mental correlation of previous experiences with present facts concerning actual or anticipated difficulties. The knowledge and know-how requirements of executive positions tend to become broader, more general, and less technical as we approach the head of the organization. Originality is dependent on the above traits. It is implied by them. It has to do with the independent development of new, fresh approaches to existing or new problems. There are people who appear to have plenty of intelligence and experience, but no high degree of originality. It is an important leadership quality in business. Competitive success depends partly on the "factor of uniquity." The organization's goods and services tend to gain customer preference to the extent that they are superior in terms of quantity, quality, time, and cost. The "uniquity" of the service is traceable usually to the intelligence, experience, and originality of some members of the management group. When these traits are highly developed in operatives, the latter are not likely to stay in the ranks of operatives.

There is danger of losing mental flexibility and becoming less receptive to new ideas as a person grows older and rises to positions of greater responsibility and authority in the organization. It may be a result of the egotism that is born of success. It may be an effect of self-indoctrination resulting from intensive, protracted studies of problems along certain lines. It is not necessarily an effect of age. Some men in their seventies are more receptive to new ideas than others who are in their forties or even younger. Lack of receptiveness to new ideas, particularly those of one's subordinates, may seriously vitiate one's leadership effectiveness. Ability to make effective use of his staff is an important measure of the value of an officer in a

military organization or any other. Effective use of staff and a closed mind are not compatible concepts.

A good personality is the result of a combination of mental and physical characteristics that tends to evoke a favorable reaction from people with whom the individual comes in contact. An effective combination seems to differ for different people under different circumstances. The importance of a good personality in executive positions may vary considerably. It is more obviously important in positions that involve face-to-face contacts with the public, customers, operative employees, suppliers, and bankers. It is always important in some degree because every executive has some face-to-face contacts with his immediate subordinates and associates. Executive leadership requires the motivation, direction, and coördination of subordinates and others in the accomplishment of group objectives. Executive effectiveness depends on the extent to which subordinates and other associates have confidence in and a liking for the executive. Their reaction to him tends to be conditioned by his personality. Much serious thought has been given to the importance of the supervisory executive as a factor in operative morale. Yet a new supervisor is often selected on the basis of superior mechanical know-how. It might be more logical if he were selected primarily on the basis of personality and leadership ability, and later given any additional mechanical know-how that he required.

Organizing for the execution of plans may include the work of training, or retraining, numbers of executive and operative employees in advance. The control of primary operative execution subsequently involves the direction and supervision of both operative and executive subordinates. The interpretation and explanation of instructions, together with the subsequent supervision of their application, is in itself an on-the-job training experience. Organizational and operational effectiveness depends in both instances on the ability of some executive—major or minor, line or staff—to impart knowledge and develop skills. Teaching ability in some degree is always an aspect of executive ability.

The need for initiative is obvious. The job of the executive is to lead, not to follow. He is expected to plan the mission, organize for execution, initiate action, and control it with respect to the accomplishment of planned objectives. The success of the mission depends

on how well he does these things. He is not necessarily expected to do them personally. He is provided with a staff to the end that he will do personally only the most important things. He remains responsible, nevertheless, for the proper performance of all the functions necessary for the accomplishment of objectives, within the limits of the responsibility and authority that have been delegated to him. Execution never proceeds exactly as planned. Some interferences with it may be expected because of contingencies that perhaps no one could foresee. The path to the planned objective may be full of obstacles. The executive should have a certain stubborn tenacity that will enable him to hold to a determined course of action, so long as there is reasonable evidence that his plan is sound and workable. This is quite different from obstinacy. Many of his difficulties have to do with the handling of the human factor. He should know the strengths and weaknesses of his personnel, what motivates them to do what they do or don't do. He may occasionally find that his proposals are in opposition to the judgment of his immediate subordinates or the personal interests of other associates. The long-term interests of the organization may require that he adhere to his plans in the face of opposition. The executive's job in a business organization seldom requires physical courage. The decisions that he must make may require mental courage of a high order. They must be just and fair, if the organization is to enjoy continuing success. They must be just, however, with respect to all the interests involved in business operations. They must not be made solely with regard for the personal interests of a dominant group in or associated directly with the organization for which the executive is responsible.

Executive Selection and Development

The preceding discussion is intended to give a picture of the executive function in terms of executive characteristics and abilities. It does not give specifications for executive success. A question therefore remains concerning the selection and advancement of executives. The previous history of the candidate usually is searched carefully for evidences of leadership ability. It is examined for evidence of adequate background for the particular executive work. Some concerns insist that candidates for executive development and

advancement take intelligence tests. Such tests give some indication as to how much money should be spent to develop the individual how far. It is unfair to the individual and the organization, as well as expensive, to advance him beyond his capacity. Some concerns give personality, emotional stability, and other psychological tests. Most companies rely largely on the pragmatic test of results. Periodic ratings of executives and key employees, together with various records of accomplishment, build up a record over a period of time that becomes increasingly conclusive. Such individual records of successes and failures are to be found today in the personnel department's files in most progressive concerns. They are reviewed periodically by a competent committee with respect to promotional possibilities.

The Law of the Situation

The executive must have whatever rights of decision and command are necessary for the proper discharge of his leadership responsibilities. It is also evident that he is not a free agent, even though he may have been given adequate authority by delegation. He is limited by the basic factors in any leadership problem. These factors are the leader, the led, and the particular situation. The effectiveness of an organization is not likely to be greater than the effectiveness of its leadership. Leadership effectiveness is limited by the attitudes and abilities of the led. The characteristics and requirements of both may be determined largely by the factors, forces, and effects in the particular situation as they relate to the particular business objectives. Operative employees have a selective power with respect to their executive leadership, whether they are organized or unorganized. If they merely do what they are told to do, when they are told to do it, and as they are told to do it, the particular executive probably will fail in his job. The "slowdown" is a dramatic application of this idea through conspiracy. The effect of the situation on the executive's fortunes depends considerably on the rate of change of the situation.[17] It is evident that effective exec-

[17] H. S. Person has made the following point: "A situation may change by such small increments that a leader, once found, may remain the leader through a series of moderately changing situations; but let there come a large increment of change in the situation, presenting new group problems and requiring a new combination of characteristics for leadership, there is as yet no principle which

utive leadership depends on the executive's ability and courage to face the facts in the situation, interpret the facts properly in the light of the situation's requirements, and follow the course of action they dictate. This is the Law of the Situation. Continued violation of it may result in the organization's failure.

Much has been written about the duties and responsibilities of leadership. Very little has been said about the duties and responsibilities of followership. Business institutions receive their sanction from organized society through the right of private property. We have enjoyed a steadily advancing standard of living. The ultimate beneficiary of private enterprise in a free, competitive society is the average individual. This suggests that the operative employee has an obligation to support the executive leadership of his business organization, so long as it exercises fair and reasonable regard for collateral business objectives. It is a condition of employment. It is the responsibility of ownership to remove executives promptly when they are unable to lead the organization to the successful achievement of its primary service objectives. The Law of the Situation emphasizes the importance of these requirements.

The Meaning of Management

Management has been defined previously as the function of executive leadership. An understanding of the relation between the leader and his function is necessary for the effective discharge of executive responsibilities. Harrington Emerson once remarked: "Even a Napoleon, forced to use a defective organization and emasculated principles, can attain at best mediocre results."[18]

There are no serious differences among students of management concerning the general significance of the term. There are, nevertheless, some interesting differences in definition. These are due in some cases to the fact that the term is given a dual meaning. It is sometimes used to refer to the leadership group in business organization. It is used at other times to refer to the function of executive leadership. Oliver Sheldon uses it in the first sense: "Management

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will enable one to determine in advance what individual will be chosen by circumstances as leader."—H. S. Person (ed.), *Scientific Management in American Industry*, p. 71.

[18] Harrington Emerson, *Twelve Principles of Efficiency*, p. 55.

may be said to be composed of those officers in a business whose duties involve control of others, or assistance in such control."[19] It therefore includes both line and staff officers. According to another definition, management includes "that group of executives and supervisors who, in any industrial establishment, make decisions for, and give orders to employees."[20]

Executive Leadership and the Management Function

Definitions of management as a function also throw interesting light on its nature. Frederick W. Taylor considered that management is merely "knowing exactly what you want men to do, and then seeing that they do it in the best and cheapest way."[21] It is helpful, certainly, in running any business. Mooney and Reiley said that "management is the vital spark which activates, directs and controls the plan and procedure of organization."[22] Thomas R. Jones suggested that "management is the direction of means and methods toward the accomplishment of a given objective."[23] Dexter Kimball said: "Under the general term 'management,' all activities are included incident to initiating an enterprise, financing it, establishing the major policies, organizing the enterprise so that its parts will function properly, and directing or administering it after it is in operation."[24] More recently, Lounsbury Fish remarked that the principal management functions are to organize, visualize, energize, and supervise.[25] These opinions by recognized authorities cover approximately a half-century of American management experience. Other documentation can be offered in support of the definition of management as the function of executive leadership.

The Organic Functions of Management

Leadership and management, by whatever names they are called, are universal requirements of organization anywhere. There has

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[19] Oliver Sheldon, *The Philosophy of Management*, p. 252.
[20] L. P. Alford, (ed.), *Cost and Production Handbook*, Ronald Press, p. 146.
[21] Frederick W. Taylor, *Shop Management*, p. 21.
[22] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 13.
[23] Thomas R. Jones—*Theories and Types of Organization*, p. 11.
[24] Dexter S. Kimball, *Industrial Economics*, pp. 198–199.
[25] Lounsbury Fish, "Organization as the Mechanism of Management," address at the A.M.A. General Management Conference in June, 1948.

gradually developed, since the beginning of the century, a realization that there must be certain organic management functions; that recognition of them is necessary for an understanding of management. They are management functions that must be performed somewhere, somehow, by someone, at some time, in or for the organization. Otherwise, it ceases to function economically and effectively. Some authorities have confused them with organic business functions or with the organic phases of control. These will be discussed later. The accompanying tabulation will be sufficient to indicate the converging trend of thought with respect to basic management functions. The functions of commanding, directing,

A Comparison of Analyses of Organic Management Functions

Henri Fayol[26] (1916)	R. C. Davis[27] (1934)	U.S.A.F., Air University[28] (1947, approx.)	Balderston, Brecht, *et al.*[29] (1949)
Plan	Planning	Planning	Planning
Organize	Organizing	Organizing	Organizing
Command	.....	.....	.....
.....	.....	Directing	.. ..
Coördinate	.....	Coördinating	.....
Control	Controlling	Controlling	Controlling

and coördinating are phases of the function of control. They have to do chiefly with the constraint and regulation of action in the accomplishment of group objectives, either organizational or operational.

The organic management functions are those of creative plan-

[26] *Industrial and General Administration*, pp. 8–9. Fayol thought that "we can divide all operations which occur in business undertakings into the following six groups": (1) technical operation; (2) commercial operations; (3) financial operations; (4) security operations; (5) accounting operations; (6) administrative operations. He failed to distinguish between organic business functions and their managerial and operative phases. His category administrative operations includes managerial functions, as we have defined the term.

[27] From a mimeographed, privately published pamphlet on business organization and operation.

[28] See *Curriculum, Senior Officers' Military Management Course*, U.S.A.F., Air University, Revised January 16, 1950. This analysis has been used by the Interstate Pipe Line Company of Tulsa, Okla., in its supervisory training program.

[29] *The Management of an Enterprise*, p. 6.

ning, organizing, and control of the work of others in the accomplishment of a common objective. Creative planning has to do with the original determination and specification of the factors, forces, effects, and relationships in the accomplishment of designated objectives. It requires the application of the logic of effective thinking. Planning is usually thought of as strictly an executive function. Most of it is. The determination of bases of effective group action certainly is a leadership responsibility. The higher a person goes in an organization the more his time is spent on problems of creative planning. The tendency in modern organizations is to encourage every employee, whether executive or operative, to engage in original thinking to the extent of his ability. An operative employee may make a very smart, cost-saving suggestion in connection with his work. The idea may be local, limited, minor, and operative in nature, but original. Many concerns record such suggestions on the employee's personal service record. They are considered in connection with promotion in pay or position. A sales plan for a coming period, on the other hand, may be based on much customer and market research. It is likely to be developed under the personal direction of a top executive in the company's sales division. When it has been approved by top administrative management, it will supply a basis of action for groups and individuals throughout the entire organization. It is clearly a function of the creative planning of the work of others. Private enterprise, in a free competitive society, must accomplish its service objectives with increasing economy and effectiveness. The business organization must have sound bases of action that will permit such accomplishment. Creative planning is, therefore, an organic function. The quality of planning is a measure of the quality of leadership.[30]

The function of organizing has to do with creating in advance of execution the basic conditions that are a prerequisite for the successful achievement of objectives. They are prescribed in the company's plans. Henri Fayol said: "To organize an undertaking is to provide it with everything useful for its running; with materials, plant, capital and staff."[31] It may therefore involve changes in or-

[30] Henry Ford, Sr., considered that "ability to present a sound plan is a test of competence."—F. L. Faurote, *My Philosophy of Industry—Henry Ford*, p. 143.

[31] Henri Fayol, *Industrial and General Administration*, p. 42.

ganization structure. It may involve preliminary financing in substantial amounts. In a manufacturing business, it may require the prior provision of initial inventories, new or additional equipment, initial tooling, changes in plant layout, and other advance provisions or adjustments of the physical factors in accomplishment. It may require corresponding adjustments of personnel. It may be necessary to transfer, promote, or hire executive and operative employees in substantial numbers. It may include, in such cases, the completion of extensive training programs. Frequent conferences between important and high-paid executives may be required as the work of organizing progresses. The function is important in old organizations as well as in new. It must usually be performed whenever the organization undertakes a substantial change in the service it offers to either its customers or its members and associates. The amounts spent on organizing large corporations indicate its basic importance. We are accustomed to newspaper reports of expenditures in the automobile industry totaling fifty million dollars or more for model change-overs. Some of it covers creative planning. But most of it as a rule covers organizing. Most of this expense must be paid before any substantial amount of product or merchandise is made or sold. The work of organizing follows creative planning. The underlying conditions for effective and economical execution cannot be provided in advance until it is known what they are. Organizing precedes control and execution. The performance of these functions may and does overlap to some extent. Organizing has its secondary operative phases. It is, nevertheless, primarily a managerial function. Free competition requires the effective, economical achievement of primary service objectives. The prerequisite conditions for such achievement must be present before primary operative performance begins. Each phase of the work of organizing an undertaking should be completed before the particular phase of operative performance to which it relates is begun. Otherwise, operative performance may not have the necessary economy and effectiveness. The company will eventually suffer defeat at the hands of its competition if this is the rule rather than the exception. Organizing must be regarded as an organic management function for these reasons.

The need for control of organized activity is universal. Even the

owner of a one-man business must relate his daily activities to the requirements of his customers. The universality of this need indicates the fundamental nature of control. It has its secondary operative phases, of course, like planning and organizing. Clerks are used in staff control departments. Operative employees are expected to coördinate their activities with those of others with whom they are working. Self-coördination is an important aspect of voluntary cooperation. It must be carried on within the framework of executive coördination. Otherwise, it will break down rather than strengthen an organizational situation. Control is basically a managerial function for these and other reasons. It involves the work of constraining and regulating business activities in accordance with the requirements of a plan. Comparisons between actual and predetermined progress must be made in terms of standards of performance that were set up in the plan.[32] The purpose of control is assurance that organizational and operational objectives will be accomplished through the economical, effective execution of the plan.[33] It is a leadership responsibility and an organic management function.

An understanding of the theory of organic management functions facilitates an analysis of executive duties. It is the basis of a logical theory of staff organization. The concept is significant for other reasons.

The Relations Between Managerial and Operative Functions

The basic distinctions between managerial and operative functions were drawn previously. Managerial functions are concerned

[32] Webster Robinson said, "Control is that fundamental of organization which comprises the means of providing the manager and the executives of an organization with continuous, prompt, and accurate information concerning the efficiency of operation, what the business is doing, what it has done in the past, and what it can be expected to do in the future."—*Fundamentals of Business Organization*, p. 147.

Henri Fayol believed that "the control of an undertaking consists of seeing that everything is being carried out in accordance with the plan which has been adopted, the orders which have been given, and the principles which have been laid down. Its object is to point out mistakes in order that they may be rectified and prevented from occurring again."—*Industrial and General Administration*, p. 77.

[33] According to W. B. Cornell, a "Principle of Control Planning is of little value unless there is subsequent control to make certain that plans are carried out."—*Organization and Management in Industry and Business*, p. 59.

primarily with planning, organizing, and controlling the work of others. Executive responsibilities must be accompanied by corresponding rights of decision and command. Operative functions may involve minor, local, and limited responsibilities for planning, organizing, and controlling one's own work. They do not include any rights of decision and command with respect to the work of others. They consist chiefly of work that enters immediately and directly into the creation of values representing some accomplishment of business objectives. It is the work of the clerk, the salesperson, the machine operator, and other operatives. This work must be performed under the direction and supervision of executive leadership. Voluntary coöperation and self-coördination are important in any organization of any size. Their effectiveness as an independent means of control decreases rapidly with increasing organization size.

The peanut vendor on the corner has no organizational problems. He is an independent, small businessman. All the functions of his business are integrated in his person. The president of a Planters' Peanut Corporation should have plenty of organizational problems. Between the two individuals is a broad range of organization size and growth. If the peanut vendor had the managerial ability to progress through this range, he would soon discover that he could no longer perform all the functions of the business himself. It would be necessary for him to hire assistants. He would retain for his personal performance the functions he regarded as most important. A casual observation of business growth will show that these functions involve managing the use of the organization's human and physical resources in the accomplishment of its objectives. It is usually the work of accomplishing a specific phase of an operative project that is delegated first.[34] The differentiation and separation of managerial and operative functions begins to take place early in the growth of an organization.

The process of functional differentiation continues with organization growth, as indicated in Fig. 15. It is necessary to divide the increasing load of work and to provide for the increasing need for specialization. Major service levels of unskilled, semiskilled, skilled,

[34] Alvin Brown gives a good discussion of this problem in *The Organization of Industry*, p. 215.

and professional operative service begin to appear in the organization. Various classes and grades of operative service eventually develop within each one of them. The general field of managerial service likewise begins to separate into major levels of administrative management and operative management. Various classes and grades of managerial service eventually develop within each of

Basic Kinds and Grades of Organizational Service			Major Organizational Divisions	
			Line	Staff
Managerial Service	Administrative Management	Planning, Organizing, and Controlling Work of Others	(Duties)	(Duties)
	Operative Management		(Duties)	(Duties)
Operative Service	Professional	Planning, Organizing, and Controlling One's Own Work	(Duties)	(Duties)
	Skilled		(Duties)	(Duties)
	Semiskilled		(Duties)	(Duties)
	Unskilled		(Duties)	(Duties)

FIG. 15. Managerial and Operative Functions.

them. Furthermore, a vertical distinction between line and staff service also appears with organization growth. It is an important distinction. At this point we can note only that line functions devolve from organic business functions. They are concerned primarily and directly with the accomplishment of primary objectives. These, in general, are salable values. Staff functions are concerned secondarily with these objectives. They are concerned immediately with the accomplishment of collateral and secondary objectives. These are values that the organization needs for the accomplishment of its primary objectives. They are not usually salable values insofar as the customers are concerned. An adequate discussion of line and staff functions is also reserved for later chapters.

This basic relationship between managerial and operative functions, both line and staff, enters directly into the problems of job evaluation, wage and salary administration, and others. The in-

creasing complexity of managerial and operative relationships that develops with organization growth and size also should be noted. It is an effect of increasing business volume that must be handled by the business establishment as a result of business success.

Administrative Management

We are concerned here with the general distinction between administrative management and operative management. These are important distinctions between major levels of leadership activity.

Administrative management, or administration as it is sometimes called, is that phase of management which has to do primarily with the accomplishment of organizational objectives over a time period.[35] It is reasonably accurate to say that administrative management is group management; operative management is project management. The term "top management" means top administrative management.

There are certain characteristics of administrative management functions that distinguish them from operative management. Administrative management involves longer time spans, as is indicated in Fig. 16. The general administrative executive must be a "practical theorist." His work involves a high degree of futurity in planning, organizing, and controlling the organization's activities. Its success or failure depends largely on his ability to foresee and anticipate developments three months, six months, a year, or further in the future. His effectiveness depends on his ability to visualize events that at best are only probabilities. It is limited by the inadequacies of business information.

The inaccuracies of business forecasting techniques also make it

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[35] Dictionary definitions of "administration" and "management" make these terms practically synonymous. It is believed, nevertheless, that administration should be regarded as a phase of management. Webster Robinson's opinion can be offered in support. He has said that administrative management "includes a dynamic study of general economic and trade conditions in their bearing upon the whole business, followed by the formulation of policies in the light of these investigations and current information."—*Fundamentals of Business Organization*, p. 37. It includes, in the opinion of Robert W. Burgess, "the determination of the general policies of the business, the adaptation of general plans to changing conditions, the coordinating control of the various major functions of the business and the appraisal of results secured by departments."—H. S. Person (ed.), *Scientific Management in American Industry*, p. 43. There is other supporting opinion.

difficult to evaluate probable future developments. The general executive is concerned chiefly with the determination and accomplishment of the general service objectives of his organization. He can make whatever use of subordinate line and staff executives is desirable, in his opinion, for the proper discharge of his responsibilities. His personal duties require breadth rather than intensity of knowledge and experience. The top administrative executive in a large organization should have top intelligence to match his top responsibilities.

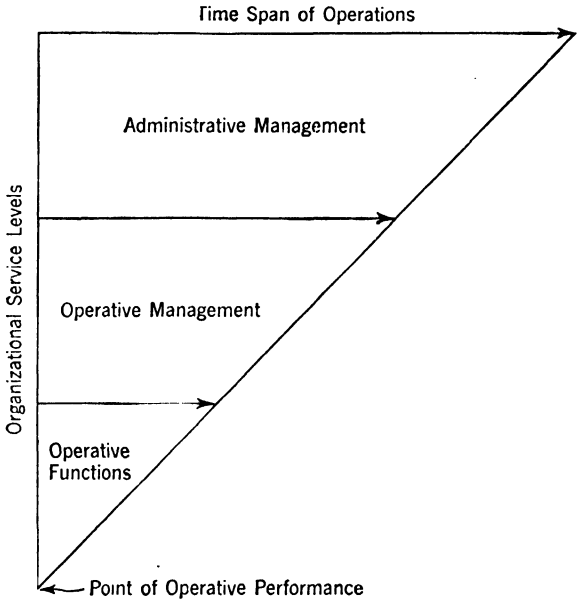

FIG. 16. Managerial Time Spans.

The distinction between administrative and operative management functions is important but difficult to make. This is indicated in Fig. 17. An operative problem may develop at the bottom of the organization. It may become an administrative problem if it develops into a general emergency and progresses to the top of the organization in consequence. This should be, and usually is, an infrequent occurrence. A local, individual employee grievance, for example, can develop into a general labor dispute. A minor opera-

tive executive, on the other hand, may perform duties of a minor administrative nature. Thus a department head may lay down rules for the conduct of his employees. They must be within the limits of his authority. They must be in harmony with any major policies that have been formulated by higher authority. His rules, nevertheless, are intended to promote the effectiveness of the group for

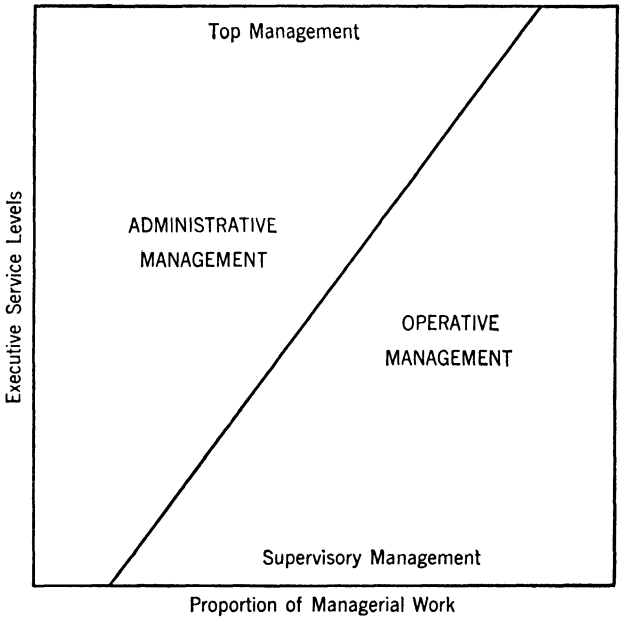

FIG. 17. Leadership Functions and Organizational Levels.

which he is responsible in accomplishing its objectives. They are usually not made to promote the efficient accomplishment of a particular project. Policies, including the rules that flow from them, are adjusted to the needs of particular projects by means of sound interpretation.

Administrative Management and the Board of Directors

Functions of operative management shade into functions of administrative management, and vice versa. The best that we can do, therefore, is to make a distinction between them on what appears to

be the most logical basis: Administrative executive jobs are those in which more than 50 percent of the executive's time is spent in performing functions of administrative management.[36] There are certain executives in the business organization whose work is clearly administrative. They include such people as the chairman of the board, the president, the executive vice-president, line or staff vice-presidents, and general managers.

FIG. 18. Top Executive Conservatism. (Courtesy, Perry Barlow and the Girard Trust Co.)

The directors of the company are the elected representatives of its stockholders. The board of directors may elect the corporate and general officers. It may delegate to the board chairman and the president broad powers for the discharge of their responsibilities. It determines general corporate objectives and policies for the immediate guidance of these executives and the ultimate guidance of the entire organization. The time covered by the board's delibera-

[36] The meaning of the term "administrative executive" is not the same in military organization as it is in business organization.

tions often extends far into the future. This may partly account for the conservative attitude of directors and top administrative executives. It may not always reflect age and vested interests. The possibility of serious mistakes in planning increases with the time span that it must cover. The safest answer is "no"—at least, it maintains the *status quo.*

The board is likely to be interested in the general results that may be expected from general divisions of the organization during the year. The general plans of the divisional vice-presidents must be integrated into a general plan for the organization as a whole. The board may receive summary reports, monthly and quarterly, of the results achieved by organizational divisions, as compared with planned results. It is interested in broad corporate problems affecting the conservation and use of capital. The board is interested, therefore, in expansion programs when they involve large sums of money and have an important bearing on the continued economic health of the company. It is interested in any major changes in organization for much the same reasons. It performs other broad basic functions. Its decisions are the basis for planning, organizing, and controlling corporate activities by organizational divisions. It usually cannot be concerned with operative projects that serve specific customers or groups of customers. The time span that must be covered by its activities, and the scope and complexity of activities in a large organization, make this impossible. Corporate and general officers in such organizations are clearly administrative executives.[37] Executives immediately below them are frequently borderline cases.

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[37] Holden, Fish, and Smith list the problems of concern to the board of directors. They include consideration of basic objectives and policies, selection and compensation of corporate officers, general operating and financial structure, management of corporate income, expansion and rehabilitation, working capital requirements, financial control of the organization and its subsidiaries, and others. See *Top Management Organization and Control,* pp. 214–217.

Paul M. Mazur has stated the following as the principal functions of a department store general manager: the determination of policies of operation to obtain the desired end, the determination of the general method of operation, the determination of the form of organization to make the best use of the existing personnel, and the direction and inspiration of the personnel. See *Principles of Organization Applied to Retailing,* Harper, p. 24.

Operative Management

Operative management, in its simplest terms, is project management. A project may be any definite, specific undertaking. An operative project, in business organization, is one whose accomplishment results directly and immediately in values that represent some achievement of business objectives. It is a primary operative project if its accomplishment results directly in salable values. It is a secondary operative project if its accomplishment results directly in values that serve collateral objectives associated with, or otherwise necessary for, the accomplishment of primary projects. Such projects are secondary in order of incidence to customer service, rather than in order of importance and necessity. Line operative projects usually are primary. Staff operative projects usually are secondary. An operative function is the work performed by an operative employee in the accomplishment of an operative project, either primary or secondary. The work of selling an item of merchandise in a five-and-ten-cent store is a routine primary operative function that is performed by an unskilled sales operative. The work of selling an expensive piece of machinery to a corporation is also a primary operative function. It results directly and immediately in providing the customer with needed values through the provision of an item of equipment that possesses the requisite utilities. The act of selling generally does not involve the direct exercise of any rights of decision or command with respect to the activities of others. The copies of the purchase order or contract that are forwarded to the company's headquarters merely convey information in most cases. They are subject to acceptance by the company. In fact, the actual closing of the deal may be done by a sales executive from the headquarters office. The salesman, in this case, may be and probably is a professional primary operative. It may be necessary to make some minor modifications of the particular piece of equipment before it can satisfactorily meet the customer's needs. A tracer in the engineering department's drafting room makes a tracing of an engineer's drawing of a design change for a particular part. He is performing a secondary operative function of a semiskilled nature. These operatives, whether primary or secondary, work under some executive

direction and supervision. The amount required may be little in the case of a professional operative. Operative management is concerned with the work of planning, organizing, and controlling the execution of such operative projects. It must be performed in a manner that will assure the effective, economical accomplishment of the final objectives in terms of quantity, quality, time, and cost.

The Classification of Executives

Distinctions have been made in the preceding discussions between line and staff executives, and between administrative and operative executives. There are, of course, other distinctions that can be made. One based on fundamental kinds of business activity often is quite helpful. References are made commonly to sales executives, production executives, financial executives, engineering executives, personnel executives, purchasing executives, and others. Some of them are line and some are staff. Some are administrative and some are operative. The significance of these terms lies in the fact that they convey a general picture of the kind of work. They suggest the nature of its objectives and functions and its relation with other executive jobs in the organization. Reference to an administrative staff sales executive, for example, suggests an individual who is attached to a headquarters sales organization and who performs a specialized function that facilitates but does not enter directly into the accomplishment of the company's general sales objectives. These considerations are important in determining the delegations of executive responsibility and authority that should be made to particular jobs, the advisory and command relationships that should exist between jobs, and other decisions of a similar nature. They go back to the determination of the requirements of objectives, functions, and physical factors in performance and personnel. These determinations require a more thorough analysis than has been given here. It will be presented when problems of organization structure and business procedure are considered. It will be helpful, in the meantime, to classify business executives on the basis of:

1. Business activity
   a. Sales executives.
   b. Production executives.
   c. Financial executives, etc.

2. Managerial activity
   a. Administrative and operative executives.
   b. Line and staff executives.

The Quality of Managerial Activity

A distinction developed during the early decades of this century between conventional, systematic, and scientific management.[38] Conventional management is characterized by trial and error in the development of organization structure and procedure, by the use of rule-of-thumb policies. Systematic management recognizes the existence of better methods of operating a business. As its name indicates, it tends to place too much reliance on system. It is characterized by a tendency to adopt the system for handling a troublesome problem that has been used successfully by some other company. It is true that there are general methods of approach that are applicable to the solution of general types of managerial problems anywhere. This is different from an attempt to hang a specific procedure on an organization structure, like a ready-made suit of clothes, with a minimum number of alterations. The systematic approach tends to overlook the fact that there are significant differences in the problems of different concerns in the same field of business that must be taken into account. This approach usually fails to result in maximum economy and effectiveness for this reason. Scientific management attempts to apply a valid logic, based on a sound philosophy, that will facilitate effective thinking in the solution of business problems.

These distinctions still have practical significance, despite the volumes on management that have been written during the past fifty years. They still suggest important causes of differences in the quality of management between concerns. It will always be possible, no doubt, to find examples of approaches to management problems that fall in each of these three classes. A free competitive system implies the right to found a business enterprise, provided one has the courage and the capital. The requirement of a certificate of

[38] An early reference will be found in Bertrand Thompson's book, *Scientific Management*, Harvard Univ. Press. These distinctions were drawn in his book in articles by Henry P. Kendall, "Unsystematized, Systematized and Scientific Management," and Forrest E. Cardullo, "Industrial Administration and Scientific Management."

public necessity and convenience signed by a government employee, to be procured before one can engage in business, is more characteristic of monopolistic state capitalism and socialism. Part of the price of a system of free enterprise and a high standard of living is the continuous entry of business mechanics into business. Their management methods at best are mediocre. This has been offset, however, by the development of a class of professional executives who have been trained in the use of modern management methods.

The Principles of Executive Leadership

There is universal interest in the principles of executive leadership. It is due, in part, to recognition of the importance of leadership in any organized activity. It is probably due also to the desire of most people for an easy formula that will lead them to power, prestige, and riches. There is no such formula. Most people have some leadership potentialities, but few seem to have what is required to rise to positions of top leadership in large organizations.

There are some business principles that relate specifically to executive leadership in business organizations anywhere. They rest on the basic principles of leadership in any organized activity. Management has been defined as the function of executive leadership. The principles of effective business leadership are, in general, the principles of sound management. They are the subject of this book. The success of an enterprise depends on their sound application.[39]

Criteria of Competent Executive Leadership

The selection of subordinate leadership is a responsibility of the principal executive at every echelon down to primary supervision. It requires criteria of what constitutes competent leadership. These criteria tend to be measures of the quality of management techniques employed and results achieved. What they are depends on the characteristics and requirements of the basic factors in a leadership problem. These are the leader, the led, and the particular situation. It is not possible to determine these criteria with any

[39] An article on the top management difficulties of Lever Brothers appeared in the April, 1950, issue of *Fortune*. It pointed this principle excellently. The following analysis is based on data that appeared in this article:

exact accuracy. Many important contributions of leadership are intangible. It is necessary, nevertheless, that the best possible criteria be developed and used in the selection and training of all grades of executives. The following are qualitative statements of some of them:

1. The use of satisfactory methods for anticipating the business future.
2. The existence of definite, written business plans, based on sound objectives and standards of business conduct.
3. The extent to which the executive's plans are based on verified facts and recognize the "law of the situation."
4. The soundness of the principles applied and the methods used in the solution of business problems, and the degree of policy understanding and acceptance.
5. The use of positive rather than negative methods of leadership.
6. The quality of the executive's subordinates.
7. The degree of voluntary, enthusiastic coöperation in the operative ranks of the organization.
8. The nature and degree of the organization's discipline.
9. The degree of mutuality of understanding and confidence be-

CHANGES IN THE COMPETITIVE POSITIONS OF LEVER BROTHERS AND PROCTER & GAMBLE
SALES AND PROFITS IN MILLIONS OF DOLLARS

Year	Lever Brothers			Procter & Gamble			Total Sales of Both	Lever's Share
	Est. Sales	Est. Profits	% Profit on Sales	Sales	Profits	% Profit on Sales		
1945	$150	$ 5.5	3.67%	$343	$19.5	5.70%	$493	30.4%
1946	150	8.0	5.34	346	23.0	6.65	496	30.2
1947	220	14.0	6.37	534	32.9	6.16	754	29.5
1948	260	6.6	2.54	724	42.4	5.87	984	26.4
1949	200	−7.0	−3.50[a]	697	49.7	7.14	897	22.3

[a] Loss.

The president of Lever Brothers was relieved of his command in 1949. The article stated: "The combination of a slow start in synthetic detergents, ineffective and under-advertising, unfortunate raw materials purchases, headlong expansion, the launching of new brands needing millions of dollars worth of promotion," together with poor leadership and low morale, were some of the principal difficulties. See page 170 of the reference issue.

tween executive and operative employees within the organization.

10. The extent to which employees on all organizational levels have knowledge and understanding of the nature of and relationships between objectives, functions, responsibilities, and authorities. This is true particularly of executive jobs that affect the particular employee's assignment.
11. The extent to which the executive has developed stability, flexibility, balance, capacity for growth, and other characteristics of a good organization.
12. The extent to which the organization achieves all classes of its objectives. This is the pragmatic test of executive competence.

Executive Leadership in an Industrial Society

Mass production in an industrial economy requires mass distribution. It must be supported by mass purchasing power. This requires the use of great amounts of capital and labor. These statements are generally accepted today as obvious truisms. There is a consequent tendency in the direction of large organizations that can employ large resources effectively and economically. Every large industry, however, requires the services of great numbers of suppliers, distributors, and outside service organizations. Many of them are small enterprises. The result is increasing complexity in our economic organization.

The leadership group in business and industry includes all executives in all business organizations large and small, whether they be administrative or operative, line or staff. The maintenance and further improvement of our standard of living depends largely on the ability of this group to plan, organize, and control the use of our physical and human resources. This must be achieved with due regard for collateral, political, and social objectives. The necessity for good executive leadership increases, therefore, with the growth and complexity of an industrial economy. Management, the function of the business executive, tends to become the principal function of economic leadership in an industrial society.

Executive leadership has a grave responsibility in an industrial economy that operates under the right of private property. It must show by deeds as well as words why our standard of living is supe-

rior. It must so conduct itself that the people will have confidence in the ability of American executive leadership to maintain and improve their living standards, but with due regard for their cultural requirements. Some businessmen consider it theoretical and impractical to spend any time or thought on anything except the promotion of their personal interests. Nor is this attitude confined to businessmen. There are, however, some business leaders who have the attributes of economic statesmanship. The responsibility for the continuous improvement of our economic organization, without any weakening of the incentives and initiative that stimulate progress, rests particularly on them.

CHAPTER 6

BUSINESS POLICY

The Nature and Importance of Policy

Business advisory services urge their clients to adhere to "prudent policies" when they feel that business may be approaching a peak. They advise ample liquid resources, wariness in purchasing, reduction of inventories, vigilance in extending credit, caution in handling personnel, the streamlining of organization structure and business procedure, and other conservative measures. They advise "more aggressive policies" when they feel that a business decline has run its course. The term "policy" is used frequently, without definition, in business books, conferences, and conventions. The term is expected to have a common meaning to businessmen. No doubt the assumption should be true, but in fact it is open to question. It was noted previously that the making of general policy decisions is an important responsibility of general executives and the board of directors. We shall see shortly that policy affects the operations of the entire organization from top to bottom.

Policy is a factor of basic importance because of its contributions to business economy and effectiveness. The business concern is obligated to supply a customer with certain goods and services of certain qualities in quantities that he desires, when and where he desires them, and at a competitive price that he is willing and able to pay. The concern exists because of the customer's needs and his patronage. The primary service objective is, accordingly, the starting point of business thinking. This is true, fundamentally, so long as the concern operates under competitive private enterprise. It is obvious that no values create themselves. They are created by work.

Function, as the term is used in business organization, is largely synonymous with work. What work must be done, what capital and labor must be supplied to do it, and similar decisions obviously depend on what values must be created and distributed for whom. These decisions do not make themselves. They must be made initially by the company's executive leadership. Policy is the factor that supplies a cogent relationship between business objectives and ideals on the one hand, and organizational functions, physical factors, and personnel on the other. This indicates the basic importance of policy, but it does not tell us what it is. A principle is an expression that is accepted as a significant truth with respect to the relationships between cause and effect in a particular problem. A policy must be based on or include applicable principles, if it supplies a cogent relationship. A business policy, then, is essentially a principle or group of related principles, with their consequent rules of action, that condition and govern the successful achievement of certain business objectives toward which they are directed.[1]

The latter definition indicates that a policy has two principal parts: the principle that governs and the rule that indicates the general manner of its application. The following statements concerning General Motors' interdivisional purchasing policy furnish a good example of the relation between these parts:[2] "Unless a true competitive situation is preserved, as to prices, there is no basis upon which the performance of the divisions can be measured." This is the principle. "No division is required absolutely to purchase product from another division." This is the rule. A rule, of course, tends to be restrictive. The higher the organizational level on which policy is made, the more it must facilitate the making of

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[1] Paul Holden says: "Policies may be defined as those precepts by which all administrative and operating decisions are determined, so that the progress and development of the enterprise will be properly directed toward definite objectives."—L. P. Alford and John R. Bangs (eds.), *Production Handbook*, Ronald Press, p. 1383. This differs materially from the definition given by General Brehon Somervell in an address before the A.M.A. General Management Conference, June 10, 1948. He considers that a policy is a statement of managerial intent and procedure. Other definitions of policy could be presented. They would show that, as usual, the authorities do not agree exactly, but that there is a common thread of understanding among them.

[2] Donaldson Brown, *Decentralized Operations and Responsibilities with Coordinated Control*, p. 9.

decisions concerning the accomplishment of general objectives. It may not be possible to accomplish them for a considerable time in the future. Top administrative policy must therefore be broad, general, and basic. Occasionally we hear someone charge that some corporation's statement of general policies is merely a platitudinous agglomeration of ambiguous generalities from which the board of directors may draw any interpretation that suits its pleasure. There is an implication that the board is guilty of bad faith. It may be. But it is more likely that the individual unwittingly is charging himself with a lack of understanding of the problem.

The situation is different at the bottom of the organization. We are close to the point of operative performance. The heads of operative departments are concerned chiefly with the control of operative performance. They find it necessary, nevertheless, to prescribe rules for the guidance of their subordinates in handling common repetitive situations. Specific, concrete guides are needed. Operative action is concerned primarily with the execution of plans. The futurity involved is a minimum. There is a tendency, in consequence, for statements of operative policy to be chiefly statements of rules. The principles behind the rules are implied, rather than expressed. The thing that makes possible an intelligent understanding of the significance of the rule is often missing. The rule stands as a fiat. A statement of operative policy governing personnel in a certain concern contains the following rule: "Employees arriving at the plant between the starting time for the work period and fifteen minutes thereafter will report to the personnel department and explain the reasons for their tardiness. They will be docked one-half hour of pay." That, as we say in the vernacular, lays it right on the line. Every executive would like to hold disciplinary problems to a minimum. But good discipline is a condition of voluntary conformity with whatever reasonable rules and regulations are necessary for effective coöperation and coördination in the particular organization. This definition implies employee volition. The latter is unlikely in the absence of intelligent understanding and acceptance of the meaning of and necessity for the rule. It is evident that an attempt to conform to a rule that is stated without the supporting principle may result in an unwitting distortion of its application. The subordinate who wishes to conform must formulate his own

statement of the underlying principle, unless the problem of conformity requires no thought, as in the case of the example cited. It is evident, then, that managerial statements of operative policy tend to be statements of rules, since they are guides for effective, economical action. They should, however, be supported by simple, understandable statements of principle that will give them meaning. Statements of administrative management policy, conversely, tend to be statements of principles, since they are guides for thought that will lead to effective, economical action at some future time. But they should be supplemented by broad basic rules that will give them tangibility and facilitate their application. A body of policy serves, therefore, as a guide for the organization's thought and action in the accomplishment of its objectives. It enters into all phases of the organization's work, both managerial and operative. It affects fundamentally the performance of the organic management functions—creative planning, organizing, and controlling. Consequently, sound policy is necessary for sound management.

There is a tendency to confuse policy with plans, objectives, procedures, and other business factors. A plan is a specification of the required factors, forces, and effects in a situation, and the necessary relationships between them. Their requirements are determined by the requirements of objectives for proper performance. A plan should supply an effective, economical basis for business action. A policy is, or should be, a statement of the principle and rule of action that govern the successful achievement of the objective. It is evident that a statement of policy may be included in the statement of a plan. They are still different business factors. This is indicated by the policy manuals put out by many concerns. These manuals certainly are not plans or procedures.

The Functions of Sound Policy

A sound policy facilitates the performance of a number of executive functions. Its principal contributions are the following:

1. It tends to prevent deviations from planned courses of action.
2. It insures consistency of action.
3. It promotes intelligent coöperation.
4. It facilitates coördination of action.

5. It fosters an intelligent exercise of initiative.
6. It provides a guide for determining equitable personnel relations.
7. It furnishes a basis for determining the quality of executive action.
8. It provides a guide for thinking in future planning.

Acceptance of responsibility and authority for the accomplishment of an assignment obligates a subordinate executive to make sound decisions within the limits of his ability. What is sound is determined by the requirements of the objectives of the assignment. Decisions concerning action on specific assignments are less likely to deviate seriously from planned courses of action for the mission as a whole, if they are made in the light of stated policies governing the mission. The action taken by different people at different times with respect to similar business problems should be consistent. This assumes that the significances and requirements of the applicable policies are understood. The fidelity and consistency with which planned action is executed are important considerations in organizational success. The business organization has to cope with labor turnover among executive as well as operative employees. When an executive leaves the organization, he takes with him a certain amount of knowledge and know-how. The new executive has new ideas. This is highly desirable, provided that the new man is able to orient his ideas properly by reference to written statements and interpretations of applicable policies. Otherwise, he may follow courses of action that are at variance with previous plans or that are not consistent with action being taken elsewhere in the organization. The result is likely to be confusion, expense, and delay. A similar situation may develop when sound policies are made but are not committed to writing. Memories of the exact meaning and significance of specific policies dim with the passage of time. In consequence, errors of omission and commission are made in good faith. The writer was once asked to make a survey of the structure of a small organization. It turned out to be a policy problem in part. Policy directives had been issued over a period of many years by the top administrative group, but without any well-organized record or any periodic review of them. Instances were

found in which policies had not been rescinded and consequently were in force, but were contradicted almost completely by later policy statements. It happened occasionally that someone applied the wrong policy at the right time, with the usual unsatisfactory results. In most cases, however, an individual could not find any official statement of the applicable policy. He was not certain what policy, if any, applied. So he requested a statement of policy from his superior. The latter gave what he hoped was a correct statement of the applicable policy, or referred the matter to higher authority. The end result might be another policy statement that was made *de novo*.

A body of sound policy, well organized in appropriate policy manuals, supplies the organization with a code of law for its government. It should facilitate intelligent understanding of the basis and general requirements for effective action in a given situation. It is more likely to do so if each statement of principle and rule is as fundamental as the purpose of the policy will permit. The attitudes of individuals and groups within the organization may be highly constructive. Little effective coöperation is likely without an intelligent understanding of the required action. It is difficult to work effectively with an individual unless one understands what he is trying to do, and why, or unless the action is purely physical. Policy gives a basis for understanding why.

A similar situation exists with respect to coördination. Self-coördination represents a voluntary attempt to relate one's work to that of one's associates with respect to time and order of performance. The higher one goes in an organization, the more self-coördination depends on an understanding of the principles underlying effective, economical action. It depends also on the ability to analyze the requirements of the situation in terms of them. Executive coordination involves a formal relation, by direction, of the work of one's subordinates with respect to time and order of performance. An understanding of applicable policy is even more necessary. Executive coördination is likely to be broader and more fundamental. It may have more far-reaching effects than self-coördination at the same organizational level.

An intelligent exercise of initiative is a related concept. It is important for a number of reasons. The seriousness of an emergency

situation, for example, tends to compound in geometric progression with the passage of time. The resulting losses may be serious unless someone has the courage, confidence, and ability to take the proper corrective action promptly. The individual who has the principal responsibility for the situation, and presumably the necessary authority, may not be available. Confidence rests in part on a feeling of competence to handle the situation. It is fostered by an understanding of the applicable policies and their requirements. It is evident that willingness to make an intelligent exercise of initiative rests also on good morale. It rests in part on positive rather than negative leadership. In fact, a dictatorial leadership tends to stifle initiative. Voluntary coöperation, self-coördination, and an intelligent exercise of initiative are evidences of good morale. Their effective and economical utilization depends in large part on the existence of a well-organized body of sound policy.

One occasionally comes across some reference to policy as a standard. It is, in a sense. It supplies a basis for a qualitative judgment concerning the soundness of a plan or action. It is necessary for the determination of sound quantitative measures of factors, forces, and effects. Personnel policy, for example, should provide the guiding principles for the effective integration of the personal objectives of organization members with the service objectives of the organization. It should result in better morale and greater organizational effectiveness. The suitability of a proposed personnel practice must be determined with reference to the difficulties that are experienced in achieving its objectives. It must be decided also in the light of sound personnel policy. The role of policy in the field of administrative control is similar. Such control has to do with the constraint and regulation of group action in the accomplishment of organizational objectives. It is concerned with the execution of long-range plans. It has to do with gauging and regulating a continuity of action that may extend for some time into the future. The criteria needed are necessarily broader and more fundamental, but less tangible and accurate than the standards that enter into operative control. Policy, in consequence, plays a more direct and immediate part in administrative control. We make use of criteria of organizational performance in the form of quotas, programs, budget allow-

ances, operating ratios, and other devices. They gauge the results that are being accomplished by a certain organizational element in terms of quantity, quality, time, and expense. They measure also the particular executive leadership. Comparisons made with such criteria never tell the complete story, however. Executive judgment is an important determinant of results in any organized activity. The quality of administrative management is determined, in the last analysis, by the quality of executive judgment, relative to what is regarded as sound policy.

It is evident that sound policy is necessary for the sound performance of all the organic management functions. The judgments and inferences that are the basis of a plan can be determined only by relating past and present experiences through sound principles in the solution of a business problem. The creation of the antecedent conditions for the proper execution of the plan requires reference to the policies that guided the development of the plan. Sound policies are necessary for planning, organizing, and controlling business activities for maximum results with minimum costs.

The Characteristics and Requirements of Sound Policy

Sound policy has many characteristics and requirements. They are considerations in the solution of policy problems. The following are the most important:

1. Sound policies are based on a careful analysis of the organization's objectives.
2. They should make possible the determination of effective, economical relations between functions, physical factors, and personnel on the one hand and business objectives on the other.
3. They must be in conformity with accepted standards of business conduct.
4. They should be definitely stated in simple, understandable terms.
5. They should have stability and flexibility.
6. They should have the breadth that will make them sufficiently comprehensive.
7. They should be complementary and/or supplementary to one another.

Policy and the Objective

It is a function of policy to assure consistent action from one business period to another. Action is consistent when it is always compatible with the requirements for the proper accomplishment of specified business objectives. The selection of principles that will guide correctly the thought and action of the organization depends, therefore, on the characteristics and requirements of these objectives. A policy has been defined, for this reason, as a statement of principles, with their consequent rules of action, that govern the achievement of business objectives. It should facilitate the determination of a cogent relationship between them and the work of the organization. It is the latter that results in the creation and distribution of the values which they represent. Hence the characteristics and requirements of policy depend on the characteristics and requirements of business objectives on the one hand and business functions, physical factors, and personnel on the other. There is a plant in southern Ohio that manufactures special-purpose automotive vehicles. It is a relatively small plant that employs a few hundred operatives. It serves profitably a real need. The demand is too small, however, to be filled profitably by large, mass-production organizations in the automotive field. The nature and conditions of manufacturing operations are necessarily quite different. If the small plant were to adopt all the policies that have been applied profitably by the large mass producers, it would soon cease to operate profitably—or, probably, any other way.

The term business objectives includes the personal objectives of individuals and groups who compose or are directly associated with the organization. It includes also the collateral values with which it provides the general public. It must likewise include the secondary values that the organization must have to accomplish its primary and collateral objectives. The interests involved can never be completely in harmony with one another. They must nevertheless be integrated by means of sound principles. Principles are sound, in general, to the extent that they guide the organization to the reasonable satisfaction of its collateral objectives without loss of competitive effectiveness. This requirement poses a difficult problem. Owners, on the one hand, tend to insist on more and better divi-

dends for less and less service, unless restrained by competition and regulation. Employees, on the other hand, tend to insist on more and better wages and salaries for less and less work, with or without a commensurate increase in per capita production. A continuing attempt to place personal objectives ahead of the primary service objectives of an organization must eventually result in its failure. There is necessarily a failure to achieve personal objectives thereafter. Morale usually drops seriously before this happens. The divisive effects of conflicting personal interests split the organization apart. All relations—whether customer, employee, stockholder, banker, or supplier—deteriorate. It is evident that the successful operation of a business organization depends on an integration of interests. This requires an equitable relation of values through an equitable application of sound principles. This takes us again into the field of business ethics. It follows, therefore, that sound policies must be in conformity with standards of business conduct which are currently and generally accepted. This is true so long as the public retains the right of freedom of choice of goods and services in the market place under conditions of competitive free enterprise. The public interest must be paramount in the long run under these conditions. Such considerations are of no interest, of course, to individuals whose short-run personal objectives have to do chiefly with cleaning up and getting out, without regard for the ultimate detriment of the organization or industry. Such people personify the reasons why there is always a necessary minimum of public regulation of business.

Simplicity in Policy

Policies should be stated definitely, in simple understandable terms.[3] Otherwise, there may be misunderstandings of the intent of plans that have been originated by higher authority. There may be consequent deviations from planned courses of action beyond the limits of reasonable flexibility. Personnel may work at cross purposes because of misinterpretations of what constitutes correct action. This leads often to friction, ill will, loss of confidence in

[3] Donaldson Brown has pointed out that this is desirable because policy establishes the fundamental bases on which the activity of any and all departments should be predicated.—*Ibid.*, pp. 7–8.

executive leadership, and other effects that sap the strength and effectiveness of the organization. Ambiguous policy statements favor the company politician. They sometimes enable him to interpret requirements in his own interests. Definite written policies, on the other hand, require the executive to think through his problem carefully and thoroughly. They put him on record with respect to his judgments concerning what are sound principles underlying correct thought and action. This may be one reason why some executives regard the creation and maintenance of policy manuals as impractical. Such manuals, nevertheless, give an executive greater assurance that his policies really are sound. They increase the probability that the originating executive, as well as his subordinates, will understand the implications of the policies. Definite, written statements of sound policy promote continuous, cumulative effort in the direction of the desired objectives. This requires, however, an adequate control of policy that will prevent unauthorized modifications or changes. The danger of conflicting policies, when there is no record and control of policy formulation and interpretation, was mentioned above. Policy formulation is expensive. It involves the cost of the time and salaries of expensive executives. Top administrative policy requires careful thought by the organization's best brains. A company cannot get its money out of policies unless they are applied effectively. They cannot be highly effective unless they are known, understood, and accepted by the individuals who must use or be governed by them. Policies should be stated in definite, written, simple form for these reasons. Policy statements should be readily available for reference and study. There is no reason why they should be treated as "top secret," provided that they are sound and in conformity with acceptable ethical standards. The practice of most well-known business organizations seems to be in line with this.

Stable, Flexible Policies

A stable policy may be defined as one that changes only in response to fundamental changes in the objectives and characteristics of the business. A policy may be regarded in some respects as a managerial tool. Experience with it is necessary to acquire a good working knowledge of its significance and requirements. Experience

is consequently necessary for its effective use. Policy instability creates a feeling of uncertainty that is a morale depressant. It tends to inhibit the exercise of initiative. It causes loss of respect for and confidence in executive leadership because of a feeling, right or wrong, that the "top brass" does not know where it is going or why. This instability may be caused by the lack of a proper analysis of objectives, opportunistic action to take advantage of passing business opportunities, lack of adequate facts concerning the organizational situation for which the policy is required, snap judgments rendered under pressure, and other causes. It was pointed out in the discussion of business objectives that organizational objectives tend to be more stable than operational objectives, that general objectives tend to be more stable than major or minor objectives, that ultimate objectives tend to be more stable than immediate objectives. Complete policy stability is a theoretical concept, however, for a number of reasons. It is usually not possible to determine the concern's ultimate general objectives and their requirements with sufficient accuracy. The quality of executive judgment tends to decrease with the length of time over which it must operate. J. O. McKinsey thought that the requisite executive foresight could not be expected for two reasons: "(1) It is impossible to secure sufficient information to be able to anticipate all of these changes in conditions, and (2) even though the necessary facts could be secured, it is not possible for business executives to have at all times the attitude of mind which would enable them to form sound judgments with reference to such conditions."[4] A satisfactory degree of stability can be developed, nevertheless, by basing policies on sound, fundamental principles.

A flexible policy is one that can serve effectively as a guide for sound management decisions throughout the normal range of variation in volume of business. A completely flexible policy is one that is equally applicable under conditions of depression and of prosperity. We can approach this ideal in practice, but we never reach it completely. The human limitations of the executive again become a limiting factor. Many concerns find it necessary, in consequence, to make extensive policy changes with fluctuations in the

[4] J. O. McKinsey, *Adjusting Policies to Meet Changing Conditions*, A.M.A. Gen. Mgt. Series, No. 116, p. 8.

general business cycle. This is sometimes necessary with changes in a company's particular seasonal cycle. There are other causes of policy inflexibility, in addition to executive limitations. A policy must have breadth if it is to cover a wide range of situations. There is a tendency to base policy determinations on immediate business objectives. These are values that must be created and distributed within the immediate future. Policies must be specific to serve such objectives effectively. As a result, they tend to be narrow statements of rules, rather than broad statements of principles. The point of primary operative performance may be the machine on the shop floor or the counter on the store floor. The only policy statements that can be applicable at this point are rules. The amount of time that is available before primary action must commence is a factor in flexibility. There is no futurity at the point of primary operative performance.

A rule is restrictive, however. It has its maximum effectiveness usually in the specific kinds of situations for which it was devised. Restrictive policies are rigid. They tend to break down as the demands of the customer and the needs of the organization change from year to year. But they are tangible. They are easier for the average person to understand.[5] They may even be desirable in some cases. A policy that says that a company will merchandise 57 varieties of pickles, no more and no less, obviously is rigid and restrictive. It might also be right, if it adequately covered the food service that the company's customers desire.

It is apparent from the foregoing that there is a relation between policy stability and policy flexibility. The necessity for stability grows out of the requirements of the business for continued growth. Unless a company can be assured that its policy structure is reasonably stable, future planning is difficult and of doubtful effectiveness. Thus it is related to the ultimate service objectives of the business, and its secular trend. The necessity for flexibility grows out of the

[5] Mooney and Reiley have recognized this problem clearly: "It is the failure of so many to discriminate between a rule and a principle, and to realize that the one derives its authority from the other, that so often gives the rule itself an exaggerated importance. The average man, though he often cannot or will not lay hold on a principle, can always understand a rule, and it is this fact alone that makes rules of the most explicit kind so necessary for this direction and guidance."—*Onward Industry*, pp. 103–104, 305.

company's requirements for the prompt adjustment of its activities to changing business conditions, with a minimum loss of economy and effectiveness. Hence it is related to the immediate service objectives of the business, and its seasonal and cyclical trends. A breakdown of policy due to inflexibility tends to result in policy instability. Policies are interrelated vertically and horizontally in the organization. Both policy characteristics require that as far as possible policy statements be made in terms of principles rather than rules. The need for flexible policies results from the need for flexible plans. Some concerns attempt to determine the conditions under which the organization must operate when the business volume is 125, 100, 75, and 50 percent of the normal volume, as determined by its secular trend. If present general policies are not broad enough to cover this range of conditions and make possible the development of adequate general plans, it is possible that there are more fundamental principles of action that the company has failed to recognize. The minor policy statements of department heads consist chiefly of rules. They can be modified or changed for sufficient reason, without creating instability or poor morale.

Comprehensive Policies

There are other situations that may develop, in addition to those resulting from temporary or permanent changes in volume of business. Changes in the specifications of its goods or services may be necessary as the result of the company's own initiative or that of its competitors. The unexpected loss of an important executive may create a serious situation that must be handled promptly, regardless of the current volume of business. Other difficulties may develop. The policy structure should be sufficiently comprehensive to cover such situations when they arise. A completely comprehensive body of policy is one that covers all possible necessary action by the organization, whenever and wherever it may be required. This concept again is theoretical. There are the natural limitations of the executive. There are forces, factors, and effects in the general economic, social, and political situation that are beyond the control of any executive or group of executives. An attempt to develop a body of policy that is completely comprehensive would result in the origination of policies for situations that might never arise. Further-

more, too many policy statements are likely to be confusing rather than helpful to the average person. On the other hand, an emergency situation for which no policy exists must be handled immediately, under pressure, on the basis of snap judgment and expedient action. Expedient policy decisions may get short-term results at the expense of long-term gains. They are likely to miss widely the mark of economy and effectiveness in the conduct of business operations. The practical answer necessarily is a matter of judgment representing a compromise between the two extremes. The guide for this judgment is similar to that in the preceding instances: Careful thought should be given to the underlying fundamental principle when a formulation of policy is necessary. The consequent statement of the policy should include a definition of the principle to facilitate subsequent policy interpretation. Comprehensiveness depends on the breadth as well as the number of policies.

Complementary and Supplementary Policies

A characteristic of a good organization is intelligent, voluntary coöperation and self-coördination. The policy structure of the company should be homogeneous, since it is expected to act as a body of guides for the organization's thought and action. Policies therefore must be reasonably complementary or supplementary, or both. Complementary policies may be defined as policies of coördinate organization elements whose effective application depends on one another. The concept of complementary policies refers to policy relationships between organizational elements, usually as they enter into the execution of specific business projects. We refer commonly to sales policies, manufacturing policies, financial policies, personnel policies, engineering policies, etc. Supplementary policies may be defined as policies that add to and extend the more fundamental policies from which they are derived. The concept of supplementary policies refers to policy relationships between organizational echelons. We refer commonly to general, major, and minor policies.[6] We refer to administrative and operative policies, with respect to the

[6] Holden, Fish, and Smith define policies as "the guiding principles established by the company to govern action, usually under repetitive conditions." They say that they "may be classed as basic, general and departmental."—*Top Management Organization and Control*, pp. 79–80.

nature of managerial action that they apply to. Many executives tend to legislate for their particular organization element. They act as though it were an entity that is totally unrelated to other organizational entities in the company. This has been called the organizational disease of "compartmentitis." It can be serious and necessitate managerial surgery. Minor executives sometimes originate minor policies—and base action on them—that contradict major and general policies which have been originated previously on higher organizational levels. This is not necessarily due to any lack of intelligence or sincerity on the part of the minor executive. It may be due to the failure of higher executives to publish or clarify the applicable major and general policies. Deliberate violation of higher policy for the purpose of advancing one's personal interests is just cause for disciplinary action by higher authority. One of the general personnel policies, for example, may be the following: "Organizational effectiveness depends on good morale. Good morale depends, in part, on equality of opportunity for advancement within the organization, based on merit. All promotions shall therefore be based primarily on merit, and secondarily on length of service with the organization." There have been instances in which an executive has operated on the generalization that a loyal partisan group in his department will assure the continuance of his leadership. He has filled his department with friends and relatives and has advanced them to responsible positions under his command. It is evident that this man's policy contradicts, rather than supplements, the particular general policy of the organization. This situation would not develop, of course, if the company had good staff control of employment, transfer, and promotion in the hands of a competent personnel department. Some minor executives only consider the problems of economical, effective operations as they exist in their own departments. They legislate for their departments accordingly. The effect may be higher costs, smaller output, or lower quality in some other department. Other policy decisions of major and minor executives may fail similarly to complement one another as a result of intent, mental laziness, incompetence, or ignorance. The results may be highly unsatisfactory, whether the project has to do with handling a batch of invoices in the office or a lot of work in the shop.

Classes of Business Policies

The previous discussion has indicated different kinds of business policies. Some of them are related closely and may be grouped broadly in classes. Such classification facilitates analysis and the consequent understanding of policy characteristics and requirements. Policies may be classified, on the basis of our earlier analysis of business factors and problems, as those having to do primarily with:

A. Organizational objectives and echelons
   1. General policies.
   2. Major policies.
   3. Minor policies.

B. Organic functions and organizational divisions
   1. Manufacturing policies.
   2. Sales policies.
   3. Financial policies, etc.

C. Types of organizational service
   1. Managerial service
      a. Administrative management } Line and staff
      b. Operative management
   2. Operative service

D. Direction of policy influence
   1. Internal.
   2. External.

General policies are statements of principles and rules of action that are intended to serve as guides to the thought and action of the entire organization. Major policies are intended to serve the major divisions and subdivisions of the organization. Minor policies serve the various departments, sections, branches, and units within the major organizational divisions. Policy-making is always an executive responsibility, whether the individual is a general executive or a minor operative executive. He must make policies within the limits of his delegated responsibility and authority. They must be made with reference to the requirements of the organizational objectives of his group. Policy must therefore be considered with respect to the objectives of each organizational element at each level of the organization.

Organic business functions are those whose contributions are so vital that the organization cannot continue to exist without them. Their nature and significance will be discussed later. It is sufficient to note here that the company's primary chains of command stem from them. They lead directly to primary operative performance. This has to do immediately and directly with the creation and distribution of the values that are the primary purpose of the organization. Policies that guide the work of planning, organizing, and controlling the performance of these functions, and the organizational elements that devolve from them, are extremely important. We hear discussions of sales, production, and financial policies in the field of manufacturing, of selling and financial policies in the field of distribution, and of similar policies in other major business fields. They may refer to general sales policies, minor production policies, or major financial policies, as the case may be.

The primary chain of command that devolves from an organic function is known as a "line" organization. Certain specialist organizations may evolve from the "line" at any organizational level where they are needed for the purposes of a division of labor and specialization. The development of line and staff organizations is necessarily accompanied by an increasing differentiation of managerial and operative functions. Classes and grades of managerial and operative service develop, such as minor administrative management and skilled operative service. We may hear in a large industrial organization a discussion of general administrative production policies. The discussion may lead to distinctions between major operative line production policies and major operative staff production policies. It is evident that these policies must be both supplementary and complementary to one another. The discussion may be confusing to an outsider, because the executives may not use such complete and accurate descriptive terminology. There are a number of reasons for this: The executives' knowledge and understanding of the particular problems and policies may be clear-cut and complete. The use of complete terminology would be cumbersome, unnecessary, and time-consuming. It might add little or nothing to the accuracy of their thinking processes. On the other hand, they may be a group of business mechanics who have no accurate, thorough understanding of policy and policy problems. One cannot

expect executives to use terminology with which they are not familiar. This devolution of policy can be carried to the point of operative performance. Motion principles, for example, may underlie certain supervisory policies.

Policies may differ also with respect to the direction of their influence. A public relations policy or a supplier relations policy, for example, originates within the organization. The direction of its influence obviously is outward from the organization. The purpose of the policy is to guide the company's thought and action in relating certain external interests and action to the organization's objectives in a manner that is mutually satisfactory. Such policies often are highly important and have far-reaching effects. The company, of course, has no command of factors, forces, and effects in its situation beyond the limits of its organization. The immediate effects of most policies are internal for this reason.

Principal Phases of Policy-Making

There are basic factors and considerations that affect any policy anywhere, whether it has to do with administrative or operative management, line or staff. There is no formula for the solution of policy problems in a narrow sense. But there is a general approach to such problems that serves as a useful guide for executive thinking. Various statements of it have been made.[7] The writer has found the following breakdown to be helpful:

1. Policy formulation.
2. Policy promulgation.
3. Policy education.
4. Policy application.
5. Policy interpretation.
6. Policy control.

[7] Northcott, Sheldon, Wardropper, and Urwick, for example, suggest the following phases: (1) location of the responsibility for policy-making; (2) definition of the subjects for which policy formulation is necessary; (3) determination of the form in which policy shall be expressed, so that it may be clear, intelligible, and complete; (4) determination of policy at the right time; and (5) determination of the means of translating policy into action.—*Factory Organization*, p. 20.

Holden, Fish, and Smith recognize three phases: determination, promulgation, and compliance. The last phase has to do largely with policy control. See *Top Management Organization and Control*, pp. 80–81.

Policy formulation is that phase of policy-making that has to do with the selection of the principles and rules of action that are to govern a particular type of activity. Policy states or implies the linking principle between objective and function. Policy formulation involves on the one hand an analysis of objectives to determine the requirements for their accomplishment. It involves on the other hand an analysis of the functions that are necessary for the accomplishment of objectives, and the related physical and personnel factors. There must be some analysis of the requirements for the creation of the values that constitute the objective. Policy formulation may involve, therefore, all the considerations affecting policy that have already been discussed. Some of the more important that affect this phase of the problem are (1) an understanding of objectives and the requirements for their proper accomplishment, (2) an understanding of functions and the requirements for their effective and economical performance, (3) the nature, direction, and rate of growth of the organization and its various elements, (4) assurance of simplicity, clarity, completeness, and logical soundness by requiring that policies be committed to writing over the signature of the responsible executive, and (5) careful consideration of all factors, both tangible and untangible, that affect the accomplishment of the mission.

There is a question, of course, as to where policies should be formulated. It has been noted that policy-making is a responsibility of every executive, in some degree, at every level in the organization. The controlling principle may be stated as follows: Policy should be formulated in the office of the executive who has the direct and immediate responsibility for the accomplishment of the particular objectives to which the policy relates. He is expected to make effective use of staff in discharging this responsibility. This does not prohibit the requirement of concurrence by designated associates who are affected by the proposed policy. It should not stop the requirement of proper approval by the designated higher authority. A minor supervisory executive may make or propose a rule for handling certain problems that recurrently affect the work of his group. He should consult his superior before putting the rule into effect. He may be asked to get the reaction of any other executives who, in the opinion of the superior, may be affected materially,

even though the decision is a minor one. We have seen that a minor policy statement must be in harmony with any major and general policies covering the particular problems as a whole. A minor executive should not be held accountable for the results of his group, however, if he cannot participate significantly in the formulation of policies that affect its work directly. His recommendation should be given the benefit of any doubt. A general executive may recommend, through the president, a general corporate policy for the consideration of the board of directors. It is the board's privilege to formulate a better policy statement without consulting the executive who originated the proposal. But this is not the usual procedure. The approving authority, whether the board or a subordinate executive, should take the responsibility for results when it overrides the recommendations of a subordinate. It may not always do so. It is human nature to feel that policy failures are due probably to errors of commission by those who applied the policy, rather than to errors of omission by those who formulated it.

How the policy is formulated should also be decided by the responsible executive. He is usually the man who has personal responsibility for the line and staff functions that enter immediately into the accomplishment of the particular objectives. It is unlikely, in a large organization, that he will investigate the problem and formulate the policy himself. He may delegate the work of policy formulation to line or staff subordinates, subject to his approval. They may study and recommend an appropriate policy. He may refer the particular policy problem to a committee of executives whose functions are affected, for their concurrence or objection. He may use some combination of these methods. That is his business. It is his policy and his responsibility when he accepts or rejects the recommendations.

This raises another question: Who should have what authority for policy formulation? The authority to originate and issue a policy may be delegated to the executive whose activities and personnel are most affected. The policy statement should be coördinated before its release with executives in charge of activities that are not under his jurisdiction, if their functions and personnel are affected. If they concur, the responsible executive may have the right to issue the statement over his signature. An important policy statement

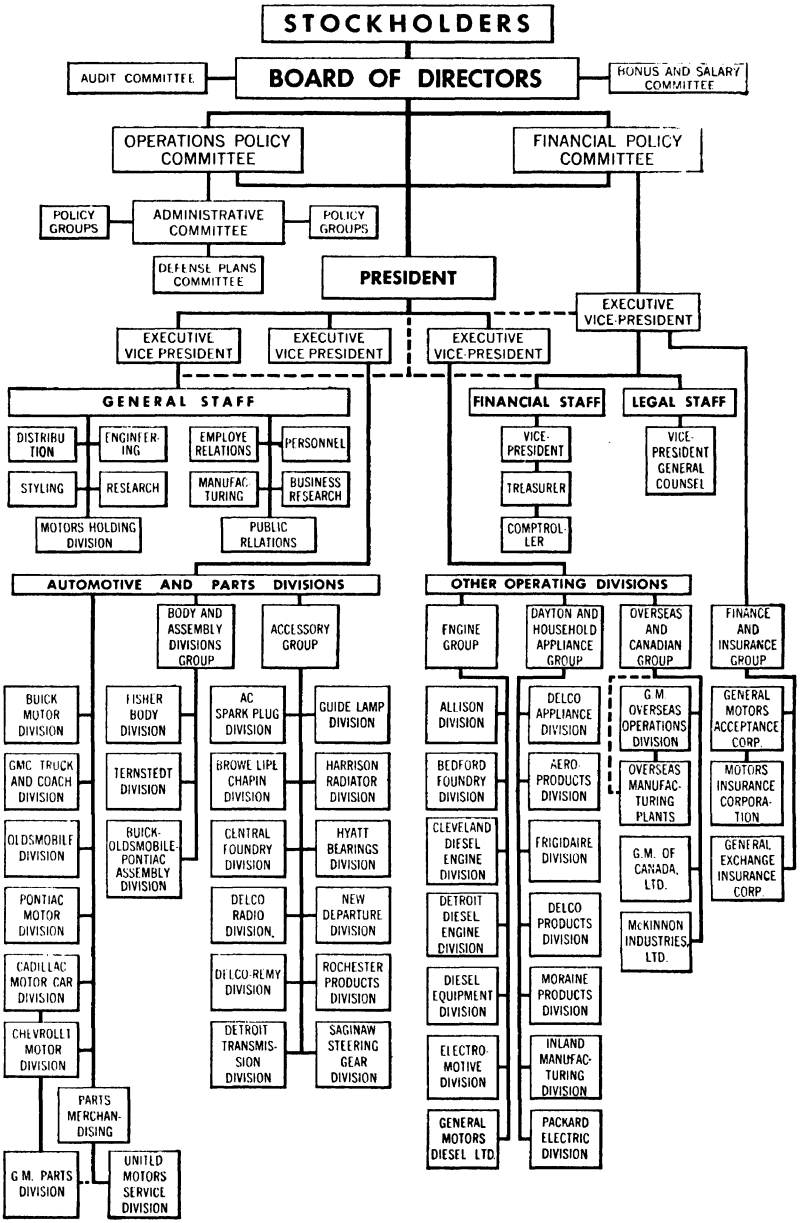

FIG. 19. Policy Committees in Large-Scale Organization. (Courtesy, General Motors Corporation.)

should be coördinated with a line superior for informational purposes or approval before issuance. The modern trend is to give subordinates the maximum practicable opportunity for participating in the formulation of policies directly affecting their work. The intent is the formulation of an integrated body of policy that represents an effective integration of ideas and interests.

Policy promulgation is the function of getting the policy down to the levels in the organization where it is to be applied. Personnel cannot be expected to apply or conform to policies about which they have no adequate knowledge. The writer had occasion to check the operating policy structure of a large corporation, during World War II, because of a serious supply failure that was associated with policy. Some official general policy statements appeared to evaporate, almost literally, at or near the third or fourth echelon below the administrative level on which they had been originated. The uncertainty as to what was or was not the applicable policy governing a particular problem was reflected in uncertainty in executive decisions at the operative levels. There were consequent instances of vacillation, confusion, friction, politics, and other organizational ills. Minor executives rushed into a "conference" whenever a problem of any magnitude arose. It was a defense mechanism. No single individual could readily be held accountable for a joint policy decision. Occasionally it seemed that the organization was producing more conferences than end product.

Policy statements, including revisions due to subsequent interpretations, should be readily available to all executives who have any legitimate use for them. They should be issued in convenient form. This applies to revisions due to subsequent interpretations. This often means nothing more expensive than a loose-leaf binder. Mimeographed statements of policies and their interpretations should be inserted in a logical order that will facilitate reference. New or revised policy statements should be supplied promptly. Any previous statements that are rendered obsolete should be collected and destroyed immediately. A policy manual that contains obsolete statements is more likely to be harmful than helpful. Policy manuals, as well as organization manuals and standard practice manuals, may be numbered serially. Each manual may then be charged against the individual to whom it is issued. This practice facilitates

Purchasing Policies

1. *Selecting Sources of Supply . . .*

In general, the Purchasing Division, in selecting and eliminating sources of supply will endeavor to conduct its activities in the best interests of the Company and simultaneously create and maintain good vendor relationships. Vendors must know that when bids are requested that the source has not been predetermined. Vendors must have opportunity at a suitable time to adequately present their product. While new sources must be sought and added as conditions warrant, we wish to build and maintain strong and enduring relationships with our tested suppliers. Frankness, fair dealing, maintenance of quality, good delivery and fair prices are elements which would have great weight in the continuation of our business with a particular source. We intend to conduct our purchasing activities so that suppliers will value our business and make every effort to meet legitimate competition.

The company policies in this regard are:

(a) To buy from sources with good reputation and with financial standing suitable for their engagements. Buyers shall keep posted, through the Company's credit department, relative to the financial responsibility of the firms with which we deal.

(b) To secure competitive bids unless there is only one source of supply; or it is an emergency order; or the amount is so small as to preclude the possibility of making a saving; or sufficient evidence from previous bids and experience is available to justify the placement of an order.

(c) To accept the low bid unless superiority in quality of product or service (including delivery) can be clearly demonstrated to be of value to the Company; or unless the bid is of the nature of "buying in" to eliminate competition with the idea of future recoupment.

(d) To buy from the vendor or vendors, contiguous to the point of use, other considerations being equal.

In support of the above policies, the Purchasing Division must maintain records to adequately support the selection of sources of supply, due consideration and weight, appropriate to the type and size of purchase, having been given to the following factors and criteria:

(1) Potential sources
(2) Relative standing and facilities of vendors
(3) Company experience as to vendor reliability
(4) Customer acceptance (if available)
(5) Single versus multiple sources
(6) Manufacturer vs. distributor
(7) Geographic location
(8) Purchasing vs. manufacture (buy or make)
(9) Quality and technical suitability
(10) Service and guarantee
(11) Price and terms

2. *Making Commitments—Placing Purchase Orders or Contracts*

Any transaction between purchaser and vendor in which materials, equipment, facilities or service are exchanged for financial or other considerations, involves a contract, the mutual undertakings and obligations of which should be a matter

FIG. 20. A Page from a Policy Manual. (Courtesy, Bigelow-Sanford Carpet Co.)

the control of policy as well as its promulgation. Fewer and fewer executives have private secretaries as the point of operative performance is approached. Their copy of the latest interpretation of a particular policy statement may be a flimsy carbon copy, if they get one at all. They may do no more than glance at the carbon copy at the time of its receipt. They may recall the statement vaguely sometime later when a problem arises that involves the application of the policy. They may not be able to find the statement. They think that they are too busy to look it up. They may act on the basis of the statement as they recall it, or on their "judgment." The results, in either case, may be bad. There has been no policy promulgation, in any event, when the policy statement issued serves chiefly to fill up a filing case.

It is surprising how many people can read the same policy statement and come up with a different understanding of what it means. Policy cannot supply an effective basis of voluntary coöperation and self-coördination when this happens. An intelligent application of a policy requires that it be understood as well as known. Policy education often is an important phase of the policy-making function for this reason. There is a limit to the size of committee that can be used effectively for policy formulation. Time limits the number of subordinates who can participate directly in policy development. There are usually key subordinates on lower levels who have little knowledge of a new policy prior to its approval. The conference training method is frequently used to impart an understanding of particular policies and their significance. It provides a form of participation. The comments and criticisms of the group may supply the basis for subsequent policy revision. Explanatory articles may be run in company newspapers or magazines. Other means may be used for policy education.

A policy may be known and understood, but not accepted by the group that must apply or conform to it. It probably will receive only lip service and routine compliance in such a case. This may be due to the fact that the individuals involved do not believe that the policy is sound. They may have doubts concerning its practicality under existing circumstances. They may feel that somehow it jeopardizes their personal interests in the situation. The application of a policy is not likely to be highly effective unless it is accepted.

Participation in policy formulation facilitates acceptance. A continuation of policy education may be required. Coöperation with executives on lower echelons in working out procedures for policy application may be helpful. This is often the job of a staff group, usually the group that has staff responsibility for policy recommendations in the particular field of activity. A considerable degree of policy indoctrination may be required when decentralized performance and remote control are involved. There is a minimum opportunity for policy interpretation and control in such cases. As Webster Robinson pointed out, "The executive may dictate the policies, but it is the worker who carries them out. The big problem, then, is to inculcate in every member of the organization, even to the minor clerks and office boys, the spirit and letter of the policies which the company has bound itself to follow."[8]

Policy application is that phase of the policy problem which has to do with the day-to-day use of policy by coördinate and subordinate personnel in making managerial and operative decisions. It is the stage at which the policy must stand up under the pragmatic test of results. Either it proves to be a sound, helpful guide for thought and action, or it doesn't. The success of the policy depends on the ability of the individual who is responsible for its application, as well as the effectiveness with which the previous phases of policy-making were performed.

There is a phase of the policy problem that may be called interpretation. It is the function of clarifying the meaning and significance of a policy as it relates to a particular situation. It is never possible to make a policy statement so clear-cut and understandable that no questions concerning its intent or application to particular situations ever arise. The mental limitations even of the ablest executives preclude it. The educational phase cannot anticipate all the situations in which some application of a particular policy may be required. Policy interpretation is usually the responsibility of the immediate superior of the individual who is having difficulty with the policy. An executive must occasionally make an important interpretation that appears to have general application beyond the immediate situation. It may be necessary because of general changes in the conditions of performance. Such interpretations should be

[8] Webster Robinson, *Fundamentals of Business Organization*, pp. 30–31.

coördinated properly with higher line and staff authority. They should be committed to writing when approved. They become the basis for further policy formulation or revision.

Policy control is concerned with determining the effectiveness of current policies and the degree of conformity with them. It is concerned with the enforcement of reasonable compliance. It is, in part, the responsibility of the inspector general in a military organization. It is, in part, the responsibility of the cognizant staff executive in a business organization. The superior line executive has the final responsibility in both types of organization. It has to do usually with group action rather than project action. Policy control is therefore a phase of administrative control. The general requirements for such control will be discussed later. It is sufficient here to say that there must be available current information concerning policy applications that will throw light on the effectiveness of the policy. It must be compared with whatever precedent indicates the requirements of sound application. This information may be obtained in a number of ways. Each staff group on each organizational level is usually expected to exercise staff surveillance over corresponding staff functions on lower echelons. Headquarters staff executives or operatives may spend considerable time in the field. They visit the various divisions of the company. They advise and assist corresponding divisional staff executives. They are in a position to see how policies in their areas of staff responsibility are actually working. They are expected to report policy deficiencies. Responsibility for the solution of a policy problem rests on the principal divisional executive and his staff. A number of subordinate line and staff executives in the division may be affected by the problem. The staff executive who has technical responsibility may act as chairman of a committee that advises on a solution. The quality manager, for example, may act as chairman of a quality committee in a manufacturing plant. Its purpose is to bring about a meeting of minds concerning the solution of problems of quality. This includes problems involving policy decisions that affect quality. The membership of the committee probably includes representatives of sales, engineering, methods, and production. It may include the representatives of any other major departments whose work affects or is

affected by the quality control function. The committee members' experiences with the particular policy may throw light on its soundness as it affects quantity, time, and cost, as well as quality. The result may be a modification of policies governing production and maintenance. Any significant change will modify quality organization and methods. Some obsolete or unused policies may remain in the policy structure, despite executive vigilance and adequate information concerning policies and their use. Some organizations audit their policies periodically for this reason. They submit them to the executives who are chiefly affected, with a request for comments and suggestions. It is evident that the function of policy control completes the circle. It leads back to policy formulation.

Organization for Policy-Making

There is usually no formal staff organization that carries on policy-making as its principal business. Policies are statements of principles and rules that guide the thought and action of an organization in the accomplishment of its objectives. The accomplishment of assigned organizational objectives is the responsibility of the company's executive leadership. Policy-making is therefore part of the work of every executive in some degree. It becomes a major part of the executive job as we approach the top of the organization. Sometimes we find a subcommittee of the board of directors that is concerned solely with the formulation, promulgation, interpretation, and control of corporate policy. Staff departments for top administrative planning and control are developing. They assist the president and the board chairman in solving administrative policy problems. We find staff assistants to general or major executives who are concerned with policy coördination on lower organizational levels. Somewhere, someone should be responsible for periodically auditing policy manuals or other official policy statements. Such statements should reflect currently any important changes, developments, and interpretations underlying the work of the organization. Observation indicates that in too many concerns there is no one except the responsible line executive, and he is too busy. The result is frequently a serious loss of business economy and effectiveness.

The Principle of Participation

Reference has been made to the participation of subordinates in the solution of policy problems. The greatest practicable participation in the performance of any managerial functions is desirable, provided that there are no important violations of the principles of unity of command, direction, or single accountability. Participation promotes an understanding of the activity. It develops an interest in it and improves morale. It makes maximum use of the brains and ability of the organization. The Principle of Participation says: A feeling of "worth-whileness" and "belonging" tends to develop from participation in the making of decisions underlying the accomplishment of organizational objectives. It tends to integrate the interests and abilities of individuals with the organization's purposes.

Policy affects broadly the work and interests of the organization. There is a tendency among progressive organizations to extend participation in policy formulation to personnel on levels considerably below that on which it takes place initially. The usual procedure is to refer a preliminary statement of the policy to committees of interested personnel on lower levels, down to or immediately above the level of application. Each committee returns the statement with its criticisms and recommendations. No committee or executive in any intervening echelon should have the right to change the report in any way. The effect is apparently to develop a proprietary interest in the policy. It results in policy understanding and acceptance. In addition, the initiating executive or committee secures some good ideas that may improve the proposed policy. The principle of participation involves delegation of advisory and recommendatory rights of decision. It does not require the delegation of any rights of command beyond those that are normally necessary for the particular subordinate positions.

The Basic Importance of Policy

The basic importance of policy has been emphasized throughout the discussion of it. It is difficult to overemphasize it. Over any great length of time, no action can be better than the principles on which it rests. It is sometimes forgotten, however, that an effective but unsound application of a sound principle can produce an effective

result. Hitler proved this. The principles on which he based his actions were, in many cases, sound enough. It was the manner of their application that often was unsound. However, an unsound application of a sound principle must produce an unsound result. Hence there may be effective accomplishment of the immediate objective, but failure to accomplish the ultimate objective. The same thing sometimes happens in business on a smaller scale. An effective but unsound application of a sound business policy may result immediately in business success, but ultimately in failure. An unsound policy may result immediately in failure. It is easy to understand, therefore, why our best business brains spend much of their time on major and general policy problems.

CHAPTER 7

BUSINESS FUNCTIONS AND FUNCTIONALIZATION

The Significance of Business Functions

It was noted previously that a business organization is an economic institution. It receives its sanction, in the United States, from organized society in the form of the right of private property. This right is a basic requisite for individual liberty anywhere. It is a right that is delegated to private enterprise in the belief that the public will be able to enjoy more goods and services of better quality at a lower price than it would under some form of public enterprise based on some form of state capitalism. These goods and services are wanted by individuals and groups for the satisfactions, tangible or intangible, that they provide. These satisfactions are the values for which the customer will part with his hard-earned dollar, provided that their price is reasonable and he can afford to pay. Values do not create themselves, however. They are created by work, both mental and manual. The business organization is composed of individuals and groups who are coöperating in some degree for the accomplishment of its service objectives. They are doing so under the direction and supervision of executive leadership. They are motivated, of course, by a desire to accomplish their personal objectives, whatever they may be. There is nothing wrong in doing what comes naturally, provided that personal interests are reasonably subordinated to organizational interests.

It is evident that the concept of business functions must be at least as broad as the concept of business objectives from which it is derived. A function therefore is any phase of the work of the organization that is necessary for the achievement of any proper or re-

quired organizational objective. It should be possible to distinguish it clearly from other phases of the organization's work. It should be separable from other such phases. Thomas R. Jones points out that "by function is meant a group of logically related and interdependent activities."[1] What is logical obviously depends on the purposes for which functions are separated from the original body of work, and grouped in work assignments. There are many possible purposes. Some of them are highly important. It is evident that what capital must be provided in what form depends on what work must be done. A milling machine cannot directly implement the performance of any primary operative function in a shoe factory. It is a piece of metal-working equipment. A last cannot implement the performance of any primary operative function in a metal-working factory. It is a necessary item in a shoe factory. The knowledge, background, training, and experience that are required to operate a milling machine are quite different from those required to operate a lasting machine. Again, the type, kind, and amount of personnel that must be provided are determined basically by the kind and quantity of work that must be done. This is determined ultimately by the customer. He has, under a democratic form of government, the right of freedom of choice of the goods and services that are offered in the market place.

Limitations affecting freedom of action as executives, and the available resources, may limit the organization's ability to give the customer exactly what he wants when he wants it. Time may interpose a limitation. We usually cannot supply at any given time the best implementation or personnel. We cannot always use the best methods for this reason. These factors condition the economy and effectiveness with which functions are performed. Modifications of their characteristics and the relations between them are taking place constantly. They are of the essence of progress. Increases in our living standards above a subsistence level depend in large part on the ability of owners and managers to supply better physical factors of implementation. This implementation does not apply itself. It is applied, for the most part, by operative employees under the leadership of executive employees. These people, both executive

[1] Thomas R. Jones, *Theories and Types of Organization*, p. 10.

and operative, have personal interests. They have to do with their interests in themselves, their homes, and their social organizations and other groups. These people are citizens and voters. The politician is well aware of this fact. The conditions under which business functions are performed affect these interests. There can be no major change in the basic nature and requirements of business functions unless a corresponding change in customer needs and desires appears. Otherwise, the particular business organization may fail to accomplish its primary economic mission. In such a case, the personal interests of organization members of all grades may be injured seriously, as well as the public interest.

Problems of work and work relationships in consequence are fundamental. Satisfactory solutions require complete, accurate facts. Techniques for securing such facts have been developed. They include job analysis, motion and time study, and other techniques that will later be briefly reviewed. They have to do primarily with two basic problems, organization structure and business procedure. Functional analysis, whatever the technique, is a process for determining the nature and significance of the various work assignments in the organization. It collects and classifies facts concerning them. It makes functional definition possible. Its objective is the determination of the requirements for functional harmony and balance. It results in an effective and economical "functionalism." This term "can mean nothing but distinctions between kinds of duties, and wherever there is such distinction there is functionalism, whether it be of a department or of individual jobs within a department."[2] Functionalization may be any process for differentiating, grouping, and relating functions in the development of organization structure or business procedure. It should be done on the basis of facts collected through functional analysis.[3]

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[2] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 491.

[3] Henry S. Dennison believed that it has to do with "the establishment of departments to give special types of service, usually advisory, to the more strictly operating departments."—*Organization Engineering*, p. 143. This concept of functionalization is narrower than the one offered above. It is concerned, of course, with planning and organizing staff departments. Webster Robinson, on the other hand, held that functionalization was "that fundamental of organization which requires that all proper functions of a business be recognized, granted existence, combined where similar or complementary, and placed under the

Organic Business Functions

It is obvious that business institutions are vital to the continued existence of any industrial economy. Their growth and development are necessary. Their effective, economical operation is necessary for the public well-being. This suggests that there must be certain organic functions of business organization. They must be functions whose performance is vital to the continuation of the particular activity. They may be defined as functions in a field of business activity that are so vital that business activity will cease unless they are performed somehow, somewhere, at some time, by someone, in the minimum degree required for the satisfactory achievement of primary service objectives. The values contributed by such functions are important basically. Any failure to provide them adequately will result directly, and probably immediately, in the organization's serious failure to accomplish its economic mission. The organization will cease to exist shortly, if the failure continues. An understanding of the theory of both line and staff organization depends on an understanding of the concept of organic business functions. It is fundamental to effective business thinking.

The concept of organic business functions is not new. It is probable that most successful general executives, in all types of business organizations, have recognized its existence. Some consultants and executives have formulated their own concepts and stated them in writing. We have, therefore, a record of their thinking. It discloses the usual differences of opinion. The reasons for these differences, however, are significant. A consultant has usually a temporary staff relation to his client's organization. He has the point of view of a staff executive in most cases. A. Hamilton Church and C. E. Knoeppel were well-known management consultants in their day. They were interested greatly in staff control problems. Their statements of "organic" functions had to do with the organic management functions, rather than with the organic service functions, of the business organization.[4] The major operative or minor administra-

direction, supervision and control of properly qualified executives who have only one or at most a few similar functions to perform."—*Fundamentals of Business Organization*, p. 36. This is a much broader concept.

[4] A. Hamilton Church said that the "organic" manufacturing functions were design which originates; equipment which provides the physical conditions;

tive executive who heads an operating division of a large enterprise has a different viewpoint. We shall see that his division represents the devolution of an organic business function. Such men may emphasize the organic functions of their business field. They usually include certain major staff functions that are important in the operation of their organic divisions.[5] The latter are usually technical staff functions.[6] The general or "top" administrative executives should have a broad, fundamental, long-range viewpoint. They should be much concerned with the ultimate objectives of the organization. They should be little concerned with the accomplishment of current operative projects. Their principal interests should therefore be in the basic functions that may be regarded as organic. They should be reflected in their analyses of basic business functions. The analyses made by Henri Fayol and James D. Mooney tend to support this contention.[7]

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control which specifies duties and which orders; comparison which measures, records, and compares; and operation which makes. *The Science and Practice of Management*, pp. 28–38. C. E. Knoeppel considered the following functions fundamental: investigation, coördination, records, planning, and standardization. See P. F. Walker, *Management Engineering*, McGraw-Hill, p. 257. It is evident that these analyses have to do chiefly with organic management functions, particularly with control.

[5] T. B. Fordham and E. H. Tingley, for example, were manufacturing executives. They felt that "in developing the theory of organization within the manufacturing division itself, the rule holds that every manufacturing division must contain the five fundamentals of plant, equipment, materials, labor and production."—*Organization and Budgetary Control*, Ronald Press, p. 138. We shall see that only one of these, production, can be regarded as an organic business function. The analysis by Northcutt, Sheldon, Wardropper, and Urwick shows the influence of operating experience. It is much broader, however. They say: "In every business there are certain functional groups of activities which must be performed." These functions are (1) the sales function, (2) the production or purchasing function, (3) the personnel function, (4) the finance function, and (5) the standards and records function.—*Factory Organization*, pp. 13–14. It will be seen shortly that sales, production, and finance are organic business functions in a manufacturing industry.

[6] This term may refer to any group whose work requires some specialized background, training, and experience in some phase of creative planning. The group may render some specialized service of facilitation. It is attached to a line organization but is not part of it. It serves the line and other staff organizations.

[7] Henri Fayol was a top administrative executive in the mining industry and in the government of France. He said: "We can divide all of the operations which occur in business undertakings into the following six groups: 1. Technical operations, 2. commercial operations, 3. financial operations, 4. security operations,

The test of universality also supports the concept of organic business functions. An adequate sample of organization charts of concerns in the same major field of business activity will show certain major organizational divisions that are present in all these concerns. It will show certain divisions that are not. The functions of the first group should be more fundamental, certainly, than those of the second. Such an analysis in the manufacturing industry, for example, will produce a picture similar to the following:

Concern	Principal Organizational Divisions—Manufacturing Concerns					
	1	2	3	4	5	6
1	Production	Personnel	Distribution	Financial control	Finance	Engineering
2	Production	Engineering	Distribution	Purchasing	Finance	Personnel
3	Production	Supply	Distribution	Personnel	Finance	Financial control
4	Production	X	Distribution	Y	Finance	Z

It indicates that there are three divisions whose presence is universal in a manufacturing organization: production, distribution, and finance. The universality of these functions indicates a universal need for the values they create. It suggests, therefore, that they are organic in nature. The other functions evidently vary in importance between fields of manufacturing and between companies. There tends, however, to be considerable uniformity between companies in the same field with respect to them. They are obviously of major importance; otherwise, the heads of these divisions would not report

5. accounting operations, and 6. administrative operations. Any undertaking, whether it is simple or complicated, big or small, always contains these six groups of operations."—*Industrial and General Administration*, pp. 8–9. The first three are organic business functions. His security and accounting functions are staff. His administrative operations are managerial.

Mooney and Reiley have said that "these departmentalized functions may differ in various kinds of distribution organizations, but in some form there are four that always appear. These four are finance, sales, supply and service."—*Onward Industry*, p. 499. Mooney was president of the General Motors Export Corporation when he first developed his concept of basic functions. They were considered in the Export Corporation to be finance, sales, supply, and manufacturing.—See Edgar W. Smith, *The Organization and Operating Principles of the Export Division*, p. 14.

directly to the principal administrative executive. It will be shown later that such organizations are major staff divisions. They derive their importance from the need for specialized assistance in handling basic managerial factors and functions. They are not organic business functions, for other reasons in addition to their inability to pass the test of universality. They evolve from such organic functions. It is relatively simple to apply this test to large organizations in the manufacturing industry. It requires little more than a visual inspection of organization charts. It is less easy to apply it in small organizations. Functional differentiation increases with organization growth and size. All the functions of a one-man concern are integrated in the person of the one man. No distinctions between organic business, managerial, or operative functions, line or staff, are visible. There is considerable evidence that the concept of organic functions is a universal organizational concept. There has not been enough general business research, as yet, to establish beyond reasonable doubt the exact nature of the organic business functions of each major business field. There is evidence, for example, that the organic functions of a distributive industry are procurement, merchandising, and finance. In the telephone communications industry they appear to be plant, traffic, and commercial functions. They are probably maintenance, traffic, and finance in the transportation industry. They seem to be sales, claims, and finance in the insurance industry. There is enough evidence, however, to establish beyond reasonable doubt the existence of organic functions.

Most business students, furthermore, have noted a marked similarity in the principal procedures of different concerns in the same major business field. A business procedure serves a number of important purposes. The provision of a basis of coördination is one of them. It provides this basis by specifying the correct order of performance of functions entering into the accomplishment of some type of business project. It tends to cut across organizational lines in consequence. These procedural similarities could not exist unless there were similarities in the principal functional divisions of organizations in the same major field. There would be no point in presenting discussions of basic business procedures in management texts. These similarities could be due, of course, to basic similarities

in both line and staff functions in a given business field. But there are basic similarities in procedures for handling similar major problems between, as well as within, major business fields. They are further evidence of the existence of organic business functions.

There must be a logical explanation for such a fundamental business concept. It rests on the concept of the business organization as an economic institution. The primary mission of business has to do with the creation and distribution of the economic values upon which the standard of living of industrial society rests. The economist's concept of production has to do with the creation and distribution of "utilities." The latter term is defined here as the characteristic attributes of goods or services that enable them to render to the consuming public the particular satisfactions that it needs or desires. These utilities are affected by such basic considerations as time, place, form, and possession. A value may be any satisfaction of a need or desire. The satisfactions that the customer demands from goods or services are, therefore, the primary service objectives of the business organization. Its organic functions consequently must be those that are vital to the economic production of the goods and services that provide the desired values. They are, accordingly, the creation of economic utilities and the distribution of the resulting benefits. However, the general standard of living in a highly developed industrial society depends largely on capital. So a third organic function must be added—the provision of capital. Without it, the first two functions cannot be performed in a manner that will meet the requirements of such a society.

The growth of a business necessarily results in the growth of its organic functions. The latter requires the separation of its phases, both managerial and operative, to provide for a division of labor and an increasing need for specialization. It is growth downward. It leads directly to operative specialization in the creation of primary utilities. The resulting hierarchy of function, responsibility, authority, and accountability is known as the primary line organization, or "line." The organizations that grow out from the line at various levels are staff. It is evident that the concept of organic business functions is of fundamental significance with respect to the development of line and staff structures.

It should be noted, in passing, that the requirement of *three*

organic functions does not necessarily apply to other major fields of human activity. It applies in the field of business activity because business is an economic institution. Hence the concept of utility governs. The ultimate general objective of military organization is national security. Its immediate objective is the destruction of the fighting power of an actual or potential enemy. Its objectives are not primarily economic. The ultimate general objective of religious organization is eternal salvation in some form. Its immediate objective is a moral condition of the individual's mind that will make him eligible for such salvation. The objectives of political organization are facilitative values that aid the accomplishment of the objectives of all the major fields that compose an organized society. With increasing socialism, however, the state tends to become an end in itself. Its general objectives can become the personal objectives of those who control it. They are not primarily economic in either case. It is probable that organization in each major field of human activity must have its organic function or functions. They cannot be the same as organic business functions. They must be related to the latter in some manner because of the natural interdependencies of all forms of organized human activities.

The tests of the organic nature of a business function may be summarized as follows: (1) The function should meet the test of universality. (2) Its contributions to the accomplishment of the organization's general service objectives must be of a basic, vital nature. (3) Direct functional devolution from an organic function, in the sense of a continuous growth downward, results in primary operative specialization. No staff function can meet this test. (4) Organic functions cannot be integrated with other organic functions, or with their subdivisions on the same organizational level.

These tests raise a question concerning the organic nature of finance. Does its devolution lead to primary operative specialization? Capital is necessary, of course, for the production of goods and services in the quantity, quality, and price range required to sustain a high standard of living. Those who have wished to accelerate the change from private capitalism to state capitalism have for this reason promoted confiscatory taxation, instigated unreasonable, cost-increasing demands by labor unions, or taken other steps that tend to dry up the sources of private capital. Statistics such as power

production show a high correlation between the increase in capital application and in manufactured wealth during the growth of the United States. They indicate that capital is productive in itself. These facts would support the necessity for the proper performance of the finance function, but not necessarily its organic necessity. Capital in the form of cash is a transitional form of wealth. It is potentially productive. It is actively productive in such forms as plant, equipment, tools, inventories, and others. The responsibility and authority for the conversion of capital from a form that is potentially productive to one that is actively productive are delegated by the top administrative leadership of the organization to other line organizations. They are the using agencies. Otherwise, one primary chain of command would have responsibility and authority for the making functions at the point of primary performance. Another primary chain would have responsibility and authority for the use of physical resources and labor, the basic factors in performance. Such a situation would violate the Principles of Unity of Command, Unity of Direction, and Single Accountability.[8] The processes for converting and applying capital are subject, however, to various staff financial controls. A brief examination of the procurement function will clarify the problem. The purchasing department is a staff organization in manufacturing industry. It is usually attached to the line production organization at a high level. The materials, supplies, and equipment that are purchased by the department generally have no utilities in themselves that are directly and immediately salable to the public. The application of primary personnel and equipment to primary materials by the line production organization does result directly and immediately in the production of salable goods and services. A distributive industry, on the other hand, is not responsible primarily for the creation of form utilities. The procurement function in such industries provides goods that have directly salable utilities. The utilities are in them when they are bought. Procurement may be regarded, therefore, as an organic function of distribution. Accordingly, for the

[8] These principles emphasize the fact that organization effectiveness is not likely unless each group of activities is headed by a single leader to whom all members of the group must render an accounting for the proper discharge of their responsibilities.

reasons stated, it is a staff function in the first instance and a line function in the second. Capital has entered, in both instances, directly and immediately into the provision of goods and services that satisfy the organization's service objectives. The money for the procurement of both physical and human resources was supplied by finance. The function of providing productive capital at the point of primary operative performance evolved logically from the finance function, but by delegation through the using chains of command. Such capital is an organic factor in operative specialization, both primary and secondary. It is believed that finance must be regarded as an organic business function for these reasons, even though it does not meet the test of devolution within its own chain of command.

Organic functions cannot be integrated with other organic functions, or their subdivisions, for a number of reasons. There are basic differences in the nature of the utilities provided. Different requirements are set up for human characteristics and abilities on the one hand and the characteristics and capacities of physical performance factors on the other. The owner of a very small plant may have only a salesman and a mechanic working for him. His financial problems are his personal concern. He may assist either his salesman or his mechanic as his load of work demands. He usually cannot put the salesman on the mechanic's job when the latter becomes ill. He will not get a satisfactory production job if he does. The converse is equally true. It is more likely that the owner must temporarily add the mechanic's job to his own. An organic function can be integrated with the top leadership function only in very small organizations during emergency situations or serious declines in business volume. Such an integration is a retrogression that tends to result in a "one-man" organization.

It has been noted that the organic management functions are the basic functions of executive leadership—the functions of creatively planning, organizing, and controlling the work of others. This suggests that there should also be organic functions of operative service. There are. The concept is not well recognized or well developed, however. There are, for example, such primary functions as milling, drilling, and planing in metal-working concerns in the field of manufacturing. Some practical use of the concept is made in solv-

ing such problems as job evaluation and wage and salary administration.

There is necessarily a direct relationship between the concept of organic business functions and the concepts of organic managerial and operative functions. An attempt has been made in Figs. 15 and 21 to show this relationship graphically. It may be summarized as follows: The concept of organic business functions is a vertical concept in organization structure. The devolution of organic functions leads from general service objectives to specialization and a division of labor in the performance of operative functions, both line and staff. The concepts of organic managerial functions and organic operative functions are horizontal concepts in organization structure. They cut across all chains of command, both line and staff.

Functional Differentiation and Integration

Operative specialization, both line and staff, is an effect of the growth and development of an organic function. Separation of the work of the organization into its component elements takes place with increasing business volume. It is caused by the need for increasing division of labor. The continuing development of business processes necessitates specialization. The nature of the separation is conditioned by the nature of the organization's service objectives and their requirements. This phenomenon of functional separation is known as the process of functional differentiation. It is universal in all forms of human activity in which organization is necessary.[9]

The kind of business change that takes place affects the characteristics of functional differentiation. There are long-term changes in the business volume of a concern. They are permanent for all practical purposes of organizational planning. They are due to the continued growth or decline of the business. They are known as

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[9] Mooney and Reiley use the term "functionalism" to indicate distinctions between duties, as noted previously. They consider that there is a Principle of Functionalism: "By the term functionalism, evidenced as a principle of organization, we mean the differentiation or distinction between kinds of duties."—*Onward Industry*, p. 45.

Alvin Brown uses the term "partition" to indicate the separation of functions through differentiation. He discusses it in connection with the division and delegation of responsibility.—*The Organization of Industry*, p. 75.

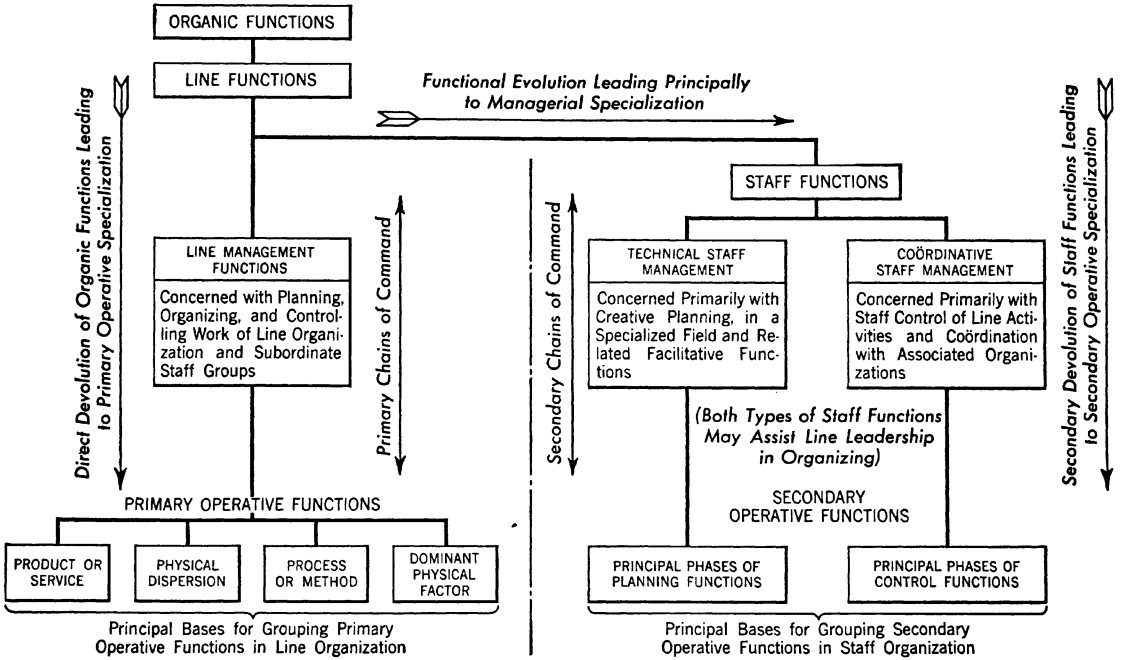

FIG. 21. Basic Functions and Functional Relationships.

"secular" changes. They are a measure of the concern's long-term success when compared with the secular trend in the particular industry. There are short-term changes in a concern's business volume that are associated with the cyclical rise and fall in the volume of general business activity. Secular changes may develop slowly over a period of decades. Cyclical changes are usually completed in less than a decade. There are also short-term changes that are associated with the seasonal cycle. Seasonal changes are necessarily completed within the year. It is evident that the differentiation of functions may be temporary or permanent. It tends to be temporary if it is associated primarily with seasonal and cyclical changes. It tends to be permanent if it is associated primarily with secular changes in business volume. There are also unpredictable and irregular changes in business volume that may be due to many current causes. They cannot, therefore, be taken into account in business planning.

Functional integration is the reverse of functional differentiation. It is the process of recombining functions in the parent organizational elements as the business volume declines. It is an important functional process during seasonal and cyclical declines in business volume. It may be necessary when a concern is losing ground competitively, with a consequent drop in volume of business.

An understanding of these processes is necessary for the solution of many business problems. Some of them, for example, have to do with the division and delegation of responsibility, the design of organization structure and business procedure, the provision of organizational capacity for continued growth, the development and maintenance of organizational flexibility and stability, certain problems of control, and other problems of a functional nature. These are problems that usually require "top-shelf" managerial consideration. It will be necessary to give them further consideration later. It is sufficient here to summarize, as follows, the principal considerations that affect most problems of functional differentiation.

1. Functional differentiation is a process of functional separation that takes place with changing objectives and increasing business volume.

2. The immediate cause of functional differentiation is the need for a further division of labor or increasing specialization, or both.

3. Functional differentiation and the resulting functionalization may be permanent or temporary.

4. Differentiation tends to take place despite personnel limitations or personal opposition. The resulting organizational and procedural changes are, or should be, due to the need for the better accomplishment of objectives to meet competition.

5. It results in problems concerning the proper relationships between the differentiated functions that should be established and maintained. These relationships may affect organizational morale, as well as structure and procedure.

6. The subsequent development of line and staff organization tends to proceed through certain definite and distinct stages. An understanding of them is necessary for the correct diagnosis of organizational ills.

7. There is a normal tendency to carry functional differentiation beyond the point of diminishing returns.

8. The necessity for and rate of differentiation may vary greatly between functions in the same concern. Effective, economical functionalization cannot be accomplished by formula.

9. Functional differentiation creates supervisory problems at every organizational level. The number of subordinate executives and organizational elements which can be supervised personally is limited.

10. Functional integration tends to take place with decreasing business volume. The time and money spent previously on training and development may be largely lost if this integration is done poorly.

Functional Devolution and Evolution

All functions of a one-man business must be performed by the owner-manager-operator. They are integrated completely in his person. The business may grow if this individual is able, industrious, and successful. The first functions to be separated are the organic functions of the business. We point out again that this differentiation results initially from the necessity for a division of labor. It provides for some basic specialization. All line and staff organizations develop subsequently as the result of the further differentiation of these organic functions. The fact that a group of people may

pool their capital, form a corporation, buy millions of dollars' worth of equipment, hire thousands of employees, and take other steps to organize a large enterprise, constitutes no exception to the statement. It may be necessary for entrepreneurs to start at a point that is far above thet one-man concern in the scale of organization size. The general growth of the industry and the conditions of competition that have developed may make it necessary. For example, there is enough business in the automotive industry to support a few small concerns that make special motor vehicles. It was necessary for Kaiser-Frazer to organize on a much larger scale, for it wished to compete with such mass producers of personal transportation as General Motors, Ford, and Chrysler. Any large organization inherits some of the problems resulting from organizational growth, whether or not it was organized initially on a large scale. Both organization structure and business procedure are still effects of functional differentiation.

The direction of organizational growth is downward from these organic functions. They are the sources from which are developed such organic divisions as sales, production, and finance in a manufacturing concern. The heads of these divisions in a small concern delegate operative functions and responsibilities first. Business growth will result if the business succeeds. The heads will be forced subsequently to delegate operative management functions and responsibilities. An increasing delegation of administrative duties and responsibilities follows. There is a certain minimum of administrative management responsibility and authority that cannot be delegated to subordinates without abdicating the top leadership responsibilities. It is possible to delegate all managerial functions and responsibilities up to this point. Responsibilty for general admnistrative planning and policy-making is usually the last of the managerial functions to be differentiated. It is the area of responsibility for the development of the fundamental ideas on which the continued progress and success of the business depend.

This process of functional growth is known as devolution. It is the process of differentiation to accommodate a growth in business volume which results in a vertical, downward growth of organization structure. It leads to either a line or a staff division of labor and consequent specialization. The existence of some basic process of

organizational growth was recognized early by students of business organization.[10] Their analyses did not add greatly to our understanding of line and staff organization, however. Recent writers have distinguished between the processes of differentiation and of delegation as they enter devolution.[11] They are related but different. The order of their relationship is important. There must be some knowledge of the values that are wanted by the customer, and of how these values must be built up or distributed to the customer, before there can be any intelligent grouping of functions in organization elements. There must be an understanding also of the values that are needed by the organization to do the job, and the values that must be provided for its members. Each organizational element, great or small, must have its primary, secondary, or collateral service objectives. The functions of the group constitute the work that it must perform to preserve, acquire, create, or distribute whatever values constitute its objectives. These functions break down into subfunctions and duties that may be assigned to subordinate groups and individuals. Responsibility, whether operative or executive, is merely an obligation. One accepts it when one takes a job with an organization. It is an obligation to perform assigned duties under the direction of executive leadership to the best of one's ability. Authority is the right that corresponds to the obligation. It includes, in some extent and degree, the right to make necessary decisions concerning what should be done, how it should be done,

[10] A. Hamilton Church, for example, attempted to trace the successive devolutions of "organic functions of manufacturing" through seven stages: the beginning of industry, operation, equipment, design, comparison, control, and the final separation of administrative and determinative elements of management. *The Science and Practice of Management*, p. 73.

[11] Oliver Sheldon noted: "Industry is an organic growth, and its functions are the outcome of devolution from the original state wherein all functions were combined in one individual."—*The Philosophy of Management*, p. 51.

Mooney and Reiley referred to the "scalar process." There must be a process, in their opinion, that is "formal in character, through which coordinating authority operates from the top throughout the entire structure of the organized body. This is called the Scalar Process. Scale means steps, hence something graduated. In organization it means the graduation of duties, not according to differentiated functions, for this involves another and distinct principle of organization, but simply according to degrees of authority and corresponding responsibility. It is our point of view that authority enters into process through the scalar chain."—*Onward Industry*, p. 31.

where and when action should take place, who should be responsible and why. It includes, in the case of an executive, certain specified rights of command. An executive cannot properly discharge his leadership responsibilities unless he can require reasonable compliance with necessary orders and instructions. There can be no proper discharge of responsibility in any case unless the responsible individual has adequate authority. The nature and limits of responsibility and authority are established by delegation. They make it possible to establish accountability. This is the requirement that a proper report concerning the discharge of a person's responsibility must be rendered to the executive under whom he serves, when and as requested. It is evident that the total process of devolution must include the devolution of objectives, functions, responsibilities, authorities, and accountabilities. It necessarily includes the processes of differentiation and delegation that are invloved. This will be discussed further in connection with the problems of responsibility, authority, and accountability.

The direct, downward devolution from general objectives and organic functions leads to the division of primary operative labor and consequent operative specialization. There is an increasing separation of managerial and operative functions as this process takes place. This phase of the process results in the development of the primary chain of command, or line organization. It does not provide adequately for the division of the load of managerial work or for managerial specialization. This is accomplished by a process of staff evolution which will be discussed later. It is a horizontal, outward process of differentiation and delegation. It is an evolution from a chain of command at some organizational level where division of managerial labor and consequent managerial specialization are needed. It results in the establishment of a staff element in the organization. It should be noted, however, that the new organization element must grow with further growth of the concern. It may grow more quickly or more slowly than the organization as a whole. But it will begin its own process of devolution at some stage in its growth. The result will be the devolution of a secondary chain of command. The general relationships involved in functional devolution and evolution are diagramed in Fig. 21.

Similar Functions

Functions must be grouped under some executive as they are differentiated. Personnel competent to perform the various phases of these functions must be assigned to him. They must be implemented with equipment, supplies, and a suitable working environment. The objectives of the group should be established clearly. Otherwise, there can be no intelligent delegation of responsibility and authority to the executive, and by him to his subordinates. There may be a corresponding breakdown of accountability. Something more is evidently required than a grouping of the separated functions in conveniently sized organizational packages. Oliver Sheldon believed that "the division of the task of management" should "be according to the relations existing between groups of activities, like grouped with like."[12] The process of devolution results in operative specialization. The problem of division of labor, specialization, and functional grouping thus involves more than a division of the task of management. L. C. Sorrell thought that activities that are like or similar, that are complementary, related, or intimately associated with each other, may be grouped together.[13]

The similar or complementary characteristics of functions are the basic considerations that determine what functions will be grouped together in what relationships, depending on the requirements of the particular functional problem. The principal problems have to do with organization structure or business procedure.

Organization structure is a relationship of functions that is set up to facilitate coöperation and the exercise of executive leadership in the accomplishment of business objectives. The work of the personnel division of a company, for example, may be broken down into employment, employee medical service, employee training and education, labor relations, employee benefits and services, personnel research, and other functions. The nature and extent of differentiation of the personnel function depend largely on the judgment of the company's personnel director, the concurrence of its general administrative executives, and its size. An illustration of a staff grouping of such functions is shown in Fig. 22. The immediate

[12] Oliver Sheldon, *The Philosophy of Management*, p. 51.

[13] See Thomas R. Jones, *Theories and Types of Organization*, p. 48.

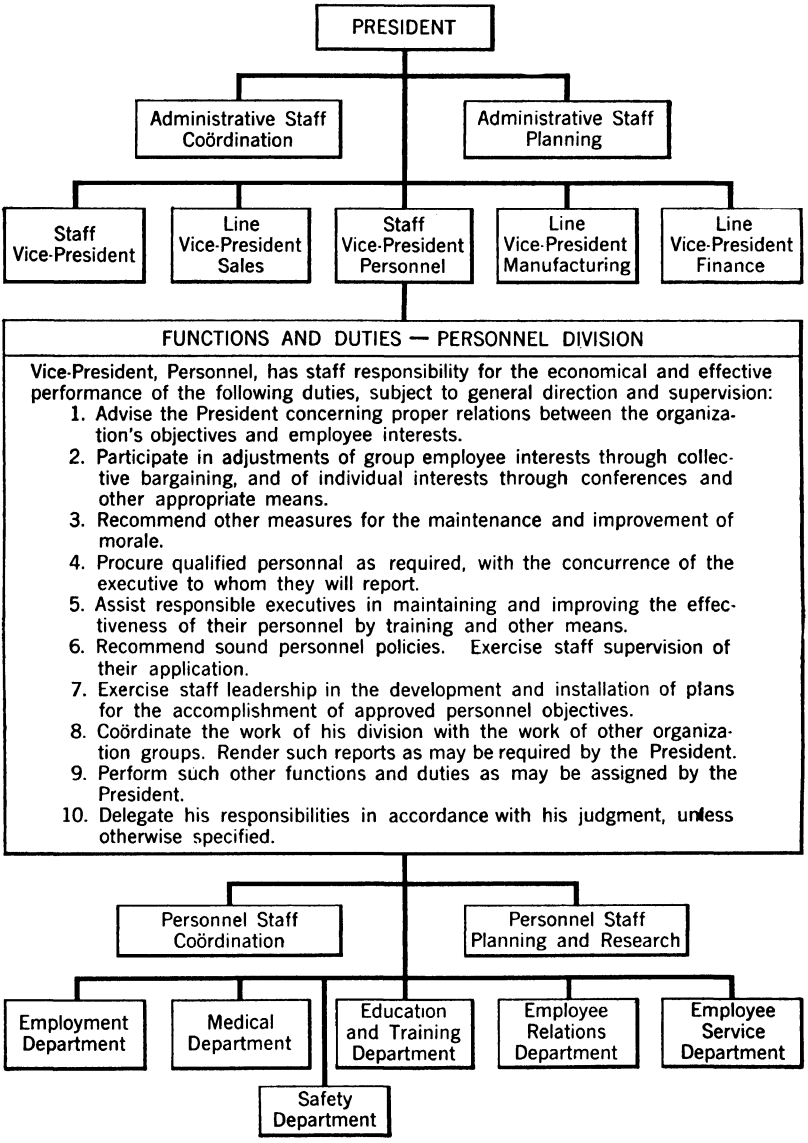

FIG. 22. Staff Personnel Functions.

objectives of the division are secondary. They are values that are needed by the organization to serve the customer or to serve the personal needs and desires of the people that compose the organization. The general objectives of the division break down into the major service objectives of each department in it. Every group in every chain of command at every organization level needs competent personnel for the performance of assigned functions. An adequate complement of such personnel is an objective of the employment department. It has a staff responsibility for the accomplishment of this objective. The proper discharge of this responsibility requires the performance of various duties that have to do with personnel procurement from sources inside or outside of the organization. Procurement of personnel from within the organization usually involves various activities having to do with promotion or transfer. The processes of promotion and transfer may provide additional values needed by the organization, such as good morale. The more able and ambitious employees, both operative and executive, wish to improve their social and economic status. They hope to do this by acquiring the greater recognition, prestige, and monetary compensation that go with advancement, on the basis of merit, to higher levels of service in the organization. These are obviously the personal objectives of certain organization members. There are other values that are contributed by the personnel division. They result from an effective and economical performance of its assigned functions. An inspection of the duties listed in Fig. 22 indicates their general nature. These objectives are similar to one another. The proper performance of the functions that create these values involves similar problems. An effective and economical handling of these problems requires, in consequence, similar background, training, experience, personality, and other personal attributes. It should be evident that there would be no basis for coöperation within the employment department if the problems and duties of each member were entirely different from those of every other member. The employment manager is responsible for properly planning, organizing, and controlling the work of his department. He is held accountable for the proper accomplishment of its objectives. His job as executive leader of the department would be extremely difficult, if not impossible, if each assigned duty differed from every other

assigned duty. The same basic condition of coöperation and leadership applies to other departments and elements of the personnel division, and to other line and staff organizations of the company. The principle is, therefore, that functions should be grouped in organizational elements, large or small, in accordance with their functional similarities. Similar functions may be defined as those that have like objectives and work characteristics; that in consequence give rise to similar problems involving similar factors, forces, and effects; that require similar background, training, experience, intelligence, and personality in the personnel assigned for their performance. It is evident that if two functions were exactly alike in all these respects they would be identical.

The Principle of Functional Similarity, or its corollaries, enters into policy decisions concerning many organizational problems. Reference was made previously to the problem of job classification and evaluation. Job classification implies a level of service within the organization. Hence it cuts across organizational lines. The general service relationships involved were illustrated in Fig. 15. These major levels break down into minor service levels within which executive and operative jobs may be classified. They imply broad, fundamental similarities between jobs in the same classification in any organizational division. A job classification may in fact be defined as "a category of jobs or positions which are similar in nature and content and in required amounts of knowledge, skill, experience and responsibility."[14] Job evaluation has to do with the determination of the relative functional and monetary worth of jobs within and between service levels, on the basis of the degree in which such work factors are present in each job. It is evident that solutions of these problems rest on an application of the Principle of Functional Similarity. Other examples that are equally important can be given.

The process of differentiation and delegation tends to operate continuously in a growing, dynamic organization. One cannot wait, however, until the need for differentiation is urgent before making the necessary decisions. Otherwise, it may be necessary to proceed on the basis of expediency in determining what functions should

[14] War Labor Board, General Order No. 31.

be separated from which organization elements, and how they should be regrouped to take care of the requirements for organization growth. Some foresight and planning are necessary if organizational effectiveness is to be maintained. The rate of increase in the work or in the particular function, and the need for increased specialization in its performance, will affect the decision. There is a corollary of the Principle of Functional Similarity that may be called the Principle of Functional Emergence. It says merely that those functions of an organizational element are most likely to be differentiated, with continued organization growth, which have the fewest similarities with those they have been grouped with. This principle is often helpful in making decisions having to do with functional differentiation and growth. Its application will be discussed later in connection with growth problems.

Complementary Functions

The values that represent achievement of the organization's objectives are created by completing various projects, both primary and secondary. The projects must be completed, usually, during the time period for which the objectives were set. The organization may have a program for a month, a quarter, a year, or even longer. It is probably based on a forecast of the volume of goods or services that the public will demand from the industry. The company knows what its proportion of the industry's total volume of business has been. It will find, at the end of the period, that it has increased its proportion of the total volume of business, or it hasn't. It will have lost ground competitively, in the latter case. The organization's program is broken down, probably by months, into primary projects and subprojects. Various staff groups may have developed programs for the completion of related secondary projects. The summation of the values produced by the completion of all such projects represents the accomplishment of the organization's business objectives.

The steps composing any procedure, whether operative or managerial, are the activities that must be properly performed to complete successfully a type of project. These steps must be performed concurrently or sequentially. It is evident that a procedure also is a relationship that results from a grouping of functions. The pur-

poses for which it is set up, however, are quite different from those of an organization structure. A statement of procedure should specify the conditions for the effective, economical accomplishment of the project. It should establish a basis for the coördination of the activities involved. Such accomplishment requires a logical build-up of whatever values represent the final objective of the project. A cast-iron part, for example, may be machined to certain specifications. The finished part may be assembled with other parts to make a product. The first step, or operation, in the procedure for making the part, after the castings have been delivered, may be to "mill" the base of each casting in the lot. This is simply a metal-working operation that creates a plane surface. The surface, however, may be a "reference" surface. This means that it is a surface from which the dimensions and contours of the piece are measured as they are formed in subsequent operations. These may be any metal-working operations that are necessary to create the specified form utilities. The part must have these utilities to enable it to perform its mechanical functions in the finished product. The part could not have them if the initial milling operation were done improperly. The initial reference surface would be formed incorrectly if it were. The customer would not get the satisfaction from the product that he had expected as a result of the concern's advertising. It is probable that he would buy one of a competitor's brands when next he needed a product of this kind. The competitor's employees would get the work and the wages. His stockholders would get the dividends, if any. This relationship of functions has basic significance in other businesses than manufacturing. Complementary functions may be defined, then, as functions that are related through their concurrent or sequential interdependencies in the accomplishment of a specific project. The principle of Complementary Functions may be stated as follows: The functions involved in the completion of a project, and their performance factors, must be related in a manner that will facilitate the cumulation of results into the effective, economical accomplishment of the final objective.

It will be necessary to give further consideration to complementary functions when the problem of business procedure is considered. The following summary of their nature and characteristics will be sufficient for our purposes at this time:

1. Complementary functions are related through interdependencies in performance. They are established fundamentally by the requirements of the final objectives of a project. These interdependencies may be concurrent or sequential.

2. The differentiation of complementary functions depends on the order in which values must be built up to accomplish the final objective.

3. The differentiation of complementary functions is affected by the characteristics of organization structure. Any procedure may cross organizational lines of responsibility and authority. There should be definite, single accountability for the performance of each step. However, functional similarity is not a requisite for the establishment of proper complementary relationships.

4. A material change in organization structure usually affects the complementary relationships between functions. A change in complementary relationships does not necessarily affect organization structure.

5. Time and order of performance are basic considerations in the performance of complementary functions. They condition the cumulation of values. Coördination depends, therefore, on procedure. The maintenance of proper complementary relationships depends accordingly on control.

6. A given function necessarily has both similar and complementary characteristics. It enters into both organization structure and business procedure.

Cross-Functionalization

Communications are an important factor in managerial effectiveness. Chains of command necessarily lengthen with organization growth. The necessity of maintaining single accountability tends to reduce the speed and accuracy of communications, unless proper provisions are made. One of them is provision for proper cross-contacts within the organization. This results necessarily in cross-functionalization. Henri Fayol commented on this as follows: "The hierarchy is the series of officials which runs in order of rank from the supreme authority to the lowest employee. The hierarchic channel is the road which all communications leaving or addressed to the supreme authority follow in passing through all the ranks of

the hierarchy. The need for this channel arises both from the need for safe transmission and from unity of command but it is not always the quickest channel, and in very big enterprises, the State in particular, it is sometimes disastrously long. As, however, there are many operations whose success depends on rapid execution, we must find a means of reconciling respect for the hierarchic channel with the need for quick action."[15] Dennison thought that for this reason "the science and art of providing cross-ties, cross-channels of communication, contacts among correlatives, are at the core of successful organization engineering."[16] Mooney and Reiley appear to have recognized that this problem may result from functional evolution as well as from devolution. They note that there may be "certain general functions, appearing in some form in many departments, which in turn may require organized supervision and correlation. Thus we may have in every organization of any size and complexity the phenomenon that we may call cross-functionalism."[17]

Cross-contacts, then, are those informal contacts in organization that take place between coördinate individuals and groups. They are in addition to any formal structural and procedural relationships that may have been specified for the particular type of problem. They are necessary because it is not possible to devise formal arrangements to cover every situation that may arise. Cross-functionalization may be defined as a process of functional adjustment through informal contacts. It is primarily a process of self-coördination, as distinguished from executive coördination.

There are obviously two general types of contacts. They are individual cross-contacts and group cross-contacts. Individual cross-contacts include the informal conferences that take place when one executive steps across the hall to the office of another to clarify some phase of a mutual problem. The same type of contact occurs when one clerk walks over to another clerk's desk for the same general purpose. Staff executives and operatives frequently make cross-contacts with employees in other line and staff organizations than their own. It may be necessary for them to engage in certain liaison

[15] Henri Fayol, *Industrial and General Administration*, p. 28.
[16] Henry S. Dennison, *Organization Engineering*, p. 168.
[17] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 47.

activities. They may be required to perform certain functions of staff supervision. The leadership exercised by the staff executive is basically one of ideas rather than authority. It may be necessary, therefore, for him to sell his ideas to his associates in other departments and to gain their acceptance of them. These contacts may greatly modify the subsequent performance of functions.

Group cross-contacts include those that result from informal conferences of groups or special committees. Such contacts lead frequently to subsequent individual cross-contacts. Such contacts may supplement any formal group meetings that were held previously. Their purpose may be to clarify further any meeting of minds that was accomplished during an earlier formal conference. Informal group contacts also take place among operative employees during the lunch hour, recreational or social activities, or at other times. They frequently have a very important influence on the morale of the operative organization.

Such informal contacts are encouraged within limits in most concerns. No formal provision can be made for them in organizational or procedural manuals for obvious reasons. They tend to be replaced by formal contacts as the organization increases in size. This is one reason, probably, why large organizations tend to lose flexibility and to acquire inertia. There are a number of reasons why, except in local operations, cross-functionalization tends to become less effective with organizational growth. The available means of intercommunication is one factor. A person may be able, literally, to stand in the door of the office of a small business concern and talk with everyone in the organization. It would be quite a feat in a large manufacturing organization engaged in multiplant operation. It would be miraculous when there is a wide geographical dispersion of plants. We try to compensate for the effect of distance by using a variety of intercommunication devices. We may have two-way loud-speaker systems, interphones between offices, telecall and PBX systems, and other devices within each plant. We have a teletypewriter service that transmits a flow of information between plants and headquarters offices. Telephone toll charges may be quite an item. A long-distance conference hookup between plants can be arranged. Nevertheless, some of the ease and speed of communication that exists in the small plant has been lost. It is possible

to have effective cross-functionalization insofar as communications are concerned. But the degree of physical contiguity between functions and individuals is a factor in its effectiveness. It is a consideration that the office manager frequently takes into account in solving office layout problems.

Increasing staff functionalization with organization growth also makes it difficult to maintain effective cross-functionalization. An effect of increasing staff specialization and division of labor is to spread a problem out over a number of line and staff groups. It is sometimes difficult to know exactly what person has staff responsibility for some phase of a particular problem. This difficulty can be minimized, but it is inherent in the phenomenon of organizational growth. Business procedure is another factor. Cross-contacts are less necessary to the extent that the procedure for a project specifies clearly and completely what must be done, who should do it, where, how, and why. The necessity for informal cross-contacts decreases when organization members know what their objectives are, what functions they must perform to achieve these objectives, where their responsibilities begin and end, what decision they may and may not make, what orders they may and may not give, and similar information concerning their responsibilities, authority, and accountabilities. The organization manual, supplemented by current directives, also is a factor in cross-functionalization. A policy manual may reduce the need for it.

Effective cross-functionalization, when necessary, is evidence of initiative, voluntary coöperation, and self-coördination. It depends, therefore, on good morale. It is likely, in the absence of good morale, to be the minimum degree that is necessary to preserve one's neck. Cross-contacts are an act of volition. The amount of cross-functionalization that is required tends to vary inversely with the intelligence and training of the people involved.

The process of cross-functionalization has some important advantages which have made it of more than passing interest to certain outstanding organizers. One advantage is the greater flexibility that it gives the organization. This facilitates the adjustment of business activities to changing conditions with a minimum loss of economy and effectiveness. It facilitates self-coördination of thought and action, thereby enabling better use of the brains and energies

of the organization. It provides, in this connection, the supplementary information necessary for effective action. The close personal informal contacts that are involved lead to a better understanding of mutual problems. They minimize the dangers of jealousy, animosity, and friction within the organization. Morale is improved as a result. Cross-functionalization saves time and speeds up action. Fayol illustrated this point with his "bridge,"[18] shown in Fig. 23. Let us assume that Executive E has a problem that should be taken

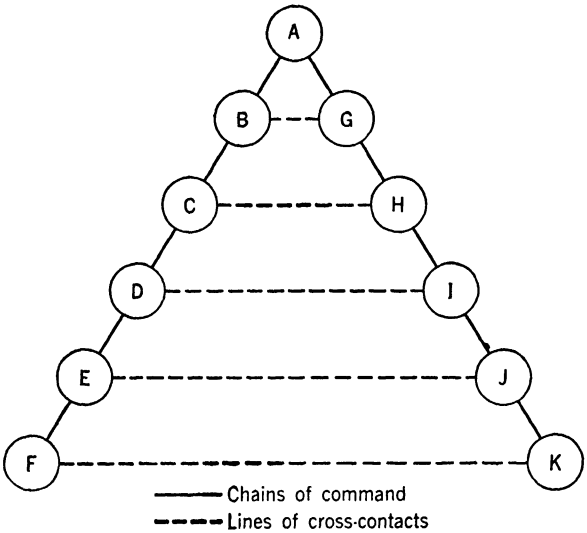

FIG. 23. Fayol's Bridge.

up with Executive J in another chain of command. It is evident that action might be seriously delayed if he were required to send a formal written communication through the "hierarchic channel." It might be too late for action by the time the memorandum had traveled from E to D, C, B, A, G, H, and I, to J. It is a case of "layering," if the intervening echelons have little or nothing to contribute to the solution of the particular problem.

Cross-functionalization has also some important disadvantages. It may result in the modification of approved plans without proper

[18] Henri Fayol, *Industrial and General Administration*, Pitman, p. 28.

authority. It is not important that the feelings of a higher authority may be hurt if he is deprived of the opportunity to initial and forward a memorandum. What is important is that coördination may break down. A serious loss of organizational effectiveness may result. It may complicate the coördination of action by higher staff control groups. Whatever self-coördination is involved takes place, by definition, outside the provisions of any formal structural and procedural relationships. Since established channels of communication and chains of command are short-circuited, there is some danger that they may break down, unless proper measures to prevent it are taken. This danger tends to increase with organization size.

It is important, therefore, that policies be determined that will minimize these dangers, without stifling initiative, voluntary cooperation, and self-coördination. It is evident that any understandings and agreements resulting from informal cross-contacts must be subject to the concurrence of the responsible line superiors. They should be informed of these agreements before any important action is taken. Such agreements are important when they involve major deviations from established plans and policies, or otherwise exceed the delegated responsibilities and authorities of the particular subordinates. Important informal understandings should be put in writing. Other executives whose responsibilities are affected should be given a coördination copy.

The Law of Functional Growth

Organizational growth takes place, under conditions of free competition, when an organization must expand to accommodate itself to a permanent increase in customer demand. The growth of a concern is associated with the growth of the particular industry of which it is a part. Competition passes the economic benefits from technological development to the public, sometimes too quickly, provided there is no monopoly of the right to produce and sell in the hands of organized capital, or of the right to work in the hands of organized labor. This development is both a cause and an effect of increasing refinements of knowledge and ability in the industry's field of economic service. Competition makes increasing specialization necessary in the application of these refinements of knowledge and ability. This may take place gradually or rapidly, as we pass

from the original state in which empirical knowledge sufficed for satisfactory customer service, to a more advanced state in which increasing professional knowledge is necessary. The result of an increasing volume of business and specialization is increasing functional differentiation, both line and staff. The complexity of the situation increases as more organizational elements are developed to meet the need for greater specialization and division of labor. More highly refined procedures for relating activities become necessary. More staff control groups to facilitate formally the coördination of these activities must be set up. The technical staff groups that have been differentiated to assist in planning also grow. Their principal functions must be differentiated. Organizational elements must be set up for their performance. There are definite limits to the number of subordinate executives and operatives who can be supervised effectively by an immediate superior. These limitations also tend to accelerate functional differentiation. There is a Law of Functional Growth which says: The various functions of an organization increase in scope and complexity, as well as in the amount of work and the technical requirements for their proper performance, as the volume of business grows. The complexity of functional relationships tends to increase in geometric progression as the volume of work that the organization must handle increases in arithmetic progression. Some but not all staff organizations tend to grow faster than the line organizations they serve. There is some evidence that the growth relation between them also involves geometric progression until we approach the optimum organization size. The resulting tendency of overhead expense to increase in geometric progression is probably the basic determinant of optimum organization size. The effect can be minimized, of course, by cost reduction, decentralization, and other measures.

Marginal Theory of Functionalization

It appears, then, that there is an organizational application of the economic Principle of Marginal Utility. It may be stated as follows: There is a point, in the development of any phase of a business, beyond which further development of its organization structure and business procedures will not produce a sufficient increase in economy or effectiveness to write off the cost of the development in a

reasonable period of time. Such developments include greater application of human and physical performance factors. The point of diminishing returns in organizational development is reached, obviously, when the last increment of functionalization produces an additional service value that is exactly commensurate with the additional cost of maintaining and producing it. This is an interesting idea, but one that has a minimum of practical value. Accurate measurements of the contributions of increased functionalization can be made at the point of primary operative performance, by means of motion and time study and other techniques. It becomes less and less possible as we depart from this point. In consequence, there is a tendency to push functionalization beyond the point of diminishing returns. This is particularly true during times of inflationary prosperity. A condition of "overorganization" develops. Budget appropriations for certain organizational "frills" are authorized. Subordinates urge such frills strongly and they are nice to have. They are often not necessary to serve the customer's needs properly. The cost can be passed to the public, however, under conditions of inflation. The business consequently acquires a certain amount of organizational fat around its corporate middle. Other causes increase costs. The middle-income groups may eventually refuse to underwrite these costs in the prices of the goods and services that they buy. Some business recession may develop when this happens. It may be accentuated by the effects of economic rigidities resulting from monopoly wages, governmental regulation, and other causes. In fact, so many factors may affect business prosperity or depression that most economists hesitate to make any categorical predictions concerning the business future. Competition intensifies during a recession. The continued existence of the concern may depend on the elimination of unnecessary operating expense. It becomes necessary, therefore, for the organization to get down to fighting weight. The consequent reducing process may be quite as painful to the corporate body as it is to the human body.

Functional Analysis

Organization structure and business procedure should be planned carefully. They are basic factors in the success of an organization. The work of planning requires knowledge about the factors and

functions involved in the particular situation. It requires also knowledge of the principles that relate them to objectives. Various methods of functional analysis have been developed in consequence. Functional analysis may be defined generally as any analytical process that has to do with the investigation, collection, and classification of facts concerning some or all phases of the work of an organization. The immediate objective of the process is usually a specification of the characteristics and requirements for the effective and economical performance of functions. The process provides the facts that will permit the differentiation, grouping, and relation of functions in a manner that will make such performance possible. It facilitates the determination of practical standards of function, condition, personnel, and performance. It furnishes the information that is required for organizational and procedural planning. It makes other important contributions to the economy and effectiveness of business operations. The principal methods of functional analysis are the following:

Organizational Analysis
1. Job analysis
2. Time and duty study

Procedural Analysis
3. Process, method, or system analysis
4. Motion and time study

The categories of organizational analysis and procedural analysis include the principal functional problems. An organization may be any group of individuals who are coöperating, voluntarily or otherwise, in the accomplishment of a common end under the direction of a leader. An executive is a business leader who plans, organizes, and controls the activities of a business organization, or some element of it, for the purpose of accomplishing business objectives. An organization structure is a relation of functions and functional groups that is designed to facilitate coöperation and the exercise of command. A basic principle underlying functional grouping in organization is the Principle of Functional Similarity. Job analysis is a technique for investigating general work assignments. It collects and classifies information concerning the characteristics and requirements of a specified general assignment. It

might, for example, investigate the general characteristics and requirements of the function of a clerk-typist. It would not be concerned directly with the processing of a particular batch of forms, or with any other clerical project on which the clerk might be working at the time of the investigation. It would be concerned with the common characteristics and requirements of all the work projects that the clerk handles normally. It is used for such purposes as job specification, job classification, job evaluation, the development of promotion plans, the study of organization structure, the development of plans for organizational expansion with business growth, and other purposes of a similar nature. The accomplishment of all these purposes depends primarily on information concerning similar functional characteristics as they enter into group relationships. Such accomplishment is concerned secondarily with complementary functional characteristics as they enter into procedural relationships. Job analysis has been used for many years by personnel departments. It has been used in recent years by administrative or organizational planning departments. This indicates that it is primarily an organizational technique.

Time and duty study is an outgrowth of job analysis.[19] It also collects information about the objectives and functions in a general work assignment, the problems involved, the factors involved, the background, training, and experience that the person should have, and other considerations of functional similarity. There is an important difference, however. This information is collected with reference to the distribution of individual or group time over the activities entering into the performance of assigned functions. One purpose is to determine what factors govern time utilization generally in the particular class and kind of work. The objective is a better understanding of what can be done to increase the proportion of time that is devoted to productive work. Such work is mental or manual effort that directly furthers the accomplishment of the service objectives of the assignment. The study is not concerned with time utilization as it enters into the performance of elementary operations in the accomplishment of particular operative projects.

[19] This method is less well known. For a good discussion of it, see James H. Davis, *Increasing Wholesale Drug Salesmen's Effectiveness*, Bureau of Business Research, Ohio State University, chaps. 5 and 6, and Appendix C.

Process analysis investigates the general requirements for the effective, economical operation of a procedure. It usually traces the steps or stages through which a kind of project passes as it progresses toward completion. Information is collected and classified concerning the objectives of each step, the functions that must be performed to achieve these objectives, the physical factors that condition such performance, and similar factors. For example, the forms used in completing some kind of routine, clerical project are a basic physical factor. The distances through which these forms must move in going from desk to desk, as the work flows through the successive steps of the particular procedure, also is a physical performance factor. It affects the overall time required to complete a project of this kind. The objective of process analysis is the determination of the most effective and economical relation between physical factors of condition or implementation and the functions that must be performed in completing each step of the procedure. The information collected aids in planning, creating, and standardizing the best working conditions. It will be necessary to look more closely at process analysis later when the problem of business procedure is examined.

Motion and time study is an extension of functional analysis, through process analysis, to the individual steps in a procedure. The method, however, is quite different from that used in process analysis. The relation between the utilities that a product must have to serve a customer adequately, and the work of making a part of that product, can be illustrated as follows:

The product.
The assemblies and subassemblies of the product.
The parts that compose each assembly.
The procedure for making a particular part.
A particular operation or step in the procedure.
A particular substep or elementary operation.
A unit motion in an elementary operation.

The ultimate in functional analysis is the breakdown of work into a single, simple motion. This unit motion is usually called a "therblig," in honor of Frank Gilbreth, who developed micromotion study. Work may be broken down into unit motions by means

of the motion-picture method of motion and time study. An approximation of it may be used in connection with the stop-watch method. In either case, however, the satisfactions that the customer enjoys when he uses the end product are the result of utilities that were built into parts and assemblies through the performance of unit motions. Motion and time study seeks to determine the optimum relation between local conditions and the performance of unit motions and elementary operations in the completion of an operation or of a step in a procedure. It determines the time that can reasonably be required to complete the step. It makes possible the establishment of fair performance standards for each step in the completion of a project. It facilitates the estimating of labor costs in price determination. It makes possible a closer, more accurate scheduling of work. It enters into the determination of standard labor costs and into budgetary control. The results of motion and time study have many other important uses that foster operating economy and effectiveness. In consequence, the technique is used widely.

Detailed discussions of these techniques will be found in most management texts. An examination of them will show that job analysis and time and duty study approach the analysis of business functions with a view primarily to determining the influence of the personnel factor on work economy. Process analysis and motion and time study approach this problem with a view primarily to determining the influence of physical factors on work economy. This is merely another way of saying that the first two techniques are primarily organizational, and the last two are primarily procedural.

It is obvious that there must be a fundamental method of approach underlying all these techniques, since they are related. It is the scientific method of approach, which was discussed in connection with planning. It has to do with the determination of the objectives, the functions and functional groups affected, the difficulties and problems of those who have a personal responsibility for the situation, the factors that limit results, and the subsequent work of planning, organizing, and controlling the action of the organization. It should lead to more effective, economical execution. These techniques are used chiefly by certain technical staff organizations in making staff investigations. They will be discussed further in connection with these organizations.

CHAPTER 8

RESPONSIBILITY

The Function of Organizing

It was noted previously that business functions are derivatives of business objectives. Functionalization may be any process for differentiating, grouping, and relating functions in the development of organization structure or business procedure. It is performed on the basis of the facts collected in functional analysis. The resulting functional groups are basic factors in problems having to do with responsibility, authority, and accountability. The function of organizing may include any process that results in the antecedent provision of the necessary basic conditions for successful business accomplishment. These conditions are prerequisites for the effective and economical execution of plans for the achievement of business objectives. The organizing process has to do, therefore, with bringing functions, physical factors, and personnel into proper relationships with one another in advance of the execution of a plan or a major phase of it. It obviously includes the development of organization structure and procedure, as well as the provision of competent personnel and the requisite working conditions. The latter would include, in a manufacturing industry, such factors as building, equipment, initial tooling, initial inventories, and other physical factors of implementation, including working capital.

The determination of responsibility, authority, and the bases of accountability are a phase of management's function of creative planning. It rests largely on prior determinations of questions having to do with objectives, policies, functions, organization structure, and business procedures. The placement and delegation of

responsibility and authority usually take place in connection with the installation of the planned organization structure and procedures. Hence these functions are phases of the function of organizing. The determination of accountability for the proper discharge of delegated responsibilities for planned execution is a phase of the function of control, both operative and administrative. It will be discussed later in connection with that subject. It is evident that questions of responsibility, authority, and accountability are fundamental in business organization and operation. They enter into and affect the performance of all organic management functions. These questions are complicated in themselves. They are complicated further by the fact that the performance of these organic functions usually overlaps. Time is usually a basic value in accomplishment. The Principle of Simultation applies broadly in consequence.

A great many of the problems of responsibility, authority, and accountability have to do with the organizing process. Taylor pointed out, for example, that in organizing it is necessary to bring about two momentous changes in men: (1) a complete revolution in the attitude of executives toward employees and their work, and, as a result of this, an improvement of the conditions under which work is done, and (2) an increase in employees' determination and physical activities.[1] He had in mind clearly that the organizing process frequently involves some changes in the viewpoints of both executive and operative employees concerning their responsibilities. Organizing usually involves significant changes in duty assignments and therefore in the nature and requirements of one's responsibilities. The ultimate objectives of organizing are greater effectiveness in the performance of functions, the subsequent reduction of the expense of operations, and the improvement of morale.[2] Hence the organizing function must be performed whenever there is a significant change in the service objectives of the organization, as well as when a business is organized initially. It results in changes in the relationships that existed previously between functions and the physical factors and personnel which condition their performance. A conditioned relationship between these factors is a requisite for

[1] Frederick W. Taylor, *Shop Management*, p. 131.

[2] See Oliver Sheldon, *The Philosophy of Management*, p. 111, for a good statement.

effective accomplishment because it is the basis for maximum cooperation among the individuals and groups composing the organization. The amount of friction between all grades and groups of employees usually is reduced to a minimum as the result of proper definitions of functions, responsibilities, and authority. Organizational expense is reduced as the result of a better balance between functions, the elimination of duplication of functions, and the reduction of other organizational difficulties. A better understanding of organizational and procedural relationships should result from the educational and training activities that usually are part of the work of organizing. Organizing supplies the basis for the intelligent exercise of initiative, as well as the effective, economical performance of functions. The provision of the prerequisite physical conditions, facilities, and implementation also contribute to these ends. Creative planning merely determines what functions should be performed. It determines how they should be grouped and related. It states what the consequent responsibilities and authority should be. It is the function of organizing that actually makes changes in existing responsibilities or creates new responsibilities.

It may be desirable to review some of the considerations affecting the relations between the function of organizing and the factor of organization before proceeding to a discussion of responsibility. Mooney and Reiley believed that "an organization of any kind is nothing if not an organization of people banded together for a common purpose, in which all, allowing for some moral deviations, have a common interest in the attainment of this purpose. That organization which does not involve this purpose, seems like a contradiction to the very purpose of organization."[3] Organizations may be good, bad, or indifferent.[4] An organization, therefore, may be any group, large or small, that is coöperating, with some degree of economy and effectiveness, in the accomplishment of a common objective under a common leadership. This leadership also may be good,

[3] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 179.

[4] A. H. Miller said that an organization is "a body of human beings, trained and disciplined to common action, understanding one another through the sharing of certain knowledge and bound together by a unit of will and interest which is expressed by their willingness and central obedience to the leader."—*Leadership*, p. 9. This is really a definition of a good organization.

bad, or indifferent. It is usually the quality of leadership that conditions the quality of the organization. It is evident that the organization must have some structure. Organizational effectiveness depends on the degree of voluntary coöperation and good discipline that leadership can obtain from the organization's members. These are effects of good morale. The latter is a fundamental condition for the efficient utilization of the human factor.[5] There are also fundamental conditions affecting the efficient utilization of physical performance factors. The work of organizing includes, accordingly, all such activities as training, the activation of the organizational and procedural arrangements prescribed, the provision of plant and equipment, the procurement of initial tooling and inventories, the initial provision of working capital and other financial arrangements, and any other work that has to do with the provision of any basic factors, and the creation of any basic conditions affecting their use, that must be present in advance of primary performance. This work must be done as specified in the plans for whose execution conditions are being created. The requirements for effectiveness in organizing are evidently a definite and adequate specification of objectives; a sound plan for accomplishing these objectives; an organization that is capable of applying economically and effectively the principles, procedures, and other factors specified in the plan; the men, money, equipment, and materials with which the organization must be implemented; and competent, forceful leadership without which no great accomplishment of objectives is probable.[6] Thus the basic factors in organizing are men, money, time, authority, and "organizational know-how," plus a high order of leadership intelligence and ability. These are also basic factors in the discharge of executive responsibility.

There are certain distinctions and relationships in the functions of organizing, preparation, and facilitation that frequently are not

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[5] Alfred P. Sloan said: "The tens of millions of dollars we may have in banks, the hundreds of millions of dollars invested in various ways in our plants and their equipment throughout the world, all is of comparatively little value without an intelligent and effective organization."—*Principles and Policies Behind General Motors*, p. 12. He is emphasizing here the human factor in organization.

[6] See Harrington Emerson, *Twelve Principles of Efficiency*, p. 11, and Henry S. Dennison, *Organization Engineering*, p. 6, for some interesting comments on the factors in organization and organizing.

clear. They have to do usually with different organic functions. Lack of clear-cut understanding can cause serious conflicts of responsibility and authority. Organizing was defined above as the function that has to do with creating or providing whatever conditions are antecedent to the successful execution of a plan, or some phase of it. The plans for the manufacture of a new product specify what constitutes a desirable initial inventory. The procurement of this initial inventory is a responsibility of the purchasing department. No product has been manufactured to the new design. The date on which production is scheduled to start has not yet arrived. Purchasing is providing an antecedent condition for the manufacture of the new product. It is participating in an organizing process under direction of higher authority. Any subordinate line or staff organization may assist a higher administrative management in the work of organizing, when authorized to do so. Preparation is the function that has to do with assuring the presence and availability of the factors in performance, when and where they are needed for effective execution. It will be necessary to replenish inventories when the company goes into production. Materials and supplies are used at varying rates. An order for the execution of some phase of a plan should not be released unless there is reasonable assurance that the various performance factors will be available when and where they are needed. There may be a preparation unit in the production control department of the particular manufacturing organization. Such a unit is charged with the responsibility of checking the current inventories with respect to the requirements of production programs or orders before production starts. The details of organization and procedure involved vary greatly between concerns. They are not important in this discussion. It is evident that this work is a function of preparation, as the term is defined here. The unit probably has other preparation functions. They concern the coördination and regulation of certain technical staff services with the needs of the line organization for certain performance factors that are necessary to maintain its operations. Preparation is a phase of management that has to do with controlling operations, rather than organizing for them. Depending on the type of manufacturing, the actual work of moving materials and supplies

to departments, production lines, or assembly lines will probably be done by the stores department, another staff organization. It renders a facilitative service in so doing. It performs a function that otherwise the using department would have to perform, and usually it does it better. Any staff organization, including production control, that renders a necessary service which makes it possible for other departments to do their work more easily, better, and/or more economically is obviously performing a facilitative function.

There are other considerations that underlie problems of responsibility, authority, and accountability. We shall meet them shortly. The above background is intended merely to serve as an introduction to these problems, whether they be line or staff, managerial or operative.

The Nature and Importance of Responsibility

Business responsibilities have their genesis in the necessity for accomplishing business objectives. Functions are derivatives of objectives. Business responsibilities are primarily derivatives of business functions. They are the obligation of the individual to perform properly the functions and duties that have been assigned to him, to the best of his ability and in accordance with the directions of the executive to whom he is accountable. It is an obligation that is created by the contractual process of employment. There is an express or implied acceptance of this obligation when one accepts any job, whether executive or operative, with any business organization. There are certain corresponding obligations that the organization accepts when an individual is admitted to membership in it. These obligations become the responsibilities of higher administrative executives. An organization can discharge its public and private obligations only under leadership. Accountability is the requirement that there must be an accurate, adequate, and just determination of the extent to which each individual has discharged his responsibilities satisfactorily.

There are many reasons why responsibility is an individual rather than a group phenomenon. Individual responsibilities lose their identity when they are fused with other individual responsibilities in a group activity. It is difficult to determine who is ac-

countable if the group fails to accomplish its mission. It is difficult to take prompt and just disciplinary action, either positive or negative, when it is required. The morale of the group, and its effectiveness, will probably deteriorate as a result. It is an old adage that what is everyone's responsibility is likely to be no one's. There is, of course, such a thing as group consciousness of the desirability of coöperation in the accomplishment of organizational service objectives in order that various personal satisfactions may be secured. This is not the meaning of responsibility in an organizational sense. It is part of a favorable psychological base for the development of good morale.

The two general kinds of responsibilities are operative and managerial. Either kind may be of a line or staff nature. Operative responsibilities are the obligations of the operative employee for the proper performance of assigned operative functions and duties. The latter result directly and immediately in the creation of utilities. They are needed or desired by the customers, by the organization, or by its members for their personal satisfaction. The responsibility of an operative employee involves no personal obligation to direct and supervise the work of others. Managerial responsibilities are the obligations of executive employees for the proper performance of assigned managerial functions and duties. The latter result in the creation of utilities, but not directly or immediately. Managerial responsibility is the obligation to plan, organize, and/or control the work of a group of people composing an organization, or a component part of it. This obligation must be discharged in a manner that will enable the organization to achieve its objectives economically and effectively. An important obligation to direct and supervise the work of others is involved. Managerial responsibility consequently includes an obligation to provide the organization with effective and satisfactory executive leadership.

The accomplishment of the minimum results that are acceptable does not, of course, constitute a complete discharge of a person's responsibilities. It may represent, however, the best that he can do at his normal working pace. In such a case he should probably be transferred to other duties or receive additional training. The pragmatic test of results is not always an accurate test of the dis-

charge of responsibility. It is possible sometimes to get short-term results at the expense of long-term accomplishments by methods that are detrimental to the best interests of both the organization and its members. The leadership of the organization may look very good today, but the organization may be very sick tomorrow.

Competitive success results in organizational growth. A devolution of organic business functions takes place in consequence. A further result is the growth and development of the line and staff organization in its various forms. This growth should be accompanied by a corresponding division and delegation of responsibility at all levels of the organization, and for all grades of employees. Otherwise, organizational growth beyond a certain point will result in decreasing economy and effectiveness. Out of the seeds of success will develop the fruits of failure. It will be necessary, therefore, to devote some attention to these problems later. Here we merely note the distinction between them: Division of responsibility has to do primarily with functional grouping and definition to the end that there may be proper specification of the corresponding obligations for proper performance; delegation of responsibility has to do primarily with the job location and assignment of these obligations. It may require that the individual who currently holds the job be educated concerning the implications and requirements of the obligations that he has accepted.

The importance of the problem is indicated by the objectives of the sound division and delegation of responsibility. A proper solution of the problem of responsibility should create the basis for a proper division and delegation of authority. The development of such a solution is a necessary part of the process of planning and activating changes in organization structure and business procedure. It should result directly in a reduction of the work load that is being carried by the executive. An intelligent division of labor should improve his effectiveness. A sound division and delegation of responsibility should also reduce the incidence of the physical disabilities common to high-pressure executives, by reducing the necessity for high pressure. It is necessary for the effective development of specialization. It provides the information that is required for intelligent, effective coöperation. Obviously it helps to know the nature, scope,

and requirements of the responsibilities of those with whom one should coöperate. It reduces the number of conferences between superior and subordinates. There is less necessity for interpretation of the requirements of assigned responsibilities, or the relationships that should exist between assignments. There may be less organizational politics as the result of good division and delegation of responsibility. "Deals" for the promotion of personal interests within the organization, at the expense of the company's interests, should at least be more difficult to make when the nature and scope of responsibilities have been clearly and completely specified and delegated. The aggressive executive should find it more difficult to take on duties that properly come within the scope of another executive's responsibilities. There should be less friction due to cross-purposes, misunderstandings, and similar difficulties.[7] A clear-cut understanding of where one's responsibilities begin and end, what they require and why, is a requisite for the intelligent exercise of initiative by subordinates. It is a requisite, therefore, for the decentralization of activities. Such decentralization usually becomes necessary with organization growth and increasing organization size. The good division and delegation of responsibility may contribute to the development of good discipline. This may be defined as voluntary conformity with those rules and regulations that are necessary for the satisfactory accomplishment of an organization's objectives. An understanding of responsibilities is obviously a factor. The whole problem of organizational morale may, in fact, be affected by the division and delegation of responsibility. An understanding of a job often leads to a greater interest in it and to other desirable morale effects. It tends to start a process of "psychic integration."[8]

The above is only a partial inventory of the values that may be contributed to the development of organizational economy and effectiveness by a good division and delegation of responsibility. It should be sufficient, nevertheless, to suggest why problems of re-

[7] Mooney and Reiley covered this point as follows: "When an employee is placed in a position with duties ill defined in their relation to other duties, what happens? Naturally he attempts to make his own definition of these duties, and where he can, to impose this view on those about him. In this process, he encounters others in similar cases, with friction and lack of coordinated effort as the inevitable consequences."—*Onward Industry*, p. 56.

[8] *Ibid.*, p. 5.

sponsibility are often matters of personal concern to top administrative executives.

The Division of Responsibility

The division of responsibility may be defined as the work of determining assignable units of responsibility with reference to certain organizational and procedural elements. It has to do primarily with functional grouping and definition to the end that there may be proper specification of the obligations for proper performance. Its objectives have been noted above.

The problem, like any other, breaks down into certain basic phases. They furnish a basis for a general method of attack on specific problems of responsibility. The principal phases concern the determination of:

1. *Objectives,* since they are the values that are needed or desired.
2. *Policies,* since they are the principles and rules that should guide thought and action in the successful accomplishment of objectives.
3. *Functions,* since they are the work that must be done by operatives and executives to create the required values. Functions must be differentiated and grouped in organizational elements and procedural steps. This must be done in a manner that will facilitate coöperation, coördination, and the exercise of command.
4. *Personnel and physical factors,* since they condition the performance of functions.
5. *Responsibility,* since it is the individual's obligation to perform, to the best of his ability, assigned duties under higher executive leadership. The determination and specification of the characteristics and requirements of these obligations cannot be made intelligently until sufficient facts concerning the preceding factors have been obtained.
6. *Authority,* since responsibility cannot be discharged properly without it. The determination of what authority should be delegated depends on what decisions must be made and what directions must be issued in connection with what work.
7. *Accountability,* since the extent and quality of the discharge of responsibility depend on the extent to which accountability can be established.

It is evident, then, that the division of responsibility is merely a phase of organizational and procedural planning. It rests on the results of some form of functional analysis.

Functional Similarity, Organization Structure, and the Division of Responsibility

The term responsibility usually refers to the obligation that an individual assumes when he accepts a general work assignment, or "job." It is generally made up of a number of duties that have similar objectives. These duties involve similar activities, since they must contribute similar values. They require the handling of similar problems.

It is necessary for the individual who performs these duties to have a certain background, education, training, experience, personality, intelligence, and other personal attributes that are required for the effective, economical performance of these duties. The Principle of Functional Homogeneity says that duties should be grouped in a manner that will provide the greatest functional similarity. The cost of managerial or operative labor may be increased greatly if this principle is violated. The price of a job tends to be determined by the highest grade of work that is included in it. It may be an office executive's privilege to set up a job in which 25 percent of the work requires the skilled operation of some piece of office equipment, and the remaining 75 percent is unskilled clerical work. He may find it necessary to pay for 100 percent of the work at the going wage rate for the particular kind of skilled office-machine operator. He may have difficulty in getting an operator to take the job. Most people do not care to do a grade of work lower than they are competent to handle. This is particularly true when business is good and they have a choice of jobs. Circumstances may temporarily force a skilled person to work at the going rate of pay for an unskilled operative. It does nothing for his morale, however, and morale is an important factor in costs. The same reasoning applies to executive employees.

General operative work assignments must be grouped on some basis. The grouping should make possible the effective, economical accomplishment of organizational service objectives. Coöperation is an important factor in such accomplishment. People cannot work

together when the work of each member of the group is dissimilar to the work of every other member. There is little basis for coöperation when individual service objectives, functions, methods, difficulties, and personal attributes are entirely different from one person to another. The job of the executive who must exercise some group leadership is more difficult when he must direct and supervise operative work assignments that are highly dissimilar. His work load is increased. The decisions that he makes to assist one operative in doing his job have little or no bearing on the decisions he must make for the next operative who comes to him. He may not be able to supervise as many operatives, in consequence. So the concern must have more supervisors than would be necessary if they had merely to supervise similar activities. They will expect to be paid, regardless of any organizational errors by higher authority. It may be necessary, furthermore, to pay them a higher rate than is ordinarily paid to the average supervisor in the particular community. They should have background, training, and experience that are at least as broad as the diverse abilities they direct. The assignments of minor operative executives must be grouped into major operative executive assignments. These must be grouped, in turn, into general administrative assignments. Provision for specialization and the division of labor must be made as the organization grows and the processes of functional differentiation continue. The Principle of Homogeneity holds also in the case of these larger units of responsibility. It might be the privilege of the president of a corporation to set up a job that will require a subordinate executive to direct personally such functions as market research, production control, personnel management, and traffic. The president would not, of course, if he were in his right mind. He might have considerable difficulty in finding an executive who had the required range of background, experience, and ability. He might find it necessary to pay him an exorbitant salary, because of the rare combination of qualifications specified. If the executive quit for any reason, he might find it difficult to replace him, either by training and promotion from within or by employment from without. There is, then, a principle of division of responsibility in accordance with functional similarity. It applies to small units of individual operative responsibility, and to large units of executive responsibility. It

governs the grouping of functions in organization structure. It is the Principle of Functional Homogeneity.

The individual's responsibility includes the performance of specified duties in the completion of assigned tasks. These tasks are often steps in the completion of some project, either primary or secondary. These steps also represent a relationship between functions and the physical and personnel factors that enter into their performance. The basis of the relationship is the requirement that the performance of the functions in each successive step must result in building up values into acceptable end values. They constitute the final objectives of the project. The functions in each step must be complementary to one another. They are not necessarily similar. Each step may, in consequence, be performed in a different department of the organization. The resulting structure of functional relationships is, of course, a business procedure. It promotes coördination and the effective, economical accomplishment of assigned tasks. The individual is responsible for the proper completion of assigned tasks. The lowest unit of responsibility, nevertheless, is the general operative work assignment. Responsibility is primarily an organizational concept.

Requirements for the Division of Responsibility

There are many possible requirements that must be met in different organizational situations to insure an effective, economical division of responsibility. Certain of them tend to be important in most business situations. They have to do with the basic business factors that have already been discussed.

There should be some specification of the nature, quantity, and quality of the objectives to be achieved. This is true, certainly, whether we are dealing with an individual operative or an executive work assignment. Such specifications condition the nature and characteristics of the work that must be done. The criteria of a satisfactory achievement of objectives determine the requirements of functions for proper performance. One purpose of job analysis is to find out the requirements for the proper performance of the general kinds of tasks that may or should be included in a general work assignment. The information makes possible more accurate

functional definition; it also serves other purposes. Functional definition has to do with the determination and specification of the characteristics, requirements, and scope of particular functions. No accurate appraisal of the degrees of similarity in assigned duties can be made until such information is available in adequate amounts. It should be reduced to writing, usually in the form of job specifications, for use as a basis for subsequent delegations of responsibility and authority, as well as for record purposes in connection with various phases of organizational planning.

The differentiation and grouping of functions in individual work assignments supply the basis for the division of responsibility. The nature and extent of the differentiation depend on the volume of work that must be handled. The latter governs the extent to which division of labor and forms of managerial or operative specialization are necessary. It is therefore a factor in line and staff organization structure. All executive work assignments involve supervision in some form. It will be seen shortly that there are definite limits to the number of operative or executive subordinates whom a higher executive can lead effectively. This affects the number of echelons, or service levels, in the organization, because it limits the number of subordinate units of responsibility of a given size and grade for which a higher executive can be given administrative responsibility. Executive effectiveness is often reduced greatly when this number is exceeded materially. The division of labor may also be affected by the availability of competent personnel. A correct division can be planned, but it cannot be completed until the responsible superior can obtain individuals who are capable of discharging satisfactorily the responsibility that he wishes to delegate. This situation is usually temporary. The organizing phase of organizational development may include, for example, the training of operatives and executives for new or changed responsibilities. The tasks that may be assigned to individuals and groups are changed as the division of responsibility changes. It is obvious, therefore, that a change in the division of responsibility may cause a substantial change in the structure of business procedure. Conversely, a change in a major procedure made for the purpose of improving the economy or effectiveness with which a certain type of project is accomplished may

cause a substantial change in organizational structure. These and other requirements will be considered further in connection with the problem of delegation.

Gaps, Overlaps, Splits, and Areas of Free Action

Organizational planning is not an engineering problem in the sense of an exact "application of the physical forces of nature to the uses of man." It deals with human forces chiefly. It is usually not possible to solve such problems with any great degree of mathematical accuracy. The pragmatic test of results often shows up some errors of commission or omission. Some of the resulting difficulties have to do with "gaps," "overlaps," "splits," and "areas of free action."

Lack of proper functional definition may result in failure to divide and delegate responsibility completely. One effect of such a failure may be a "gap." A gap may be defined as an area of action, either mental of physical, for which no delegation of responsibility has been made because of executive failure to recognize its existence. The particular functions probably will not be included definitely in any job specification. The individual who should be responsible for their performance may not be aware of their existence, in consequence. No action for the performance of the functions may be taken, in such case, until an emergency brings the situation to the attention of the responsible executive. The expedient action that follows is usually costly. The difficulty may be due to inadequate job investigation, analysis, description and specification, or to the absence of any functional analysis.[9]

Another effect of improper functional definition may be an "overlap." This occurs when certain functions in an area of action apparently or actually fall within the jurisdictions of two or more executives. There may be no action until the matter is referred to a mutual superior for a decision concerning who should be responsible for what. This increases the burden of the superior officer. The

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[9] A. Hamilton Church said: "In planning spheres of duty at the outset, coordination demands that every possible duty should be provided for somewhere. There must not be 'floating' duties to be attended to as opportunity offers. What is everyone's business is no one's business."—*The Science and Practice of Management*, p. 155.

matter may be referred to a committee. The delay may be longer, in this case. It is always costly to some extent, whether or not there is an emergency. Some ambitious office politician, on the other hand, may attempt to aggrandize his position by assuming jurisdiction over the particular function. He may wish to bring as many functions, and their attendant personnel, under his direction as possible. Disregard of functional similarities may break down any logical pattern of functions, responsibilities, and relationships. Such an executive operates frequently on the half-truth that "rank is a function of command." There are also other important considerations in the determination of rank and compensation.

A "split function" is one that is performed independently in two or more organizational components. This is not necessarily undesirable. Any differentiation of functions involves some splitting of functions. It may be a requisite for the effective operation of certain organization components when decentralization takes place. Each group would like to have its own stenographic service, for example. Each individual in each group probably would like to have a private secretary, whether or not he has any real need for one, because of the prestige values involved. A central stenographic pool, on the other hand, can make some important contributions if properly organized and operated. The final answer often is a compromise between the two extremes. There are good reasons why some staff service functions should be split and decentralized, rather than performed completely at a central point. The function is placed in direct, physical contact with the functions it serves. The service can be modified by the executive who is responsible for the principal functions, to suit their specific needs. The service is rendered with greater promptness because the service functions can be coördinated directly with the principal functions' need for this service at the time it arises. Such close coördination may contribute greatly to the effectiveness of the principal functions, since time is a fundamental factor in accomplishment.

Serious losses may result, on the other hand, when functions are improperly split. They may be caused by some executive's desire for uneconomic self-sufficiency. He may honestly feel that he should not be held accountable for results, unless he can have under his command all the functions, personnel, and equipment that signifi-

cantly affect the accomplishment of his assigned objectives. The idea, when it originates in a line organization, can be extended to include most of the major functions of an organizational component. All organizational elements of a business are or should be related to one another, directly or indirectly, through the company's primary service objectives. This idea can therefore lead to "empire building." The executive who is responsible for a group of functions may have a greater feeling of security when all the factors, forces, and effects in his situation are under his personal command. It may actually add to the effectiveness of his group, or it may merely add to his feeling of importance. It may not be in the best interests of the whole organization when there is not enough work of the particular kind to keep a specialist busy for a reasonable proportion of his time. This does not improve his morale or that of his associates. It is necessary normally to pay the specialist at the going rate for his specialty. It may become necessary to assign less skilled work to him or his group in order to occupy the clock time for which the concern is paying. The cost of the less skilled work is high as a result. A headquarters staff group in a large organization is usually charged with responsibility for the quality and effectiveness of the methods used by similar groups on lower organizational levels. It is a leadership of ideas, rather than of command. It involves staff surveillance and technical supervision. It is more difficult to perform these duties properly when the corresponding specialized function is split between various organization elements at subordinate levels on an illogical basis. Furthermore, the immediate supervision given by the executive head of an organization to the particular service function may be mediocre. It may be presumed that the executive is competent to direct and supervise the principal functions of the group. Otherwise he would not hold his job. He may not be competent to give a dissimilar staff activity the proper operative direction and supervision. The conditions under which he can give it an effective administrative management will be discussed later. For these reasons, there is likely to be poor utilization of specialized skills and knowledge when a staff function has been split improperly. The desire for functional independence with increasing decentralization may result in a duplication of work. Again, this usually occurs in connection with a phase of managerial

rather than operative specialization. Two executives, for example, may need facts for the handling of operations that are essentially the same. To facilitate his functions, each man may wish to have the facts presented in a form different from that requested by the other. He may feel that he should get the facts he needs in the form that best suits his purposes, at the time he wants them. This sometimes leads to the development of duplicate systems for collecting, analyzing, and reporting essentially the same information for related but different managerial purposes. Such duplication tends to pyramid overhead expenses. It is likely to be an interdivisional rather than an intradivisional problem. Other difficulties may result from the improper splitting of functions. They are organizational ills that tend to develop with the growth of the business, and a consequent devolution of functions. They involve problems of centralization and decentralization. They usually arise in connection with the evolution and development of staff organization. No problem is likely to arise where no specialization is involved.

Areas of free action may be desirable when it is difficult to define exactly the characteristics and requirements of one or more related functions whose performance directly affects the discharge of responsibilities that have been delegated to two or more executives. The situation may result from inability to forecast accurately the nature of the problems that will arise. The existence of the particular functions in the area must be recognized if their problems are to be handled adequately. The general nature of these functions and their requirements should be specified as clearly as possible. Responsibility for the exercise of initiative and leadership in handling such problems should be definitely located. It may be placed on the executive whose functions are most affected, whose experience and ability fit him better for such leadership, whose rank and position require it. The problems involved are handled by cross-contacts and committee action, except when emergencies make immediate action imperative. The problem of materials standardization in large manufacturing organizations provides a good example. Raw-materials standardization may be under the engineering division. The utilities of the finished product may depend greatly on the attributes of the materials from which its component parts are made. The determination of these attributes may be an impor-

tant phase of product design. Certain expense materials, small tools, and equipment condition the performance of primary operative functions. The primary responsibility of a manufacturing methods or industrial engineering department is, or should be, process planning. Staff responsibility for the standardization of such materials and equipment may be allocated to the head of this department. The office manager should know as much about the required characteristic attributes of office materials and supplies as anyone does—perhaps even more. Responsibility for the standardization of such materials may be placed on him. All such materials and supplies are bought by the purchasing department. The purchasing agent should and probably does know more about prices and price trends, the probable availability of supplies in the market, the location of reliable sources, and other problems having to do with the economics of purchasing. He may transmute millions of dollars of the company's working capital into inventories in the course of the year. He should have quite a bit to contribute in determining what materials should be specified for primary production and other purposes. The number, variety, and kind of items that are kept regularly in stores frequently create problems for both the purchasing agent and the general storekeeper. The line organization of the manufacturing division has the primary responsibility for the production of salable goods as specified with respect to quantity, quality, time, and expense. It has therefore a primary interest in the attributes of the direct and indirect materials that are specified for manufacturing purposes.

The agencies that have been mentioned are technical staff organizations, with the exception of the manufacturing line organization. It may be presumed that they have the usual technical staff authority to investigate, analyze the facts, develop a plan, and recommend its adoption; that they do not have rights of command except within each staff executive's organization. It may be presumed that the company's service objectives are changing either because of its product research and development or because of the changing needs and demands of the public. Its suppliers are probably improving their materials and supplies, and new items are being offered for sale as a result. These developments may cause extensive changes in products and processes, and therefore in the materials and supplies used

in the operation of the business. This condition makes it difficult to define exactly the characteristics and requirements of the various standardization functions. Therefore it is hard to make a sharp, clean division of responsibility and authority. It involves a number of areas of responsibilities that are related in a fluid situation. The areas where these responsibilities touch one another must be maintained in a fluid state, rather than in one that is rigidly fixed. It must be an area of free action, but not an area of "free-for-all" action. The solution may be to appoint a materials standards committee, composed of representatives of the line and staff groups involved, with the director of supply as the chairman, ex officio. Each of the technical staff agencies concerned may be responsible for the development of standards for the materials that directly affect its staff planning or technical facilitation. It may be responsible for such other materials as may be assigned to it with the approval of higher line authority. The concurrence of the committee regarding the desirability of the specifications for each new item of material, and for its inclusion in the classified inventory list, would be required before the standard could be put into effect. The function of the committee would be to accomplish a meeting of minds with respect to materials standardization problems. Any group affected could, of course, carry the problem to higher line authority in the event of disagreement. It is obvious that there is no gap in responsibility for materials standardization, but there is an area of free action. The difficulties associated with it are likely to be those associated with committee action.

The Personnel Factor and the Division of Responsibility

It was noted previously that responsibility is an individual matter, that its satisfactory discharge is unlikely unless it has been allocated properly and definitely to some individual. It was also noted that responsibility is a derivative of function, and is therefore inherent in the job. There is some confusion among executives concerning this concept. There are those who believe that there should be little formal division of responsibility and authority. There are those who believe that responsibility should be divided primarily with regard to the specific capacities of the individuals available in the organization. There are those who believe that responsibility

should be divided primarily with regard for the requirements of specific functions for proper performance.

Executives in the first group feel that responsibility and authority will gravitate naturally to the stronger and more competent executives in the organization. This implies the belief that they will gravitate in the proper amounts and degrees, if a condition of free competition for responsibility, rank, pay, and prestige is maintained between executives. This concept overlooks the fact that the stronger executive is not necessarily the more competent. It may be sound to the extent that decisiveness and strength of character are attributes of successful leadership. But the concept involves various dangers and difficulties. It fosters organizational politics. It may reduce organizational effectiveness, rather than increase it, because of distortions in functional groupings and divisions of responsibility that may result. Executives have an incentive to aggrandize their position by grabbing areas of responsibility and authority. As a result, they tend to advance their personal objectives at the expense of the organization's service objectives. There is inevitably some stultification among individuals who have superior ability but are less aggressive. The progress of aggressive, self-seeking executives may be achieved at the cost of resentment among those over whom they have climbed roughshod. This may cause friction and strife within the organization. The chief executive may have to intervene in the situation to correct it. This may be the beginning of the well-known "house cleaning" that occurs occasionally in some business organizations. Responsibility and authority tend to remain highly centralized under this concept. It rests on the assumption that the least formal division of responsibility and authority is the most desirable. The responsibility and authority of the "strong" aggressive executive are assumed, of course, rather than delegated. Their existence may be denied without notice by the executive's superior. This happens sometimes when a superior attempts to avoid accountability for failure by "passing the buck" to a subordinate. It is rare in good organizations.

Executives who believe in the second hypothesis have some good reasons. They feel that a company cannot make drastic changes in its personnel, particularly in the executive ranks, whenever there is a change in its business situation. Good executives are hard to get.

This remains true even when major changes modify the characteristics and requirements of the organization's functions in an important way. They may feel also that justice requires some security for executives. It is a fact that a person who can meet exactly the background, training, intelligence, experience, and other personnel requirements of a job is seldom available. It may not be possible to obtain such an individual, except by education and training within the organization over a period of time. Jones has summarized this as follows: "An organization is primarily an arrangement of human beings, and human beings cannot be fitted to ideal niches in an organization."[10] This concept has its weaknesses, however. The grouping of functions on the basis of the human capacities and abilities that may be available at the moment is an expedient. It may lead to violations of the Principle of Functional Similarity. This violation may result in the difficulties noted previously. Moreover, it tends to overlook the Principle of Executive Leadership: The right of security in office varies inversely with the organizational echelon in which the individual serves. No organization is likely to be much better than its leadership. The economy and effectiveness with which the business operates depend ultimately on the quality of its executive leadership. The executive's right of tenure should depend primarily on his continued ability to lead. There are situations, of course, that may prevent the operation of this principle. Many concerns were expanded to several times their original size during World War II. The principles of sound business organization and operation do not change as an organization expands, but the manner of their application does. Some heads of operating divisions of some concerns did a progressively poorer job as their organizations expanded. They were usually not relieved of their commands, because of the scarcity of top leadership ability. Some top administrative executives may, in peacetime, be able to perpetuate themselves in office through the proxy device. The changes in executive leadership that occur in business organizations suggest that this principle of executive tenure tends to operate at all levels over a period of time. This should not mean high executive turnover, provided that the selection, training, and promotional

[10] Thomas R. Jones, *Theories and Types of Organization*, pp. 31–32.

facilities of the company are operating properly. Furthermore, the higher one goes in an organization, the less the effect of current business changes on the characteristics and requirements of managerial functions. Futurity becomes increasingly a factor in their performance. There is obviously an exception to this statement, when a current change, such as a sudden sharp business recession, creates an emergency situation that affects the entire organization. It may be necessary for top administrative management to take personal command of the situation if it appears to be beyond the scope of the subordinate executives' responsibility, authority, or ability. Top leadership may be in serious trouble if the organization continues to fail under such circumstances. It tends to be true also that the higher one goes in a business organization the less important is technical specialization in the performance of managerial duties, and the more important is breadth of background, training, and experience. The personnel must be broader, more flexible, and more adaptable as it assumes greater responsibilities in an organization. It may still be difficult, nevertheless, to fit particular individuals into ideal "niches" in the organization structure. On the other hand, a concern built on the inadequacies of its present personnel is not likely to achieve any great permanent success.

The third point of view emphasizes the need for a division of responsibility on the basis of functional requirements. It holds that the satisfactory accomplishment of service objectives is a primary factor in the continued existence of the organization. These service values can be created only by work. The requirements of functions for proper performance, with respect to the requirements of service objectives for proper accomplishment, are necessarily a primary consideration in functional grouping. They are therefore a primary consideration in the division of responsibility. The principal functions of a business organization remain and must be performed, whether the individuals who man it remain or leave, as is their right. This concept does not say that the human factor in organization is unimportant. It merely says that the individual necessarily is less important to the organization than the functions he performs. It insists that a grouping of functions based permanently on the inadequacies of the present personnel can lead only to organizational ineffectiveness. This concept also has its weaknesses. It mini-

mizes the difficulty of finding the right man for the right job. It minimizes also the importance and difficulty of the training job in business organization.

The general method of handling the personnel factor, with respect to the division of responsibility, is usually a compromise between the above points of view. It may include:

1. Analysis of objectives to determine the specifications of a satisfactory accomplishment of the mission.

2. Functional analysis to determine the general effects of anticipated changes in objectives on organization structure and business procedure. This includes job analysis to determine the probable effects of changing objectives and functions on existing general work assignments, executive and operative.

3. The determination of the personnel requirements for changed jobs, without regard for the abilities and availabilities of the present personnel.

4. Comparison of the background, training, and experience of the present personnel with the personnel requirements of changed jobs.

5. Intelligent compromise between the ideal requirements of the job and the abilities of the available personnel. It may be decided to make temporary divisions of responsibility, that are not the most desirable, until certain key individuals can be retrained and built up to handle a proper division of these responsibilities. It may be decided to proceed at once to the proper organizational arrangements, hiring various individuals from other organizations. Some step intermediate between these may be taken.[11]

Diminishing Individual Importance

The preceding discussion suggests that the economic importance of the individual as an organizational element varies inversely with the size of the organization, regardless of the echelon in which he serves. The death or resignation of the president of a large organization may cause serious difficulties and losses. They should not be too serious or permanent, if he was a good organizer. A small organization cannot afford a large complement of top leadership ability. A very small organization can afford, perhaps, only one

[11] This follows Henry H. Farquhar's general line of reasoning. See H. S. Person (ed.), *Scientific Management in American Industry*, p. 45.

good leader, and he may be the man who founded and built up the business. The loss of the principal executive under such conditions can bring failure to the business. An executive may be relatively "indispensable" to a small concern. He may carry in his head much important knowledge about the organization and its operations. He may, in fact, be hoarding it in the hope that it will increase and perpetuate his fancied indispensability. It may be true—temporarily, at least—that there is no one who can take his place. The validity of the notion of the "indispensable man" decreases rapidly as the size of the organization increases.

This principle does not depreciate the value and importance of executive leadership in large organizations. We saw earlier that functional complexity tends to increase rapidly with organizational growth and size. This appears to follow geometric progression. Managerial problems tend to compound accordingly. The continuing difficulty of getting competent top administrative executives supports this concept. General officers of the armed services are frequently hired by private industry after they have passed the retirement age. Top executives who have been released from one company frequently get another assignment of equal importance in another organization at the same or a better salary, and within a relatively few months. They do not need social security. Superior ability to plan, organize, and control large-scale activities carries its own security. The large salaries that these executives demand, and frequently get, are based on the great contributions made by the top leadership function. The principle of diminishing individual importance does not imply diminishing executive value with increasing organization size. It merely emphasizes the greater stability of large-scale business organization.

The principle does not argue for or against large organizations. Some fields of business activity do not require large-scale capital application. It is possible that they will remain the domain of the small businessman. Other fields do require this large-scale capital. There is undoubtedly a trend in the direction of larger size in many industries. It is a logical development in a competitive industrial society that is based on the right of private property. An increasing standard of living requires mass distribution at decreasing costs and prices. It is necessary to provide increasing purchasing power for

the masses. The increased production must be consumed by them eventually, unless the government pays producers to destroy or otherwise divert goods and services from the market place. Most people in the United States have been putting less and less physical effort and time into their work, as our economy has developed over the decades. More and more skills and knowledge have been transferred to machines of greater capacity. A steady increase in per capita production has made possible greater leisure. Yet the per capita consumption of goods and services has been increasing at the same time. This is due largely to the increasing effectiveness of capital application and management under competitive conditions. Large-scale capital application usually requires large-scale organization to permit efficient use of the capital. Public interest in business operations tends to vary directly with the size of the organization and its relation to the general economy. Increasing business regulation undoubtedly is necessary with the increasing size and complexity of our economy. It can lead to a progressive breakdown of the right of private property and to increasing degrees of socialism, unless it is held to the necessary minimum. The ultimate effect tends to be directed labor, both mental and manual, executive and operative. The principle of diminishing individual importance may come to have increasing significance, as our economy expands, if regulation is not held to this minimum.

Functional Grouping and the Division of Responsibility

The manner in which functions are grouped to form organizational elements greatly affects the division of responsibility. The grouping for maximum economy and effectiveness depends on various principles that were discussed previously. Their application to the growth and development of the organization and its structure results in general functional patterns. Their detailed characteristics appear to vary with the industry. However, certain relationships tend to be universal. Their general nature was illustrated in Figs. 15 and 21.

There is a devolution downward from ownership with the growth of a business from the one-man stage, and its subsequent development. The first separations of the functions of the owner-manager have to do with the organic functions of the business. The reasons

therefor were discussed earlier. As the business grows, these functions continue the processes of differentiation, to take care of the need for increasing specialization and a division of labor. The continuing devolution results in the increasing separation of managerial and operative functions. The owner-manager tends to retain the managerial functions, and the leadership responsibilities and authorities that are associated with them. He tends to delegate purely operative functions and responsibilities. It becomes necessary more and more, as growth continues, to differentiate the functions of administrative management and operative management. Responsibility and authority for their performance must be delegated increasingly as the need for decentralization increases.

This process leads directly to primary operative specialization. The performance of certain primary operative functions usually requires special knowledge, skills, background, training, experience, personality, intelligence, or other personnel requirements in some kind and degree. This special knowledge and know-how are required for the effective, economical use of certain physical performance factors. These functions eventually are separated from other functions that have different requirements, so that more efficient performance will be possible. Functions must be grouped into general operative work assignments as they are differentiated. This is necessary to permit the definite allocation of responsibility for their proper performance to specific individuals, who can then be held accountable for results. This is necessary also to group individual operative work assignments into organizational elements of greater or lesser size. This makes possible the logical division of executive responsibility in accordance with the Principle of Functional Similarity. It is the basis of executive specialization. The chief considerations, then, in the grouping of operative functions and the subsequent division of operative responsibility, are the physical factors and conditions in operative performance.

An examination of organization charts indicates that four bases for grouping primary operative functions are in common use. A concern may use some or all of them. In Fig. 21 they were listed as follows: (1) product or service, (2) physical dispersion, (3) process or method, and (4) dominant physical factors. A production line for making crankshafts may be set up in an engine plant, under certain

conditions, on the basis of the operative procedure for making the part. Each step in the procedure is an operation. Each operation becomes an individual, general work assignment for an operative employee. A number of operatives may perform the operation at a "station" on the production line. The operations and stations are lined up in the serial order of their performance. A foreman or an assistant foreman may be responsible for the proper operation of the line. It is obvious that the primary basis for the division of responsibility is the product. The secondary basis is the requirements of the metal-working processes and the equipment that must be used. A department store often differentiates its primary operative functions of selling on a commodity basis. It may have a women's hosiery department, a drug and cosmetics department, a jewelry department, and many others. The garage business is a service industry. It is evident in the larger garages that limited operative specialization has been developed. It is based on the characteristics and requirements of the various repair services which the car-owning public needs. The physical characteristics and requirements of the product or service have supplied the basis for the grouping of operative functions and division of responsibility in each of these cases.

Both the particular manufacturing plant and the department store organization may expand to the point where it is practicable to engage in multiplant or multistore operation. One reason may be to have a plant or store as close to the customer as possible. Time and convenience are factors in customer service. Decentralization and a geographical dispersion of business activities may be desirable to obtain other economic advantages. National security may be a consideration in some industries. A decision must be made, in any event, concerning the operations to be carried on in the new plant or store. This decision obviously affects the grouping of primary operative functions and the division of responsibility, both operative and executive.

The processes in a chemical manufacturing plant, or any process type of industry, condition functional grouping and the division of operative responsibility. Equipment rather than product becomes the dominant physical factor in many plants engaged in job-order manufacturing. Grouping on the basis of mechanical functions per-

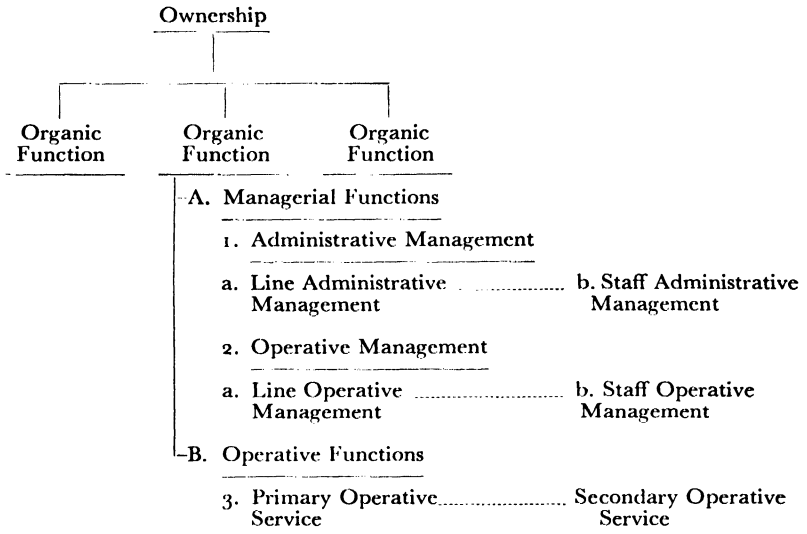
formed by various kinds of equipment makes possible the greater operating flexibility that is necessary. The underlying consideration in any functional grouping is, of course, the service objective. It is the reason for the performance of functions in the first place. All the bases for grouping primary operative functions involve considerations having to do with the effective, economical use of certain physical factors and conditions that dominate their performance. Other considerations are usually secondary.

The bases for grouping secondary operative functions, and the subsequent division of staff responsibility, are different from those for primary operative specialization. A staff organization is usually attached to a prmary chain of command at some point above the level of primary operative performance. Staff is an evolution from a chain of command for the purpose of supplying specialized assistance in the performance of particular managerial functions. The fundamental basis of functional grouping is, therefore, the breakdown of the specialized service into its subfunctions. The organic management functions are creative planning, organizing, and controlling. The managerial functions for which staff service is provided specifically are planning and control. Any or all subordinate line and staff functions may participate in organizing. Hence the principal bases for the grouping of secondary operative functions are the operative phases of planning and control, or some facilitative service that is associated with them. They will be discussed in more detail in connection with staff organization.

The general relations between the bases for functional grouping may be summarized as in the diagram on page 267.

Organizational Elements and the Division of Responsibility

Responsibility is an individual obligation. Otherwise, there is a loss of effectiveness when accountability cannot be enforced. There is a loss of morale when an attempt is made to hold individuals accountable for duties whose performance requirements have not been specified adequately or clearly, and whose scope and limitations, in relation to the duties of other people, have not been defined properly. Other difficulties may appear. The division of responsibility is based on a differentiation and grouping of functions in accordance with the principles of sound functionalization.



It results in the development of organization elements whose size increases with the growth of the business. An individual job, however, may include responsibility for certain kinds and types of projects, or phases of them, that may be assigned to the individual in the course of the day or week. These projects are processed through the organization in accordance with the requirements of a specified procedure. The procedure may be managerial or operative, depending on the nature of the work. The work that the individual does on a project may accomplish only one step in the completion of the project. It leaves him and goes to some other individual who may be located in another department. Procedure cuts across organizational lines. Functionalization may be carried down, accordingly, into the steps or operations in the completion of a project. It necessarily affects the division of responsibility.

It is evident that a relation between these concepts will facilitate an understanding of the problem of responsibility. The following definitions of terms indicate the relationship; they supply a basis of understanding sufficient for the subsequent discussion of organization structure and procedure.

Ultimate unit function: A single, simple act of operative performance, either mental or physical, that has definite points of starting

and stopping. It is the equivalent of the "therblig" of the Gilbreth motion study technique. A single, simple motion is an example in the field of physical effort.

Elementary operation: A combination and grouping of unit functions that constitute a distinct phase or division of a step in the completion of an operative project, either primary or secondary. The principles that govern the grouping of unit functions into elementary operations are to be found chiefly in texts on motion and time study and office management. An elementary operation also should have definite points of starting and stopping.

An operation or procedural step: A combination or grouping of elementary operations that constitutes a distinct, sequential division of the work of accomplishing a project. Each step has its objectives; otherwise there is no justification for its performance. They are intermediate objectives, however, because they are not in themselves usable values for planned purposes. They are built up with values produced by previous and subsequent operations, into end values that represent accomplishment of the planned final objectives of the project. These values are usable in their present form. The objectives of each step determine the functions that must be performed and the physical factors and personnel that must be used. The functions performed in one step complement the functions performed in the next step, but are not necessarily similar to them. Their nature will be examined in connection with procedure.

A project: Any undertaking that has definite, final objectives representing specified values to be used in the satisfaction of some need or desire. These objectives may be primary, collateral, or secondary. A project may be major or minor, primary or secondary, managerial or operative. It is accomplished through the proper operation of a procedure.

A specific operative work assignment: An operative project, or a phase of one, that is given to an operative employee for performance. An operation on a production order for 1000 pieces of a certain part that are to be used in the assembly of a certain number of machines on a manufacturing order is an example.

A general work assignment: The specification of the functions and duties to be performed by an individual in doing certain kinds of work on the projects or operations that are assigned to him. The

assignment may be managerial or operative. Whether or not it constitutes a full-time job depends on the amount of work that is available and the number of specific assignments that can be given to him.

Ultimate unit of responsibility: The obligation of an operative employee for the proper performance of the work assignments that constitute his job. Duties should be assigned in accordance with the Principle of Functional Similarity. It is the obligation, therefore, to perform such specific assignments within his job classification as may be given to him.

A unit of operative supervision: The number of units of operative responsibility suitable for face-to-face leadership and supervision by a minor supervisory executive, with due regard for executive economy and effectiveness. It is the ultimate unit of executive responsibility. It is seen in the job of the "lead man," "group leader," or "assistant foreman" in a factory, provided that he has certain minimum rights of decision and command and that the major proportion of his time is spent in directing and supervising the operatives in his group. The unit of operative supervision is the basic organizational group. It is the smallest organization element that conforms, formally, to the definition of an organization. It can be line or staff.

A unit of executive supervision: The number of subordinate units of executive responsibility suitable for administration by a higher executive, with due regard for executive economy and effectiveness. The subordinate units are not necessarily units of operative supervision, except at the level of operative management that is immediately above "first-line" supervision. They can be line or staff.

These concepts enter directly into the design of organization structure. They will be discussed further in connection with it. It is desirable, however, first to consider the effect of units of operative and executive supervision, and certain related factors, on the division and delegation of responsibility and authority.

The Optimum Unit of Operative Supervision

Experience has shown that there are definite limits to the number of operative employees who can be supervised personally by a minor supervisory executive. The optimum unit of supervision is neces-

sarily within these limits. The exact number that constitutes the optimum unit varies between industries, and between concerns within an industry. The range of variation between concerns is surprisingly small. This is interesting because in most concerns the unit appears to be the result of trial and error over a period of time, rather than the result of any rational organizational planning.

This suggests that there are fundamental organizational principles that govern closely the size of the optimum unit. We have a general knowledge of some of them. It is not sufficient to enable us to determine quantitatively by rational methods what the optimum unit should be for a particular concern, or to establish beyond reasonable doubt what is the normal size range of such units. We do have quite a bit of testimony from practical executives or competent students of the subject that enables us to establish empirically the probable normal range. Henri Fayol, for example, thought that it should include from 20 to 30 operative employees.[12] He recognized, however, that a supervisory executive or foreman probably would be needed when the group of operative employees exceeded 10.[13] Edward D. Jones believed that the optimum unit normally is around 25 operatives.[14] The present author once had occasion to check the range of operative units of supervision in a large steel corporation. He found that it varied from 18 to 26 operatives. These instances are taken from manufacturing industry. The problem of supervision of course is present in any form of organized activity. In military organization, the squad is the unit of supervision. It consisted of 8 men before World War II. It was increased, during that war, to 12 men including a corporal. Considerations affecting the size of the squad have to do with the requirements for effective personal direction and supervision under conditions of extreme emergency.[15] There has been considerable interest in recent years in

[12] Henri Fayol, *Industrial and General Administration*, p. 70.

[13] *Ibid.*, p. 43.

[14] E. D. Jones, *The Administration of Industrial Enterprises*, p. 2.

[15] The General Service Schools, U.S.A., said prior to World War II: "The maximum size of a unit is limited by the ability to exercise command and the mobility to perform its intended task in combat. The minimum size depends on the necessity for economy of men and matériel, but it is limited by the requirement that the unit be able to accomplish its intended combat task."—*Command Staff and Tactics*, p. 32. This statement applies either to executive or operative units of supervision.

communist organization in the United States and abroad. Apparently the communist unit of operative supervision in this country is known as a "cell." Articles on the subject indicate that its optimum size is 10 or 12 persons.[16] Size, in this instance, probably is dictated by security as well as emergency reasons. A research organization uses a unit of 10 professional operatives or less. The work of the professional research operative consists largely of creative thought. Frequently he works alone. Direction and supervision may involve extensive conferences with him. These conferences may be infrequent because he is well trained professionally. There are other reasons for a small unit of supervision in research organizations. All this suggests the following conclusion: The range of the optimum unit of operative supervision extends probably from a minimum of 10 operatives to a maximum of 30 for most concerns. There is nothing in this statement, of course, that precludes operative units larger or smaller than those indicated, under special circumstances. It suggests, however, that supervisory units which deviate greatly from this range should be subjected to careful study. The range is based on practical experience, rather than theory.

There are various reasons why this size range tends to be universal. The size of the operative unit is a factor in effective face-to-face leadership of operatives. Such leadership is required in an organization of any size. Rapidly changing situations usually make it necessary to give operatives directions more frequently and to exercise closer direction and supervision of performance. The amount required is a function of the degree of operative indoctrination of the group. Operatives who are well educated and well trained for their work do not need as much direction and supervision as those who are not. The greater the degree of operative indoctrination, the larger the effective unit of operative supervision, other things being equal. The physical dispersion of operative performance usually requires a small supervisory unit. The difficulties in exercising effective face-to-face leadership increase with loss of physical contact between superior and subordinate. This loss may be overcome partially by faster, more effective means of intercommunication, indoctrination, and other methods. The necessity for visual control of

[16] Columbus (Ohio) *Dispatch*, March 15, 1948.

operations imposes limitations on the maximum size of the supervisory unit. The writer once saw a mechanic in the tool room of a manufacturing concern kill a half day without the foreman's becoming aware of it. The foreman had between 50 and 60 tool- and die-makers under his supervision, and no assistance. There were too many projects in process to permit any effective comparison of performance and progress by visual observation. The extent to which operative work is routine and repetitive also is a factor, as suggested by this example. There are other reasons why the size of the unit of operative supervision is limited. They are the requirements of effective, face-to-face leadership of operatives anywhere. It is for this reason, probably, that the size range of such units tends to be universal.

The Optimum Unit of Executive Supervision

There appears to be a distinct difference in the range of effective units of operative supervision and of executive supervision. The basis of the difference is probably to be found in the differences between executive and operative performance. The former tends to be largely mental. It involves the leadership of others. The latter may be mental but it tends to be largely manual. First-line supervision is concerned largely with face-to-face leadership of operative employees. It involves chiefly the functions of direction and supervision. Simple, direct contacts are involved. Such managerial responsibilities are affected little by cross-functionalization. The decisions that must be made are not highly original. They can be made quickly and decisively. They involve little or no analysis of future conditions. The unit of operative supervision is usually much larger than the unit of executive supervision for these and other reasons.

The unit of executive supervision is the number of subordinate executives who are supervised personally by a superior. The superior is the executive who has ultimate responsibility for the functions under the subordinates' command. The optimum unit is the number of subordinates who can be thus supervised with maximum economy and effectiveness under the particular conditions of command. This is an important concept for a number of reasons. An executive's vision and judgment may be fogged by too much detail when too many subordinates report to him. A subordinate must sup-

ply a certain minimum of factual information in presenting a problem in order to provide his superior with an adequate basis for understanding it. Every conference, report, or communication requires a certain amount of time. The long hours of work and nervous strain resulting from an excessive managerial load tend to reduce executive effectiveness. The result may possibly be the well-known diseases of the high-pressure executive. In any event he may become a bottleneck in his organization. There are only a certain number of hours in the working day. Subordinate executives may be forced to wait too long for an appointment with their superior. Time limitations may preclude adequate direction and supervision when finally they have an appointment. There may be a tendency for the more energetic and courageous subordinates to go ahead on their own initiative. Loss of coördination, conflicts of responsibility, and other organizational ills may result from these well-intentioned attempts to get action. The executive may delegate more and more responsibility and authority to subordinates in an effort to cope with such difficulties. He may lose control of the functions for which he is responsible if he delegates too much. There are frequently problems of such magnitude that they should be brought to his attention before action is taken. He should have a broader and more fundamental understanding of the problems in his field than his subordinates. Other difficulties may develop when his span of executive supervision is too great.

A superior executive can have too few subordinates reporting to him. He can reduce his load of work and retain control of the activities under his command, but other difficulties may develop. The number of executives required to run a business tends to vary inversely with the unit or span of executive supervision. The smaller the average unit of executive supervision, the greater the number of major and minor echelons, or service levels, that are required in the organization. The executive payroll is increased. Top management is necessarily pushed further away from primary operative service. The problem of general administrative management accordingly becomes more difficult. There may also be a tendency to delegate too little authority and responsibility because of the smaller unit. The result may be a degree of centralized line or staff control that is undesirable.

There is, of course, an optimum unit of executive supervision. The determination of what it is in a given industry is again a matter of judgment, practical experience, and trial and error. Various factors limit its size. The principal factors are those that limit the effective face-to-face leadership of subordinate executives. These factors have to do with the frequency with which major problems are presented for decision, the number and duration of the conferences that are required for their clarification, the time required for a study of the facts and opinions that are developed, and similar considerations. The rate of growth of the organization is certainly a factor. Major problems develop more frequently in a fast-growing concern than in a static organization. There may be less time for the collection and analysis of facts about them. Common sense says that the number of subordinates who can be supervised effectively should be smaller. The characteristics and requirements of the work for which subordinates are responsible is another factor. More subordinates can be supervised when the functions under their command require chiefly routine repetitive decisions. The ability and experience of the subordinate executives enter into the decision. More responsibility and authority can be delegated to able, experienced executives. It should be possible, therefore, to command a larger number of them. More personal supervision is required, on the other hand, in a new organization. A related factor is the degree to which subordinate executives have been indoctrinated with their superior's philosophy of management, if he has one.[17]

The extent to which functional similarity has been observed in the formation of the organizational groups under one's subordinate executives also affects the unit of executive supervision. The grouping of dissimilar functions under an executive necessarily means that he has responsibility for diverse decisions concerning their performance. A decision applies only to the problems of the group for which it is made. Fewer subordinate executives can be super-

[17] Mooney and Reiley have asked: "Why could Napoleon delegate a military task to a Davout, a Lannes, or a Massena, with the assurance that it would be performed with the same intelligence as though he personally were present? These men were not the equals of Napoleon in military genius, but they had come to know, through his training, the principles on which Napoleon himself would act in a given case."—*Onward Industry*, p. 301. The same question could be raised in the case of any great leader in any field, including business.

vised, other things being equal. The salary requirements for both the superior and the subordinate may be greater than normal for their grades of service. An unusual combination of executive intelligence, background, training, and experience may be required. The nature and extent of the staff organization is a factor. The burden of executive decision and command can be reduced by competent staff services of investigation, analysis, and recommendation. An executive should be able to handle more subordinates effectively if he has the benefit of good staff work. These and other factors must be considered in deciding the optimum unit of supervision.

Some students of organization have suggested that the psychological principle of "span of attention" explains the narrow range of the unit of executive supervision. This principle says that the number of different things to which the average human mind can attend at a given time is quite limited, rarely exceeding seven or eight. It is no doubt a consideration. There are others, however, as noted above. Yet there appears to be a surprising degree of agreement in practical opinion. Fordham and Tingley believed that only four men should report to the chief executive of a manufacturing plant.[18] Henry P. Kendall of the Kendall Manufacturing Company considered a ratio of 1:4 or 1:5 to be sufficient. Howard Coonley of the Walworth Manufacturing Company felt that the desirable ratio was 1:6.[19] James L. Fri said: "In a store having seventy buyers, the merchandise activities may be supervised by seven divisional merchandise managers, each having ten buyers in the group."[20] The Socony-Vacuum Oil Company's sales organization has a unit of operative supervision of 15 salesmen to one district sales manager, and from 5 to 9 district sales managers to a division manager.[21] According to Henri Fayol: "Whatever his rank, a man has only to command a very small number of direct subordinates, usually less than six, except that a foreman, who is dealing with quite a simple operation, is in direct command of twenty

[18] T. B. Fordham and E. H. Tingley, *Organization and Budgetary Control*, Ronald Press, p. 19.

[19] E. D. Jones, *The Administration of Industrial Enterprises*, p. 2.

[20] James L. Fri, *Retail Merchandising, Planning and Control*, Prentice-Hall, p. 31.

[21] National Industrial Conference Board, *Sales Organization and Compensation of Sales Executives*, Studies in Business Policy No. 28, p. 35.

or thirty men."[22] The U.S. Army, prior to World War II, believed that, "in larger organizations, the number of units that can be effectively commanded, or directed by one commander, depends on the means of communication and on the size and functions of the subordinate units. The number of these subordinate units rarely exceeds 6."[23] Other competent opinions could be cited. They would merely confirm those that have been cited above. They indicate that the maximum number of executive subordinates probably should not be more than 8 or 9. The minimum number reporting to the top administrative executive cannot be less than three in a large organization, because there are three organic business functions. The unit of executive supervision appears, therefore, to range from 3 to 8 or 9 subordinates. The span of executive supervision may be short at the top of the organization because of the magnitude of the problems that must be handled. It approaches usually the upper limit as we approach the levels of operative management and first-line supervision.

Graicunas' Theorem

It was noted previously that the complexity of functionalization increases, usually in geometric progression, with the growth in the volume of business that the organization must handle. Henri Fayol commented on the influence of this geometric progression in 1908. His comments had to do, however, with its effect on the number of major ranks or service levels that are required in an organization.[24] A. V. Graicunas, in 1933, pointed out that the number of subordinates reporting to an executive is an important factor in the complexity of the senior executive's job.[25] The number of contacts with junior executives that are necessary is a function of the number of such executives under the command of the senior executive. It was assumed that the number of different kinds of contacts that may be necessary between the senior and his subordinate executives is a

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[22] Henri Fayol, *Industrial and General Administration*, p. 70.

[23] General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 32.

[24] Henri Fayol, *Industrial and General Administration*, p. 43.

[25] *Relationships in Organization*, Bulletin of the International Management Institute, March, 1933.

measure of the complexity of his job. This is logical, of course, since the decision that he makes in conference with one executive is likely to affect, directly or indirectly, the work of another executive under his command. Some complex interrelationships in command tend to develop in the course of planning, organizing, and controlling the work of the organizational group for which the senior executive is responsible. Graicunas analyzed the contacts that usually take place between a senior executive and his subordinates in the exercise of face-to-face leadership, or that directly affect the exercise of such leadership. These contacts were classified in three categories: (1) direct single contacts that take place solely between superior and subordinate; (2) cross-contacts between two or more subordinates, without the superior executive (we saw above that cross-functionalization modifies the responsibility of the superior); (3) direct group contacts that take place directly between a superior and two or more subordinates. A mathematical expression of the increase in the possible number of contacts with an increase in the number of subordinates reporting directly to the senior executive, was obtained by applying the theory of combinations to the three classes of contacts. The expression for the maximum number of different contacts, including all classes, is:

$$C = N(2^N/2 + N - 1)$$

In this expression, C represents the total possible number of different contacts of all kinds, and N represents the number of subordinates who report directly to a principal executive. This relationship is shown graphically in Fig. 24. It indicates that the possible number of different contacts which affect the senior executive's work tends to increase in geometric progression as the number of subordinates reporting to him increases in arithmetic progression. The difficulty of his job also tends to increase in geometric progression, if these contacts are an accurate measure of managerial complexity.

It will be seen in Fig. 24 that the curve of total different contacts rises sharply beyond five or six subordinates. This suggests that the optimum number of subordinates is around these figures. Hence it supports the empirical results of practical experience. It does not suggest that units of executive supervision above or below these fig-

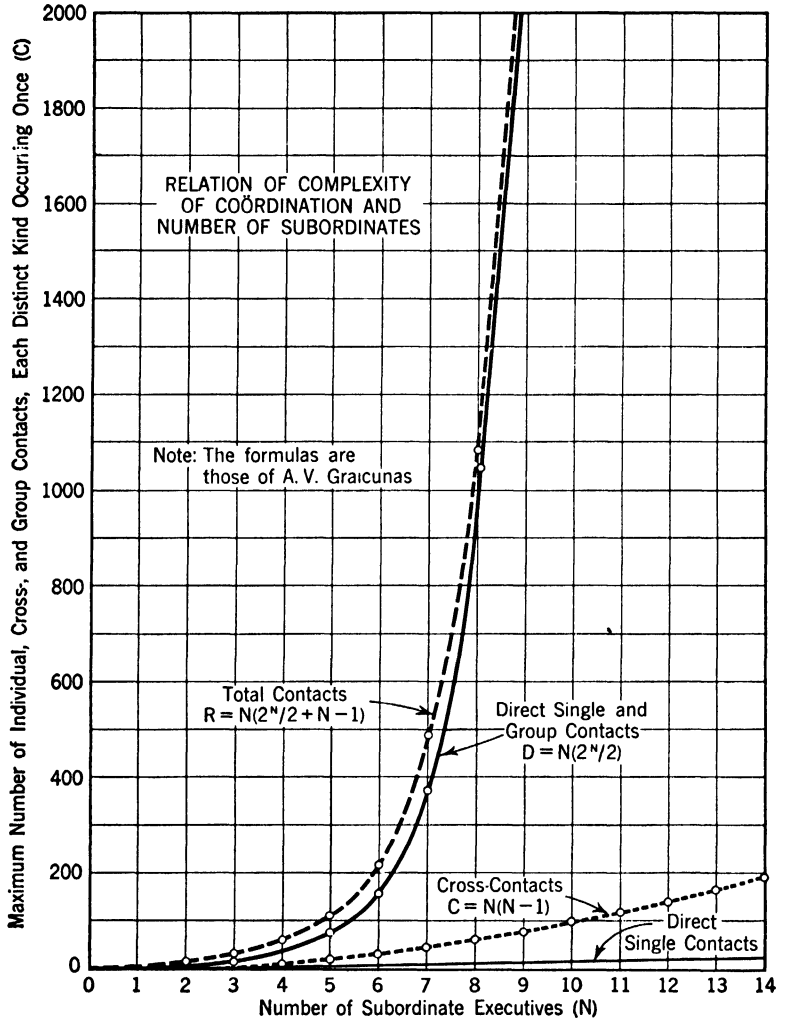

FIG. 24. Executive Contacts and Managerial Complexity.

ures are necessarily unsound. The actual number of executive contacts that may be required during any period of time may be more or less than the theoretical number of different contacts that are possible with a given number of subordinates. This theorem also suggests that the necessity for group contacts is one of the most im-

portant factors in the complexity of the executive situation. It supports the feeling of some executives that the conference is one of the necessary evils of modern business.

This theorem indicates another reason why the unit of operative supervision always is larger than the unit of executive supervision. First-level operative management has to do chiefly with face-to-face leadership between supervisor and operative. It involves chiefly direct, single contacts. Cross-contacts between operatives may be frequent in some concerns. Direct group contacts between operatives and supervisor are relatively rare.

Graicunas' Theorem is not proof of the optimum size of the unit of operative supervision or the unit of executive supervision. It is a hypothesis that explains the influence of certain factors affecting their size. It supports the results observed in practical experience. It is accordingly a valuable contribution to our understanding of supervisory leadership.

Supervisory Units and Organization Structure

The basic organizational element is the operative employee. The basic organizational group is the number of operatives that constitute a unit of operative supervision. The supervisor in command of an operative unit is on the lowest level of executive service in the organization. The unit of executive supervision is quite limited. The interaction of these concepts, and their requirements, greatly condition the design of line organization structure. It indirectly conditions the development of staff organization. These matters will be taken up in connection with the design of organization structure. The effect on the division of responsibility is our chief interest at this point. Dennison noted that "the smallest sub-departments must in the last analysis finally distribute the work they have to do among single individuals—must divide their work into departments of one man each. To make any one of the assignments carelessly or stupidly may not seem important; but upon the aggregate of them rests the whole structure of organization."[26] Jones has said: "The functions remaining to the personal care of any major executive should be so ordered and limited that only those matters which are exceptions

[26] Henry S. Dennison, *Organization Engineering*, p. 134.

to the routine under his control shall come to him for action, and that the number of persons reporting to him shall be the minimum commensurate with economical operations."[27]

The act of delegating responsibility relieves the executive of none of his responsibility. It can only relieve him of his immediate load of work and give him the advantages of some form of specialized assistance. The variety, scope, and magnitude of the problems on which an executive may be required to pass judgment tend to increase greatly as his rank increases. There is evidently a principle of complex responsibility that is a corollary of the Law of Functional Growth. It may be stated as follows: The complexity of the executive's responsibilities tends to increase in geometric progression as his rank increases in arithmetic progression. It is a derivative of his ultimate responsibility for an increasing number of operative and executive units of supervision performing diverse functions involving increasingly complex relationships.

[27] Thomas R. Jones, *Theories and Types of Organization*, p. 30.

CHAPTER 9

AUTHORITY, DECENTRALIZATION, AND ACCOUNTABILITY

The Nature of Authority

Responsibility has been defined as an obligation of the individual to perform assigned duties to the best of his ability under the direction of his executive leader. Authority is the corresponding right that enables the individual to discharge the particular obligation. It is a derivative of responsibility. The latter is in turn a derivative of objective and function.

The work of the organization tends to divide horizontally into managerial and operative activities. Kinds of authority can be distinguished on this same basis. Managerial authority is the right to exercise executive leadership. It is the right to plan, organize, and control the organization's activities for which the executive is responsible. It consists principally of the rights of decision and command.[1] It is an attribute of leadership in any organization anywhere, business or otherwise, if that leadership is to be effective. Operative authority is the right of the operative employee to perform assigned operative functions without undue interference, so long as he follows directions satisfactorily. It does not include any rights of decision or command with respect to the activities of others. It does include the operative's right to plan, organize, and

[1] Various students of management differ in detail concerning what authority is. Their views support the above definition in general. Henry S. Dennison, for example, said: "Authority is in essence the working out of plans which meet conditions and are understandable by those they affect."—*Organization Engineering*, p. 159. Henri Fayol thought that "authority is the right to command, and the power to make oneself obeyed."—*Industrial and General Administration*, p. 20.

control his own job within the limits of whatever operative responsibility and authority have been delegated to him. The practical existence of this right can be tested easily. The test merely requires officious interference with the assigned duties of a competent operative who is doing his work satisfactorily.

It is necessary to make a distinction between rights of decision and rights of command. A decision is a definite determination of a question. It has to do with answers to such questions as what should be done, how should it be done, and others that were discussed in connection with planning. They concern a proposed action or a significant deviation from the plan underlying a current action. The right of decision is basically the right to plan. The latter is the basis of group action when it specifies and relates the activities of individuals and organizational groups in the accomplishment of a common objective. Coördination of subsequent action is effective usually to the extent that it is based on a sound plan. A right of decision with respect to the activities of others, whether executives or operatives, is in consequence a necessary attribute of executive authority. An operative employee may have certain rights of decision, over and above any property rights in whatever intelligence, knowledge, skill, and experience he brings to the job. These rights extend only to his assigned duties. They are received by delegation from his supervisor and are limited thereby. They do not extend to the work of others in any significant degree. A simple test of the nature and amount of authority that an individual requires is provided by the question: What are the nature and scope of decisions that he should make? These decisions may vary greatly in their importance. They may be entirely routine. They may require considerable originality and judgment.[2] They may affect the action of large groups, or they may affect only the individual's job.

The right of command can be only an executive prerogative. It is the right to require reasonable compliance by his subordinates with the orders and instructions that are necessary for the execution of the decisions for which the executive is ultimately responsible. The concept in military organization has been expressed as follows: "Command is the authority which a person in the

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[2] H. P. Dutton, *Principles of Organization*, pp. 30–31.

military service lawfully exercises over subordinates by virtue of rank or assignment. Authority to command is an attribute of rank exercisable under certain conditions by virtue of rank alone, and obligatory when coupled with lawful assignment to command."[3] This concept does not necessarily involve compulsion. In business organization it has been expressed by the following statement: "After an organization has been formed, it must be made to work, and this is the function of command."[4] An executive who regularly makes a negative use of authority is not likely to be as effective a leader as one who uses it positively. The right of command, like the right of decision, serves certain necessary purposes. It assures that individuals and groups within the organization will conform to the plans and policies of executive leadership. These plans usually are the result of much thought by many executives and their subordinates. They are probably the product of the best brains of the organization. They represent what these men think is the most economical and effective basis of action for the accomplishment of organizational objectives. Their execution generally requires coördination of the action of many different individuals and groups. It has to do principally with the relation of action to the time and order of performance. Its purpose is the accumulation of the values resulting from the action, into the desired end result. Good coördination requires, therefore, not only that these individuals and groups do what should be done, but that they do it where and when it should be done. It is evident that the right of command underlies performance of the executive function of control. An executive who is stopped by lack of authority from exercising adequate control must not be held responsible for the results.

The managerial function of organizing is a linking function between creative planning on the one hand and executing on the other. It can be shown that the work of organizing also requires the exercise of the rights of decision and command.

Authority and the Democratic Process

Authority is a term for certain rights that individuals acquire when they become members of an organization and accept certain responsibilities. It refers to organizational rights. Such individuals

[3] General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 22.

[4] Henri Fayol, *Industrial and General Administration*, p. 20.

have, in addition, certain rights by reason of being human beings and citizens. The latter rights include property rights in their services. They are the basis of the contractual relationships between an individual, or a group of individuals, and the business organization of which it is a part. They concern the right to certain values that the individual or group desires for itself, and which constitute its personal objectives. Satisfaction of these personal objectives comes ultimately from the consumer's dollar. The accomplishment of the personal objectives of members of business organizations depends ultimately on the accomplishment of the organization's service objectives. This must continue to be the case so long as we retain private capitalism and a democratic society. The customer has the right of freedom of choice in the market. Conversely, anything that tends to limit this freedom of choice tends to break down a democratic society.

The business organization is obviously an economic institution. The term includes farms, stores, factories, amusement establishments, transportation companies, and any other agencies whose activities have to do primarily with the creation and distribution of economic benefits. The sum total of the values created and distributed by all such institutions is the sum total of the values that sustain an industrial society. Their continued creation and distribution are necessary to its continuing existence. The creation and distribution of these values require the utilization of the physical and human resources of the particular society. The right of the private business organization to use these resources depends on the delegation, to the owners of the business, of private property rights by organized society through its elected representatives. The right of the executive to plan, organize, and control their use by the business organization is a right that is delegated by ownership. This delegation of authority must be commensurate with the executive's leadership obligations. He delegates these responsibilities and authority, in turn, to executive and operative subordinates.

Executive authority is a universal phenomenon in organization. The high standard of living of an industrial society depends on abundant resources, mass production, and mass consumption. It requires, in many industries, large-scale organization for the effective, economical use of large-scale capital. The complexity of the

work of planning, organizing, and controlling business activity increases with business growth. The importance of executive leadership accordingly tends to increase with the size of the organization. The authority of the executive in a vast state trust that is operating under an advanced form of socialistic state capitalism is derived from the right of public property. The authority of the executive in a large corporation that is operating under a democratic form of government and private capitalism is derived from the right of private property. Both executives have authority. However, its nature, extent, and manner of use are almost as different as day and night.

The term "property" may refer to any disposable goods, lands, or services in which one owns a beneficial interest. The right of private property is the right to hold and use such resources for personal benefit, but with due regard for the public benefit. The public interest is paramount in theory. It may not be in practice, in the absence of adequate public regulation. This applies, in general, to both capital and labor. The experiences of the last quarter-century indicate that a loss of private property rights in one usually is followed quickly by loss of private property rights in the other. The title to property which is vested in an individual is merely an expression of his right to control the use of his property under the conditions stated. Increasing public control of the use of private property obviously tends to vitiate title and the right of private property. Increasing regulation of the use of private property tends to become necessary as an industrial society increases in size and complexity. It is a major problem to hold such regulation to the necessary minimum. The restriction of the right of private property and other private rights is accomplished, in a democratic society, by the people through their elected representatives. It is of the essence of the democratic process.

The term "democratic" applies to political organization. It refers to a form of government in which temporal power is vested in the citizen and is exercised by him through his elected representatives. No other form of organization that is concerned with temporal affairs can be democratic in its internal operations. It receives its sanctions by delegation from the body politic, through its representatives. The democratic process in economic affairs is concerned

largely with the use and abuse of private property rights. It is concerned, therefore, with the regulation of collective bargaining between capital and labor, the maintenance of free competition between business organizations, and similar problems. The term does not apply to committee action, various applications of the principle of participation, and other managerial processes whereby the business organization accomplishes its objectives.

The development of the corporate form of organization, and the proxy device, have placed great responsibility on corporate executive leadership. Most corporate executives believe sincerely in the concept of free enterprise. If they do, they cannot consistently enter into cartels, support price agreements in restraint of trade, deny the right of labor to organize, or take similar positions for short-term gains. The small retailer often supports retail price maintenance. The farmer is enthusiastic about governmental support of agricultural prices. All these policies tend to diminish free competition and the customer's freedom of choice. To the extent that they succeed, they break down the right of private property in capital. Labor leaders wax profane when someone questions their right to use the strike as an instrument of economic and physical compulsion to require the acceptance of their demands. They insist that they have a special right to create a monopoly of the right to work, to create permanent shortages of certain types of labor through restriction of apprentices and other methods, and to engage in other practices for the purpose of obtaining for their followers a monopoly wage from the public. Such practices also tend to diminish competition and the customer's freedom of choice. To the extent that they succeed, they also break down the laboring man's right of private property in his services. Collective bargaining rests on this right.

People have fought for the right of private property for centuries. It is a basic requisite for the existence of personal liberties. The continued development of the right of public property, on the other hand, ultimately results in complete state capitalism. It concentrates control of the use of society's resources in the state, presumably in the interests of the people. Authority for the use of these resources is necessarily exercised by functionaries of the state. The individual is one of the means of production that must be

controlled. The exercise of this authority is backed by the power of the state. The continued concentration of authority and power in the hands of such functionaries has resulted, in the past, in a weakening of democratic processes and a serious loss of liberty. Conversely, private capitalism tends to result in the decentralization of responsibility, authority, and initiative, provded that free competition and the customer's right of freedom of choice are maintained to an effective degree.

Most people are greatly concerned with the public interest, but only after they have first taken care of their private interests. It is reasonable to expect them to behave like human beings, of course, since they are. A great majority of our people, nevertheless, sincerely believe in competitive private capitalism. They fear monopoly state capitalism. They believe that, under the former, the average person can enjoy more goods and services of better quality at lower prices and have greater personal liberty than under any other system. This belief has been changed in many other countries, with a resulting loss of liberties.

It is evident that all grades of executive leaders in all business organizations have broad social as well as economic responsibilities. They should use their authority with due regard for the public interest, and in a manner that will retain the public's confidence in competitive private capitalism. Their responsibility and authority are received by delegation from organized society, through ownership. It can be modified by the representatives of organized society.

The Distinction Between Authority and Power

Authority and power are related but different terms. A right may be any privilege to which an individual or group has a just or asserted claim. Executive authority in business is a right that is exercised by virtue of the sanctions of a higher authority. Power is the force that maintains that right. It may be a moral force or a physical force. No moral force is likely to sustain a right indefinitely, however, in the absence of adequate physical force to back it up. There are always individuals who have no respect for moral force. Executive authority in private business can be sustained only by the moral force of the common good and by the physical force of

organized society. This also requires the business executive to exercise a proper regard for the public interest. The famous sit-down strikes during the early nineteen-thirties furnished a practical example of this relationship. Plants that were important in the economic life of the nation were seized by strikers. A majority of our people were in a state of fear and uncertainty as the result of a great depression. They believed, rightly or wrongly, that business leaders had failed somehow to discharge properly their responsibilities to society. The judicial and executive branches of the government failed to use the police powers of the state to eject the strikers and return the properties affected to their owners. The right of private property was nullified temporarily in particular instances. The executives of the struck plants were in effect stripped of their authorities, since they were unable to exercise them.

The Coincidence of Responsibility and Authority

There is a close and dependent relationship between responsibility and authority. There is an order of devolution of authority that determines the nature and extent of its delegation to executives on any subordinate level of an organization. This was stated previously to be organizational service objectives, policies, functions, responsibility, authority, accountability. This relationship has been recognized generally in the field of business organization. As Edward D. Jones pointed out: "For any industrial enterprise, there is a sum total of functions to be performed; and there rests somewhere an adequate source of authority to give the necessary privilege or right to accomplish these functions. Orders issue by virtue of authority. The recipients of orders are invested with responsibility. Authority and responsibility should be equal; they are two viewpoints from which to consider duty."[5] Winston Churchill commented on its importance in the fields of military and political organization: "I was ruined for the time being in 1915 over the Dardanelles, and a supreme enterprise was cast away, through my trying to carry out a major and cardinal operation of war from a subordinate position.

[5] E. D. Jones, *The Administration of Industrial Enterprises*, p. 149. See also H. C. Metcalf (ed.), *Business Leadership*, pp. 278–279; Thomas R. Jones, *Theories and Types of Organization*, p. 30; Henri Fayol, *Industrial and General Administration*, p. 20.

Men are ill-advised to try such ventures."[6] Other competent opinion confirms these points of view. They indicate the existence of an important organizational principle which may be called the Principle of the Coincidence of Responsibility and Authority. It says: The delegation of responsibility should be accompanied by a commensurate delegation of authority. Otherwise, it is difficult to maintain accountability for the accomplishment of assigned objectives.

The Classification of Authority

A classification of authority should follow the earlier classifications of function and responsibility. Authority is a derivative of their requirements. The general distinction between managerial and operative authority was also defined previously. It is necessary, however, to distinguish further between types of executive authority, since they affect the design and development of organization structure. Managerial authority has been defined as the right of the executive to plan, organize, and control the activities of others. It is exercised with respect to the group that he is expected to lead in the accomplishment of assigned objectives. Authority to plan includes the right to demand and obtain the facts necessary for an intelligent decision. It includes the right to make some decision concerning what should be done and how it should be done, and related questions. Authority to organize is the right to create or require the creation of those conditions and relationships between functions, physical factors, and personnel that are necessary for the execution of the plan. Authority to control is the right to initiate planned action when and where it is required, to exercise disciplinary action when necessary, and otherwise to constrain and regulate the activities of subordinates in accordance with the requirements of the plan. The function of management breaks down broadly, however, into the functions of administrative management and operative management. The distinction between them is roughly the distinction between group management and project management. The authority of the administrative executive includes the rights of decision and command that are exercised by him in planning, organizing, and controlling broadly the activities

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[6] Winston Churchill, "Their Finest Hour," *Life*, February 7, 1949, p. 61.

of the organization elements under his command. It is usually exercised with respect to the accomplishment of the organizational objectives of his group over a span of time extending considerably beyond the immediate future. It is the characteristic authority of top executive leadership, but executives at any organizational level may have it in some degree. The authority of the operative executive includes the rights of decision and command that are necessary for planning, organizing, and controlling specifically the accomplishment of projects, or phases of them. These are projects that have been assigned to his group for accomplishment. The project may be the promotion of a sale of some kind of merchandise in a department store, the fabrication of a specified number of parts on a production order in a factory, or any other specific undertaking in any business organization. The accomplishment of the organizational objectives of the group, in any organization, results from the accumulation of project values over a period of time. They represent some accomplishment of final project objectives.

It was also seen that the devolution of organic functions results in the development of subordinate line and staff groups. The executives who head these groups may hold managerial rank as administrative or operative executives, depending on the size and position of their group in the organization. The nature and scope of their authority are affected, however, by the line or staff character of their group. The authority of a line executive includes the rights of decision and command that are exercised over subordinate line and staff elements by an executive who holds a position in a primary chain of command. A principal staff executive heads a group that is attached to a chain of command for the purpose of rendering some specialized assistance. It is not part of that chain. It is a component of a larger organizational group that includes the particular line. Its services may facilitate the performance of either managerial or operative functions. The authority of the staff executive, therefore, may be broken down broadly into two general kinds: (1) advisory rights of decision relative to primary line and other staff groups, and (2) rights of decision and command relative to the activities of subordinate staff elements and groups for which he is directly responsible. He may exercise his line superior's rights of command beyond the limits of his staff group under certain

limited circumstances. It will be shown later that this is not necessarily an exception to the above statement. The exact nature and scope of an executive's authority are determined by delegation by higher line authority.

The Division and Placement of Authority

The division of authority is the process of determining the nature, scope, and extent of the rights of decision and command that should be delegated. It involves a decision concerning what rights are necessary for the proper discharge of the particular responsibilities in specific general work assignments. It is a problem of organization structure. Its purpose is that of enabling the discharge of delegated responsibilities. Many factors can affect this division. The nature, importance, time, frequency, and place of the decisions that must be made by the delegate certainly are considerations. The nature and requirements of the orders and instructions that must be issued should be taken into account. The intelligence, experience, and ability of the individual to whom the responsibility must be entrusted in whole or in part may temporarily be a factor. The extent to which a subordinate executive and his group can be entrusted with authority is a function of the extent to which they have been indoctrinated with the managerial philosophy of the particular organization. The self-coördination of independent judgments requires the acceptance and application of some common philosophy that underlies the solution of related problems. These and other considerations will be taken up shortly in connection with the problems of delegation and decentralization.

The location or placement of authority is the process of relating the authority that has been determined to be necessary to the position that carries the responsibility for the proper performance of the particular functions. The location of authority has to do with positions rather than persons. The employee who accepts a job, whether operative or executive, accepts an obligation to perform properly the functions and duties that compose the job. He acquires whatever rights of decision and/or command are necessary for the discharge of this obligation only during the time that he has the particular assignment. He becomes accountable for results during this time. The accountable person may be changed for any number

of reasons. The responsibility and authority that are associated with the job should not change, unless there is a significant change in its objectives and functions. A poor location of authority may partially or completely vitiate a good division of authority. Any division, good or bad, is meaningless if no one knows what it is. It should be stated definitely and clearly, in language that cannot be misinterpreted, by means of such instrumentalities as the organization chart, the organization manual, specific written directives, oral interpretations that are confirmed subsequently in writing, and other instruments. The location of authority depends on a proper division of it and is accomplished by proper delegation.

There are excellent reasons why the division and location of authority are important problems in business organization. The exercise of initiative within established limits is promoted when they are handled properly. Interest in the job and a flow of ideas are stimulated. Another reason is the proprietary interest in his job that the individual tends to develop. The responsible executive is relieved of the burden of unnecessary decisions, as a result of delegating adequate rights of decision and command to subordinates. The quality of performance generally improves when the accountability of subordinates is strengthened. Morale also usually improves. There are contributions to organizational stability, flexibility, and capacity for growth. The right to make decisions, issue orders, and give instructions is a factor in executive growth and development. The proper division, location, and delegation of authority promotes decisive action. This is usually an important factor in successful accomplishment. There are other reasons that account for the importance of the problem.

Many concerns specify job service objectives satisfactorily. They may specify very well the details of the functions, responsibilities, and duties composing the job. They usually specify poorly the authority that should go with the job. Rights are intangibles. It is difficult to define them accurately. It is not easy to establish the limits of an executive's authority in proper relation to the decisions that other executives must make. It requires clear thinking to educate subordinates concerning the significance and proper use of their authority under different circumstances. Some executives attempt to avoid the issue by making a general statement. The

following is an example: "The incumbent executive is delegated such authority as may be necessary for the proper discharge of the responsibilities of this position." The statement tells the responsible executive exactly nothing. He knows merely that he is expected to make decisions, that he may do all right if he can outguess his superior. There is an appearance of delegation where none actually exists. The superior hopes to be able to define this authority gradually by subsequent interpretation and the establishment of precedent. Some trial and error usually is necessary as a supplement to the use of any scientific method anywhere. To rely principally on the method of trial and error is generally expensive. The problem of the division, location, and delegation of authority is no exception.

The Delegation of Responsibility and Authority

A delegate is a person who is appointed to represent and act for another. Any subordinate, whether executive or operative, is in a sense a delegate of the superior executive to whom he reports directly. The process of delegation, in business organization, is one whereby certain of the executive's functions, responsibilities, and authority are released and committed to designated subordinate positions. The appointment of an individual to a job and his acceptance of the obligations associated with it entitle him to use the corresponding authority for the duration of his appointment. Responsibility and authority in business organization are attributes of the job. They are distinguishable from but related to the employee's duties and rights as a citizen. Delegation enables the principal executive to extend his abilities beyond the limits of his personal powers. It facilitates a division of labor and the development of specialization. It makes it possible for an executive to accomplish successfully a mission that exceeds many times his immediate, personal limits of time, physical energy, and knowledge. The delegations of responsibility and authority usually are made simultaneously, since the latter is a derivative of the former.

The proper grouping and assignment of functions to a position precedes the division and location of responsibility. The latter necessarily precede the release and commitment of this responsibility to the designated position. Delegation does not involve a transfer of responsibility from superior to subordinate. The superior has

exactly the same responsibility that he had before delegation took place. The reasons for this will be seen shortly. Delegation does result in a downward transfer of work, both mental and manual.[7] It results in additional relationships between functions and responsibilities, authority and accountability.

The principal requirements for the effective delegation of responsibility are those already noted: (1) a careful analysis of the objectives and functions of the business, and of each element and group composing the organization, (2) an accurate definition of functions and their requirements, (3) a division and definition of responsibility based on a proper grouping of functions, (4) the establishment of correct functional relationships for purposes of coöperation and coördination, and (5) the release and commitment of responsibility in accordance with the principles of effective delegation.

The delegation of authority is merely the phase of the process in which authority for the performance of assigned functions is released to positions to be exercised by their incumbents. The principal factors and requirements governing the effective delegation of authority are basically the same as those for the delegation of responsibility. There are two distinguishing differences, however, between delegations of managerial and of operative authority. The delegation of managerial authority may include: (1) the necessary rights to plan, organize, and/or control the activities of subordinates in the performance of functions for which the particular executive is responsible, and (2) the right to redelegate this right. It is obvious that rights of command cannot be delegated to positions of operative performance. There may be, in addition, certain rights of decision and command that may be released to an executive position, but without the right to redelegate. They are associated usually with decisions of such importance that they should be made personally by the executive holding the position. They should not be made by one of his subordinates. He cannot afford the risk

[7] Northcott, Sheldon, Wardropper, and Urwick expressed this as follows: "The organic functions of organization represent a horizontal division of work. . . . Delegation is, so to speak, the vertical divisioning of work—the division of a total sum of work into various component and subsidiary units of responsibility, each unit carrying a less degree of responsibility, than the whole of which it forms a part."—*Factory Organization*, p. 55.

of an error in judgment. It is a practice that is not generally followed. The executive's personal load of work is increased to the extent that he cannot delegate it. Key executives would break down quickly from overwork if the practice were general. Controls would be too highly centralized in many cases. The executive would be forced to bottleneck his own organization, and many other difficulties would develop. Limitations of the right to delegate the managerial phases of an executive's responsibilities do not, of course, limit his right to delegate its operative phases.

The delegation of executive authority has two principal phases: (1) the delegation of rights of decision and/or command for the performance of designated, general executive work assignments, and (2) their delegation for the execution of specific projects. The first has to do with a release of authority for the performance of administrative management functions. This is the authority to plan, organize, and control the group activities for which the executive is responsible. The second has to do with authority for the performance of operative management functions. This is the right to plan, organize, and control the execution of the specific projects, or phases of them, for which the executive is responsible. The delegation of operative management authority usually includes the right to redelegate operative responsibility and authority for the operative phases of the executive's work.

The Process of Delegation

A labor organization is an association of individuals who are banded together for the purpose of promoting their personal interests in the economic process. Its primary objective is not economic service for the general public. The individual member is usually a citizen. He has a property right in his services. It is received by delegation from the body politic. It is a condition of individual freedom. It enables the individual to sell his services individually or in concert with others. The direction of delegation is downward by election from individual members to professional labor leaders for purposes of collective bargaining. The development of a monopoly of the right to work in the hands of a strong, dominant leader may diminish the worker's property right in his services. The process of delegation may be distorted accordingly.

A business organization is an association of owners and their employees. A business comes into existence through the provision of capital and labor by ownership. All authority within the organization is an extension of the right of private property in capital by delegation from ownership. This right also is received by delegation from the body politic. It enables ownership to create and distribute economic goods and services at a profit. The direction of delegation in business organization also is downward from owners to professional executives, and through them to operatives. Delegation takes place in the corporation through elected directors. A wide diffusion of ownership among people who have only a dividend interest in the business, and the control of its proxy machinery by a group on the board of directors, may diminish the stockholder's property right in his capital. The process of delegation may be distorted accordingly. Public regulation, together with the evolution of professional executive leadership, has given the stockholder reasonable assurance of a prudent use of his capital.

The status of the professional executive is in a state of flux as these concepts develop. The primary objective of the business organization is some economic service. It is obvious that the executive has an obligation to the representatives of the owners who appointed him. The latter have a right to a profit if it is earned by the success-acceptance of a business risk, under competitive conditions, in rendering an economic service. It is equally obvious that in a modern industrial society the executive also has an obligation to represent fairly the interests of the public and the employees, as well as other segments of the economy that are affected by business operations. These obligations grow out of the responsibilities of his position as an industrial leader. Their importance would not be changed by a shift to state capitalism. The direction of delegation in the business organization would still be downward.

There must be some process whereby this downward flow of responsibility and authority is accomplished. Mooney and Reiley believed that the "supreme authority" is anterior to leadership, and that authority is of the essence of organization. They formulated a Principle of Functionalism which recognizes that the principles of functional differentiation and devolution result in the development of the functional hierarchy, gradations of duties, and

ends in functional definition. They spoke of "functional correlation," which meant simply "that every member of an organization must know his duties, the full extent of his duties and above all their exact relation to all surrounding duties." They referred to "the scalar chain": "In organization it means the graduation of duties, not according to differentiated functions, for this involves another and distinct principle of organization, but simply according to degrees of authority and corresponding responsibility." The "scalar process" is obviously the process by which authority and "corresponding responsibility" are delegated. They believed that the "scalar chain" is synonymous with what is usually called the line organization.[8] This differs from the present writer's point of view that business objectives, functions, and responsibilities condition the delegation of authority. The determination of what responsibility and authority shall be delegated is made by executive leadership. Its decisions are effectuated through business policy. The private property rights of both capital and labor depend on the anterior consideration that the public shall be well served.

The general process by which responsibility and authority become active is the process of "dispatching." It may be defined as that phase of the control function which seeks to constrain action, either mental or physical, through the proper regulation of the release of authority to act. General releases of authority take place in connection with dispatching for administrative control. Specific releases take place in connection with dispatching for operative control. Administrative releases of responsibility and authority usually occur concurrently. Operative releases frequently do not. The release of operative responsibility may take place prior to the release of authority to execute a specific operative project or some phase of it. These problems will be considered later in the discussion of the control function. The principal means for delegating responsibility and authority will only be mentioned here. They may be classified broadly as (1) organizational directives releasing administrative responsibility and authority, and (2) operational directives releasing operational responsibilty and authority. The former are accomplished by means of organization manuals, organization charts, job specifications, and similar instruments. The

[8] James D. Mooney and Alan C. Reiley, *Onward Industry*, pp. 31, 45, 61, 518.

latter are accomplished by standard office procedures, standing orders, orders covering specific projects, and similar instruments. They include instruments for the release of operative authority by operative executives to operative employees. An example of the latter in manufacturing is the job ticket which frequently releases operative authority to a machine operator for performing an operation on a lot of parts in a plant that operates under conditions of intermittent production.

Any release of responsibility and authority may be made orally or in writing, or both ways. Important releases should be made or confirmed in writing. Any release should have the approval of the line superior of the individual to whom it is made. Otherwise, there is a violation of the Principle of Unity of Command.

Limitations of the Right to Delegate

There are various limitations of the right to delegate responsibility and authority. Some of them were noted previously. The process of delegation, for example, relieves the responsible executive of none of his responsibility and authority. The implied limitation applies to degrees rather than kinds. There are no kinds of executive responsibility and authority that cannot be delegated. The right of subordinate executives to redelegate can be restricted, as we have seen. The principal significance of these limitations has to do with the distinction between administrative management and operative management. Intragroup executive responsibility and authority are characteristic of subordinate leadership regardless of the organizational level. The leadership of the unit chief is subordinate to that of the section chief. The leadership of the department manager is subordinate to that of the division manager. The leadership of the division manager is subordinate to that of the general manager, who may in turn report to the head of the organization. Intergroup responsibility and authority, conversely, are characteristic of superior leadership. Administrative management is primarily group management. It is concerned largely with intergroup activities and relationships. An excessive delegation of administrative authority means excessive delegation of the right to determine the general objectives, policies, and functional relationships between groups composing the particular organization. There are always certain fundamental deci-

sions concerning such matters that are basic to organizational economy and effectiveness. They represent the minimum of administrative responsibility and authority that must be retained. The executive cannot delegate it without abdicating his position of executive leadership. He still has the possibility of relief from any detail that is associated with this residual responsibility, through the proper use of his personal staff, if it is adequate. Frech and Jeffries have described this minimum of residual responsibility and authority as follows: "The chief executive should reserve authority as to those things which affect the business as a whole. He should establish the ideals and the fundamental principles which govern the corporation in its operation, its relations with the public, its employees and its stockholders."[9] This concept is not peculiar to the position of the chief executive, however. A branch chief in a clerical department may spend most of his time assisting his unit chiefs in solving local problems having to do with clerical work that is flowing through the particular units. Both executive grades in a manufacturing establishment are concerned chiefly with staff operative management. There are occasions, however, when the branch chief must consider what basic conditions and relationships should exist in the units under his command for the proper achievement of the service objectives of the branch. He may have been requested to make recommendations concerning them to the department manager. He can, and probably will, ask for the suggestions of his unit chiefs. He cannot ask them to make the decision for him. The unit chief has a more intimate knowledge of and interest in the work of his unit. It is usually greater than his interest in the work of the branch as a whole, regardless of how many facts he may be given. It is the responsibility of the branch chief to work out a compromise that will represent the best interests of the branch as a whole. His department manager will hold him accountable for results, regardless of how he arrives at the answer. It is evident that even this minor executive, whose work lies chiefly in the field of staff operative management, has some residual administrative responsibilities that he cannot safely delegate.

[9] T. W. Frech and Zay Jeffries, *Business Ideals, Principles and Policies*, p. 16. See also H. P. Dutton, *Principles of Organization*, p. 153, and a more recent statement by Alvin Brown in his *Organization of Industry*, pp. 42, 77.

It does not follow, of course, that one always should delegate responsibility and authority to the maximum permissible degree. This involves the question of the degree of centralization or decentralization of authority and control that is practicable.

Principles of Delegation

Policy in organizational planning rests largely on the principles of delegation. They relate authority and responsibility to the objective through function and leadership. The delegation of responsibility and authority is primarily to positions. The acceptance of a position in the organization obligates the individual to discharge properly the responsbilities attached to it. He is entitled to exercise the authorities that go with the position, either operative or executive, only so long as he holds the job. The Principle of the Fixation of Responsibility and Authority is derived from this concept. It may be stated as follows: The process of delegation relieves the responsible executive of none of his responsibility, authority, or accountability. This principle has been recognized widely and stated variously by different authorities.[10] Delegation cannot properly result in abdication, since responsibility and authority are received by delegation and inhere in the particular position. Abdication is the process whereby a responsible individual relieves himself of some or all of his responsibility. Relief from responsibilities and accountabilities can properly be accomplished in business organization only by the action of a superior executive, or by resignation and withdrawal from the company. The Principle of the Coincidence of Authority and Responsibility is derived from this concept. It says that the delegation of responsibility should be accompanied by a commensurate delegation of authority. There can be no just accountability without such delegation.[11]

There are some limitations governing the extent of delegation. The ultimate limits are established by the Principle of Residual Responsibility and Authority. It says, in effect, that there are certain

[10] For example, see Edgar W. Smith, *The Organization and Operating Principles of the Export Division*, p. 5. Privately printed by General Motors Export Corporation in June, 1929. Reprinted largely in A.M.A. Gen. Mgt. Series, No. 112, *Organization and Operating Principles.*

[11] See Thomas R. Jones, *Theories and Types of Organization*, pp. 30–31, for a good statement of this principle.

basic responsibilities of executive leadership which cannot be delegated. They have to do with the final decisions governing the accomplishment of joint objectives by the executives under the direct, personal command of a superior. They concern the performance of management functions in connection with intergroup rather than intragroup activities. These ultimate limits are established, therefore, by whatever constitutes these residual administrative responsibilities and authority. The ability to delegate may, of course, be limited before this point is reached. We saw that the delegation of authority usually includes the right of redelegation. This right may be limited or withheld by higher authority. The practice is undesirable, unless a personal decision by the responsible executive is absolutely necessary. There may also be certain natural limitations. It is apparent that one cannot delegate responsibility unless his subordinates have the ability and experience necessary for its proper discharge. There is a Principle of Factoral Selection. It says that the delegation of executive responsibility should carry with it adequate authority to select the facilities and personnel with which results must be accomplished. The extent to which responsibility and authority should be delegated depends also on the span of executive supervision that should be maintained. The nature of the staff relationships that are necessary is another factor. Principles governing and limiting the delegation of responsibility and authority are important considerations in the problem involving decentralized operations with a strong central administrative control.

The Decentralization of Function, Responsibility, and Authority

Decentralization takes place when some higher central source of responsibility and authority assigns certain functions and duties to subordinate individuals and groups for performance. The decentralized functions may be operative or managerial, or both. Their decentralization is accomplished through delegation. Any assignment of functions to subordinates should be accompanied by an adequate delegation of responsibility and authority.

The decentralization of operative functions, responsibilities, and authorities without any managerial decentralization would result necessarily in the complete centralization of control in the hands of the top executive leadership. There are situations in which this

is beneficial to the interests of the public and of the organization and its members for limited periods of time. Emergency situations and conditions of very rapid growth, as in wartime organizational expansions, are examples. It is not usually beneficial under normal conditions. The trend in American industry has been in the direction of establishing a strong, highly competent executive leadership at corporate headquarters. Responsibility and authority, both operative and managerial, have been highly decentralized, however. The extent of delegation by top management frequently has closely approached the residual administrative responsibility and authority as a limit. The larger the corporation, the more this has tended to be true. A strong central administrative leadership and control does not necessarily indicate centralized operative control of activity within the business organization.

The extent of decentralization may be governed by the attitude of the top executive leadership, since it involves the delegation of leadership responsibilities as well as operative activities. Either the conditions created by organization growth will force decentralization, despite any autocratic tendencies of a particular top leadership, or the growth of the organization may be stopped. Company morale may deteriorate in the latter case. The organization may begin its decline and disintegration in consequence.

The decentralization of organizational activity is closely associated with decentralized control. Centralized control is control in which a central position of responsibility for certain functions exercises authority directly with respect to the individuals who perform them. It does not exercise authority through intermediate leadership positions. A decentralized management, conversely, delegates to these intermediate leadership centers in some degree the responsibility and authority for planning, organizing, and controlling the decentralized operations. The extent of managerial decentralization is indicated largely by the extent of delegation of authority. There are certain natural limitations of delegation, and therefore decentralization, as we have seen. The closer one approaches the point of operative performance, the more the executive is concerned with control and the less with planning and organizing. The relations between an operative employee and his immediate supervisor are necessarily those of a centralized line control.

The direct relations between any subordinate and his superior cannot be anything else.

The centralized control of managerial and/or operative functions may be either line or staff. The degree of centralization is indicated by the relationships between a given staff group and other line and staff groups on coördinate and subordinate levels. A staff executive may have rights of decision and command with respect to similar staff groups on lower organizational levels. The heads of these groups may be accountable directly to this executive. But he may not have any final rights of decision and command with respect to any other line or staff groups. The centralization of control exists only within the particular field of specialization. The point of final decision for the kinds of problems handled by the particular staff is the line executive to whom the staff head reports. It is possible, of course, to delegate to this staff executive complete responsibility for all problems that fall properly in his field of specialization. It would be necessary to delegate to him corresponding rights of decision and command. He would be endowed with both line and staff authority, insofar as problems in his field are concerned. The result would be a completely centralized staff control of the particular function. The staff group under this executive would be brought into direct contact with other groups that it serves with direct line control. This condition has been called a "completely functionalized relationship" in a "functional organization." It is usually not regarded as good organization, except in certain limited situations. It tends to violate such organizational principles as Unit of Command and Single Accountability. The normal staff relationship is one in which the responsible staff executive has final rights of decision and command within his group, but only investigative, facilitative, and advisory rights with respect to other line and staff groups whom he serves.

The Advantages and Disadvantages of Decentralization

People are more favorably disposed toward decentralization of function, responsibility, and authority, generally, than they are toward centralization. This may be due to centuries of experience in the field of politics. Centralization in political organization has led frequently to serious losses of liberty. The business organization,

under the right of private property, may be regarded as an effect of economic decentralization. The degree of decentralization or centralization within it is not good or bad in itself, however. What matters is the extent to which the particular degree fosters or retards the development of economical, effective customer service. Business organizations affect and are affected by the public interest as they succeed and grow. Their structures become complex and intricate. A high degree of centralization may be most effective in a very small concern. It may result in serious ineffectiveness in a large corporation. As Henri Fayol pointed out, "Centralization, like division of labor, is one of the laws of nature. . . . Centralization is not a system of administration, which is good or bad in itself, and can be adopted or discarded at will; it is always present to some extent, so that the question of centralization or decentralization is simply one of degree—the problem is to find out what is the best degree of centralization for a given undertaking."[12]

Centralization and decentralization, then, are inverse aspects of the problem of delegation. The advantages of one tend to be the disadvantages of the other. Decentralization usually is necessary for maximum economy and effectiveness when a wide geographical dispersion of activities requires remote control. It may have the opposite effect, however, if it is not properly planned and organized. This is particularly true when personnel with limited ability must operate without benefit of direct personal supervision. It is generally the case when the personnel have not been thoroughly indoctrinated with an understanding of objectives and policies and lack thorough training in methods. Decentralized operations require subordinate personnel to understand clearly and completely the functions for which they are responsible, and their requirements. Difficulties develop when the subordinates do not know exactly to whom they are accountable. The receipt of the right orders from the wrong superior or the submission of the right report to the wrong executive may seriously delay the removal of interferences to the accomplishment of the mission. The difficulties are compounded when subordinate personnel have an inaccurate understanding of the functions of other members of the organization with

[12] Henri Fayol, *Industrial and General Administration*, p. 27.

whom they must coöperate.[13] Such difficulties are not peculiar to large organizations. The writer has encountered many of them in small concerns.

Centralized authority and control may, in theory, make possible more effective planning and coördination. All reports and information relating to activities flow into the central control point. The central authority has a broader and more complete picture of the total situation. It has complete authority to make complete decisions covering all phases of the situation. It is under no obligation to appease subordinate authorities by attempting to harmonize their divergent viewpoints through some compromise. It may actually work out this way in very small concerns. The greater speed of decision and of prompt, definite action may be important factors in the effectiveness of such concerns. This is more likely to be true when the concern sells its goods or services to a larger corporation with which it must coördinate its activities.

Centralized control tends to become a disadvantage when the organization grows to a large size. The factual data, background, experience, and ability required by the central authority for complete, accurate decisions tend to increase more rapidly than the size of the organization. Personnel at the point of central authority have less and less personal knowledge of conditions at the point of operative performance. Attempts to compensate for this condition by larger and more complicated procedures, reports, files, records, and communication devices tend to result in rapidly increasing overhead expense, accompanied by decreasing executive effectiveness. The time that is required for the principal executive and his immediate assistants to make specific decisions increases rapidly. It becomes more and more necessary to base decisions on average general conditions throughout the organization and to apply them to specific local situations in operative departments. The responsible executive may be forced into dictatorial action, despite any desire to be fair. The number of centers of initiative in the organization decrease with continued centralization, relative to the increase in volume of work with business growth. The production of new ideas in the organization may decrease relatively and actually

[13] James D. Mooney and Alan C. Reiley have covered this situation with their Principle of Functional Correlation. See *Onward Industry*, p. 518.

because of the increasing pressure of work on the central source of ideas. Organizational instability tends to develop. Subordinate executives do not have adequate opportunity to make the local decisions and mistakes that are necessary for managerial growth.

Large corporations have found from practical experience that increasing decentralization with organization growth is sound business policy. It retards the loss of flexibility and of speed of action in handling emergency situations that often afflicts large organizations. It maintains the vitality of the organization by making possible a greater and more effective exercise of initiative by subordinate executives. The quality of operative decisions may be improved, because they are made by executives who are closer to the point of operative performance and are thoroughly familiar with the requirements of local situations. The morale of the organization, both operative and executive, may be greatly improved as the result of broader executive "freedom to make decisions, freedom to use judgment, freedom to act."[14] Better morale is a necessary condition for better coöperation, intelligent self-coördination and initiative, greater interest in work, greater fidelity to duty, and other characteristic attributes of a good organization.

Principles of Decentralization

Planning and organizing for effective and economical decentralization must be based on sound business policies. The initial success of decentralized operations depends largely on the decentralization of competent executive leadership. Such decentralization requires, therefore, the proper delegation of managerial responsibilities, as well as provision of the necessary personnel and facilities at the point of decentralized operations. The basic factors in any leadership problem are the leader, the led, and the requirements of the particular situation. The applicable principles of decentralization should relate these factors to the accomplishment of its objectives. The advantages of decentralization are important business values. They are basically an avoidance or reduction of the losses in economy and effectiveness that tend to result from continued organization growth, without loss of the advantages of large organization.

[14] Lawrence A. Appley, president of the American Management Association, in *Management News*, May 24, 1949.

Sound policies in large organizations rest on the principles of decentralization.

It was noted earlier that the necessity for functional differentiation increases or decreases with changes in the volume of business that must be handled by an organization. A permanent increase in the size of the business organization results from a permanent increase in its business volume. Organization growth requires increasing delegation of responsibility and authority, both managerial and operative. Functional relationships and organization structure become more complex as new organizational units are added to provide for greater specialization and an adequate division of labor. New organizational service levels are formed gradually. The managerial gap between top executive leadership and the level of operative service increases. Top management can acquire less and less, by personal direction and supervision, the information and understanding that are required for sound, detailed decisions concerning problems on lower levels. There is in consequence a Principle of Decentralized Decisions: A decision should be made at the lowest level in the organization that has the requisite competence, authority, and prestige. There is a corollary of this principle, however, which says that decisions involving interdivisional action should be referred upward promptly, through organizational channels, until they reach the first executive who has the competence, authority, and prestige to make them. He is usually the line executive to whom the particular divisional heads report. Cross-contacts may be a factor in its application, of course. Winston Churchill noted that "differences with American Authorities, insuperable at the second level, were settled often in a few hours by direct contact at the top."[15] It is evident, however, that the degree of decentralization that is most economical and effective tends to vary directly with the size of the organization and the complexity of its functionalization.

There are certain related considerations that may modify the application of this principle. It was implied above that communications is a factor in the problem. The detailed decisions that must be made at the point of operative performance may require the

[15] Winston Churchill, "Their Finest Hour," *Life*, February 7, 1949, p. 62.

collection of a great mass of information, if they are to be made satisfactorily by a central authority. A number of service levels may intervene between the point of execution and the central authority. Time is of the essence of effective accomplishment. The information required for decisions must be transmitted promptly. This means that more and speedier means of intercommunication must be employed, with increasing organization size, as organizational distances between the point of decision and the point of execution increase. The information transmitted must be accurate, and must be transmitted accurately. It may not be possible for the central authority to have any personal contact with the situation surrounding the problem, except in the case of a serious emergency. He must rely more and more on the accuracy of the information that is submitted to him. It follows, then, that the degree of decentralization that is most effective and economical tends to vary inversely with the speed, accuracy, and capacity of the available communications equipment and services. The general use, in large organizations, of communications devices such as the various interphone systems, teletypewriters, telephone conference procedures, and others, is an effect of the operation of this principle. Such use can delay, but it cannot stop decentralization. The volume of information required for centralized control tends to increase with organization growth, and probably in geometric progression. The job of posting, filing, indexing, summarizing, charting, and reporting this mass of information in itself becomes complicated and expensive. The general organizational situation continues to increase in complexity. The communications equipment continues to be necessary, despite the increasing decentralization that takes place. The information that flows between the divisional and corporate headquarters of a large organization is used more for administrative control purposes, however, and less for purposes of operative control within the division.

Organization growth tends also to result in the physical dispersion of operative functions. An increasing physical volume of business means usually that the company's goods and services are being distributed over an increasing geographical area. It may become desirable eventually to bring the point of primary operative performance as close to the customer as is practicable. This may make possible more prompt personal service, and improve competitive

effectiveness accordingly. Sales organizations frequently are decentralized geographically. There may be branch manufacturing plants for the same reasons. But some large concerns prefer to expand their operations at their original location. The result may be a number of large plants located on the same lot. This lot may be several miles in length and breadth. The personnel of these plants may have infrequent personal contacts with one another, except by telephone. Physical distances have been added to organizational distances in either case. It becomes desirable to decentralize more and more responsibility and authority to plant managements. Accordingly, the degree of decentralization that is desirable tends to vary directly with the degree of physical dispersion of business activities that is necessary.

Business growth and large organization size tend to be accompanied by business stability. A large manufacturing organization, for example, may be able to develop a heavy demand for a limited number of annual models of its product. It may be able to engage in mass production of these models on a continuous-production basis. The layout of each plant is not likely to be changed greatly during the life of the model. The flow of materials through the plant is highly channelized, because of the layout and the use of modern materials-handling equipment. Other conditions, such as operative procedures for making parts and assemblies, organization structures, and policies, are also stable and may be highly standardized. Stable work assignments accompanied by a high degree of standardization reduce the difficulties involved in producing the required quantity of the specified quality at the minimum cost. Standardization tends to reduce the magnitude and frequency of the decisions that must be made. It follows, then, that the degree of decentralization that is necessary and desirable tends to vary inversely with the degree of standardization of the situation that can be achieved and maintained.[16] Dictatorships have attempted to standardize the needs and desires of their citizens to facilitate the

[16] Henry S. Dennison has pointed out that "procedure pretty well known and whipped into accustomed methods can be centrally controlled in some detail, new and unknown factors being left to the judgment of local heads, that is, decentralized. Then as these unknown factors reoccur sufficiently often to become familiar, the central office may work out the best methods of meeting them, and so exert centralized authority."—*Organization Engineering*, pp. 157–158.

application of this principle in the development of centralized economic and political controls. Its application in large-scale American industry is limited. Administrative and operative management is usually highly decentralized, in accordance with principles previously stated. This decentralization extends from corporate headquarters through divisional headquarters to the plant manager's office and often to lower echelons. There are certain problems that must be handled centrally, of course, because of government intervention, national labor organizations, or interdivisional requirements. This principle of standardization is applied, however, in the control of production in the plants of large concerns engaged in continuous manufacturing. Such intraplant application contributes greatly to low-cost production under the conditions stated. It would have a reverse effect in plants that must operate under conditions of intermittent manufacturing.

The degree of emergency with which management must cope is also an important determinant of the degree of decentralization that is practicable. An emergency may be any development, created by an unforeseen contingency, that requires immediate action to prevent a serious deterioration of the situation, and consequent loss. Time is usually of the essence in the effective handling of an emergency. It should be handled, therefore, at the lowest organization level whose executive head has sufficient authority and competence to handle it effectively and quickly. Otherwise, an emergency situation may spread from the group in which it originates to other groups that depend on that group for assistance in accomplishing their work. All groups make a necessary contribution, directly or indirectly, to the accomplishment of the organization's service objectives. Otherwise, they should not be on the payroll. Their activities are accordingly related and interdependent. The sit-down strikes of the thirties were particularly effective in large continuous-manufacturing concerns for this reason. A small proportion of the total number of employees, if permitted to seize and hold a few key production and assembly lines, could close down a great manufacturing establishment. The same proportion would not be as effective in a concern engaged in intermittent manufacturing, because there is not the same high degree of interdependency.

It may be necessary for the responsible executive leadership in

any organization to make arbitrary decisions for relieving an emergency, and to enforce their prompt execution by an exercise of its authority. The processes of integration of interests, voluntary cooperation, and self-coördination may require time that is not available. These requirements of broad rights of decision and command on the one hand and quick, competent decisions at the lowest practicable point in the organization on the other, may appear at first to be incompatible with each other. But they are not. The administrative or major operative executive who is ultimately responsible for activity in the affected area may have to take personal command of the situation, coördinating directly with the minor operative executive or executives who have immediate responsibility for the area. Any intervening line executives step temporarily into a staff advisory position for the duration of the emergency. It is obvious that a centralized line control exists temporarily. It has to do chiefly with the prompt transmission of policy decisions and grants of authority beyond those normally required. The writer was once on the floor of a large locomotive repair shop when an error in judgment by a craneman placed the lives of some twenty-five mechanics in jeopardy. The shop superintendent immediately took command of the situation and directed personally the action required to avert the danger. The foremen who were normally in charge of operations in the particular area acted temporarily as his aides. A strike emergency, in another case, had spread to a number of plants. The president of the company took personal command, coördinating directly with the plant and department heads. Intervening line executives stepped temporarily into a staff relationship. Organizational and operational relationships should return promptly to the normal degree of decentralized management when the emergency has passed. The degree of decentralization that is desirable tends to vary inversely with the degree of the emergency that must be handled. It is related, therefore, to the rate of change of the situation. The principles of centralization can be misapplied. The public press has supplied many examples in recent years. Some foreign governments have deliberately created emergencies to use as an excuse for the centralization of economic, political, and military powers.

Personnel, both executive and operative, may be a limiting factor

in the degree of decentralization that is economical and effective. Henri Fayol recognized its importance in the following statement: "Since the absolute and relative abilities of the manager and his staff are always varying, it is clear that the degree of centralization can also be constantly in a state of change."[17] With increasing decentralization, subordinate leaders must perform all the functions of management in increasing degree. They must therefore have greater ability and experience in planning, organizing, and controlling the decentralized activities. The present subordinate executives may have the intelligence, know-how, and potential leadership ability. They may nevertheless lack the broader knowledge and the practical experience that are necessary for the higher degree of managerial responsibility that is involved. Managerial decentralization may be halted until the present subordinates can be developed to handle their increased responsibilities, or new subordinate leadership brought in. Lack of a sufficient number of skilled or professional operatives may also be a limiting factor. One headquarters specialist may have been sufficient previously. It is probable that his effectiveness has decreased with organization growth, despite any additional assistance that has been given to him. It may be decided, for example, to decentralize the organization's activities into seven districts. It is now necessary to have seven experts. Each one should be almost as good as the headquarters expert. They may or may not be available, depending on how much thinking about the requirements for organization growth was done in advance by top management. It is evident, therefore, that the degree of decentralization that is economical and effective tends to vary directly with the availability of trained operative personnel and the quality of subordinate leadership. The rate of change in the situation affects the application of this principle. A large military command grew from a few thousand to a half million, approximately, in less than three years during World War II. Its mission had to do with the logistics of supply, including procurement by manufacture. The need for decentralization was recognized and accomplished to a considerable degree. It was much less than the desired degree, however, chiefly because of the limitations of the personnel factor. The desired degree was lower, of course, than that

[17] Henri Fayol, *Industrial and General Administration*, p. 28.

desirable under peacetime conditions, because of the general condition of extreme emergency. There is usually some tendency on the part of a headquarters bureaucracy to resist decentralization. It was not a significant factor in this instance, however.

There are also certain organizational considerations that are related closely to the personnel factor. Indoctrination is an example. The greater the degree of decentralization the more the subordinate executive must make independently whatever decisions are required for the proper handling of the functions, facilities, and personnel under his command. One objective of decentralization is relieving the superior executive of the burden of decisions, other than those dealing with serious emergencies or unusual situations. The presumption is, obviously, that, in the absence of his superior, the subordinate can be trusted to make a decision that will be satisfactory. This is more than a matter of the subordinate's intelligence, general background, and experience in the work that is being decentralized. It requires some assurance that an understanding of company and divisional objectives, policies, and organizational relationships and procedures has been thoroughly inculcated in his mind. There is no assurance otherwise that the organization will have the benefit of that unity of thinking which is necessary for unity of action. The local executive must approach and think through local problems independently in a manner that will produce solutions which are in harmony with other decisions made elsewhere in the organization. Many of these other decisions are also made independently without benefit of the immediate personal direction and supervision of the superior executive. A common example is the problem of local decisions under conditions of multiplant operation. A clearer example may be the problem of the large corporation whose manufacturing and distributive operations are world-wide in scope. Local decisions must be adjusted to local requirements. However, these decisions must lie within the frame of reference of the basic objectives, policies, and relationships that underlie the corporation's activities everywhere, even though the decentralized activities can be self-sustaining. Otherwise, the task of central administration coördination becomes extremely difficult. The same general considerations enter into the decentralization of purely operative functions. Some public utility corporations find

it necessary to employ operatives on tasks that take them temporarily out of direct contact with any supervisory executive. This can happen easily despite the excellence of modern communications systems. Under these conditions, the economy and effectiveness with which the job is done rests entirely with the operative. It may depend largely on the thoroughness with which a knowledge and understanding of sound operative principles have been instilled in him, as well as on his training in their application through good operative procedures. It follows that the degree of decentralization that is economical and effective tends to vary with the extent to which the personnel have been indoctrinated with sound managerial and operative philosophies. It is a corollary, therefore, that it depends on the skill and knowledge of the local organization. Organizational instability and high labor turnover, both executive and operative, tend consequently to limit the degree of decentralization that is practicable.

We saw that the optimum degree of decentralization tends to vary directly with the size and complexity of the organization. The more the company must depend on decentralized decisions, the more it must rely on the coöperation, initiative, self-coördination, loyalty, and courage of the local executive and his organization. Such organizational values as voluntary coöperation, intelligent initiative, effective self-coördination, and steadfast, courageous loyalty to the organization and its objectives are largely effects of high morale. It is evident, therefore, that the degree of decentralization that is practicable tends to vary directly with the state of organizational morale. This is true particularly with respect to the morale of key executives and operatives. This means that any contributions to customer and stockholder interests through decentralization should be made with due consideration for the legitimate interests of the decentralized personnel.

Organizational growth with consequent increases in the size of the organization is another important factor. Organizational changes to meet the requirements of increasing size can be made by trial and error. This process may be successful if the rate of change is not too rapid. But in any event, this method is usually the slowest and most expensive method of solving a problem. In this instance it may involve grave danger of the loss of competitive

effectiveness. The success of decentralization may depend consequently on the quality of organizational planning for business growth.

There are other factors, such as population shifts, exhaustion or discovery of natural resources, and considerations of military security, that may enter into the problem of decentralization. They may be beyond the control of a particular business organization. They may influence greatly the decision concerning whether to decentralize or not. The factors discussed above are likely to control subsequent decisions concerning how decentralization shall be accomplished. The principles that relate them to the objectives of decentralization may be summarized as follows:

1. The degree of decentralization that is effective and economical tends to vary directly with:
   a. The size of the organization and the complexity of its functionalization.
   b. The physical dispersion of the organization's activities.
   c. The availability of adequate numbers of competent, trained personnel, both operative and managerial.
   d. The extent to which the decentralized personnel have been indoctrinated with sound managerial and operative philosophies, as well as the skill and knowledge of local organizations.
   e. The state of morale in the organization.
   f. The quality of organizational planning for business growth.
   g. The quality of subordinate leadership, particularly at decentralized operation levels.
2. The degree of decentralization that is effective and economical tends to vary inversely with:
   a. The speed, accuracy, and capacity of available communications equipment and services.
   b. The degree of standardization of the factors, forces, and effects in the situation that can be developed and maintained.
   c. The degree and extent of the emergency that must be dealt with.
   d. The degree of organizational instability and personnel turnover.

These principles must be applied in the light of detailed information concerning whatever factors are important in the particular company's business.

Authority and Other Executive Relations

Any discussion of the relations between executive employees necessarily anticipates the subject of executive morale. Decentralization changes executive relations. Sometimes executive leadership tends to resist such changes. Some managements feel that executive relations should be a natural development based on individual initiative and the rise of a strong leadership within the organization. These are always important considerations in the development of any company, because a strong, competent leadership usually is a controlling factor in the success of any organization. However, the kind of leadership and its characteristics should be determined ultimately by the characteristics of the organization's objectives and the leadership requirements that they set up. Competition for preferment among strong, aggressive executives does not, by itself, assure the elevation of men with the right kind of abilities to important leadership posts. Hence, in an increasing number of concerns, executive relations are the result of definite delegations of responsibility and authority based on organizational planning. Executive advancement depends more on ability to meet the leadership requirements set up in executive job specifications. Advancement can never become a matter of formula, however, because many of the contributions of executive leadership are intangible.

Executive advancement primarily on the basis of strength and aggressiveness tends to result in organizational development by trial and error. The strong, aggressive executive tends to take over the duties and responsibilities of less aggressive executives. The result may be an illogical grouping of functions that does not result in good organization. It is at best a slow, expensive process of organizational development. Under this concept, the development is based on individuals rather than functions. The concept inverts the normal relations between function, responsibility, and authority. Advancement based chiefly on aggressiveness, with a resulting battle for promotion at the expense of one's colleagues' careers, tends to elevate personal objectives above organizational service

objectives in the minds of the executives involved. Those who get to the top probably will be "strong" executives. But they may have an undernourished, atrophied sense of organizational service. They may have developed a love of authority for itself, rather than for its legitimate uses. In any event, they are likely to be strong-willed, dominant individuals. They are likely to be impatient with the restraints on personal decisions made by principal executives that become necessary with decentralization. These restraints slow action somewhat, even though they may improve its quality.

A subordinate has a right to expect that his superior will support him in his decisions, within the limits of the responsibilities and authority that have been delegated to him. There are exceptions to this generalization, of course. He is expected to refer decisions concerning emergency situations to his superior when they require greater authority or more mature judgment than he possesses. He should have no unilateral rights of decision when the problem has to do largely with the personal rights and interests of the members of his organization. It is obvious that he should refer the matter to higher authority when the problem extends beyond the limits of the organizational component for which he is responsible. This still leaves frequently a wide range of decisions that have to do primarily with the accomplishment of his organization's service objectives and are within his limits of delegation. The strong-willed, brilliant, driving superior is tempted to interpose his authority in local decisions when in his opinion progress is not as rapid as it should be. Such interposition is likely to result in the modification or cancellation of orders and instructions that were issued previously at the direction of the subordinate. His leadership position and his effectiveness may be seriously weakened if this happens frequently. His position may become untenable, leading to his resignation or dismissal.

The delegation of responsibility and authority includes some right, within the limits of delegation, to question the orders and instructions of a superior without being guilty of insubordination. A subordinate should have the right to advance his opinions, and maintain them stoutly, regardless of how they may differ from those of his superior. Otherwise, the subordinate is merely a "yes man." The situation is different, of course, when the superior has heard

and considered the opinions and has rendered a definite decision. It is the duty of the subordinate, then, to execute this decision promptly to the best of his ability, whether or not it agrees with his original recommendations. Deliberate refusal or failure to do so is insubordination. It may merit immediate dismissal, subject to whatever provisions for appeal are in force in the organization. Problems of intergroup relations arise in every company at every level. Some such policies are necessary for effective decentralization.

Authority, Rank, and Position

Authority tends to be an attribute of rank or position, since it is a derivative of objective, function, and responsibility. Rank and position, as a matter of fact, are effects of functional differentiation and grouping in organization structure. Rank refers to the organizational level on which the executive functions. He may be a major administrative staff executive or he may be a minor operative line executive. Title is merely a designation that indicates the individual's rank and general assignment. He may be a vice-president in charge of industrial relations, or he may be a department foreman in charge of a primary shop department. The value of rank lies largely in its ability to establish the executive's status in the organization.[18] The value of title is found largely in its informative qualities. Both title and rank may affect executive prestige.

Prestige may be defined as the reputation or influence that results from successful achievement, character, or position. It adds to the person's ability to influence the thoughts and actions of others. It is obviously a derivative of the individual's characteristics and the importance of the functions for which he is responsible. The principal factors in prestige development are consequently personality, ability and reputation, position in the organization, and environment. The prompt, willing acceptance of orders and instructions depends, in part, on the prestige of the executive. Rank and title contribute to prestige to the extent that they indicate the nature and importance of the executive's leadership responsibilities.

Rank and title have other functional uses. An outsider usually does not have access to the company's organization manuals and

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[18] L. Urwick, *Organization as a Technical Problem*, p. 4.

charts. A title gives him some help in determining whether he is doing business with the responsible head of an important organization group, or the janitor. It may be of some help, in this connection, to the members of a large, rapidly growing organization. It is sometimes difficult under these conditions to develop and maintain complete, up-to-date organizational directives. An organization chart shows at least the titles of major and minor organization groups and their general position in the organization. It may also give the name of the executive head of each group, and his title.

The use of rank and title in an organization does not necessarily carry with it any implication of icy aloofness coupled with dictatorial techniques. The prestige of executive leadership, on the contrary, usually requires friendly contacts with one's immediate subordinates and the rank and file of one's organization. The evidence on this point is ample and clear.[19]

The opinions and reactions of most people are appreciably affected by immediate environmental influences. The areas of a bank in which the bank's officers meet the public are furnished in a manner that will give the visitor an impression of financial success and competence. Church and political organizations traditionally house their leaders in an environment that is appropriate to their responsibilities.[20] Most business concerns provide their executives with offices that are appropriate to their positions, give them titles, and establish these positions in the organization by charts and

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[19] H. P. Dutton, for example, made the following statement: "The leader must take himself seriously, insisting on that degree of respect and those forms and manners which are customary. This does not mean that the leader shall not unbend, nor that he shall take an entirely humorless view of his responsibilities, nor surround himself with a wall of ceremonial and red tape. It does mean that he shall not forget his station or permit his men to transgress the courtesies appropriate to his rank."—*Principles of Organization*, p. 387. Edward L. Munson said: "Too intimate association sacrifices the element of prestige, which is such an important factor in command. For this reason, relations, while close and cordial, should be sympathetic rather than social."—*Management of Men*, p. 458.

[20] Henry S. Dennison wrote as follows: "The full effect of true leadership being to release and direct, in any given organization, energies not otherwise usable, the trappings and methods of a leader will have to be suitable to the situation. Titles, uniforms and ceremony have proved beyond question their values under proper circumstances. . . . In organizations held together largely by the economic bond, they do not seem to fit so well."—*Organization Engineering*, p. 53.

manuals. They frequently expect the more important executives to participate in community activities and to dress and comport themselves in a manner that will contribute to the company's prestige locally. An environment that is more expensive than is warranted by the particular position may lower, rather than increase, the executive's prestige. An appropriate environment, on the other hand, tends to support and maintain his prestige. It is merely a case of packaging the product properly.

Many measures have been used in business organizations to establish executive prestige. Those frequently used are:

1. The establishment of the executive's position in the company by means of organizational manuals and charts.
2. Provision of an environment that is suitable to the executive's rank.
3. Support of subordinates by their superiors, except when they are clearly in the wrong.
4. Use of the established chain of command as a channel of communication for important orders and instructions, whenever practicable.
5. Reasonable use of titles in connection with rank.
6. Reasonable insistence on the courtesy and respect that are customarily due the rank and position of the executive.
7. Reasonable maintenance of the distinctions of rank within the organization.
8. Avoidance of loss of confidence in the organization's executive leadership, through their proper selection, training, and supervision.

Accountability

Accountability is a requirement or condition under which each member of the organization renders a report on his discharge of responsibilities and is judged fairly on the basis of his record of accomplishment. It is a derivative of objective, function, responsibility, and authority. A person accepts the condition, as specified, when he accepts the responsibilities that go with the job. Accountability is similar to function, responsibility, and authority in that a superior can establish accountability for the proper performance

of functions that have been delegated to his subordinates. He cannot, however, relieve himself of accountability through delegation.

Accountability may be established by means of organizational and operational directives. They usually specify the performance standards by which the degree of accomplishment of assigned objectives, both organization and operational, may be judged. They should state where and how such standards may be obtained, if they do not specify them. Directives of one sort or another facilitate the extension of the results of planning into the functions of organizing, controlling, and executing the mission. The maintenance of accountability is one of the purposes of the control function. The comparison phase of control determines the degree of agreement between actual and predetermined performance in accomplishing an assigned mission or some phase of it. It measures the extent of the accomplishment of assigned objectives in terms of quantity, quality, time, or expense. The corrective action phase of control leads to disciplinary action, either positive or negative. Hence it may include some determination of what constitutes appropriate action with respect to a subordinate's personal interests in the light of his discharge of his responsibilities. This is basically true whether the problem has to do with operative control or administrative control. The maintenance of accountability will be discussed later, therefore, in connection with the control function. It may be desirable, however, to note again that the problem of accountability is a logical outgrowth of problems discussed above, in approximately the following order:

1. The analysis of objectives.
2. Functional analysis.
3. Division of responsibility.
4. Determination of the authority required for each allocation of functions and responsibility.
5. The delegation of responsibility and authority.
6. The establishment of control.
7. The development of accountability.

Accountability is an individual rather than a group problem. Divided responsibility and authority necessarily results in divided accountablity. The latter leads to friction between superior execu-

tives, "buck-passing" by subordinates, and other difficulties. Such problems can lead to the breakdown of the organization and the failure of the mission, if permitted to persist in the absence of proper correction. A "completely functionalized" organization is one in which staff executives are brought into direct contact with line functions with direct control. It has never been popular in American business organization for this reason. A pooled judgment may be very helpful. However, the process of pooling inevitably diffuses responsibility for the results of the joint judgment among the group that makes it. No one can be held wholly accountable. This is one reason why committees are usually kept strictly in a staff capacity in business organization. Individuals are likely to give themselves the benefit of the doubt concerning what constitutes satisfactory performance of their functions when they cannot be held strictly accountable for results. This condition leads to one in which they give priority to the accomplishment of their personal objectives rather than the organization's service objectives. This results eventually in the failure of the organization and its members. There are instances in which a concern has been "milked" by its top executives because of the inability or failure of its board of directors to determine and assess accountability properly. Gross inefficency has frequently developed on lower levels for the same basic reasons. The Principle of Single Accountability has become well established in business organizations because of such developments. It may be stated as follows: Accountability to a single superior executive for results, based on clearly defined delegations of responsibility and authority to designated positions, is a requisite for the successful accomplishment of organizational objectives.

CHAPTER 10

THE LINE ORGANIZATION

The Organizing Process

The function of organizing is the work of providing certain basic performance factors and conditions, and of creating between them certain relationships that underlie action generally. This must be done in advance of the execution of a business plan or a major phase of it. These are antecedent factors and conditions that must be present before effective, economical execution can begin. They should conform, therefore, to the specifications that were finally approved in the business plan. It is common knowledge that large automobile manufacturing companies may spend from fifty to one hundred million dollars on the introduction of a new model. The exact amount depends on the size of the company and its volume of business, the stage of the business cycle, the general price level, the number and technical complexity of the innovations in the new model, and similar considerations. Much of this money must be spent for initial inventories, tooling, changes in plant layout, organizational planning, initial training of old employees in new duties or of new employees in their assignments, and other expenses. These costs must be incurred before a car is shipped. They are the costs of the work of organizing. They are necessary for effective, economical production subsequently. Accountants recognize them as such, and treat many of them as deferred expense. Other industries may not be as well publicized as the automobile industry. They have, nevertheless, an analogous function of organizing, whenever they are faced with the problem of executing important business plans. Their organizing activities may or may not take place on the same scale.

The organizing process is the method of performing the work of organizing. Certain general characteristics are common to it everywhere. The detailed characteristics and requirements necessarily are peculiar to the particular industry. The objectives of the organizing process are, of course, the values that result from the prior provision of certain human and physical factors. The kind, extent, and degree in which they must be provided are determined by the requirements for effective, economical performance. They include such values as the best possible working conditions for the job to be done; an implementation of personnel, whether executive or operative, that will permit the employees to do the best possible job; a relationship between functions, responsibilities, and authorities that will promote coöperation and facilitate the exercise of executive leadership; managerial and operative methods that will permit the personnel to do a good job; executive leadership that can perform its management functions competently, and others of a similar nature. They are values that should be created or acquired in a minimum degree before performance starts. They may be improved in quantity and quality after performance is under way. Hence the organizing function overlaps the functions of control and execution. Its performance must lead control and execution by a minimum time span. Otherwise, the undertaking may fail. There are instances in which manufacturers have failed to complete their planning and organizing for the introduction of new products sufficiently in advance of the advertised date when the products would go on sale. They have been unable to stock adequately their wholesalers or dealers by this date. Customers have transferred their patronage to competitors. Part of the company's advertising and sales promotion budget has, in effect, been spent to stimulate the sale of its competitors' products. Some concerns attempt to avoid such losses by withholding any announcement of the date until the last possible moment. But there are losses that result from this policy also.

Many people seem to feel that the function of organizing has to do with the development of organization. It does. It has to do also with the prior provision of physical factors and conditions, as the preceding discussion suggests. This chapter and those that follow immediately will deal with the problems of organization structure,

and with matters related directly to them. Many of them are major business problems. They are also phases of the work of organizational planning and the subsequent work of organizing.

Executive Leadership and the Line Organization

The line organization is the hierarchy of executive and operative personnel which extends from the executive head of the entire organization to groups of primary operatives. The activities of the latter are grouped on some basis for the creation and distribution of primary values. Such values are the values that are needed or desired by the customer. They are values for which he is willing to part from his money. The business organization will cease to exist shortly without an adequate, continuing inflow of customer dollars. It may still go out of business if it cannot keep its expenses below its income.

There can be no problems of organization structure in a one-man business. All functions, responsibilities, and authority are integrated in the person of the individual. The owner-manager-operative must hire some assistance eventually, if his business grows. This becomes necessary when the work load begins to exceed his personal capacity. He must assign functions and delegate some measure of responsibility and authority. Otherwise there can be no division of labor or specialization of any kind. He will probably assign to his employees the primary operative functions that require the least skill and knowledge. He will delegate accordingly a minimum of operative responsibility and authority. He will continue for the time being to perform most of the skilled functions that are required to serve the customer, and all the managerial functions of the business. The further development of the line organization will be discussed shortly. It should be noted at this point that the organization of the small business is predominantly line. A small business may be able to afford only one good man. He is likely to be the head of the organization. He needs little if any staff assistance in the performance of functions, either managerial or operative. The development of staff organization is therefore a function of organizational growth and size. It tends to follow the development of line organization. It is an evolution from a line organization, as was shown in Fig. 21. It may take place at any organizational level where it is needed. It

is made only when and as required, because it represents overhead expense. Hence the rank order of importance of organization problems in a small organization tends to be:

1. The errors of omission or commission of line executive leadership.
2. The morale difficulties that frequently develop therefrom.
3. The problems of developing a line organization structure.
4. Staff organization problems, if any.

The focal point of an organizational study of a small business is, consequently, the line executive who is immediately in charge of the group. Interest in other basic factors in the situation has to do initially with the determination of line executive requirements, and the corresponding leadership qualifications of the principal line executive. Extended and expensive investigation and study of operating problems are not likely to pay dividends if this executive lacks the ability to plan, organize, and control operations properly on the basis of results.

It should be recognized, however, that operating problems are usually a first concern. Problems of administrative management in the small organization are generally less important and difficult than those of operative management and operative performance. The small businessman who runs an automobile body repair shop with the aid of two or three mechanics cannot have any great administrative problems. His concern in life frequently involves the problem of getting out today the job that he promised for delivery yesterday.

New organizational service levels become necessary as the company grows. Certain functions must be differentiated from the primary line organization, and accordingly new staff elements must be set up. Other organizational problems develop and the emphasis on older problems changes. It still remains true, nevertheless, that no organization is likely to be much better than its leadership, particularly its top leadership. It is still true that the primary values which justify the concern's economic existence are created directly and immediately by the line organization. It is also true that every direct supervisory relationship between superior and subordinate is fundamentally a line relationship. It is or should be true that

every staff executive reports directly or indirectly to a higher line executive. The "line" continues, therefore, to be the backbone of the business organization, despite business growth that requires increasing staff functionalization.

The principal line executive is personally a more important factor in organizational effectiveness in the small concern than in the large. His function in a large organization is more complex and difficult. The law of managerial complexity says that with continued growth in organization size, the complexities and difficulties of management tend to increase in geometric progression. The top line executive in a large concern should have much greater ability, and he is paid accordingly. Nevertheless, his personal importance tends to decrease relatively, because of the greater organizational stability of the large concern. The "indispensable men" are more likely to be found in small companies than in the large ones.

Considerations in Organization Structure and Form

The literature of management includes references to organization structure and organization form. There is a distinction between them. It has some practical significance in problems of organizational planning and organizing. To bring this significance out, it is necessary to review briefly certain fundamentals that were discussed previously.

An organization may be defined as any group of individuals, large or small, that is coöperating under the direction of executive leadership in the accomplishment of certain common objectives. The term by itself carries no particular connotation of any degree of economy and effectiveness in the accomplishment of these objectives. The individuals should be properly selected, trained, and implemented for their assigned duties. A good organization is usually one in which coöperation is willing as well as effective. A successful organization is usually a good organization that is securing an effective and economical achievement of its objectives under competent executive leadership. It is evident that organizational problems are concerned primarily with relationships between functions and human factors. Considerations having to do with physical factors tend to be secondary. The function of organizing, however, is concerned with all performance factors, conditions, and relationships whose

prior provision is a prerequisite for the accomplishment of the designated objectives. This includes physical as well as human factors in performance. The whole field of organization has to do, therefore, with those conditions in and relationships between functions, physical factors, and personnel that will create and maintain morale, facilitate coöperation, effectuate executive leadership, and promote managerial and operative effectiveness.

Organization structure is merely the structure of relationships between similar functions, physical factors, and personnel. It is set up primarily for the purpose of promoting coöperation and facilitating the effective exercise of executive leadership. Hence it is an instrument of command. It affects greatly the functioning of the organization, but it is not the organization. It is entirely possible to have a good organization structure, a beautiful organization chart, and a poor organization. The organization structure can determine, to a considerable degree, the kind and condition of relationships that will exist within the organization. It is important accordingly.[1] It cannot determine in any great degree the quality of these relationships. This quality is determined more by the factors of morale and leadership.

The basic determinant of organization structure is, of course, the objective. Organization structure is a functional concept. The work of the organization is determined ultimately by its objectives. The fundamental consideration underlying the design of the organization structure is the Principle of Functional Similarity. Functions are similar, as we have seen, when they have similar objectives which require the performance of similar kinds of work involving the use of similar physical facilities and factors. They necessarily involve similar problems whose solution requires personnel having similar characteristics and abilities, such as intelligence, personality, background, training, and experience. Similar operative problems tend to create similar managerial problems. The Principle of Functional Similarity says that the logical grouping of functions in or-

[1] It has been thus recognized in military organization: "But as units increase in size, personal direction and supervision of each individual is impossible, so resort is had to the mechanical framework of organization by means of which the commander, dealing directly with only a few subordinates, reaches every individual in the command."—General Service Schools, U.S.A., *Command, Staff and Tactics,* p. 23.

ganization structure on the basis of work similarities tends to improve coöperation and facilitate the exercise of executive leadership. The application of this principle is of course modified by the requirements of other principles of functionalization that have already been mentioned. They affect the solution of such problems in organization structure as the proper division and location of responsibility, the proper determination of the kind and amount of authority that should be delegated to given positions, and others. They influence greatly the selection and provision of physical factors and facilities. They have an important bearing on the determination of personnel requirements for executive positions. They directly affect the development of such important organizational values as stability, flexibility, and capacity for growth. Consideration of these problems raises such questions as the following: What constitutes the proper functional composition of the various organizational elements? What constitutes proper functional relationships within the various organizational elements? What constitutes proper relationships between the larger functional group from the standpoint of interelement coöperation and the development of managerial effectiveness? The answers to such questions determine the form that the organization's structure will take.

The term "organization form" means usually the design or pattern that these interelement relationships follow. It has a more restricted meaning than the phrase "organization structure." The former refers to the pattern formed by the lines of responsibility, authority, and accountability that are established. It may be shown with reasonable accuracy by an organization chart. The latter term refers to the whole structure of objectives, functions, duties, responsibilities, authority, and accountabilities. It includes specifications of job contents and requirements, as well as relationships in performance. A specification of organization structure in a large corporation may require organization manuals for each major division, as well as for the corporation as a whole. They may be supplemented from time to time by organizational directives. The relation between organization form and organization structure is much like that between an assembly drawing and the corresponding product specification. The former is really a part of the latter.

There are two basic forms of organization structure. The primary

form is line structure. The secondary form is staff organization structure. The distinction is similar to that between "the arms" and "the services" in military organization. The exact form of organization in each specific case is a development of relationships between the primary and secondary forms. The general pattern of development was shown in Fig. 21. It is obviously an oversimplification. The pattern tends to become complicated as staff evolves from line with continuing growth. It is evident, however, that the established pattern of relationships between responsibility, authority, and accountability has an important conditioning effect on the economy and effectiveness of operations. This has been recognized. P. F. Walker, for example, said that "the guiding element in the determination of type and form is that organization is a means to an end. It is the agent of administration, and as such merits attention."[2] According to Oliver Sheldon, "The form of an organization depends upon the extent to which the basic functions of a business have been developed and distinguished by delegation."[3]

Factors Determining Organization Structure

Almost any factor, internal or external, that importantly affects the operations of a business may have an important effect on its organization and therefore on its structure. There are, however, certain factors that tend to be important in the development of organization structure anywhere. The values demanded by customers determine the work that must be done by the company. The manner in which functions are grouped for greatest economy and effectiveness is determined basically by their characteristics and requirements for proper performance. These characteristics and requirements determine what facilities, resources, and personnel must be supplied. Functionalization takes place usually to accomplish a necessary division of labor or to promote the development of some needed form of specialization. Frederick W. Taylor thought that "functional management consists in so dividing the work of management that each man from the assistant superintendent down shall have as few functions as possible to perform."[4] It has to do, in other

[2] P. F. Walker, *Management Engineering*, McGraw-Hill, p. 217.
[3] Oliver Sheldon, *The Philosophy of Management*, p. 112.
[4] F. W. Taylor, *Shop Management*, p. 99.

words, with the division of labor and specialization in the field of operative management. For the same reasons, increasing differentiation of operative functions is needed with organization growth. It determines the nature and form of organization structure.

The size of the organization is, therefore, an important factor. This brings up certain considerations that have to do with decentralization. Among them are the kind, extent, degree, and frequency of the emergency situations that must be handled. The rate of growth of the organization is frequently an important factor. Further structural development of the organization may be desirable or even necessary to maintain competitive effectiveness. This may not be possible to achieve within a reasonable length of time if the company's increase in volume of business has outstripped its financial and physical development. The process may be held up by inability to develop skilled or professional operatives fast enough or in sufficient numbers to man new assignments, unless they can be hired from outside sources. The same thing may be true in the case of executive personnel. Business procedure, whether line or staff, operative or managerial, cuts across organizational lines. Most concerns are trying constantly to develop more economical or effective methods. Any major change in methods may make necessary a substantial change in organization structure. The performance requirements of managerial and operative functions should be the first consideration in making such changes. But the characteristics and abilities of the responsible executive leadership should be the second consideration. Organization structure facilitates coöperation and is an instrument of command. For this reason, the executive who has immediate responsibility for a group of functions usually has the right of decision as to what the structure of his organization shall be.[5] The decision should be subject to review by higher authority. All organizational elements are interacting.

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[5] Paul M. Mazur said: "No one can fail to recognize the importance of developing a plan of organization which is suited both to the man who leads it and to the human material available for executive office."—*Principles of Organization Applied to Retailing*, Harper, p. 4.

Thomas R. Jones felt as follows: "Any organizational arrangement or assignment of duties must be adjusted to the knowledge, ability and personality of the human material available for the operation of that organization."—*Theories and Types of Organization*, pp. 31–32.

The factors which have been discussed are directly related to the basic business factors and problems that were shown graphically in Fig. 1. No attempt has been made to cover all the subfactors that may affect structural development. They include all the major factors in business decisions.

Organization Structure and the Law of Functional Growth

Current changes in organization structure may be due to seasonal or cyclical changes in business conditions. They may be due to new ideas of new executives. They may be due to changes in consumer wants as to kind, quality, and price, but not necessarily quantity. They may be due to innovations developed by competitors, or they may be due to other causes. The successful adjusting of business organization and operation to current conditions usually results in business growth. To most people, the average rate of increase in business volume over a period of years represents business growth. It can be shown statistically, with approximate accuracy, by a line of "secular trend."

Such business growth is likely to cause fundamental and permanent changes in organization structure. The Law of Functional Growth says that business functions tend to become more complex and technical with the growth of the organization's business volume. The public has been educated to demand an increasing standard of living. This means that the goods and services offered by the successful concern, under competitive conditions, must give the customer, from year to year, more values of better quality at the same or a lower cost. These goods and services usually become more complex as a result. The requirements for creating whatever utilities they possess become more technical accordingly. Business methods and equipment in every business field are becoming more complex and expensive. Business growth requires an increasing differentiation of functions to make possible a reasonable division of labor. It also requires an increasing differentiation of functions to make possible the reasonable provision of specialization. In consequence, the number of departments, both line and staff, tends to increase. There is also some tendency for the number and size of staff departments to increase more quickly than line departments, as will be shown later. The overall complexity of the managerial situation increases

in geometric progression as the number of departments increases in arithmetic progression. This is due to the increase in the number of direct and cross-contacts that become necessary. The net result is that the complexity of functions and functional relations tends to increase in geometric progression as the volume of work increases in arithmetic progression. Hence the structure of the business organization tends to become more complex with business growth. It is possible to lessen or delay these effects through decentralization. The great size of some successful business organizations is evidence. There is little evidence, however, that these effects can be entirely avoided with increasing organization size.

The Development of the Line Organization

The fact that the number of organizational elements, both line and staff, increases with business growth raises certain questions. From what do they develop? How do they develop? Why? The general answer, that they develop to meet the need for a greater division of labor and specialization, is correct. It does not tell us much, however. An analysis of their development should start logically with the smallest organizational element, the individual. There are many examples of one-man businesses, such as the tobacco and newsstand that one man owns and operates in an office building or the peanut stand on the corner. The individual is a valid starting point despite the fact that many businesses are started on a much larger scale. In some industries it may be necessary, in fact, to begin with a large accumulation of capital and thousands of employees to compete economically. The steel industry is an obvious example. Nevertheless, the new concern with its thousands of employees may suffer from many of the organizational growth difficulties that have been solved by older competitors who began small. How serious they are depends on how much and what kind of organizing brains can be bought, preferably from these competitors.

The one-man proprietor has no organizational difficulties. He may of course have plenty of business troubles. An organization has been defined as a group of people coöperating under leadership in the accomplishment of a common objective. It is evident that the proprietor can have no problems of functional and human relations until he hires at least one person to assist him. All functions, both

managerial and operative, are integrated in the person of the proprietor at the one-man stage of organization.

The proprietor must solve a problem in functional differentiation, even though he has never heard of the term, as soon as the business grows so that he can no longer perform all its functions single-handed. He merely does the obvious in deciding what work he will assign to his employee and what he will continue to do himself. He assigns the jobs that require the least intelligence, knowledge, and know-how, and at the same time give him adequate relief from his growing load of work. It is less likely that the errors made by the new employee will injure the business. He requires less training. It is easier to find such a man, and he is less expensive. There

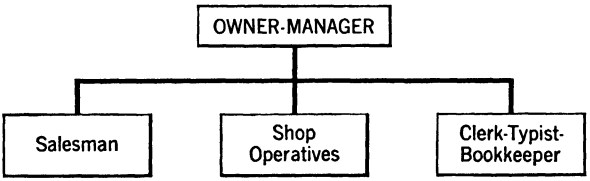

FIG. 25. A Small Job Shop Organization.

may be an exception when expansion requires the exercise of special knowledge or skill that the proprietor does not have. He tends initially to keep the managerial and skilled operative functions. They are likely to be more important in the success of the business. This process of differentiation and delegation continues. The situation that develops may look something like that illustrated in Fig 25, if the owner-manager is a small manufacturer who is running a service shop. He has hired a few mechanics to help him in the shop but he still does some of the skilled work. He has hired a salesman, but he himself still calls on some of his old customers to get their business. He has hired a combination clerk-typist-bookkeeper and he may buy limited service from a local public accountant. He has probably found it desirable, to keep out of difficulties with his banker and the government. He arranges his financing with his bank. He still does most or all of the work of planning, organizing, and controlling the activities of his employees. His decisions involve something more than the requirement for the separation of managerial and operative functions. He recog-

nizes that there are basic differences between the work of producing a job or service, the work of selling it, and the work of getting the money to keep the business going. He recognizes, probably without realizing it, the existence of "organic" business functions. It was pointed out in Chapter 7 that these are basically important. They are the functions of creating the required utilities in the goods or service, making these utilities available by the distribution of the goods or services, and providing the capital that enables the personnel to perform the first two functions. These functions are vital, because these utilities make it possible for the customers to enjoy the desired satisfactions for which he is willing to pay his money. The primary objective of the business organization is or should be the satisfaction of the customer's needs and desires. The primary functions of the business are necessarily its organic functions. In a manufacturing business they are the primary functions of production, distribution, and finance.

We shall assume, further, that the owner-manager has been successful during the next quarter century, and that his business and organization have grown from a small shop into a manufacturing business of moderate size. It is not "big business," but it is big enough to require the operation of a few plants in different states. The business has been incorporated during this time. The owner-manager has become president of the company and chairman of the board.[6] The organization structure of the company's manufacturing division may look something like that in Fig. 26. The details cannot be determined, since we have no information concerning the development of its services and the conditions of its growth. Fig. 26 indicates, for example, a high degree of decentralization of the manufacturing control function. This is desirable for some types and conditions of manufacturing, but not for others. The chart has been simplified in other respects to emphasize the development of the line organization.

Inspection of the chart shows that there has been a direct devolution from ownership of objectives, functions, responsibilities, and

[6] The last assumption is possible, of course, but not highly probable. There are apparently few men who have the ability to grow with a business organization from a small beginning to large-scale operations. The reasons were discussed in the chapter on executive leadership (chap. 5).

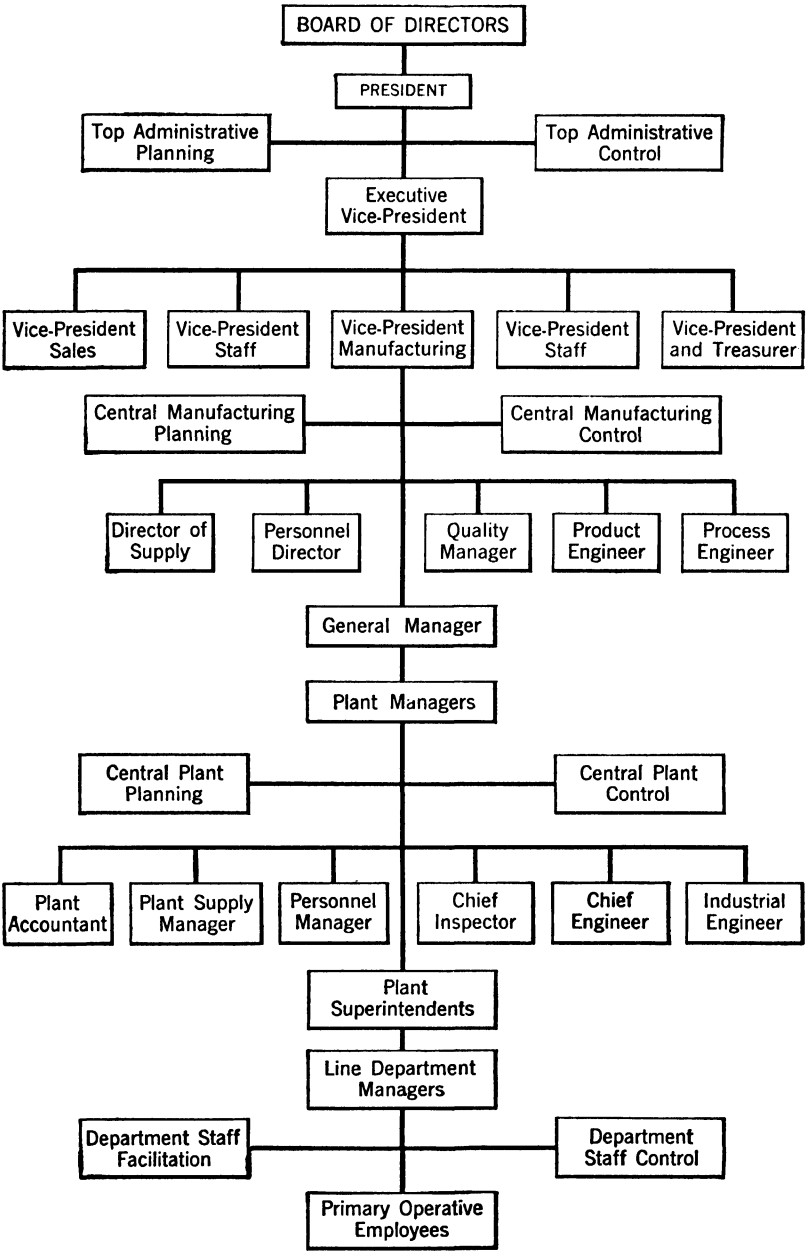

FIG. 26. An Industrial Organization.

authority with organization growth. It has led directly to an increasing division of labor and specialization in the production of primary service values by primary operative employees. This is typical of any organization. The hierarchy of functions that develops by direct devolution from ownership through organic business functions to and including primary operative performance may be called the primary functional hierarchy. The hierarchy of executive and operative personnel that is necessary for the performance of primary functions is the "line" organization. The chain of delegated responsibilities and authority that is necessary to enable the line organization to perform its duties, and to establish accountability therefor, is a "primary chain of command." Mooney and Reiley have called this the "scalar chain."[7] The line organization of the manufacturing division in Fig. 26 extends from the president, through the executive vice-president, the vice-president in charge of manufacturing, the general manager, each plant manager, each superintendent, each general foreman, each foreman or department manager, each subforeman or supervisor, to each primary operative employee. The other line organizations in the company are headed by the vice-president in charge of sales and by the vice-president and treasurer respectively.

The test of a primary chain of command is this: Does the functional devolution and differentiation on which it rests lead to specialization in the creation of values for which the customer will pay? The chains of command of staff organizations do not. They can lead only to specialization in the creation of values that are needed by the organization for the accomplishment of its primary service objectives, or values that its members desire for themselves. These are secondary or collateral business objectives. The result of a devolution of responsibility and authority within a staff organiza-

[7] See James D. Mooney and Alan C. Reiley, *Onward Industry*. They do not make the above distinction between a line organization and a primary chain of command. Their point of view is as follows: "In organization it [a scale] means the graduation of duties, not according to differentiated functions, for this involves another and distinct principle of organization, but simply according to degrees of authority and corresponding responsibility. For convenience, we shall hereafter call this phenomenon of organization the scalar chain" (p. 31). "What is known in military organization as the line is synonymous with what we have called the scalar chain. There can never be but one channel of line authority and the line represents the sum of the entire organized process" (p. 61).

tion is necessarily the development of a secondary chain of command. Fig. 26 also shows certain staff vice-presidents who report to the executive vice-president, a line administrative executive. This should not give them any line authority. No staff executive can head a line organization. He ceases to be a staff executive when he does. The significance of this will be discussed when we take up the problems of staff organization.

Organizational Elements and the Line Organization

The development of a line organization, such as that shown in Fig. 26, results in the creation of an increasing number of service levels within the organization. It is accompanied by an increasing differentiation of functions, since it occurs in response to a growth in business volume. We saw in Chapter 8 that it leads to the ultimate unit function—a single simple motion with a definite starting point. It is necessarily an operative function, because it represents the ultimate in the separation of managerial and operative functions. This concept has been applied widely in offices and factories, through the use of motion-and-time-study techniques, in the improvement of processes and the determination of production standards. Both specific and general operative work assignments represent some combination of ultimate unit functions. The ultimate unit of responsibility is the obligation of an operative employee for the proper performance of the work assignments that constitute his job. The ultimate organizational element is, of course, the individual operative employee. The number of units of operative responsibility that are suitable for face-to-face leadership and personal management by a supervisory executive constitutes a unit of operative supervision. It is the basic organizational group. It represents the minimum unit of executive responsibility. The supervisory executive must report directly to a higher executive for coördinative and other purposes. There is also a number of units of executive responsibility that are suitable for administration by this higher executive. It will be seen shortly that this number is limited. It is the unit of executive supervision.

The development of the line organization with continued business growth requires the development of new and larger organizational elements in higher echelons. All the operatives in Fig. 25

report directly to the owner-manager. Groups of primary operative employees in Fig. 26 report to supervisors who in turn report to department managers or foremen. A number of foremen report to a general foreman, a number of general foremen to a superintendent, etc. A similar situation arises with growth in any business organization. The nature of these elements should be determined, and plans made for their development, if continuing growth is envisioned. Otherwise, it may not be possible to take advantage of growth possibilities when they appear because of failure to provide adequate leadership, man power, and facilities.

Organizational planning for business growth, flexibility, stability, more effective coöperation, or other organizational values implies ability to classify organizational elements, as well as functions, to the end that their characteristics may be studied. Such classification requires a terminology that will identify these elements with reasonable accuracy. Although there is no terminology that is universally accepted, it is believed that the following will serve our purposes:

A *unit* (of supervision) is the smallest number of units of operative responsibility that require the performance of managerial functions involving chiefly face-to-face leadership. The head of this element may be called a "unit chief" in some business concerns. This is a common term in military and governmental organization. He is more likely to be called a "supervisor" in most business organizations. The size of his unit varies between concerns, as we shall see. The normal range apparently is from 10 to 30 persons approximately.

A *branch* is a combination of two or more units of supervision that are suitable for executive direction and supervision. The normal range or span of executive supervision appears to be limited. It seldom includes less than three subordinates or more than seven or eight.

A *section* is a combination of two or more branches.

A *department* is a combination of two or more sections. It is, in most business concerns, the smallest organizational element that requires formal provision for the functions of administrative management.

A *division* is a combination of two or more departments. It con-

tains within itself, usually, the essential man power and facilities, properly departmentalized, that are necessary for the accomplishment of its assigned task. The Army says that "the division is a self-contained tactical and administrative unit."[8] Much the same thing can be said for a major division of a business establishment. A line division represents an organic function of the business, or some major phase of it.

An *establishment* is a combination of two or more divisions that represents a sufficiently complete organization to permit its independent operation in competition with other business establishments in the same business field.

A *corporate division* is composed of two or more establishments.

An *integrated concern* is composed of two or more corporate divisions that are related through the need for some form of economic integration. It may be vertical or horizontal, or both.

There is no implication in the above classification that examples of each kind of major and minor element can or should be found in each business organization. None of them is to be found in a one-man business. All of them can be found in a great corporation. The number and nature of the organizational elements that are set up in concerns within these limits depend largely on the nature and size of the concern. The above terminology should, however, be sufficient for the needs of most concerns.

The general levels of service, or echelons, that are required by an organization may be classified as major and minor. The above classification of organizational elements is related to major service levels, but is not synonymous with them.

Organizational Problems and the Small Business

It would be erroneous to infer from the foregoing classification that the small business has no organizational problems. It is obviously true that the one-man business can have no organizational problems. The small concern should have a simple structure that is predominantly line, with a minimum of staff. The structure of the business organization becomes increasingly complex with growth due to the addition and expansion of staff. The small organization may nevertheless have some difficult problems arising from the

[8] General Service Schools, U.S.A., *Command, Staff and Tactics,* p. 32.

grouping of functions and the delegation of responsibility. It may have serious morale problems. It may suffer from lack of adequate leadership. The head of a small business may have adequate technical knowledge and practical experience. He is less likely to have adequate managerial training. He may be a business mechanic rather than a professional executive. His managerial inadequacies may hamper the organization and its development long before it has grown out of the small-business category. It may be difficult to do much about the matter quickly, even in the case of minor executives. The greater importance of the individual in the small organization may make it desirable to proceed slowly.

The Grouping of Primary Operative Functions

It was noted above that the line hierarchy of functions devolves from ownership through an organic function of the business to primary operative performance. The continued devolution of the line requires increasing differentiation of managerial and operative functions. There is an increasing separation of administrative management from operative management within the managerial service levels. The further growth and devolution of the line, and its organization, results in the further differentiation of primary operative functions, the development of operative specialization, the determination and specification of job assignments, and the formation of primary operative units. This, in turn, causes further differentiation and development of both operative and administrative management functions.

It was also noted that administrative management is essentially group management, that operative management is essentially project management. Operative performance has to do with the performance of functions that enter directly and immediately into the accomplishment of an operative project. These functions, as we have seen, do not involve the direction and supervision of other people in any essential degree.

It is evident that the characteristics of operative functions must be determined ultimately by the requirements of the projects to which they relate. Otherwise, it is most unlikely that the final objectives of each project will be accomplished with satisfactory economy and effectiveness. These requirements necessarily condition the

grouping of operative functions in units of operative responsibility and supervisory units. Such grouping should be made in accordance with the Principle of Functional Similarity. The operative project is therefore an important factor in the design and development of organization structure at the operative level. It is necessary, in consequence, to define a business project and its principal subdivisions. It is suggested that they are the following:

A business project may be any undertaking that has to do with the achievement of business objectives—primary, collateral, and/or secondary. Hence it is composed of certain related managerial and operative projects.

A managerial project is merely some executive's specific mission to plan, organize, and/or control the execution of an operative project or projects. It may be accomplished directly, as in the case of operative management, or indirectly, as in the case of administrative management.

A primary operative project is a project whose accomplishment results directly and immediately in salable values. It involves the creation of utilities in the product or service that will enable it to satisfy certain needs or desires of the customer. In other words, the accomplishment of primary operative projects supplies the consuming public with whatever legitimate values it wants.

A secondary operative project is a project whose accomplishment results directly and immediately in values that are needed by the organization or its members. It involves the creation of utilities that will enable the line or some other staff organizations to accomplish their missions. In other words, these utilities provide the line with values that it needs to provide the customer properly with primary values, the stockholders and employees with values they want for themselves, or society with certain general values that it demands through the agency of government. A secondary operative project is usually a staff project.

The bases for grouping primary operative functions, then, are determined ultimately by the requirements of the organization's primary service objectives. These, in turn, determine the characteristics and requirements of its primary operative projects. They determine what primary operative functions must be performed, how they must be performed, in what order, and why. This is true gen-

erally whether the primary project has to do with selling an item of merchandise to a customer or processing an order for a product through a factory. The immediate basis for functional grouping may be the general characteristics and requirements of functions or the characteristics and requirements of factors conditioning their performance. These characteristics are the immediate determinants of functional similarity.

All major business fields have the same basic service objectives. Whether or not they accomplish them satisfactorily is another question. This is necessarily true, since the business organization is primarily an economic institution. These basic values are, in general, more goods or services of better quality at lower costs and prices, with delivery at the right time and place, together with such collateral services as may reasonably be expected by the customer. There will be differences between each major business field and between each business organization within each field, because of specific differences in the primary service values that they supply. There are, however, certain bases for grouping primary operative functions that are common to large groups of business organizations. They tend, in fact, to be common to all organizations in all business fields, when and as they become large.[9] This is due, of course, to the existence of common, basic service objectives. The principal bases for grouping primary operative functions were discussed briefly in Chapter 8 and were shown in Fig. 21. They are:

1. Product, commodity, or service.
2. Process or method.
3. Equipment or other dominant physical factors.
4. Physical dispersion of activities on some geographical basis.

It should be noted again that these bases are useful chiefly in business organization. A similar problem necessarily exists in the fields

[9] This has been recognized by many authorities in the field of organization. Thomas R. Jones, for example, has suggested the following bases: (1) product, (2) process, (3) equipment, (4) geography, (5) function, and (6) some combination of the preceding bases. See *Theories and Types of Organization*, p. 10. All such statements are fundamentally the same, and probably for reasons stated. The differences usually reflect the particular writer's notion of the most useful classification of bases.

of religious, social, educational, political, military organization, and others. The objectives of these fields are related generally through the necessities of this earthly existence. There are obviously some fundamental differences in the values contributed by organizations in each of these fields. These differences result in fundamental differences in the bases on which their operative functions are grouped. They are not the concern of this discussion. It should be remembered also that the force and effect of any basis for grouping primary operative functions decrease progressively above the level of minor operative management. Functions are grouped in divisions at the top of the business establishment. The grouping is based on the organic functions of the business plus such staff phases as the chief executive feels should be carried on under his personal administrative direction. The bases for grouping primary operative functions have a fundamental significance, nevertheless. Our primary economic values are produced at this level.

A grouping of primary operative functions on the basis of product or service is quite common. Most people are familiar with such terms as "production lines" and "assembly lines" through reading the newspapers. They know that these terms apply to conditions in large manufacturing concerns that are engaged in the continuous manufacture of assembled products. They may or may not know that in the case of a particular "piece part" of the product, man power and equipment have probably been grouped in the serial order of the operations or steps required to make the part. These steps are, of course, operative functions. There may be supervisors in charge of sections of the production line, an assistant foreman in charge of the entire line, and a foreman or department manager in charge of a number of lines. Each of these lines may make a different part of the product. Operative functions of selling, in a distributive industry such as a department store, may be grouped in departments according to the kinds and classes of commodities or merchandise that must be sold. An independent service organization, such as a garage or large filling station, must be departmentalized on the basis of the kinds of service rendered and their operative requirements. Primary operative functions have been grouped in the above cases with immediate reference to the characteristics and

requirements of product, commodity, or service, the vehicle that conveys certain values to the customer.

Process or method also is a common basis for functional grouping, particularly in manufacturing industries. The large concern that is engaged in continuous manufacturing may be able to operate a continuous foundry, if it has sufficient volume. There are some similarities in the bases for grouping operative functions in this foundry and in production and assembly lines. There are, however, more dissimilarities of a fundamental nature. Different parts are made in the parts plant on different production lines. The successive operations of functional steps are different for each part. The equipment and personnel requirements are correspondingly different. All the equipment probably falls in the same general classification, such as light machine tools. The raw material for the production line may be a casting that comes from the foundry. It has the general form of the finished part. It is formed, we shall assume, by pouring molten metal into a green-sand mold where it solidifies. The mold is made on a molding machine by means of a pattern board that gives it the correct form. Cores are set in where solid metal is not needed or desired. The mold with its cores is really a tool for making a casting. It is destroyed, in this process, when the casting has been made. All castings made on the "line" in the foundry require some performance of the same functions—core making, core baking, machine molding, pouring, cool-off, shake-out, and tumbling, chipping, or burring. The entire process may be conveyorized. Competent personnel must be assigned to the making stages of this process, and of course they must be supervised. There may be only one "line" in the foundry, and all small castings may be made on it. It is evident that primary operative functions have been grouped on the basis of the characteristics and requirements of the basic stages in a fundamental process or method. It can be shown that the same considerations govern basically in a jobbing foundry that has no conveyorized production. The same general basis of functional grouping is often used in the boot-and-shoe industry, the textile industry, the printing industry, and others. It may have a marked effect on the control phase of the management. The ultimate determinant is still the service objective, since

it governs the characteristics and requirements of primary operative functions.

The manner of grouping functions in primary supervisory units may be affected also by the characteristics and requirements of equipment, or some other dominant physical factor in performance. This basis can be seen broadly in the transportation industry. It is obvious that goods or people can be moved by land, sea, or air. Fundamental differences in the transportation equipment used introduces corresponding differences in operating problems. What it takes to maintain and operate successfully a fleet of airplanes is different from the operating requirements for a fleet of tankers, trucks, a pipe line, or railroad transportation equipment. There are many instances in industrial establishments in which the dominant factor in economical and effective operations is the kind and type of equipment that must be used. In small plants engaged in intermittent manufacturing, it is more economical and effective to group and departmentalize on the basis of like equipment to gain operating flexibility and other economic advantages. It is not usually economical to conveyorize production because of lack of volume.

The physical dispersion of activities on some geographical basis is so obvious and common that it hardly requires comment. Everyone has had contact with a unit of a chain-store organization in the field of distribution. Large mail-order houses may operate branch warehouses at various points in the United States, as well as a retail chain-store system. Any large transportation organization is affected in the grouping of its operative functions by the far-flung geographical dispersion of its activities. This is in addition to the conditioning effect of its equipment on its functions. The line organization of the sales division in a manufacturing organization frequently is broken down at the operative level on a geographical basis. Other examples can be given. The intent in using this basis to improve operations by bringing the point of primary service as close to the customer as possible, particularly where distributive functions are involved. It may however be used to get a favorable conjunction of cost factors, such as materials, labor, taxes, etc. These are common considerations in plant location.

The selection of the appropriate basis is determined by the importance of performance factors in the creation of end values in

primary operative projects. It is evident, therefore, that the best basis for grouping primary operative functions in a particular establishment may be some combination of the bases that have been mentioned above.

Major Organizational Echelons or Service Levels

We saw in Chapter 5 that general organizational levels or echelons necessarily develop with organizational growth. They result from functional differentiation and devolution leading to a division of labor and specialization. The consequent general relationships between levels of managerial and operative service were shown in Fig. 15. A distinction between major and minor echelons can and should be made. These concepts are fundamental to wage and salary administration as well as to organization structure.

Major echelons, or service levels, are broad general gradations of service within the organization. They represent basic differences in the characteristics of and requirements for an effective exercise of authority in the discharge of responsibility. This concept applies to all grades of employee service, since responsibility and authority may be managerial or operative, line or staff. We can distinguish broadly between major and minor administrative management, major and minor operative management. We can distinguish within the general level of operative service such major levels as professional, skilled, semiskilled, and unskilled performance. It was noted previously that the individual work assignment is the ultimate organizational element. The requirements of work assignments are determined by the service that must be rendered. The concept of major service levels is therefore basic to the design and development of organization structure.

The Basic Relationship Governing Echelons

The factors that ultimately govern the required number of major service levels in an organization, and their development, are fundamental. They have to do originally with the causes of organizational growth. There may be some necessity for functional differentiation in the absence of growth. Under competitive conditions, a concern must meet the changing needs and desires of the public for service, even if it does such a poor job that its business volume tends to

remain constant. There is little necessity for functional devolution, however. The factors that immediately govern the required number of major echelons are those that determine the optimum units of operative supervision in the particular situation, and the structural relationships that should exist between them. These relationships are expressed by the corresponding span of executive supervision, as was shown in Chapter 8. These considerations condition to a great extent the character of functional devolution in the particular situation, the subsequent delegation of responsibility and authority, and the decentralization of operations in nature and extent. They therefore affect the development of chains of command and line organizations, both primary and secondary. They are most significant, of course, with respect to primary chains of command. The force and effect of these factors and relationships on the development of line organization structure can be brought out best by illustration.

The existence of a relationship between units of operative supervision, spans of executive supervision, and the delegation of responsibility and authority was recognized in ancient times. Most people are familiar with the following Biblical quotation: "And Moses chose able men out of all Israel, and made them heads over the people, rulers of thousands, rulers of hundreds, rulers of fifties, and rulers of tens. And they judged the people at all seasons: the hard causes they brought unto Moses, but every small matter they judged themselves."[10] Henri Fayol pointed out, at the turn of the present century, that the relations between these units and spans may be expressed mathematically by a simple geometrical progression, "that the number of ranks of officials in even the biggest businesses is quite small."[11] The term "rank," as he used it, appears to be synonymous with the terms "major echelon" and "major service level" that have been used in this book. Unfortunately, Fayol did not give us the mathematical expression of this progression. It may be simple, but it is also important in understanding line organization structure.

The general nature of line devolution is shown graphically in

[10] Exodus 18:25, 26. This quotation is also interesting as a statement of the exception principle in control which antedates F. W. Taylor by some centuries.

[11] Henri Fayol, *Industrial and General Administration*, p. 43.

Fig. 27. The average unit of operative supervision, in this example, is assumed to be 20 operative employees. The average span of executive supervision is assumed to be 5 subordinate executives. The head of a primary line organization is the chief executive of an organic division of the business. Each primary functional hierarchy in a business devolves from some one or its organic functions. Inspection of Fig. 27 shows that the number of operative employees who can be commanded effectively increases in geometric progression as the number of executive service levels, including the organic head of the line organization, increases in arithmetic progression. However, this statement assumes an appropriate development of staff organization.

This relationship is shown statistically and algebraically in the accompanying tabulation. It is based on the same conditions as those in Fig. 27. The letter symbols have the following meanings:

A = the unit of operative supervision, 20 operative employees
R = the span of executive supervision, 5 subordinate executives
N = the number of major executive service levels below the principal executive
E = the number of primary operative employees

No. of Executive Ranks (N)	No. of Primary Operatives (E)	Relations Between A and R
1	20	A
2	100	$A.R$
3	500	$(AR)R$ or AR^2
4	2,500	$(AR^2)R$ or AR^3
5	12,500	$(AR^3)R$ or AR^4
6	etc.	etc.

Each group of operatives must be directed and supervised by a supervisory executive. The number of units of supervision that can be directed and supervised by a higher executive depends on what is an effective span of executive supervision in the particular situa-

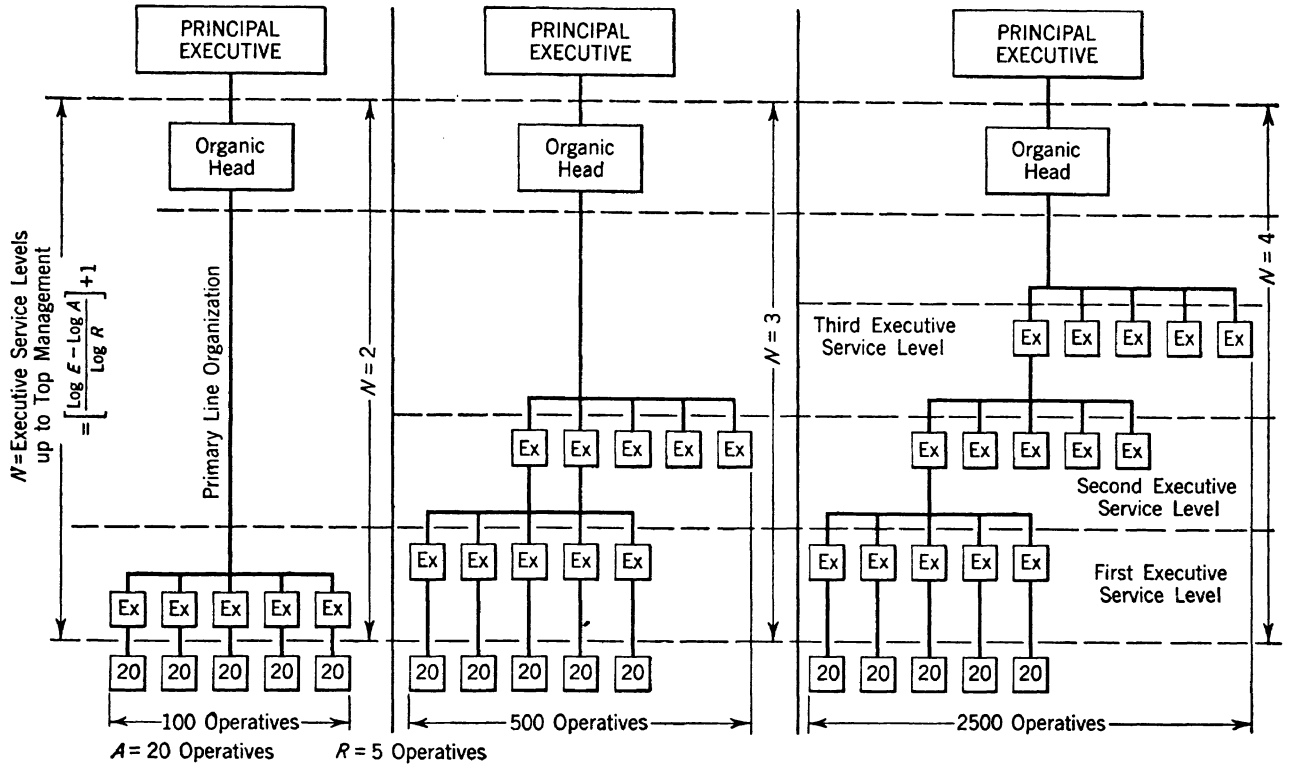

FIG. 27. The Devolution of Primary Line Organization Structure.

tion. It is evident from inspection of the relations between A and R that the number of operatives who can be supervised effectively varies with these relations as follows:

$$E = A.R^{(N-1)}$$

This expression, in logarithmic terms, is

$$\text{Log } E = \text{Log } A + (N - 1)\text{Log } R$$

The number of major executive service levels, above the level of operative performance and including the head of the line, is therefore

$$N = [(\text{Log } E - \text{Log } A)/\text{Log } R] + 1$$

The number of service levels above the head of the line organization is a matter of organizational size and policy. The head may report to an executive vice-president, or directly to the president of the company. The number of echelons of primary operative service below the level of "first line" supervision is determined by related but different considerations. They cannot be discussed here, except to note again the major classes of such service: professional operatives, skilled operatives, semiskilled operatives, and unskilled operatives. The determination of major and minor operative service levels has been well discussed in various books on wage and salary administration.

The development of major echelons tends to be gradual. The growth of a successful organization tends to be continuous. Its rate of growth may vary, of course, in depression and prosperity. It follows, however, that a company does not jump suddenly from a condition in which it can staff a given number of executive echelons with a complete complement of line executives to one in which it can staff the next higher echelon fully. It would require, for example, approximately 4.4 major executive echelons, including the head of the line, to staff an organization of 5,000 primary operatives, under the above conditions of supervision. It is probable in this case that four executive service levels are fully developed. A fifth level has begun to develop, as indicated by the fractional level. The significance of the fraction is this: It may be necessary, in the interests of economy, to exceed temporarily whatever are regarded in the organization as optimum units and spans of supervision. It may become necessary in other instances for an executive to serve on two contiguous service levels. Such cases are not uncommon in

business organizations. The latter situation is illustrated in Fig. 28.

It is evident that the functions under Smith have developed to the point where they cannot be grouped entirely under Jones and Adams, without serious danger of loss of organizational effectiveness. This can happen for many reasons that were noted earlier. For whatever reasons, Smith has taken over temporarily the supervision of certain functions that were previously the responsibility of Jones and/or Adams, in an effort presumably to maintain the economy and effectiveness of his operations. He has set up a new department to assist him. It is operating for the time being under his personal supervision. There is the danger that Smith has merely transferred

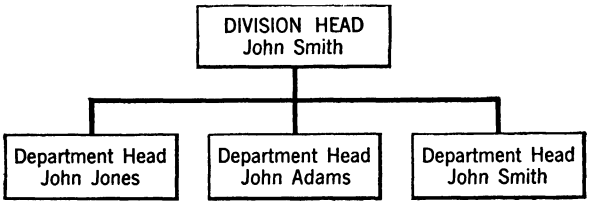

FIG. 28. Fractional Service Levels.

the overload or other difficulty to himself, that there will be a consequent deterioration in the quality of the divisional top leadership. This danger can be avoided by various means, such as the appointment of an assistant department head. It will eventually be necessary for Smith to appoint a permanent head for the new department, if its work continues to grow.

It may be advisable to point out again that we do not manage by mathematics. Mathematics may be very helpful, however, in making analyses for planning or control purposes. The mathematics of line organization is frequently helpful in making general checks of organization structure. But it is not a substitute for investigation and analysis of structural problems, based on the use of job analysis or time and duty study.

Minor Organizational Echelons or Service Levels

Major service levels represent broad, basic differences in the kind of service, either operative or executive, that is required by an organization. There are usually a number of grades of service within

each major echelon. They differ from one another in the importance of their contributions to the service objectives of the organization, the scope and difficulty of their performance, the background, training, experience, personality, and other personal characteristics that they require, and in other ways. Jobs should be graded properly, on the basis of the results of job analysis. They should be related to one another and evaluated as accurately and equitably as possible. The objective in so doing is . . . an incentive that will induce superior individuals to work for advancement, a relationship in remuneration that will reduce frictions and loss of morale growing out of real or alleged inequities in the wage and salary rate structure, and other related benefits.

These service grades represent minor service levels within major echelons. Individual work assignments or groups of assignments should be related logically to one another with respect to these service grades. It is the function of job classification to determine this logical relationship. It is the function of job evaluation to determine the corresponding wage and salary structure that is economical and equitable.[12] The sound solution of both these problems rests on the solution of the problems of objectives, leadership, policies, functions, responsibilities, authority, and accountabilities that were discussed previously. It is partly for this reason that job classification and evaluation, including the determination of service grades, is usually undertaken after the organization and its structure have grown to a considerable size and complexity. It is evident that such concepts as line organization structure, minor service levels, and classified work assignments are related and interacting. Some consideration of minor service levels in the development of line organization should be helpful. However, little or no such consideration is given, so far as the writer can determine, except in a few large corporations.

There is no general relationship governing the number of minor service levels that may be required for an organization which is similar to the above relationship for major service levels. An aver-

[12] Authoritative and complete discussions of such problems may be found in J. O. Hopwood, *Salaries, Wages and Labor Relations*, Ronald Press: C. W. Lytle, *Job Evaluation Methods*, Ronald Press, and other books on job evaluation, wage and salary administration, and similar topics.

age of four to seven minor service levels per major echelon appears to be sufficient in most cases, judging from the limited experience that is available. The correct answer is, however, a function of particular organizational requirements. It is again the result of investigation, facts, analysis, and judgment, rather than mathematics.

Line Executive Requirements

It has been the custom of military organizations to develop "tables of organization" for their various components. The purpose has been to gain control of the numbers, kinds, and grades of personnel that may properly be requisitioned and maintained by a given organization during a future period of time. Organizational planning for growth requires the best possible estimate of personnel requirements, both line and staff, by future time periods. We shall see shortly that the greater problem in estimating growth requirements has to do with probable needs for staff, rather than line personnel. Staff exists primarily to serve the line. Staff is appended to the line but is not a part of it. Accordingly, every staff executive reports to a higher line executive. The problem of line executive requirements is therefore more fundamental.

Executive responsibility is largely the obligation to manage the work of certain organizational groups with economy and effectiveness, to the best of one's ability. All functional groupings should be made in accordance with the Principle of Functional Similarity. Responsibility and authority should be delegated in accordance with the Principle of Unity of Command. Other organizational principles should be applied, to the end that the relationships between organizational groupings will make possible the maximum practicable operating economy and effectiveness. The principal structural relationships are chiefly those between units of operative supervision and spans of executive supervision. The executive requirements of the line organization, therefore, must be determined basically by what are considered to be the proper relationships between such units and spans. The number of "'first-line" supervisors, for example, must conform to the number of units of primary operative supervision in the particular concern. The number of "second-line" supervisors should conform to what is considered the most effective and economical span of executive super-

vision for such a minor operative executive. Again the basic relationship between executive numbers and line organization structure may be shown best by illustration.

It was shown, in discussing the relationship for major echelons, that only 5 major executive echelons, approximately, are required for the direction and supervision of 12,500 primary operatives. This included first-line supervision and the head of the line organization. The conclusion was based on an average unit of operative supervision of 20 employees and an average span of executive supervision of 5 subordinates. The line executive requirements for this organization, using the same data and the same symbols, can be expressed approximately as follows:

Total No. of Executive Ranks	Line Executives Required	Basic Relationships Between A, E, and R
1	625	(E/A)
2	125	$(E/A)(1/R)$
3	25	$[(E/A)(1/R)](1/R)$, or $(E/A)(1/R^2)$
4	5	$(E/A)(1/R^3)$
5	1	$(E/A)(1/R^4)$
Total requirements—781 line executives of all grades		

It will be seen by inspection that the total number of executives required to man the line organization is governed basically by the following relationship, in which

T = The total number of executives required for all major echelons

$$= E/A(1 + 1/R + 1/R^2 + 1/R^3 + \cdots + 1/R^{N-1})$$

The relationship is merely a summation of the executive numbers required at each major service level.

The Effect of Growth on Line Executive Requirements

The above relationships governing organizational requirements for major service levels and line executives make it possible to formulate a number of general conclusions concerning the character-

istics and requirements of line organization. One of them is the following: Organization growth has practically no effect on the percentage requirements for line executives, provided that the sizes of units of operative supervision and spans of executive supervision remain constant.

The effect of accelerated growth can be simulated by increasing the number of primary operatives in geometric progression and determining the corresponding ratio of total line executives to such operatives. This has been done in the accompanying tabulation. The letter symbols have the same meanings as in preceding examples.

Company	E	A	R	N	T	$\% T/E$
A	100	20	5	2.00	6.00	6.00
B	1,000	20	5	3.43	61.88	6.19
C	10,000	20	5	4.86	624.45	6.24

It was noted previously that there is a Law of Functional Growth. The law says that the size and complexity of the business organization increase with increasing business volume, and usually in geometric progression. It is evident from the accompanying tabulation that this increasing complexity does not develop in the primary chain of command itself. It must therefore take place largely in staff functions and organizations that are attached to the line.

The Effect of Structural Changes on Executive Requirements and Costs

Changes in the relative sizes of units of operative supervision and spans of executive supervision may have an appreciable effect on executive payroll costs. A given percentage change in the size of the unit of operative supervision will have a greater effect, other things being equal, than will a corresponding change in the span of executive supervision. The change in the latter has its greatest effect on administrative executive requirements and costs. An increase in this span at the top of the organization may greatly impair top administrative effectiveness. It will tend, of course, to reduce top executive salary requirements, since fewer top executives will be required. Impairment of top leadership effectiveness may be serious or fatal in any organization. Economy in the use of competent top leader-

ship ability is less desirable than effectiveness. Top administrative payroll costs are usually a small percentage of total payroll costs, despite the large salaries of top administrative executives.

These facts can be illustrated by a few cases in which the total number of primary operatives and the scale of wages and salaries for the organization are held constant. The total number of primary operatives is taken to be 12,500 employees. There are approximately six major service levels in this organization. The median wages and salaries for these service levels have been determined by applying the Principle of Uniform Incentive Value. The resulting median annual pay rates for these levels are: primary operative service, $2000; minor operative management, $3945; major operative management, $4775; minor administrative management, $15,385; major administrative management, $30,667; top line executive, $60,000.[13] Units of operative supervision and spans of executive supervision have been varied. Corresponding changes in required executive numbers have been evaluated. The results are shown in the accompanying tabulation. The letter symbols have the same meanings as in preceding examples. It will be seen that the percentage increase in the unit of operative supervision (A) between Case 1 and Case 4 is 20 percent. The percentage increase in the span of executive supervision (R) between Case 1 and Case 3 is also 20 percent.

					Percent of Total Line Payroll			% T/E	
Case	E	A	R	N	Prim. Oper.	Oper. Exec.	Admin. Exec.	Oper. Exec.	Admin. Exec.
1	12,500	20	5	6.00	86.2%	11.8%	2.0%	6.00%	0.25%
2	12,500	15	5	6.14	82.3%	15.1%	2.6%	8.00%	0.33%
3	12,500	20	6	5.59	87.2%	11.4%	1.4%	5.84%	0.17%
4	12,500	24	5	5.89	88.3%	10.0%	1.7%	5.00%	0.21%

[13] There is a principle in psychology known as Weber's Law of Discrimination. It says that a stimulus must increase in geometric progression if the reaction is to increase in arithmetic progression. The Principle of Uniform Incentive Value is based on Weber's Law. It says that wage and salary levels of an

Other Conclusions Concerning Structural Changes

Business executives must have some principles to guide them in designing and developing organization structure. They cannot do an intelligent job of organizational planning otherwise. Most executives use rule-of-thumb methods that have been developed from practical experience by trial and error. An advantage of such mathematical relations as those above is that they permit some evaluation of these rules, subject always to further research. This has been done elsewhere.[14] There are, however, certain conclusions that are of general interest. They are summarized below.

It was shown above that the number of major echelons required for effective leadership tends to increase in arithmetic progression as the number of primary operatives increases in geometric progression. It tends also to vary inversely with the span of executive supervision. It increases sharply when the average span drops below five subordinates. It decreases slowly when the span rises above seven. The number of major echelons required also varies inversely with the size of the unit of operative supervision. However, this variation in size does not greatly affect the number of major echelons required. These major service levels tend to develop continuously with corresponding growth in business volume and organization. We saw earlier that "fractional" service levels may develop as a result.

It is evident that the number of minor operative executives required by an organization must vary with the size of the unit of operative supervision. The greatest effect is on the number of "first-line" supervisors who are needed. The quality of executive leadership at the operative level has been the subject of much discussion

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organization should increase in geometric progression as the service levels increase in arithmetic progression, if its wage and salary structure is to have a uniform incentive value. The law assumes that major and minor service levels represent approximately equal increases in responsibility. It says nothing about the rate of progression. This principle can be expressed mathematically as follows:

$$\log P = a.N + \log B$$

in which P is the rate of pay, a is the rate of progression, N is the number of service levels beginning with operative service, and B is a base value. In the above cases, the rates for the first and sixth major echelons were assumed.

[14] R. C. Davis, *Research Monograph Number 26,* Bureau of Business Research, Ohio State University.

for many years. There appears to be a trend in the direction of larger units of operative supervision, within the limits previously noted. Where this is the case, there are fewer supervisors of higher quality. The organization can afford to pay higher salaries, under these conditions, to attract better leadership ability. The title of "foreman" should probably become obsolete when applied to second- and third-line supervision. It is hardly appropriate, in such cases, since the operative executives performing this function are in some grade of departmental management.

A given percentage change in the unit of operative supervision has, accordingly, a much greater effect on the total number of line operative executives required than does a corresponding change in the span of executive supervision. Variations in the span of executive supervision directly affect the number of second-line supervisors required. It can have no effect on the number of first-line supervisors. The number of line executives required for each echelon tends to decrease in geometric progression, as we approach the principal line executive, under any constant condition of units and spans of supervision. The ratio of operative executives to operatives tends to be small. The ratio of administrative executives to operatives is quite small.

Variations in the sizes of units and the spans of supervision have little or no effect on the number of top administrative executives required for a given number of primary operative employees. After all, only one board chairman, one president, and possibly one executive vice-president will be needed, regardless of such variations. They may, however, affect the number of minor administrative executives required. A given percentage change in the span of executive supervision has a much greater effect on the number of line administrative executives required than does a corresponding change in the unit of primary operative supervision. A greater span of executive supervision in the lower echelons may reduce the supervisory span of the top line executives. A small unit of operative supervision may increase it. Such changes are usually not sufficient to cause any significant change in the number of echelons required, unless the variations are excessive.

Line executive salary expense is affected materially by variations in units and spans of supervision. The greatest effect of these varia-

tions is on the expense for minor operative executives. This group has the largest executive payroll in most concerns. The percentage of this payroll to the total executive payroll varies, of course. The statement concerning salary expense variation tends to be less true in cases where the greater proportion of prime costs is in materials rather than labor. Capital application is usually greater in such cases. A given percentage change in the unit of operative supervision has a greater effect on executive salary costs than does a corresponding percentage change in the span of executive supervision. The percentage of the total line payroll that goes to executive employees generally is small. The bulk of the payroll goes to operative employees. Here again the accuracy of this statement will vary with the importance of the part played by capital in primary operations. Obviously, no operative employees would be needed if all primary and secondary operations were completely automatic. But executive employees would still be required. The salaries of top line executives may be very large when compared individually with the annual wages of an operative. The administrative payroll containing these salaries usually constitutes a very small percentage of the total line payroll. The percentage may be negligible where large numbers of operatives are concerned. The larger the organization, the more this tends to be true. The effectiveness of the top executive leadership is far more important to the success of an organization and the well-being of the members, than is its cost.

Large organizations permit, in general, a more economical use of superior executive ability. This tends to be true, despite the fact that the price tags for the requisite top leadership ability tend to increase with the size of the concern. The structural problems of line organization are relatively more serious in small organizations than in large. The structure of the small company is predominantly line. Staff organization tends to develop with business growth. The small businessman frequently knows little about organizational problems.

There are other practical implications of supervisory units and spans. The units of operative and executive supervision affect the determination of the numbers and grades of minor operative executives who must be hired and trained for anticipated organization

growth. The effects of these factors on morale and payroll expense have been mentioned. They deserve more consideration than usually is given to them.

The Second-in-Command

The development and designation of a second-in-command becomes increasingly desirable with organizational growth. Some concerns attach such importance to the problem that they have a specific policy for it. It may be, for example, that no executive may be promoted to a position of higher authority until he has trained a subordinate who can carry on in his place. It is a matter of necessity rather than theory in large departments or divisions of a business. The person to whom one can go for an interpretation of directions or advice, in the absence of the chief, often comes to be known unofficially when no official designation has been made. It would be better to designate a second-in-command officially when the need is that great. His title will depend on the mission of the particular organization group, as well as on the service level on which he operates. It may be anything from "assistant department head" to "executive vice-president."

The functions, responsibilities, and authority of the second-in-command depend on the extent of delegation by his chief. He usually performs the following duties and such others as may be assigned: (1) He relieves his chief of the detail of directing and supervising the day-to-day operations of the organization. (2) He acts for his chief during the latter's absence in the field, on vacation, or for other reasons. (3) He advises his chief, in a line capacity, concerning decisions on problems that his chief has reserved for himself.

There are many advantages in this arrangement, provided that it can be worked out economically. The head of the organization has more time to sit back and think. It is less likely that he will be "unable to see the forest for the trees." The higher one goes in an organization, the more the work of the executive has to do with the difficult business of thinking. Whether or not the arrangement is an advantage depends, therefore, on the mental capacity of the executive. The provision of a second-in-command adds stability to an organization. The temporary or permanent loss of the services of the organization head is less likely to cause a serious loss in organi-

zational effectiveness. It is less likely that the chief will "bottleneck" his own group because he cannot be available for decisions and interpretations to the extent required by his subordinates. He is freed from his desk to a greater degree. He is accordingly more available to his superiors for conferences or other assistance. He can participate in organizational activities beyond the limits of his group. The larger the organization and the higher the level on which a person serves, the more likely it is that he must participate in community and other public relations activities. The necessity for field contracts becomes greater as the operations of the business are decentralized and dispersed geographically. There are other advantages that account for the fact that the designating of a second-in-command, under whatever title is appropriate, becomes increasingly common with increasing organization size.

There may be some disadvantages or dangers in the appointment of such an executive. The particular organizational group may need some or all of the values suggested above. It may not, however, be large enough to afford the full-time services of a second-in-command. It may be necessary, in such a case, for the head of a subgroup in the organization to serve also as the assistant head. It is not uncommon, for example, for a branch or section chief to serve also as the assistant department head. This is another instance of the development of a "fractional" service level. The economy of the development can be determined only by analysis of the work load of the new assistant's job. He will probably expect to get a salary increase that is commensurate with the added responsibilities at a higher service level, together with a better office, a higher title, and other intangible values of a prestige nature. It will probably be necessary to convince other branch or section heads that the appointment of their associate to the new job of assistant chief has not closed the door of opportunity to them. There is the danger that the chief of the particular group may lose contact with his organization because of the interposition of an assistant chief. It happens on rare occasions that the assistant chief is an "office politician" who attempts to take the play away from his chief and undermine his position with a view to getting his job. A remedial measure in both instances is probably the development of adequate

administrative control of the group's activities. An additional remedy in the latter instance is the dismissal of the assistant chief for disloyalty. There are other problems that may develop. They are usually not fundamental. The disadvantages in the development and appointment of a second-in-command are therefore much less important than the advantages. This assumes that the development is properly planned and executed.

The Characteristics of a Primary Line Organization

The development and maintenance of a primary line organization constitute a problem that has basic importance. The line organization has certain characteristics and requirements that should be understood. Otherwise, it may be necessary to solve the problem by the costly, time-consuming method of trial and error. Hence it is desirable to summarize these characteristics and requirements.

The line organization, as we have seen, is based on a direct functional devolution from some organic function. This devolution is chiefly an effect of increasing business volume. The growth of the line organization is brought about by further devolution. It results in the creation, successively, of major organizational service levels or echelons. The direction of growth is necessarily downward. Continued growth results in an increasing differentiation of operative and managerial functions. This is accompanied by an increasing differentiation of administrative and operative management functions. Such devolution leads to primary operative specialization. Staff devolution does not. Primary service values are created and/or distributed by a line organization. It is for this reason that line organization structure should be regarded as the primary form.

Line organization structure has simple, direct lines of responsibility, authority, and accountability between top leadership and primary operative performance. It has, for this reason, certain advantages in economy and effectiveness that will be discussed shortly. Continued line growth, beyond the stage of a very small organization, requires supplementary development of staff organization. Line growth succeeds in spreading the load of managerial work but makes little provision for managerial specialization. The personal value of specialized, technical knowledge to the line executive tends

to be less and less, however, as he progresses toward the top. This is because the requirements for effective administrative management do not demand it.

The growth of a line organization, without some staff development, tends to result in line controls that are centralized too highly. Coördination of thought and action, at each level, has to be brought about personally by the responsible line executive. He must, in fact, perform all the functions of management for his immediate subordinates to the extent that his time and ability permit. This executive, in a small but fast-growing organization, may be a "practical" man. This means frequently that he knows little about management and less about the phase of it that has to do with organization. He is likely to have little interest in any except operative problems. Such an executive often finds it difficult to delegate responsibility and authority. There tends to be a flow of ideas and orders from the top to the bottom of the organization. Subordinate line executives have limited opportunity to broaden their executive experience, to develop self-confidence, self-reliance, and initiative. These conditions may be sufficient to retard or stop the growth of the organization.

Advantages of Simple Line Structure in Small Organizations

A simple line structure, with a minimum of staff organization, has certain advantages. Because of them, it tends to be the form that is characteristic of small business organizations. Its simple, direct lines of responsibility are easy to understand. It can be directed by the owner or manager without any great knowledge of organization. It provides, in many cases, relatively greater economy. This may be an offset for the greater effectiveness of its larger competitor. The highly professional staffs that must be maintained by the large concern are also high-priced overhead expense.

The small organization often has a certain inherent flexibility because of its line structure. It may have greater ability to adjust itself quickly to changing conditions without serious loss of economy or effectiveness, for a number of reasons. There is usually less specialization among executive and operative personnel. They can be assigned promptly when and where needed. There is usually greater use of general-purpose facilities. A highly centralized line

control may be an advantage for the small concern. It may make possible close, personal executive coördination. Action tends to be prompt and decisive, because of short, simple, direct channels of communication and chains of command. All this facilitates prompt adjustment to changing conditions.

The question has sometimes been asked why some of our best strikes have occurred in concerns that have provided the best wages, hours, and working conditions for their employees. These have usually been large organizations. Concerns can be found in almost any city that work standard hours, pay mediocre wages, and sometimes operate under poor working conditions. Yet they seem to maintain continuously good relations with their employees. There may, of course, be many reasons for this. The short, simple chains of command in the small organization certainly are one factor. They place the "boss," the top leader of the concern, in closer relation to the rank and file of his organization. He may know most of his employees by name, and they know him. They also know more about what is going on in the organization than is possible in a large company. There may develop a feeling of participation, of belonging, of worth-whileness. It satisfies a common desire to be important and significant as an individual in the eyes of one's family, friends, and associates. This takes us into the problem of morale. This problem will be reserved for later discussion.

It was noted previously that organization structure is an instrument of leadership. It facilitates coöperation and the exercise of command. No organization can be better than its leadership. The most significant leadership is usually its top leadership. The small organization whose structure is chiefly a primary line structure may be dependent to a high degree on the direct, personal exercise of leadership by the principal executive. No structural form can do much for the small concern that is headed by an incompetent individual. The same thing can be said of the large concern, of course, but not to the same extent.

Disadvantages of Simple Line Structure in Large Organizations

The same characteristics of simple line structure that are the basis of economic advantages in the small concern tend to become serious disadvantages in the large organization. The concept of a residual

administrative responsibility that cannot be delegated was mentioned previously.[15] Continued line growth, without corresponding staff development, tends to develop an excessive load of administrative responsibility. This residual load grows heavier and is compounded by problems that come through from lower levels.

Centralized line control of activities tends to break down as the load on the simple line organization increases and the chain of command lengthens. This may lead to loss of control of the situation. The increasing load of work and the limitations of the span of executive supervision forces increasing delegation. Lack of adequate staff is likely to cause loss of control, even though delegation is not dangerously close to abdication. The alternative to excessive delegation in this case is a serious overload on the principal executive or a situation in which he "bottlenecks" his organization. The executive may die of coronary thrombosis if he elects the first alternative. His organization may die if he elects the second. On the other hand, excessive delegation may result in the creation of a hierarchy of little "Caesars." The situation may have an undesirable effect on morale.

The lack of managerial specialization with simple line structure may cause serious loss of competitive effectiveness in large concerns. We said above that the vision of top executives tends to be fogged by a haze of detail. There are other difficulties that are equally serious. The requirements for all-round ability, background, training, and experience increase rapidly with simple line growth. It becomes increasingly difficult to fill executive personnel needs. Top executive ability is necessarily diffused over wider and wider areas of action. Harrington Emerson recognized this effect during the early part of this century: "In vain does the president or vice-president, manager or superintendent, issue orders and delegate power under current (line) organization. Knowledge and ability, desire and interest, become diluted with every spreading step."[16] It should be possible theoretically, under conditions of simple line growth, for top executive ability eventually to be spread so thinly as to become completely ineffective. Lack of technical specialization, due to the failure to develop an adequate staff, may be quite serious. It

[15] Alvin Brown, *The Organization of Industry*, chaps. 2, 5.
[16] Harrington Emerson, *Twelve Principles of Efficiency*, p. 49.

means usually that the concern is failing to keep abreast of its competition in meeting the service objectives of the industry. This failure may be compounded by the tendencies of executives, under these conditions, to render decisions based on snap judgments Some serious mistakes may result, since there are no staff checks on line executive judgment.

Simple line structure has many other weaknesses as the principal form of large organizations. The opportunity for the development of second- and third-growth executive timber is limited. Organizational inbreeding tends to develop, because only line promotions are possible. This may lead to nepotism because there is no staff personnel function. The result may be lack of organizational stability. Simple, direct chains of command may provide greater flexibility in small organizations. They may have an opposite effect in large ones, despite the use of modern communications equipment. There is a loss in speed of action and flexibility. There may be a rapid increase in the number of minor service levels, since the organization can grow only by devolution of its primary chain. The organizational distance between the point of top authority and the point of operative action increases accordingly. The evil of "layering" may appear. There is likely to be some loss of effectiveness in any event, because of the existence of a single channel of communication between the operative and administrative levels.

The tendency to retain a highly centralized line control too long may cause a violation of the Principle of Coincidence of Responsibility and Authority. There may be an excessive delegation of function and responsibility without corresponding authority. It may be worth while to recall Emerson's comment on this point: "In American organization, a successful man becomes president. He selects his staff, his cabinet, and he puts it up to them. Each in turn selects his staff of managers, and puts it up to them. The manager selects his superintendents and passes the power and responsibility on to them. The superintendent selects formen, and delegates to them the power to 'make good.' The foremen select their workmen, and transmit to them the power to do the thing the president really wanted done."[17] The statement is an obvious exaggeration for emphasis. It is even less true today, because we have progressed in

[17] *Ibid.*, p. 44.

our knowledge of organization. It is true, of course, to the extent that a large enterprise is organized on the basis of a simple line structure. Such specific grants of function and responsibility, accompanied sometimes by inadequate authority, may not materially diminish the load on higher executives. It is often necessary to refer the problem to a higher authority for decision or concurrence before action commences. The position of subordinate leadership is weak. This does not help the morale of minor executives. The problem may be transferred to lower service levels when excessive delegation of responsibility is accompanied by corresponding authority. The department head tends to develop negative management methods.[18] This is in part the result of a centralized line control within the department. It may act as a depressant on the morale of the department's operatives. There may be the further difficulty that it tends to develop departmental insularity. Departments tend to lose both physical and managerial contact with one another. Department heads tend to legislate for their local situations, without too much regard for the situation of the organization as a whole.

These are some of the difficulties that may develop when the growth and development of an organization on the basis of simple, primary line structure have passed beyond the point of diminishing returns. They are symptoms that may indicate inadequate development of staff organization.

The Basic Importance of Line Organization

Some executives lose sight of the basic importance of the line organization because of such difficulties. It is still true in any concern of any size that the primary service values, which are the economic justification for its existence, are created in its primary line organizations. All staff forms of organization have their genesis in some primary line. They are attached to this line but are not a part of it. They exist chiefly for the purpose of assisting the line organization in achieving primary service objectives. The primary line is the backbone of each organic division of a business organization, regardless of its size and the complexity of its staff development.

[18] George Filipetti, "Line Organization," *A.M.A. Management Review*, April, 1932.

CHAPTER 11

STAFF ORGANIZATION

The Nature of Staff Organization

Percival White once remarked that "all managerial activities can be divided into line activities and staff activities."[1] These are the two basic forms of organization structure. Both of them are derived originally by functional differentiation and devolution from one of the organic functions of a business organization. Line organization structure must be regarded as the more fundamental of the two structural forms. It is the functional hierarchy that leads directly to the division of primary operative labor and consequent primary specialization. The continued existence of the business organization under competitive conditions depends on an effective and economical creation and distribution of primary service values.[2] The company lives on the customer's dollar. He has, in a free economy, the right of freedom of choice in the market place. Providing him with such values, while in competition with other business organizations, is a matter of prime concern to society. It is also a matter of prime concern to management. Continued failure to achieve adequately the organization's primary service objectives may lead to financial failure. Such personal objectives as larger dividends for owners or better wages and salaries for employees may become chiefly matters of academic interest under such conditions. Authority has been defined as the right of decision and command. There must be a hierarchy of responsibility, authority, and accountability which is

[1] Percival White, *Business Management*, Holt, 1926, p. 89.

[2] The validity of this statement does not depend on the existence of complete, "pure" competition.

based on the primary functional hierarchy. It is a primary chain of command for this reason. There is necessarily a hierarchy of individuals and groups of individuals who perform the functions and discharge the responsibilities. This is the primary line organization.

Staff organization structure is an evolution from a primary functional hierarchy. It takes place necessarily above the level of operative performance. It is made necessary chiefly by increases in the load of managerial work and the requirements for specialized background, training, experience, and ability. It has to do, therefore, with a division and specialization of managerial labor.[3] A staff organization is developed, accordingly, to assist the line or other staff organizations in the performance of some phase of an organic managerial function. It may, in addition, be required to perform certain functions of facilitation. The latter may include any services that make it easier for the line or other staff organizations to execute their retained functions. It is usually desirable to distinguish clearly between them and the functions that enter directly into the accomplishment of the designated objectives of the staff department.[4] This distinction aids the organizing process.

The concept of staff in business organization is similar to that of staff in military organization. There are, however, some important differences.[5] The staff function is usually advisory and facilitative in both business and military organization. It assists in coördination in both kinds of organization. The greatest difference is in the relation of staff responsibility and authority to command functions. There has gradually developed in business organization, by trial and error apparently, a distinction between staff functions that

[3] Holden, Fish, and Smith have said: "Staff departments do not create new functions but concentrate specialized attention upon certain phases of the management problem as these reach extensive proportions."—*Top Management Organization and Control*, p. 36.

[4] Alvin Brown uses the term "auxiliary responsibility" to refer to that which serves other responsibilities.—*The Organization of Industry*, p. 227.

[5] The following is one definition of the military concept: "By the term staff is meant the personnel who help the Commander in the exercise of the functions of command."—General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 24. This contrasts with the business point of view as represented by the following definition given by Mooney and Reiley: "The staff function in organization means the service of advice or counsel, as distinguished from the function of authority or command." According to them, "Staff functions exist for one purpose—to facilitate organized planning and procedure."—*Onward Industry*, pp. 60, 517.

assist in the performance of management's control function and those that assist in the performance of its function of creative planning. The distinction between the coördination of thought and the coördination of action is less clear in military organization.

Staff executives are merely those who hold positions of executive leadership in staff organizations. The nature of their duties, responsibilities, and authority varies with the kind of staff function and its position in the organization. They exercise, for the most part, a leadership of ideas and service. They have certain delegated rights of decision throughout the organization with respect to the performance of the staff functions for which they are responsible. The exercise of rights of command by a staff executive in his own name is usually restricted to the internal operations of the staff organization that he commands. As Fayol expressed it: "The staff is a group of men which has the strength, knowledge and time which the general manager may lack; it is a help or reinforcement, a sort of extension of the manager's personality."[6]

Staff Objectives

The duties, responsibilities, and authority of staff executives vary because they are derivatives of the objectives of the particular staff group. These objectives depend on the type of service that is required of the group. The objectives of a product design group in a manufacturing concern are product plans and specifications. These plans and specifications should provide a basis for the manufacture of a suitable product. It must have whatever utilities are required to enable it to serve satisfactorily the needs and desires of the customers. The objectives of a process design or industrial engineering department are process plans and specifications. They should provide a basis for the economical fabrication and assembly of parts into a finished product in accordance with product plans. The objectives of a personnel department are certain values having to do with the economical and effective handling of the human factor in the conduct of business operations. They include such values as adequate knowledge and skills for the performance of functions, good morale, and others that are needed by the organization. The personnel department in addition may provide for its members

[6] Henri Fayol, *Industrial and General Administration*, p. 48.

certain values that they desire for themselves. A supply organization provides certain values that contribute to the effective, economical handling of such physical factors as materials, supplies, and equipment. All the organizations named must be classified as staff departments for reasons that will become evident shortly.

The immediate objectives of such staff organizations are collateral or secondary objectives in the sense that we defined these terms previously. They include, in general, such values as the conservation of the time, ability, and energy of line or other staff executives. These objectives include greater managerial and operative effectiveness resulting initially from expert assistance in the preparation and execution of plans, and subsequently from better coördination and control. They include greater effectiveness as a result of expert facilitation of the performance of operative functions. They may also be values that satisfy collateral social or personal objectives. They do not include values that are salable directly to the customers. This is necessarily true, because staff basically is an outgrowth from a primary line for purposes of managerial specialization and a division of the load of managerial work.

It follows that the staff does no work and therefore contributes no basic values that the line would not otherwise create if there were no staff. Edgar Smith says that the responsible line executive would not need a staff if he "had sufficient time and sufficient ability to study out in detail and be thoroughly familiar with all phases of the work for which he is responsible."[7] This is a big "if," of course. The responsible head of a small business may need and have very little staff. In this case he must perform personally all the functions of management. Staff develops with business growth. It contributes, in a large organization, values that the responsible line executive could not. His staff subordinates should have better professional background, training, and experience in their respective specialized fields than he could possibly have.

Staff Functionalization and Costs

The concept of organic business functions rests on the concept of economic utility.[8] The utility of an economic good or service is its

[7] Edgar W. Smith, *Organization and Operating Principles*, p. 4.

[8] This was discussed in chap. 7.

ability to satisfy economic needs or desires. The organic functions of a business have to do with the creation of utilities, the distribution of these utilities, and the provision of capital. The objectives of the business field within which the organization falls determine the nature and content of its organic functions. Each of its primary line organizations develops as the result of a downward growth, or devolution, from one of its organic functions. This devolution requires and is accomplished by functional differentiation. It ends in primary operative specialization.

This process of devolution continues with further growth in the organization's business volume. There is increasing differentiation of managerial and operative functions. Each of management's basic functions of planning, organizing, and controlling also increases with the volume and complexity of the work that must be done. It becomes necessary, accordingly, to differentiate various phases of the work of management from one another to provide for the division of the work of management and for managerial specialization. A horizontal separation of operative management from administrative management develops. It is accompanied by a vertical separation of line management from staff management. It is this separation of staff from line management that is known as staff evolution. It is originally an outgrowth from a primary functional hierarchy at a point or service level where some specialized managerial assistance is needed. It was illustrated above in Fig. 21.

This evolutionary process is basically an effect of the Law of Functional Growth. This law says that functions tend to increase in scope, complexity, and technical requirements for proper performance, with an increase in the volume of work required for their performance. The complexity of the organization tends to increase in geometric progression, because of increasing differentiation, as the volume of work increases in arithmetic progression. It was shown in Chapter 10 that the percentage relationship between the number of executive and of operative employees in a primary line organization tends to remain approximately constant with increasing organization size. It follows that the staff organization tends to grow faster than the line organization in volume of managerial work and in numbers employed. The geometric tendencies in organizational complexity and expense may be due to a number of

causes. It becomes necessary, with increasing organization size, to substitute reports, files, and records for personal knowledge, observation, and supervision to some extent. The work of investigating a problem, analyzing the facts concerning it, and reporting on it to higher authority is usually a staff job. The work of coördinating the activities of an increasing number of line and staff groups, subject to higher line supervision, is also a staff job. The amount and complexity of this work increase rapidly with organization growth. The product or service that a concern sells to the public probably has been improved greatly during the years that the business or industry has been operating. It has been the rule in American industry, rather than the exception, that the customer has each year been able to enjoy more values, of a better quality, of the kind he desires. It has often been the case, when prices have been corrected for inflation, that he has been able to obtain these values at less cost. It is obviously smart competition to get the price of one's goods or services down to the point where they can be consumed more and more by persons in the lower income brackets. The number of people in these brackets tends to increase in geometric progression, in accordance with Pareto's Law, as we progress from the high individual income brackets to the low ones. A high turnover and a low markup are a sounder profit basis than a low turnover and a high markup. It depends, of course, on whether the values offered are suitable for mass consumption. This concept is, in any event, an important factor in organization growth to the extent that it is applicable. It requires increasing refinement of the values offered and of the methods by which they are created and distributed. This increasing refinement is reflected in an increasing need for specialization, both managerial and operative. The initial work of planning these refinements is in large part a staff job. It is another factor that accounts for the tendency of staff work to increase in geometric progression with organization growth. The operation of the Law of Functional Growth can be retarded by the use of modern office machinery and practices, more effective and economical staff organization, decentralization, and other means. However, there is little evidence that the law can be repealed. The cost of producing more and better secondary values by staff organizations tends to overcome

eventually their advantage, in greater economy and effectiveness, in producing primary values. These effects are considerations in optimum organization size.

The Principle of Functional Emergence

The factors and forces that govern staff evolution and growth are determined immediately by the requirements of the particular business situation. There are, however, certain considerations in staff evolution that are common to most organizational situations. It is a matter of general observation that some managerial functions have a greater tendency than others to be differentiated from the line organization and to assume a staff position in the concern. Some staff functions have greater growth potentialities with increasing business volume than others. It is evident that the functions that have growth potentialities and are least similar to those with which they are grouped are most likely to be differentiated first and set up in independent position. This is particularly true if they tend to become more complex and technical with organization growth. They may be associated originally with dissimilar functions because the size of the organization does not permit economical independent development of them. They may be associated with these functions because they serve them directly and in consequence have a strong complementary relation to them. It is probable that they are assigned to the particular organization group, in such case, because it is in a position to make the greatest and most economical use of them. They are often expected to serve other groups that need their services. These other groups could not, presumably, make as efficient use of them. Complete differentiation of the staff function does not take place usually until the amount of work and the importance of the service rendered to other organizational elements are sufficient to warrant the operation of a separate organization unit under its own supervisory head. These considerations may be summarized in a Principle of Functional Emergence, as follows: The tendency of a given function toward differentiation and independent grouping tends to vary directly with (1) the degree of dissimilarity between the particular function and the functions with which it is grouped, (2) the degree of correlation between its growth and de-

velopment and the growth of the organization as a whole, and (3) the tendency of the function to become increasingly complex and technical with growth.

There are many examples of the operation of this principle in business organization. It provides a partial explanation, for instance, for the establishment of certain central office services, such as a central filing section, under the general supervision of an office manager. The principle applies to either line or staff differentiation. Observation suggests that it applies with greater force in the development of staff organization. In any event, it operates chiefly in conjunction with organizational growth. Further discussion of it will be given later in connection with that subject, since it is of interest to administrative executives in command of growth industries. They have the ultimate responsibility for administrative planning for organizational growth.

Stages of Staff Evolution

Staff functionalization has to do, therefore, with the differentiation, grouping, and relating of functions whose development has made necessary their separation from the line organization. The immediate objective is managerial specialization in some form. It is a principle of staff evolution, consequently, that staff organization elements may be appended to the line organization at any service level where such specialization becomes necessary, but they cannot form a link in a primary chain of command. This is necessarily true because staff functionalization is always an evolutionary development from an antecedent line functionalization. There is a similar principle in military organization.[9]

Staff functions derive their characteristics from the characteristics and requirements of the line or other staff functions that they serve. This is evident from the nature of their development. They tend, in other words, to be characteristic of the echelon at which they are appended to the line. It follows that there may be staff functions of

[9] "The introduction of the staff into a unit does not alter the basic principles of command and responsibility. . . . The staff does not form a link in the chain of command, or in any way take from or add to the authority and responsibility of commanders."—General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 24.

administrative management, staff functions of operative management, and, under the executive heads of such staff groups, staff functions of operative performance. The most common staff operative is, of course, the clerk. Staff personnel, whether executive or operative, must have the intelligence, background, training, and experience that will enable them to accomplish the objectives of their staff group.[10] Such personal requirements tend to become greater as a staff function proceeds through the various stages in staff evolution.

We should note also, before we discuss these stages, that staff organizations develop their own chains of command with the continued growth of the organization and the consequent increased need for staff service. The immediate objectives of staff organizations are collateral or secondary objectives. Their chains of command are, in consequence, secondary chains. This does not mean that staff organizations are of secondary importance. It means merely that the values which they produce enter into the process of serving the customer through the primary line organization; they are collateral benefits. These secondary line organizations have their own internal management problems. This sometimes results in a need for specialized assistance for the principal staff functions. The result is a complicated staff situation that may affect the development of both line and staff. It should also be noted that with the development of staff organization and increasing specialization, there may arise a bureaucratic tendency of the staff to dominate the line organization. It may be based on the prestige of professional specialization and the feeling of importance that sometimes goes with it. It tends to invert the normal relationships between line and staff, nevertheless, when it does appear.

It is helpful, because of these and other reasons, to be able to recognize the stages through which staff functions pass in the course of their evolution. Ability to diagnose the current stage in the

[10] Robert W. Burgess made the following point: "Staff specialists assigned to assist the general management should combine as far as possible experience in the particular enterprise with a broad range of interests and the attitude of scientific research."—*Scientific Management in American Industry*, p. 53. This does not distinguish between staff requirements for a coördination of thought and those for a coördination of action. It applies with greatest force to technical staff executives who are concerned with the former.

evolution of a staff function makes possible a better determination of the requirements for its present development. Such a diagnosis must rest on qualitative judgments and is difficult for a number of reasons. Staff functions tend to pass through certain typical stages, because the basic factors, forces, and effects governing their evolution are universal. But the extent to which they go through these stages appears to vary considerably between staff functions. It is affected by the susceptibility of the function to growth and development. This is determined largely by the relation between organization growth and the rate of increase in the service supplied by the function. It is not necessary, accordingly, for all staff functions to pass through all the stages, even if the organization grows to large-scale corporate size. The size of the organization is a consideration. A small organization may have no continuing need for large amounts of specialized services. It may be cheaper to hire consulting service when and as needed. Staff payroll and operating expense are "overhead." There is a limit to the indirect expense that any concern should add to its prime cost, since there is a limit to the price that the customer will pay for its goods and services at any given time. Concerns differ, furthermore, in their rate of growth as well as their characteristics and requirements. A dying organization does not need to worry about staff development, unless it is dying because of the lack of adequate staff service. The stage at which the development of a staff organization begins is also a consideration. It may be necessary for it to start at an advanced stage, for example, if the particular concern is organized initially as a large corporation doing business on a national scale. The concern may inherit the difficulties, both line and staff, that result from organizational growth, nevertheless, and they may be compounded by lack of experience in handling them. It is still true, despite these limitations, that ability to recognize the current stage in the evolution of a staff function is helpful in determining the requirements for its current and future development.

There has been some recognition of the existence of these evolutionary stages, but it has not been clear. There is no unanimity of opinion concerning them, as would be expected. The following analysis is one that the writer has found helpful:

PRINCIPAL STAGES OF STAFF EVOLUTION

1. Line integration.
2. Distinct staff differentiation.
3. Complete staff differentiation.
4. Staff integration.
5. Staff elevation.
6. Staff decentralization.
7. Complete staff separation.

The stage of line integration is merely the original state of functionalization. The managerial and operative phases of the particular functions are merged, in this stage, with other functions in the primary functional hierarchy. All responsibility and authority for the performance of all phases of the function are vested in line executive and operative employees. The condition may be illustrated by the function of designing and making tools in a small plant. It was once a requirement in American industry that a foreman, or shop department manager, should be able to design and if necessary make the tools used by the machines under his supervision. This requirement is obsolete today. Tool design and tool making are recognized generally as staff functions in manufacturing.

The stage of distinct differentiation is reached when it is realized that the general background, training, and experience of a line executive will suffice no longer for the proper performance of the function; that the requirements placed on the function by the growth and development of the business make it necessary to differentiate the function from other line duties and to provide for its performance by specialized personnel. The function has been distinctly differentiated from the line organization, and responsibility for its proper performance has been delegated to a qualified individual. No organization unit for its performance has been set up, however. The writer once witnessed the progress of the tool design function into this stage in a plant in which he was employed. The plant foremen had always designed the tools for their department. Most of them were journeymen mechanics but not trained tool designers. They did very well, so long as competing plants developed their tooling in the same manner. The job foremen made

sketches of whatever tools they needed, and sent them over to the tool room. These foremen argued with the tool-room foreman and had new tools made up if they did not produce the quantity and quality that had been expected. There was no system for filing and safeguarding the sketches. In consequence, the tool room sometimes made up obsolete tools for standard parts. This caused serious losses and delays. Other costly difficulties arose. The plant superintendent finally hired a competent tool designer. He required that all tool orders clear through this designer. The latter's drafting table was located in the shop to bring him in close physical contact with the foremen with whom he worked. The designer reported directly to the superintendent. He was not an executive, however. He had no one under his command. He was clearly a professional operative who acted as a specialized staff assistant to the principal operating executive in charge of the plant organization.

Such a relationship could not continue indefinitely. There would be too much tool-design work for one man to handle. It would be necessary to give the designer some assistance. It would be necessary in consequence for him to spend more time in directing and supervising his subordinates, and less time in drawing tool designs. More assistance would be required with further growth of the function. A point would be reached eventually where the designer would be spending most of his time managing his group and very little time on routine design and drafting. He should be given executive status when the group reaches the size of an economical unit of supervision. Adequate staff responsibility and authority should be delegated so that he could relieve the superintendent of most of the burden of decision in the field of tool design. The function would then have arrived at the stage of complete differentiation. The development through these stages raises some interesting questions. Can a particular staff assistant develop and make the transition from the status of a professional operative to that of a staff executive Many specialists cannot. What phases of the function are likely to grow more rapidly than others, and at what rate? What modifications and expansions of organization structure may be required as a result? Many other questions are raised.

The evolution of staff functions through the stage of complete differentiation may be the result chiefly of expedient action based

on necessity. Difficult organizational situations arise. It becomes necessary to do something about them when it is evident that they represent a continuing problem. The resulting decisions "get us by," as we say. "Getting by" and "competitive effectiveness" are not necessarily synonymous, nevertheless. Hence staff functionalization is not always logical, since there may be a minimum of long-range organizational planning. The growth of the organization may be retarded or stopped at some point in consequence. This lack of logical functionalization may lead to the fourth stage of staff evolution, staff integration. This may be defined as the stage in which a number of similar but independent staff units are brought together under a single staff executive. The result obviously is the formation of a staff department or division. The preceding example was in the general field of process planning in manufacturing. The fourth stage there might be the relation of such functions as operation layout, routing, machine analysis and selection, tool design, plant layout, motion and time study, and others in a process design department, manufacturing methods department, industrial engineering department, master mechanic's division, or some group with a similar title that represents integrated responsibility for process planning. We find a similar development in other functional areas, however. The field of manufacturing logistics offers examples. The stores function in a small concern, under conditions of intermittent manufacturing and job-order control, may be headed by a storekeeper who reports to a plant superintendent. The buying function may be under a purchasing agent who reports to a general manager. The shipping function may be under the storekeeper or the sales department. The receiving function may be integrated with stores or be under purchasing. It may even be under inspection or engineering, since the control of quality should begin with the receipt of the raw material. The function of moving raw materials to primary operations may still be integrated in the line organization. There may be no provision of any kind for the traffic function. All these functions tend to evolve from line organizations and to acquire staff status. The tendency in modern manufacturing organization, with business growth, is to integrate these functions and groups in a supply division under a major staff executive. He may be known variously

as the general purchasing agent, materials manager, director of supply, or by similar titles.[11] We have arrived again at the fourth stage of staff evolution when this occurs. Other examples could be drawn from other functional and business fields. It will be seen that in all cases the development follows logically from the implications of the Principle of Functional Similarity. There are common general objectives that result in basic work similarities requiring personnel backgrounds, training, and experience that are basically similar. The related groups handle problems whose difficulties are basically similar. Their solutions require close coöperation between these groups. They can be commanded effectively by a staff executive who has a good general background and experience in the particular field. These groups could not be related structurally in a staff department or division, were this not so. They could be related effectively and economically only through business procedure.

The stage of staff elevation is reached when some or all of the functions of a staff department or division are separated from it and are reattached to the line at a higher echelon. This may take place when a general executive decides that the work of a particular staff organization has become so important that it should operate under his personal cognizance and his immediate general direction. This stage may also be reached when the concern grows to the point where multiplant or multistore operation becomes desirable. It may become necessary to differentiate the phases of the function that deal with general administrative management from its operative staff management phases, and to make provision for the separate performance of the former in the general offices of the company. The operative management phases may remain where they were in the organization structure, with appropriate modifications made necessary by the change. Staff elevation has taken place in this instance with respect to the administrative phases of the problem. It is evident also that we are no longer dealing with a small business

[11] It should be noted in passing that there is little uniformity in terms and titles in business organization. It is unlikely that there will ever be the degree of uniformity that exists in the exact sciences. Professional management societies have attempted to develop such uniformity, but with little success. It is usually necessary in a given organization to examine the specification for a job before one can determine the exact significance of a title.

when this stage is reached. This development could take place in the case of the supply function that was mentioned above. The general purchasing agent of a large single-plant company could be elevated to a headquarters position and given the rank of director of supply or vice-president with the advent of multiplant operation. It is probable that he would be advanced, if the materials costs were the major part of the prime costs and labor costs were the minor part.

The stage of staff decentralization may be reached before or after the stage of staff elevation. It occurs when it becomes necessary to set up similar staff units on lower service levels. It may be necessary to bring certain operative phases of the particular staff function closer to the point where the service is needed. It happens often that the original staff group has been pushed farther and farther away from the point of operative performance by the growth of the organization. As a result, it may have been necessary to substitute forms, charts, procedures, and conferences for close personal contacts. The cost of the service may have been increasing, its quality decreasing, and the time required to get results increasing in consequence. Staff decentralization, however, is not an easy solution. There are usually some difficult questions that must be answered. They concern the development of effective staff parallelism, the decentralization of staff performance with or without centralized staff control, man-power requirements for subordinate units, modifications of managerial and operative procedures that may be required, and many other problems that must be reserved for later discussion. It should be noted, however, that with the delegation of certain operative staff responsibility and authority to staff units on lower levels, the original staff group is concerned more and more with the administrative phases of the function in the particular establishment. This requires a modification of its original mission by higher line authority. The decentralization of staff production control with the growth of a plant engaged in intermittent manufacturing is a good example.

These developments continue as the organization continues to grow. Different functions are frequently at different stages of staff evolution at the same time. The final stage of complete staff separation is reached only in very large organizations. It is not reached by

all staff functions even then. This stage may be defined as one in which the function is differentiated completely from its parent organization and is set up as an independent business establishment within the general corporate organization structure. The research function appears to be the most common example. Research is a staff function in any business organization, if it is performed at all. The major operating divisions of the large automobile companies carry on research, but with specific reference to the problems involved in developing the particular product lines for which they are responsible. There is usually a headquarters research department or committee. Its function is chiefly to coördinate the thinking of the divisional research agencies, operate certain interdivisional facilitative services for research, and perform such other duties of a headquarters staff group as may be assigned. There may be, in addition, an independent research establishment. It may be concerned with pure and applied research problems of a scientific and engineering nature that affect the economic mission of the particular corporation as a whole. It may not work on problems that are of interest only to a particular division, until the latter has exhausted its own research resources. The organizational details vary, of course, with each corporation. A well-known instance is the General Motors Research Corporation. It is a division of the General Motors Corporation. It is largely autonomous, being subject only to general administrative control by corporate headquarters. The General Motor Corporation also furnishes an example in the field of industrial relations and personnel management. The staff training function is regarded usually as a phase of the function of personnel management. The General Motors Institute is the central training agency for the corporation. It has its own president and may be considered an independent corporate staff division.

Staff Organization and the Basic Functions of Management

Staff evolution requires an initial differentiation of some function from a primary functional hierarchy at a point above the level of primary operative performance. A purpose of staff organization is to provide a specialized managerial service. If the differentiation took place below the level of primary operative performance, the

result would be some form of primary operative specialization and probably a further devolution of line organization. This statement is not altered by the fact that staff evolution requires the differentiation of both the managerial and the operative phases of the particular staff function.

The objectives and requirements of a staff organization are determined by the needs of the line or other staff organizations for certain specialized managerial services. The characteristics and requirements of staff functions are determined, for this reason, by the characteristics and requirements of the particular management functions they serve. A basic classification of staff functions should rest, therefore, on a classification of basic management functions. In the field of business organization, the latter are the functions of creatively planning, organizing, and controlling the work of associates and subordinates in the accomplishment of business objectives. In discussing any problem it is helpful to have uniform labels. The following basic classification of staff functions has been found to be helpful, and will be used subsequently for this reason:

Technical staff functions: Those whose purpose is primarily to assist executives and their organizations in the performance of the managerial function of creative planning or to perform some facilitative service that is related thereto.

Coördinative staff functions: Those whose purpose is primarily to assist executives and their organizations in the performance of the managerial function of control or to perform some facilitative service that is related thereto.

The reader may wonder what has happened to the function of organizing. Nothing has happened to it. It is so important usually that the responsible executive feels that it should be performed under his personal cognizance, if not under his personal direction. Organizing is the work of creating the requisite underlying conditions on which the subsequent execution of plans must rest. The actual work is generally done by the subordinate line and staff groups that participated in the development of the plan or will be affected by its execution. The work of organizing is recurring. It is not usually continuous and repetitive in kind and amount. The writer knows of no staff department in any business organization

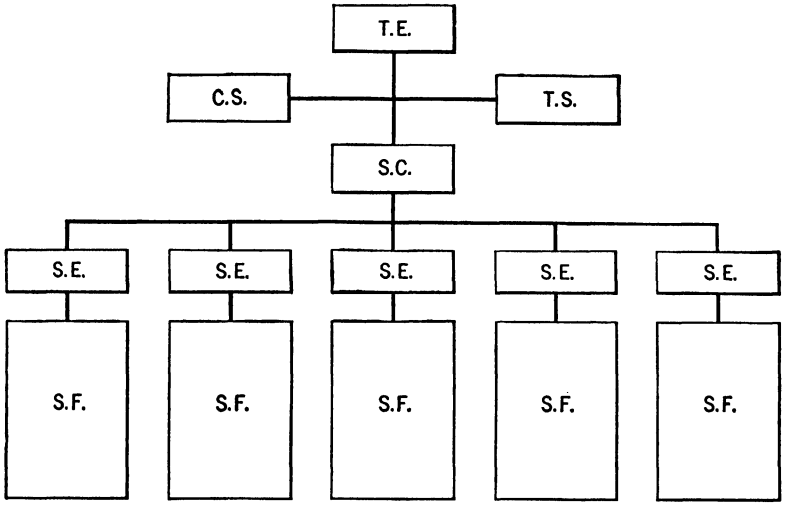
that specializes in organizing. There are departments for organizational planning in a few large concerns. They are technical staff groups, as their name indicates.[12]

Examination of organization charts suggests that there is a general pattern of line and staff evolution. This would be expected, no doubt, since the basic managerial functions are organic and an increasing need for assistance in the performance of managerial functions is universal with organizational growth. The first differentiation is, of course, between managerial and operative functions. Staff evolution takes place thereafter. The general pattern that results is shown in Fig. 29. It does not represent any attempt to manage by mathematics.

Technical staff usually evolves in some degree before coördinative staff. The number of staff groups of each kind depends on the organization's need for managerial specialization. These groups may evolve and be appended to a line organization at any service level that will permit them to operate effectively. Similar staff groups are often found in large organizations on contiguous service levels. The volume of work involved in performing the line functions shown in Fig. 29 under the subordinate executives will probably continue to increase with the further growth of the organization. The same general pattern of line and staff structure will appear as line devolution continues and staff evolution begins within the subordinate line functions.

The staff functions that have been differentiated previously will continue to grow also. The rate of growth of some of them may be as fast as or faster than that of the primary line organization to which they are attached. The chain of command that develops within the staff organization with continued growth is obviously a secondary chain of command. It ends in organizational groups that represent the principal forms of specialization into which the par-

[12] The term "technical," as used here, refers to any function whose proper performance creates special problems requiring special personal attributes, background, training, and experience beyond those required by the related line personnel. The particular specialization may or may not be of a professional nature. The head of the legal department, the personnel director, the purchasing agent, the chief engineer, and the quality manager in a manufacturing plant are examples of staff executives. So are tool-room and maintenance foremen.



LEGEND:

T.E. — Principal executive leadership.
S.C. — A second-in-command, if the size of the operation warrants. He may have whatever rank and title is appropriate, from assistant department head to executive vice-president.
T.S. — Technical staff groups.
C.S. Coördinative staff groups.
S.E. — Subordinate line executives. They are primary line executives, if it is a line organization; secondary line executives, if it is a staff organization.
S.F. — Subordinate functions under their command.

FIG. 29. Basic Organizational Form.

ticular staff function breaks down. The complexity and technical requirements of this function are likely to increase as this staff organization expands from an individual work assignment, staff unit, staff branch, staff department, to a staff division. It begins to create its own problems of internal and external coördination. A need for some secondary specialization begins to develop. Some staff elements, usually small, may evolve from this secondary chain of command. They are secondary staff elements, either technical or coördinative, since the values they produce are needed by and enter into the process chiefly through a secondary chain. The same basic organization form that was illustrated in Fig. 29 will develop in the

particular staff function, if its growth continues sufficiently long. There are many examples of secondary staff developments. They will be noted later.

The problem of staff organization structure is complex. There are many additional angles that will be seen shortly. The concept of a basic organizational form is helpful in analyzing them.

Tests of Staff Organization

One occasionally meets a general executive who seems to feel that the distinction between line and staff, and the development of proper relations between them, are academic matters of no practical business importance. Lack of proper distinctions and relations creates uncertainty and instability. There may be many evidences of friction between line and staff, empire building, ineffectiveness due to cross-purposes, and other organizational ills. The executive may feel, nevertheless, that somehow this condition of uncertainty and instability is beneficial to the organization. It may be brought out in the course of the conversation that he does not have a good understanding of line and staff organization and is unable to distinguish clearly between them. No one can see the practical significance of something that he does not understand. This attitude probably represents a tendency to mistake disorderly confusion for orderly competition and coöperation within the organization. A lack of such understanding on the part of important top executives may retard the growth and development of a company. It may adversely affect its competitive position. Any comment, however, that calls this lack of understanding directly to the executive's attention may not be politic or expedient. Most executives regard themselves as organizational experts.

The distinction is generally not difficult to make. The devolution of a staff function cannot lead directly to specialization in the creation or provision of primary utilities, or their distribution. Staff is appended to a line organization at some level but is not part of it. Its devolution can lead only to specialization in the creation or distribution of secondary utilities. These are needed by a line or other staff organization. If this is the case, the basic test is simple. Does the chain of command lead directly to specialization in the creation, provision, or distribution of values for which the customer

will pay cash or its equivalent? If it does, it is a line organization. If not, does it lead directly to values that are needed by a line organization for the accomplishment of primary objectives? If it does, it is a staff organization. If not, does it lead directly to collateral values that are required by the government or by organization members? If it does, it is a staff organization. If it does not lead to specialization in the creation, provision, or distribution of any of these classes of values, why is the organization on the company's payroll?

These tests concern the general kind of staff organization, rather than its economy. They have to do with the need for specialized staff services, rather than their expense. A company may need certain staff services that it cannot afford and can do without. This is often true in small organizations. The need must be met in such cases by the line organization or by the employment of consulting service.

Basic Staff Duties

The specific duties of a staff organization are determined by its objectives. The responsibilities and authority of the staff executive, as well as the service objectives of his group, are determined by the line executive to whom he reports. The nature and extent of the resulting delegations reflect the judgment and understanding of this executive. The quality of his judgment is affected by his knowledge of basic staff duties.

It has been recognized by many students of organization that there are basic duties. There must be if staff evolution is a universal development with organization growth. It does not follow, however, that every staff group must perform all these duties. Similar staff groups in different organizations may perform the same basic duties. It is not necessary that they perform them in the same manner or degree. Hence there is considerable general but no exact agreement concerning the basic staff duties. Henri Fayol, for example, classified them as follows: "Staff work falls into four categories: (1) Assistance given to the manager in his daily work of correspondence, interview, study, preparation of reports, etc., (2) liaison and control, (3) studying the future, drawing up or ensuring the smooth working of a programme, and (4) research for improvement."[13] According to

[13] Henri Fayol, *Industrial and General Administration*, p. 54.

Thomas R. Jones, "The functions of staff units are: (1) Research into managerial, technical or operating problems, (2) Determination and recommendation of standards, and (3) Records and statistics to check performance."[14] Other authorities have offered other classifications. The present writer has found the following classification of basic staff duties convenient; it seems to cover all staff situations that require analysis:

1. Investigation, including research.
2. Analysis of facts and information.
3. Interpretation, including services of information.
4. Recommendation, including the formulation of plans.
5. Coördination, including assistance in control.
6. Facilitation, including assistance in organizing and executing.

Investigation is the process of determining, procuring, and verifying facts. Its performance may require specialized background training and experience. Facts are important business values. They are needed for an effective, economical performance of both managerial and operative functions. They may be necessary for the production and distribution of primary values, but they are not primary values. The customers of most concerns buy goods or services. They do not buy statistics concerning them. The average line executive, furthermore, does not have the time to do a thorough job of investigating the causes of his problems. Investigation is a function that may be and usually is assigned to staff. Its performance, like any staff duty, is subject to general administrative management by higher line authority. A staff service that is purely investigational may go no further than the collection, classification, and presentation of facts in a proper form for consideration by the responsible line executive or other staff agencies. This service may be rendered periodically or as required. A statistical group that merely applies statistical processes to business data and presents the results in tabular or graphic form is an example. It is often the case, however, that the group that makes the investigation is expected to analyze the results. Analysis is a mental process. It involves the examination

[14] Thomas R. Jones, *Theories and Types of Organization*, p. 13.

of facts. Its purpose usually is the determination of the important factors, forces, and effects in a particular situation and the relationships that exist between them. The objective is generally a better understanding of the situation and the requirements for the solution of a problem. What is important depends on what the applicable standards are in the case. Analysis leads directly to interpretation. The latter function involves the determination and explanation of the significance that should be attached to the facts in the light of the particular problem's requirements for a satisfactory solution. Mooney and Reiley attach great importance to this function. They feel that "the ideal of such a service in the industrial sphere is so complete a dissemination of knowledge that it reaches every individual in the entire organization, and thus enables him to see clearly the relation of his duties to all surrounding and contacting duties, and the relation of these to the whole."[15] They regard this as the "supervisory" phase of staff service. Intelligent interpretation is hardly possible without reference to the applicable principles and policies. Precedent is always a factor in policy formulation. The limits of staff authority and responsibility for the interpretation of plans, policies, and directives in particular situations may be carefully circumscribed for this reason.

The staff function of recommendation may follow the comparison phase of control. A comparison of actual and predetermined results often suggests the causes of deviations of actual from planned performance. The function is commonly performed in connection with the formulation or modification of plans. It has to do with suggesting courses of action based on judgments formed as the result of the previous processes of investigation, analysis, and interpretation. Its performance is therefore more highly developed in technical staff organization.

Coördination has to do with the relation of current performance to effective, economical accomplishment. Work may be mental or physical. The coördination of mental work leads to a meeting of minds concerning what should be done, how it should be done, where it should be done, who should be responsible, what conditions of time and resources are involved, and why. It has to do

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[15] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 74.

chiefly with planning. The larger the organization, the more it is beyond the time and ability of the line executive to work out personally the answers to these questions. The coördination of mental work becomes more and more a responsibility of technical staff executives, so far as plans originating in or affecting their fields are concerned. The coördination of physical work involves the relation of actions rather than thought. Its purpose is the cumulation of values produced in the course of the execution of some project to accomplish a satisfactory end result. It accomplishes this cumulation by relating the activities entering into the project with respect to the correct time and order of their performance. The schedule for an order that is being processed in a manufacturing plant is an example of formal time coördination. The coördination of action is part of the management function of control. The formal or routine coördination of action becomes more and more a responsibility of coördinative staff executives with organization growth.[16] Staff coördination of any kind is subject to higher administrative control. A staff executive can have final rights of decision and command only within the staff organization for which he is responsible. These rights are subject to the limitations established by the superior line executive by delegation. A staff executive should have only advisory rights of decision with respect to other line and staff organizations that are served by his group.

Staff facilitation is a function that may be performed by any type of staff group. Facilitation is the process of smoothing the way for and making easy the performance of other line or staff functions by means of a special service. It may be accomplished by the provision of needed performance factors, the prompt removal of interferences with performance, and by other means. Oliver Sheldon has said that the general purpose of facilitation is "to take over those necessary activities which are not inherent in the immediate manufacture

[16] Authorities disagree concerning the staff function of coördination. Webster Robinson says: "The purposes of staff functions are the coordination and control of the administrative and executive functions. . . . They are advisory activities and are neither legislative, judicial nor executive in character."—*Fundamentals of Business Organization*, p. 40. Mooney and Reiley say that there are two prime necessities in an efficient staff service which may be called coördination and infiltration. The function of "infiltration" has to do with the "service of knowledge."—*Onward Industry*, p. 72.

of the goods, so that the concentration of effort upon such manufacture may be unhampered by considerations of an alien character."[17] Such facilitative services may be provided for any important function of any business, manufacturing or otherwise.

The important activities of staff groups in business organizations fall into this classification. Their characteristics and requirements will be brought out shortly in our further discussion of coördinative and technical staff organization. It may be desirable, however, to summarize the relations between them. The effective performance of basic staff functions rests on the principles of specialization. Such performance leads to a successful accomplishment of staff objectives. The staff processes by which these results are achieved are determined fundamentally by the requirements of assigned staff objectives. The logical relation of staff functions through principle, process, and effect may be summarized as follows:[18]

Staff Objectives	Basic Principles	Staff Processes	Staff Effects	Staff Results
Collateral or secondary values.	Principles of staff specialization.	Investigation. Analysis. Interpretation. Recommendation. Coördination. Facilitation.	Accurate and complete facts. Professional advice and assistance in planning, organizing, controlling, and executing.	Greater economy and effectiveness in achieving primary service objectives.

Technical Staff Organization

Technical functions were defined previously as any functions that require specialized techniques or procedures for the solution of certain special problems. These procedures require a highly specialized background, training, experience, and ability of the executives who are responsible for their proper application, and frequently of the operatives who perform the various steps in the

[17] Oliver Sheldon, *The Philosophy of Management*, p. 59.

[18] L. Urwick has compared the philosophies of Henri Fayol and of Mooney and Reiley with respect to principle, process, and effect as they affect the classification of basic staff duties. See the reprint of his *Organization as a Technical Problem* in Luther Gulick and L. Urwick, *Papers on the Science of Administration*, 1937, p. 78.

procedures. Technical functions may or may not be of a professional character. They may, of course, be either line or staff.

Such special problems arise most frequently in connection with the creative planning of products, processes, goods, or services. The solution of such problems may require time as well as abilities that the line executive may not have. It is often necessary with organization growth to differentiate such technical functions, together with the allied facilitative services, and place them in a staff position. A technical staff function may be defined, therefore, as one that has been differentiated from a primary functional chain for purposes of specialized assistance in planning or in rendering some specialized service of facilitation that is directly allied to it.

Technical staff functions usually evolve from a primary line before it becomes necessary to differentiate coördinative staff functions. They are not necessarily more important than coördinative staff functions, but there is a need for more of them. There are more examples of them in consequence, and they are better understood. As a result, there is a tendency to assume that all staff executives are technical specialists.[19] Most of them are. It is not necessarily true in the case of coördinate staff executives. It is less and less true of technical staff executives as we approach the top administrative levels of the organization. Military organization distinguishes between technical and administrative staff officers, and between these in turn and general staff officers.[20] The terms technical, administrative, and general staff officers are similar to but not synonymous with the terms technical and coördinative staff executives as used here. General staff groups, as a matter of fact, assist commanders in the coördination of both thought and action.

Staff Investigation and the Theory of Limiting Factors

It was pointed out during the discussion of planning that the Principle of Limiting Factors enters into the formulation and execution of plans. The principle may be stated briefly as follows:

[19] E. H. Schell said that functional executives "are technicians, the experts, who are skilled in some single service which is of value to other members of the organization." The term "functional," as used here, is synonymous with staff. See his *Technique of Executive Control*, 2nd ed., p. 5, and 7th ed., p. 11.

[20] For example, see General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 24.

Failure to achieve satisfactory accomplishment of reasonable business objectives is due to ineffectiveness caused by mishandling of human or physical factors in the particular business problem, or by malperformance of functions, or both. The immediate cause may be some undesirable effects of these failures that are limiting current results. The information concerning the particular difficulties may be reported originally by control. This is part of its job in connection with its performance of the comparison function. It may be possible for the line organization to eliminate a difficulty quickly. This may be the case when corrective action merely requires some adjustment of the factors, forces, and effects in current operations that can be made promptly by the line personnel. Most current operating difficulties are of this nature in any business. Difficulties arise occasionally that are more serious. A preliminary investigation may indicate some recurrent causes. The changes required for their elimination may have important effects that will extend far beyond current operations. The problem may become an assignment for a technical staff group, since its solution probably will require creative planning.

The problem may exist at any level and in any division of the organization. It has to do with a better accomplishment of objectives in terms of quantity, quality, time, and expense. The consequent investigation and analysis of it have to do largely with a more accurate and complete determination of the nature of the factors, forces, effects, and relationships in the problem, and their influence on results. The information collected must permit a breakdown of the problem into its elements and a determination of the controlling factors in it.

The approach to the problem usually starts with an attempt to discover the nature of the difficulties that are being experienced by individuals and groups at various levels. They are personnel whose duties have a significant relationship to the functions and objectives involved. Information is required concerning the nature and conditions of work, as well as the problems, complaints, and suggestions of the people who do it. This information may be procured by some form of observation or interrogation, or both. It always involves some form of functional analysis. It indicates in more detail the nature and extent of any malperformance of functions, maladjust-

ments of human and physical factors, policies that are poorly conceived and misapplied, deficiencies of executive leadership, and other difficulties. Such information is necessary for intelligent judgments concerning the various possible solutions. The principal methods of investigation and analysis that may be used are well known to students of business. They may be classified as follows:

METHODS OF STAFF INVESTIGATION AND ANALYSIS

I. Methods of determining the objectives
   A. Primary objectives
      1. Various marketing research techniques.
   B. Collateral and secondary objectives
      1. The questionnaire method of difficulty analysis.
      2. Interview and observational methods based on:
         a. Comparative records by projects and organizational groups of:
            (1) Recurring interferences with performance.
            (2) Actual results accomplished.
         b. Executive statements concerning results that are being accomplished and their causes.
      3. Morale surveys.
II. Methods of investigating causes
   A. Formal research methods
      1. The laboratory research techniques of the physical sciences.
      2. The statistical research techniques of the social sciences.
   B. Methods of functional analysis
      1. Organizational techniques of:
         a. Job analysis.
         b. Time and duty study.
      2. Procedural techniques of:
         a. Process or methods analysis.
         b. Motion and time study.

These methods may be used concurrently by different staff groups. Certain features of different methods are combined occasionally to suit the purposes of a particular investigation.

The subsequent development of a solution for the problem involves applications of the principles of creative planning. They have already been discussed. The work of developing a plan may involve numerous and lengthy conferences between the representatives of the line and staff groups affected. These conferences may be held under the chairmanship of the executive who has staff responsibility for the development of the plan. Nevertheless, the result is a provisional basis of action. A major plan should not be activated until it receives the concurrence of the executive heads of the affected groups, or the approval of the line executive who has administrative responsibility for the line and staff groups involved, or preferably both.

The investigation and analysis of the limiting factors in a situation may lead to further investigation and analysis. For example, if the principal limiting factor is determined to be an inequitable and unsatisfactory wage and salary structure, then further investigation and analysis of this problem obviously are necessary. The problem of job evaluation is, in fact, a major problem in itself unless the concern is quite small.

The Staff Planning Function

The evolution of the staff planning function in business organization is comparatively recent. Henri Fayol remarked as late as the first decade of the present century: "It has not yet become an established custom to regard the staff as an organ of thought, study and observation, whose principal functions are to prepare for the future and look for possible improvements under the manager's guidance."[21] Taylor made some provision for it in his organization. There was little provision for technical staff planning prior to World War I, however. Its greatest development appears to have taken place since that time.

Staff planning may be defined as the function of assisting the line or other staff organizations in determining a basis of action for the solution of a problem, or some phase of it. It involves the detailed work of determining what should be done, how it should be done, what organization resources are required, where action should take

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[21] Henri Fayol, *Industrial and General Administration*, p. 54.

place, who should be responsible for it, why it should be done this way, and similar questions. They were reviewed generally in the earlier chapter on planning. This service may be rendered at any level of the organization where it is needed, provided that it can be performed more economically and effectively by staff than by line. Creative planning, however, is an organic management function. Responsibility and authority for the performance of designated phases of it may be delegated to technical staff executives by higher line executives.[22] Plans originated by a technical staff organization are therefore in the nature of advice given to the responsible line executive regarding what constitute proper courses of action for a given problem. Staff plans can have no higher status until they receive the approval of the superior line executive or his delegate, and are promulgated throughout the organization, over his signature or with his approval, in the form of technical orders or instructions.[23] They acquire the force and effect of standing orders when this happens.

The possible scope of the staff planning function includes any work of developing bases for any project or group action. It may include staff planning by the company's industrial relations division for morale development, by the engineering division for the development of better production processes, by the marketing research department for the development of better sales plans, by the supply division for the development of better procurement plans, by the comptroller's division for a better control of expense, or by any other staff group for the solution of any business problem. The development of any staff organization is limited, of course, by considerations of need and expense.

Technical staff development does not require the higher line executive to be an expert in all fields of knowledge that may affect the operations of the modern business organization. Business organizations would break down because of inability to obtain competent administrative executives, if it did. The responsible line executive

[22] Edgar W. Smith has said: "This obligation, a line responsibility delegated largely to functional staff officers for pursuit, embraces . . . elements which have the specific purpose of directly improving results."—*Organization and Operating Principles.*

[23] The point of view of military organization is well stated in General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 26.

needs administrative knowledge of the staff fields under his command, rather than professional knowledge. It is the general, basic knowledge which will enable him to evaluate technical staff proposals broadly, to determine their implications with respect to general organizational objectives and policies, to see where they affect other organizational groups whose responsible executives have not been coördinated properly, to note failures to estimate accurately general trends affecting the business because of the more narrow, specialized viewpoint of the technical executive, and to make other broad decisions that are necessary for the proper discharge of the responsibilities of administrative leadership in the field of creative planning.

The Basis of Technical Staff Organization

The characteristics of the principal chain of command in a technical organization are determined by the type and kind of service that it is required to render. The basic kinds of technical staff service are (1) assistance in the work of creative planning and (2) facilitation that requires the same or similar background, training, and experience as that required for planning. The devolution of a staff function, as it goes through the various stages in its evolution, results in the development of a secondary chain of command. The extension of this chain leads to some specialization in the work of the staff. This specialization will have to do basically with the services noted above in the case of a technical organization. The principal objectives of the particular technical staff group will determine whether its chain of command leads to specialization in planning or to specialization in facilitation.

The basic organizational form shown in Fig. 29 may be applied to the problem of technical organization structure. The functions of a staff planning organization are related basically as shown in Fig. 30. The various groups performing the principal planning functions must be headed by technical specialists in each major phase of the particular planning problem. The status of the group depends on the size of the planning organization. It may be a staff department in a large staff division. The group may break down in such case into sections, branches, and units of the department. Each subgroup probably will be headed by a minor staff executive who is

more highly specialized in some subphase of planning than is the head of the section or department. Each unit chief or staff supervisor will have professional or skilled operatives working under his direction. The unit of operative supervision may be small for this reason. A common example of this structure in manufacturing is the engineering division. Its executive head may be a staff officer with the rank of chief engineer or vice-president in charge of en-

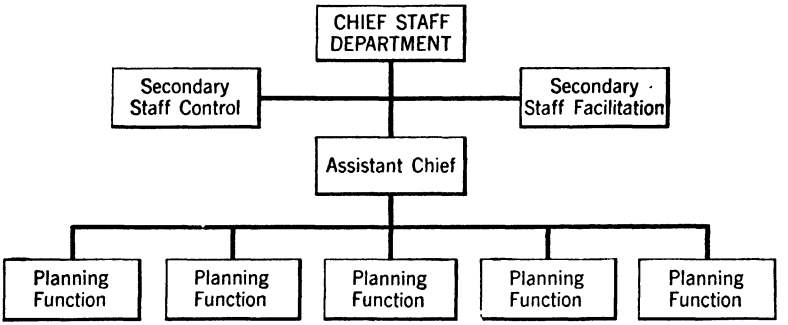

FIG. 30. Basic Organizational Structure for Staff Planning.

gineering. This depends on the importance of the function, its position in the organization structure, the size of the organization, and other considerations that have been noted previously. His second-in-command, the assistant chief engineer, is immediately in charge of the various design groups or departments. The objectives of the division are plans for a product that will satisfy the needs and desires of the customer. Each design group, then, will be concerned with the development of plans for a major subassembly or component of the product. These groups in the engineering division of an automobile plant, for example, may be a chassis group, a body group, an electrical group, an engine group, and such others as may be set up. There may be a design unit within the engine group that is concerned chiefly with carburetor design. Its head probably knows more about this problem than the chief engineer does or ever did.

An organization of this size develops some difficult problems in coördination. There are usually definite deadlines for the completion of the final design of a new product and therefore for each of its components and parts. A serious delay in completing plans,

prints, and specifications may cause expensive delays subsequently in supplying dealers and customers when promised. The sales division must be supplied with information for sales promotion and advertising purposes. Liaison must also be maintained with the cost and purchasing departments. There are engineering records to be maintained. Valuable patent rights may depend on them. These are staff functions. They have to do with the control of design work. They are not design. They have to do with certain aspects of coordinating the activities of the engineering division that can no longer be performed by its chief. They are obviously secondary coordinative staff functions.

An example of secondary staff facilitation is the work of the blueprint room. Its function is the duplication of information by means of a photographic process. It does not enter directly and immediately into the creative planning of product. It does facilitate the communication of the ideas of the product designers to those who must be concerned in some manner with the work of organizing and controlling the execution of product plans. Another example is the professional mathematician who is sometimes found in large engineering divisions. He does not participate directly in product design. He does facilitate such design by solving mathematical problems that are beyond the ability of the average product designer.

It should not be concluded, however, that product design is the only technical staff planning function in manufacturing organization. Process design, which is often called manufacturing methods development or industrial engineering, is also a staff planning function. It should not be concluded, either, that staff planning is always an engineering function. There are other staff planning functions in the manufacturing division, as well as in the sales and finance divisions of an industrial concern, that have their principal bases of specialization in the economics of management. A staff planning function may evolve at any level where it is needed, and may have any basis of specialization that is appropriate to the problem.

It is quite possible, but less common, to have a secondary planning function attached to the chain of command of a primary staff planning organization. Such a function is concerned basically with developing "plans for planning," or with providing new facts and extensions of principles that will supplement and extend the appli-

cation of existing general methods of approach to the solution of the particular planning problems. Engineering research usually is a secondary technical staff planning function initially. It may become so important in some organizations, however, that it will be differentiated completely from engineering. It may then be set up in a primary staff position. The General Electric Company has done considerable research work in the field of process design.[24] One immediate objective has been determination of the relationships between time and variations in the factors that affect the performance of unit motions or "therbligs." The ultimate objective has been standard time relationships that will permit an accurate estimate, before a new operation is run, of the time that will be required for its performance; that will permit the analysis of physical factors and motions in advance to determine how they affect the quantity, quality, time, and cost of the operation. A further result is the accomplishment of the economic objectives of the operation with a minimum of effort by the workman. Such standard time relationships are another example of a "plan for planning." The work of developing such relationships is obviously a secondary technical staff planning function within the primary staff field of process planning.

Organization for Technical Staff Facilitation

All technical staff functions have some planning responsibilities. The facilitative services of a particular technical staff organization may constitute most of its work, however. The logical basis of organization structure, in such cases, is a grouping of functions that will provide an effective, economical division of labor and specialization in the particular work of facilitation. An application of the basic structural form to this problem in Fig. 31 shows the general relationships that tend to result. There are many examples of such staff organizations. The personnel division of a company is one. Most of its work is facilitative. Its organization breaks down into an employment department, medical department, education and training department, employees' service department, a labor relations department, a safety department, and others as the size of the organization and its needs may dictate. The services of these groups are concerned with better provision of the human factor in operations,

[24] Ralph M. Barnes, *Motion and Time Study*, Wiley, 3rd ed., p. 435.

and with making it easier for line and other staff executives to handle this factor properly. These groups supply the employee daily with various personal services that benefit his interests. These services do not develop themselves. They are developed by the personnel director and his department heads. It is usually the responsibility of the latter to plan and organize these staff services, subject to higher line approval. It is obvious that the negotiation of an agree-

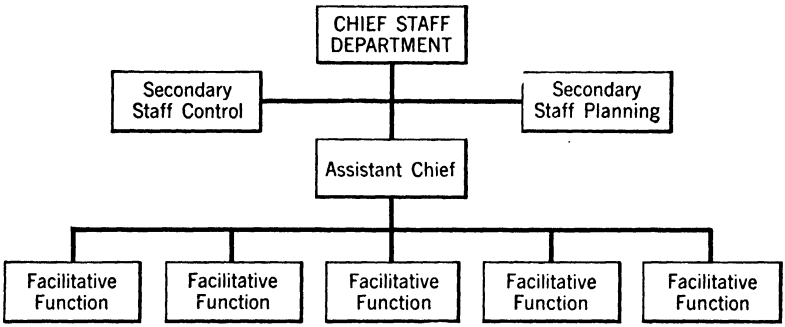

FIG. 31. Basic Organizational Structure for Staff Facilitation.

ment with a labor union should be preceded by considerable staff investigation and planning, if the company has the staff. It is evident that a technical staff organization may be primarily facilitative and still have important functions of creative planning. This merely means that the division of labor and specialization within the organization must be based on the various phases of the work of facilitation for which it is responsible, since it is the principal work of the organization. The growth of such an organization often requires the development of secondary staff planning functions. This is the logical expectation, since the particular staff is organized primarily on the basis of its facilitative responsibilities. Most texts on personnel management recognize the existence of a personnel research function. It exists as an organizational element in some large personnel divisions. It may evolve whenever the detailed work involved in creative planning exceeds the time or ability of the principal staff department heads for such work. An example of the work of a personnel research unit is the development of a plan for wage and salary administration. The plan should have the concurrence of the principal personnel department heads and of the heads of

other line and staff departments affected, and the approval of higher line authority. It should be accepted by employee representatives. It may be administered by the employment department, since the price of a person's labor always is an important consideration, whether he is an executive or an operative employee, when he enters into a contract of employment. It is less likely that secondary facilitative functions will be differentiated completely. They are there, nevertheless. An example is the handling of payroll deductions for payroll and other purposes. Secondary coördinative staff functions are usually found in large staff organizations for technical facilitation. The work of internal coördination and external liaison is again too much to be handled effectively by staff department heads in the course of their daily duties.

A technical staff organization whose work is largely facilitative tends to become routine. The writer observed a number of instances during World War II in which this had taken place in the field of supply. It was probably one reason why the subcontract function was differentiated completely from purchasing in some concerns. This tendency is not inevitable. It can be avoided (1) if the existence of a secondary planning function is recognized, and provision for its differentiation is included in the organizational plan; (2) if a secondary coördinative staff unit is developed in whatever degree is necessary for proper internal control and external liaison; (3) if a second-in-command is appointed who will be responsible for the routine direction and supervision of facilitative operations; and, as a result, (4) if the chief of the particular staff organization is freed from routine sufficiently to permit him to study the creative phases of his mission.

The control of technical staff operations and their coördination with other activities are much more important than the above discussion indicates. If the completion of plans is late, all subsequent action will be late unless the lost time can somehow be made up. If the provision of needed performance factors by some facilitative agency is late, coördination of action may break down. Poor control of staff operations may cause failure of the mission for these and other reasons. This problem will be considered subsequently, during the discussion of the control function.

The development of technical staff functions cannot be carried

out in the small concern to the extent indicated above. It is just as necessary, nevertheless, to analyze such functions when the staff organization consists of one man and his secretary and most of the technical functions still remain in the line.

Coördinative Staff Organization

Control has been defined as the function of constraining and regulating business activity in accordance with the requirements of a business plan. The purpose of such a plan is the economical and effective accomplishment of business objectives. Coördination has to do with the development and maintenance of the proper relation of activities, either mental or physical. The coördination of thought has to do chiefly with achieving a meeting of minds concerning plans and their application. It is frequently a technical staff responsibility, as we have seen. The coördination of action has to do with the relations between activities involved in the completion of an undertaking, with respect to time and the correct order of performance of functions. Its contribution is the maximum cumulation of effort with the minimum of expense, leading to maximum accomplishment.

The immediate objectives of control are usually the following: (1) reasonable assurance that proper performance can and will take place as specified by the plan, (2) well-coördinated action as execution proceeds, and (3) the minimum loss of quantity, quality, time, and expense because of interference with performance as the action progresses. It is evident that control depends greatly on the proper coördination of action. The staff functions that are concerned primarily with assisting management in the performance of its control duties have been called coördinative staff functions for this reason.

A distinction should be made between self-coördination and executive coördination. Self-coördination is the voluntary act of relating one's actions to those of other individuals and groups in the organization. It may take place at any organizational level, either managerial or operative. It should be encouraged to the maximum practicable extent. Executive coördination is the formal relation of action with respect to time and order of performance. It is accomplished chiefly through the formulation and release of orders, instructions, and directions. It may be accomplished personally by

the responsible executive, or for him by his staff. Self-coördination is most effective in small groups where close personal contacts are possible. Its effectiveness as a principal means of coördination decreases rapidly with organization growth. It becomes necessary to supplement or replace it more and more by formal coördination. Self-coördination remains, however, an important force in the operations of the groups that compose the organization. This was recognized in the previous discussion of cross-contacts. It is evident that a coördinative staff function is concerned with formal or executive coördination, rather than informal or self-coördination. This is the principal significance of the distinction at this point.

Many executives, consultants, and business educators have recognized the existence of basic or organic control functions. The idea is possibly rather obvious. There is a universal need for some control in any organized activity. The control function must break down into certain basic phases, or subfunctions, if it is an organic function of leadership anywhere. The general significance of these subfunctions will be examined when the problem of control is discussed later. It is necessary at this point merely to have an analysis of the control function that will permit us to determine which of its subfunctions can best be differentiated from line management and assigned to staff, and which cannot. The writer has found the analysis shown in Fig. 32 to be helpful in this respect. The order in which these functions tend to be performed is the order in which they are listed. This analysis is significant, then, in the planning of control procedure. It does not concern us, however, at this point.

There must be greater functional similarity between some of these control functions than between others, if certain of them are more readily assignable to staff than others. All of them have the same common objectives of control. But the work of certain of them tends to be routine. Usually there are no vital decisions to be made in connection with their performance. Their operative functions are clerical. Operative personnel require only the background and experience that one finds in conscientious and reliable clerks, together with some training for their specific jobs. The operations of a coördinative staff department cut across all chains of command, since it must coördinate the activities of the groups composing the organization, both line and staff. Obviously, little or no technical

Normal Order of Performance	Relation to Execution	Control Subfunctions	Organizational Assignment	
			Line	Staff
1	Preliminary Control Functions ↓	Routine Planning: A secondary, routine provision of information concerning the plan.		✓
2		Scheduling: The determination of when or at what rate the principal phases of the plan must be completed to meet the final time objective of the undertaking.		✓
3		Preparation: The function of assuring that the factors and conditions required for the execution of the plan will be available as needed.		✓
4		Dispatching: The maintenance of coördination through control of the release of the authority to act.		✓
5	Concurrent Control Functions ↓	Direction: The function of instruction concerning the requirements for proper execution of the plan.	✓	
6		Supervision: The function of assuring that current execution is taking place in accordance with plans and instructions.	✓	
7		Comparison: The function of determining the degree of agreement between actual and planned results.		✓
8		Corrective Action: The removal of interferences with planned execution and the restoration of effective, coördinated action.	✓	

FIG. 32. The Organic Functions of Control.

specialization is required. It is desirable also, for purposes of cooperation, to have a close physical relation between the personnel operating a control procedure. There should be close complementary as well as similar relationships between their functions. The control functions that most nearly meet the requirements are routine planning, scheduling, preparation, dispatching, and comparison. Their operative phases are therefore most easily assignable to staff.

The functions of direction, supervision, and corrective action are, conversely, less readily assignable to staff. Direction and supervision involve direct, face-to-face leadership. Direction involves personal instruction and interpretation of plans and policies. It is no differ-

ent basically whether it takes place between a president and a vice-president with respect to the wishes of a board of directors, or between a supervisor and an operative with respect to the handling of some work project. Supervision is the function of overseeing, as its name indicates. It involves personal and usually face-to-face contact between superior and subordinate to assure that directions have been understood and are being carried out as intended.[25] Direction and supervision are the only functions of control that can result directly in correcting a tendency for actual performance to deviate from planned performance while action is in progress. They are highly important for this reason. Corrective action takes place also when the performance of the comparison function shows a significant deviation from planned performance. Such a comparison can only be made when action on a particular step or operation on a project has been completed. Correction can only be exercised with reference to the steps that remain to be performed. It is required usually that significant deviations be reported promptly to the responsible line executive. What is significant is determined by policies, rules, and standards that are established by this executive or with his approval. A significant deviation of actual from planned performance represents some degree of emergency. The responsible executive generally wishes to take personal cognizance and, if necessary, direction of relieving emergencies in areas under his jurisdiction. It is evident that any considerable delegation to staff of responsibility for direction, supervision, and corrective action would be tantamount to abdication. No employee, whether operative or executive, can abdicate his assigned responsibilities and stay on the payroll. The general condition of production control in the automobile industry is the best evidence that these control functions are inherently line responsibilities. Production control in large automotive corporations is highly decentralized down to and including the level of plant management. It is highly centralized in line production and assembly plants below the level of plant management. There are some sound reasons for this. Line foremen and supervisors are responsible, nevertheless, for the direction and supervision of their men. They are responsible also for taking corrective

[25] Reference is sometimes made to "staff supervision." The term usually refers to technical comparison.

action when there is a holdup on the production or assembly line for which they are responsible, or for seeing that such action is taken if the cause is beyond their authority and ability. These are control functions, since they have to do with the constraint and regulation of action in the accomplishment of an assigned mission. Direction, supervision, and corrective action at the point of performance represent the limit beyond which managerial centralization cannot go.

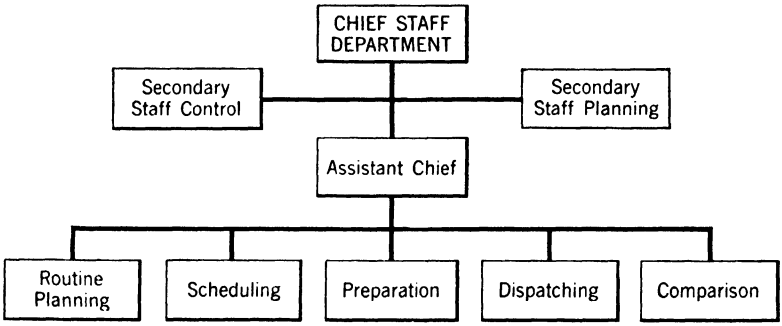

FIG. 33. Basic Organizational Structure for Staff Control.

The basic structural form that was shown in Fig. 29 can also be applied to the organization of a coördinative staff department. The devolution of a coördinative staff function must lead to specialization and a division of labor based on the staff phases of control. The assigned mission of such an organization is staff assistance in control as specified by higher line authority. We have seen that these phases are routine planning, scheduling, preparation, dispatching, and comparison. The general picture looks like that shown in Fig. 33.

The secondary staff functions require little comment. It is often possible for a small coördinative staff department to perform the staff control functions involved in a large volume of business. The secondary staff functions are not likely to be differentiated distinctly except in large organizations. Any large staff division will develop problems of internal coördination and external liaison, however. It may become necessary to place staff responsibility for them on someone. A function of secondary staff control develops when this happens. The principal secondary staff planning function has to do with the development and maintenance of control procedure.

Any executive is responsible for the development and use of proper methods for the accomplishment of his mission. He is expected to make use of a competent staff if he can get it or it is available. The writer once had the interesting experience of seeing such a procedural planning function develop in a large production control department. Frederick W. Taylor placed various technical staff function in his control department. This may be one reason why he called it a "planning department." It was unsound organization for a number of reasons that will be discussed shortly. The proof is found in the subsequent history of the production control function.

The extent to which a control department is developed depends on the size of the company and the need for staff specialization, as in the case of technical staff functions. It may consist merely of an assistant, with or without the full-time services of a clerk-stenographer. It may be a large department in which all of the five staff control functions are represented by operative units. There are intermediate conditions of organization structure. There is a definite functional similarity, for example, between the functions of routine planning and preparation. Both of them are concerned chiefly with the coördination of technical staff services with the line organization's requirements for such services. They can be integrated for this reason. The functions of scheduling, dispatching, and comparison may involve some liaison with outside organizations. They are, however, concerned chiefly with the coördination of activities within the line organization. This tends to be true regardless of line and of business.

It should not be concluded that the chief of a control department need be only a high-grade clerk because the operations of his department are largely routine. He should have a broad view and understanding of the operations of the entire organization, both line and staff. A great mass of information flows through his department. It is possible to routinize partially the operations of the comparison function in reporting deviations by applying the exception principle. He should have, however, sufficient breadth of background and intelligence to see trends in conditions and results that may not be brought out by the usual performance standards. It is his responsibility to determine whether or not they have sufficient significance to warrant the attention of his line superior. His

characteristics and viewpoint are usually more akin to those of the line executive than are those of the technical staff executive. He, rather than a technical staff executive on the same level, may be advanced to higher line responsibilities when a vacancy occurs in a higher line position. The reason is that the top line executive in most business organizations also requires a broad, general background of training and experience, rather than highly specialized abilities in a relatively narrow field.

Coördinative and Technical Staff Relationships

Staff coördination of thinking in the development of plans is, of course, the responsibility of the technical staff department that is charged with leadership of ideas for the solution of the particular problem. These plans are developed by the department in coöperation with other interested line and staff agencies. They must have the concurrence of these agencies and the approval of higher line authority.

Copies of these plans may then be distributed directly by the department to the line and staff departments that will be responsible for their execution. This includes the coördinative staff department that will be responsible for staff control of action. It may be required, on the other hand, that plans be issued through this staff control group. The group becomes, in such case, an office of issue. The release of information concerning plans is a routine matter after the original release, until modifications of plans become necessary. It may be regarded as routine planning, as distinguished from creative planning, since it involves a secondary determination of what should be done, how it should be done, etc. It does not involve any original thinking or any coördination of thought in the solution of an original problem. However, no action can be any better than the basis on which it rests. The first step in establishing control of action is to get promptly accurate, complete information concerning the plans that must be executed into the hands of the personnel responsible for their execution. This information should be supplied in whatever form is most usable. Routine planning has been regarded as the first function of control for these reasons. It includes the work of coördinating the results of technical staff planning with the requirements of the line organization for informa-

tion about plans. This is not truly a planning function. It is or should be an important phase of the work of a coördinative staff group.

Conditions change or interferences develop in the course of execution. The need for a modification of plans should be picked up promptly by control. It is not its duty to make the necessary modifications. It is its duty to notify promptly the responsible line executive, or the appropriate technical staff department directly, depending on the nature of the case.

CHAPTER 12

STAFF ORGANIZATION (*Continued*)

Top Management Staff Organization

There appears to have been little professional interest in administrative staff organization prior to World War II. At least, very little was written about it. The function of general management had been recognized by Taylor, Fayol, and others at the turn of the century. The depression of 1929–32 had focused attention on the responsibilities of top executive leadership. The American Management Association published its *General Management Series* of pamphlets, as it still does. The few executives and scholars who wrote on the subject approached it from the standpoint of basic managerial philosophy. They devoted little attention to administrative staff organization. There were some notable exceptions, however. The Standard Oil Company of California apparently set up its organization department in 1938.[1] Holden, Fish, and Smith brought out a good discussion of administrative staff in 1941.[2] Many commands in the armed services developed the functions of organizational planning, man-power planning, and statistical control during World War II. These functions were integrated eventually in "management control" groups in some commands. They were attached usually to the office of the commander. The interest in administrative staff organization has continued since World War II. It appears to have centered largely on organizational planning. There has been an increasing appreciation of the fact that a major-

[1] L. G. Hall, *The Management Guide*, p. 9.

[2] Paul Holden, L. Fish, and H. Smith, *Top Management Organization and Control*.

ity of managerial difficulties are basically organizational. The American Management Association has summarized the organizational defects reported in a study for the Swedish government, as follows, and it suggests that they are pertinent to business everywhere:[3]

1. Overqualified staff spends whole or part of its time doing jobs which do not require its special training and experience, but which are of a complete or partial routine type, and could therefore be carried out by less qualified and lower salaried executives.

2. Working groups (sections or sub-sections) within an office are often too small to make possible an efficient and economical division of work.

3. Different departments and sections often carry out jobs which could be centralized to certain service groups, to be used jointly by several departments or offices. This system can, for example, be applied to certain types of bookkeeping, typing, statistical, counting and registrational work.

4. The division of responsibility is incorrectly balanced between different levels of an organization.

5. Unnecessarily complicated and cumbersome routines often exist in the treatment of simple and less important jobs.

6. Unnecessary work often occurs in the form of reports, statistics, etc.

7. Duplicate work often exists within one department, or in different departments or offices.

8. Auditing and control work is not adapted in the most suitable way to the matter which is to be controlled.

Such difficulties may exist at any organization level. Their existence is a top management responsibility, nevertheless. The number of large concerns that have made any formal provision for top management planning and control is still very small. The trend appears to be going in this direction, however.

The chief executive's functions of leadership have to do almost entirely with administrative management. A sufficient operative emergency can get through to his desk, but this should happen only rarely. His responsibilities have to do chiefly with interdivisional planning, organizing, and controlling of corporate activities. They concern the determination of ultimate as well as immediate corporate objectives. They have to do with the secular trend of the

[3] A.M.A. bulletin, January, 1950. The summary is part of a good article on "Organization Planning" by Ernest Dale. He referred in his discussion to a paper by C. Tarras Sallfors, *Principles of Organization and Management as Applied to Public Administration*.

business, and its implications with respect to corporate growth. They include analysis of the bases of corporate policy. They involve solutions of other fundamental problems, subject to approval by the board of directors. His vision should extend into the future as far as is possible. The first-line supervisor, on the other hand, is close to the lower end of the functional hierarchy. The span of time by which he must anticipate action approaches zero as a limit. He is close to the point of primary operative performance. The top administrative executive is, in consequence, concerned largely with the work of overall creative planning with respect to anticipated corporate progress. The minor operative executive is concerned largely with the control of current action for the execution of current jobs. It may not be necessary to develop an organization for top administrative control to the extent that may be necessary for top administrative planning. There is less work to be done. For one thing, there are few close, immediate deadlines at this level. Control is, nevertheless, quite as important as planning. There is a tendency to confuse functional importance with the amount of work required to perform the function. This may be why top administrative controls are sometimes inadequate. They were tested in many concerns, during the war, by the requirements for rapid organization growth. They broke down in some instances with very serious consequences.

A staff organization that assists the chief executive in administrative planning is concerned with interdivisional coördination of thought. It is concerned, therefore, with problems of organization structure, administrative procedure, general policies, and the general condition of organizational morale. It necessarily has close relations with financial planning. Adequate financing is a prerequisite for the proper implementation of the organization with the required physical facilities and other resources. Such a staff organization may also be concerned with general man-power requirements. A staff organization that assists the chief executive in administrative control is concerned largely with interdivisional coördination of action in the execution of corporate plans and programs. All divisions, both line and staff, must participate in the work of organizing for execution, as required. The general relations between top management line and staff can be illustrated also by means of the basic

organizational form shown previously in Fig. 29. This has been done in Fig. 34. The staff directors may have the rank of staff vice-presidents in some concerns. They may be responsible for any staff functions that should report directly to the executive vice-president, in the opinion of the president. These functions are technical staff. Examples in a manufacturing plant are the director of personnel, the director of procurement and supply, the director of engineering and research, and the comptroller. The line executives would of

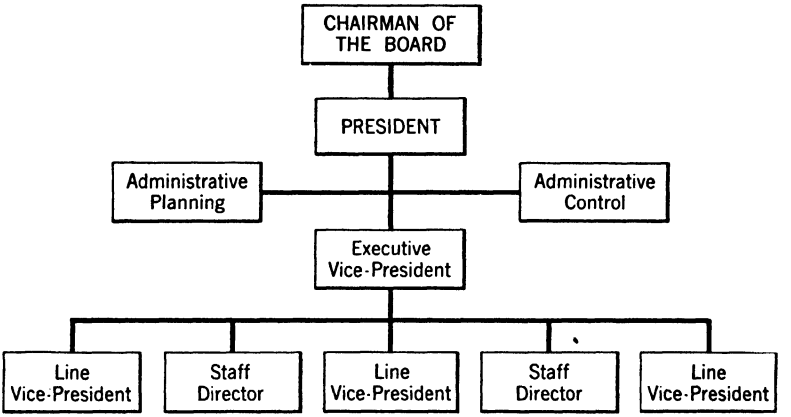

FIG. 34. Basic Organizational Structure for Top Management.

course be the vice-president in charge of sales, the vice-president in charge of production, and the vice-president and treasurer. There may also be more than five general executives reporting to the executive vice-president. Good staff work in one echelon tends to increase the practicable span of executive supervision in the next lower echelon. There is danger, however, in exceeding the normal span of executive supervision, as noted previously. The distinction between the technical staff group reporting directly to the president in Fig. 34 and the technical staff divisions reporting to the executive vice-president should be noted. A technical staff function under the executive vice-president would have responsibility only for inter-divisional coördination of planning with respect to assigned problems in its particular field of specialization. The staff function of administrative planning under the president would have staff re-

sponsibility for the overall coördination of thought between divisions.

The Control Section of the Koppers Company is one of the pioneer top management staff developments in business organization. It illustrates many of the principles that have been noted above. The chief of the Control Section reports directly to the president of the company. The following are stated to be its principal functions: (a) determining or agreeing on programs, (b) guiding and coördinating performance, (c) appraising results, and (d) correcting unsatisfactory conditions.[4] These functions break down into certain duties. They have been classified by the present writer as follows for convenience in comparing with the basic structural form:

1. Those that have to do primarily with creative planning:
   a. Coördinates the development of plans and programs by drawing together the forecasts and plans of each staff and operating division.
   b. Reviews continuously organizational relationships within the company. Prepares and maintains organization manuals.
   c. Participates in policy formulation. The section prepares and maintains policy manuals.
   d. Analyzes procedural problems. Plans procedures. Prepares and maintains procedural manuals.
   e. Investigates special problems, at the direction of the president, that develop from reports and conferences. Formulates and recommends solutions for such problems.
2. Those that have to do primarily with control:
   a. Reviews objectives, programs, and progress as execution proceeds, making appropriate reports to top management.
   b. Provides the chief executive with reports of results that are analytical as well as statistical.
   c. Collects opinions and facts concerning the value of current programs, and reports its findings to the chief executive.

The contribution of the Koppers Control Section to the coördination of thought at the top administrative level is illustrated by its

[4] George M. Walker, *The Control Section as an Aid to Management.*

summary of the company's procedure for the development of programs.[5] The following are the principal steps in the procedure:

1. The Control Section requests the operating divisions and staff departments, in advance of the coming year, to submit preliminary expenditure programs.
2. These preliminary programs are analyzed by Finance in terms of capital resources and requirements, in coöperation with Control.
3. The recommended program is submitted by Control to various committees.
4. These committees submit the results of their deliberation to Control in terms of capital allocations by operating divisions.
5. Control forwards the program, presumably as revised, to the operating divisions.
6. The operating divisions submit detailed programs. (Such programs usually give a breakdown of proposed activities and related expenditures.)
7. Control compares these programs with divisional objectives as previously established. They are then consolidated into an overall program.
8. Finance prepares an overall financial program.
9. Control compares overall programs with overall objectives.
10. The final recommendation is submitted to the president.
11. It is finally reviewed and approved, if satisfactory, by the Operating Committee and the Board of Directors.
12. Control then publishes the program.

The contribution of the Koppers Control Section to the coördination of action at the top administrative level is illustrated by its summary of the company's procedure for results appraisal through progress reports.[6] The following are the principal steps in the procedure:

1. Monthly reports on operations are forwarded by the operating divisions and staff departments to the Control Section.
2. The results are analyzed by Control. It requests the operating

[5] *Ibid.*, Chart 5.
[6] *Ibid.*, Chart 10.

divisions and staff departments to supply clarification of discrepancies and additional information when needed.

3. The Control Section compares results against programs, and evaluates results and reasons therefor.
4. The section compiles and publishes a monthly report of operations, including its analyses and evaluations of results.
5. The report is presented to the president and other authorized executives.

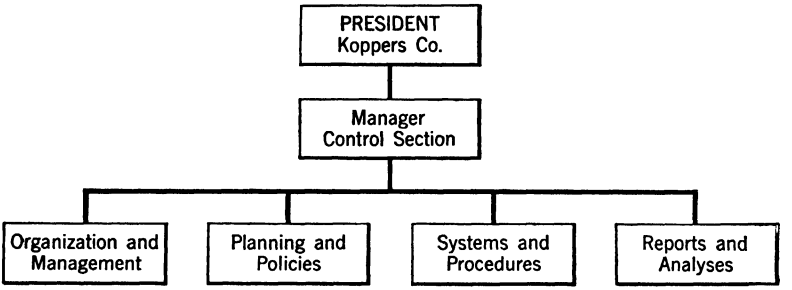

FIG. 35. Control Section, The Koppers Company, Inc.

It will be seen that this procedure for results appraisal breaks down into the basic phases of the comparison function of control anywhere. The line nature of correction is recognized clearly by the Control Section in the following statement: "The correction of unsatisfactory conditions must, of course, rest with the chief executive himself." It recognizes also its staff position in the organization. It does not issue directions or orders. It seeks to minimize the need for executive action by good staff coördination of administrative thought and action at lower levels. It is interesting that no complete differentiation of administrative control has been made. A distinct differentiation of the comparison function of control has been made, however, in the form of a Reports and Analysis branch within the Control Section. This is shown in Fig. 35.

It is not true that top management organization is a matter of concern only in large corporations. The owners and managers of small businesses usually wish their concerns to grow and become big organizations within the limits of their industry. It is the opinion of this writer that a small business organization in a dynamic industry has a public responsibility for growth, within the limits of

its managerial ability. A dynamic industry in a competitive industrial economy is one that successfully and continuously gives the public more goods and services of better quality at a lower cost. It is growing, in consequence, and perhaps rapidly, because it is making its goods and services available to more people in lower income groups, either directly or indirectly. The leading companies in the industry should certainly be making a higher rate of profit on their investments because of the greater turnover and operating economies that are possible with large volume and good management. Part of these profits become available for the further development of the company's goods and services, and for its expansion. It is a proper decision, under the right of private property, for a small concern in a dynamic industry to refuse responsibility for expanding its services in an expanding society. It may elect to remain small when the expansion of the industry requires larger organizations. If it does, however, it may suffer loss of competitive position and eventual elimination from the industry.

Organizational problems are usually an effect of organization growth and size. It is inevitable that the small organization will be faced with them if it grows. This is true whether the growth is the result of intelligent planning, chance circumstances, or economic and political favoritism. The maintenance of a competitive position depends greatly on intelligent planning for growth in any event. The small organization does not have and cannot afford a completely differentiated staff group for administrative planning under the chief executive. Such staff service, as is shown in Fig. 34, should be provided largely by committee organization. The detailed staff investigations and analyses must be made by technical staff groups in lower echelons. These groups are shown in Fig. 34 as reporting to an executive vice-president. There may be no such executive in a small organization. In such case, it is obvious that they must report directly to the chief executive. Each committee for each major phase of administrative planning may be headed by the appropriate line or staff executive as chairman ex officio. An interesting question arises concerning what executive should head a committee for organizational planning in a small organization. It should be, but usually isn't, the personnel manager. There is an organizational planning group under the Personnel Director of the RCA Victor

RADIO CORPORATION OF AMERICA
RCA VICTOR DIVISION

ORGANIZATION MANUAL

DEPARTMENT PERSONNEL

DIVISION ORGANIZATION PLANNING — FILE WITH CHART NO. 6

SECTION

TITLE MANAGER — ISSUED Sept. 1949

DEFINITIONS OF DUTIES and RESPONSIBILITIES

1. Participate in the development of Personnel Department policies and interpret such policies throughout the Organization Planning Division.
2. Cooperate with RCA Victor Division Management in developing and planning the most efficient organization structure for the conduct of all operations.
3. Serve as a research medium for management in the development of future organization modifications caused by operating necessity, business trends or economic situations.
4. Conduct appraisals and audits of present organization structures, both from the viewpoint of mechancial structure and operating philosophy.
5. Determine, as a result of organization surveys, those areas which require correction, and analyze the type of correction necessary.
6. Act as a consulting medium for all Departments on organization matters.
7. Issue and maintain an RCA Victor Division organization manual.
8. Control the announcement of organization appointments throughout the Victor Division.
9. Through close collaboration with the Executive Development and Training Divisions, assist in the establishment of such special training positions as may be necessary to assure the availability of competently trained personnel for present and contemplated activities.
10. Establish technical operating standards relating to Organization Planning activities and measure operational performance against the established standards.
11. Administer and control the RCA Victor Division Internal Mailing Lists, and maintain the "Master Divisional (Victor) Internal Mailing List"
12. Provide for developing and issuing definitions of duties and responsibilities for every position shown within the Company organization structure.
13. Establish budget objectives for the Organization Planning Division; require performance within the budget.
14. Supervise an adequate organization to perform the functions of the Organization Planning Division.
15. Report performance to the Assistant Director of Personnel.

FIG. 36. Organizational Planning and Personnel Management. (Courtesy, Radio Corporation of America, RCA Victor Division.)

Division of the Radio Corporation of America, as Fig. 36 shows. The difficulty with this proposition, in most organizations, is that the personnel executive knows too much about personnel techniques and too little about organization to be given responsibility for a leadership of ideas in this area. It becomes more practicable, of course, if resort to a competent management consultant for counsel and guidance is possible. Personnel management may be regarded, in fact, as a staff phase of organizational planning and

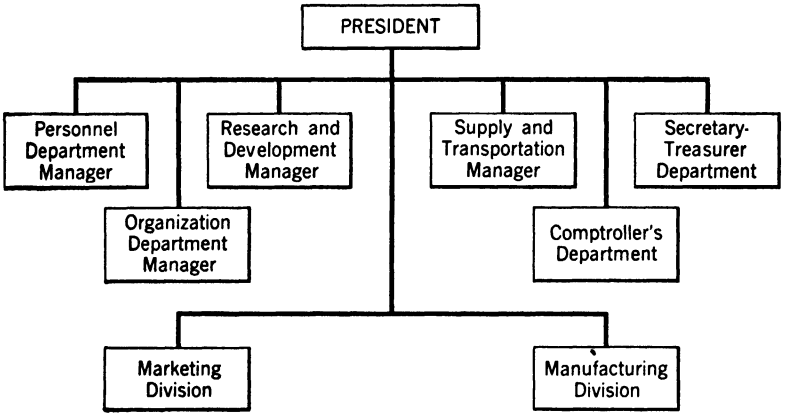

FIG. 37. Organization Chart, Standard Oil Company of California.

organizing. Such problems as selection and training for executive leadership, the operation of personal service plans for morale maintenance, the provision of required man power, the negotiation of collective bargaining contracts, and others having to do with the handling of the human factor are certainly organizational in nature. Most personnel management activities in small organizations, on the other hand, have to do with the relations of operative executives and employees.

One way to test the proposition is by examining large organizations in which the personnel management and organizational planning functions have been completely differentiated and highly developed. The effect of highly developed functional differentiation in large-scale organization is much like that of placing biological specimens under a high-power microscope. It is easier to see significant differences and relationships. A well-known case is the Stand-

ard Oil Company of California. This company has a Personnel Department and an Organization Department. Both departments report directly to the president of the company, as shown in Fig. 37.[7] The principal functions of the Personnel Department have to do with personnel selection, morale development and maintenance, and such related activities as may be expected of a headquarters staff group in this field.[8] The principal functions of the Organization Department[9] have been classified by the present writer as follows:

1. Organizational planning
   a. Functional grouping into organization components that are "logical, separable, integral" parts of the whole organization.
   b. Definition of the functions, responsibilities, authority, and relationships of each new or altered management position.
   c. Conducts studies, as requested, to determine the soundness and adequacy of the company's organization plan.
   d. Initiates periodic appraisals of the functions of the company to determine their necessity and adequacy in the light of company objectives.
   e. Fosters the "centralization of control and decentralization of responsibility for details and commensurate authority for their accomplishment, ensuring that decisions are made at the lowest practicable level of management at which they can be made intelligently."
   f. Maintains "management guides" (organization manuals).
2. Financial planning
   a. Advises, as requested, members of management in the preparation of the annual budget, and requests for extraordinary or capital expenditures, making recommendations concerning the appropriateness of the requests.
3. Policy determination
   a. Formulates, clears, and recommends policy proposals.
   b. Maintains currently a policy manual.
4. Procedural planning

[7] L. G. Hall, *The Management Guide*, p. 35.
[8] *Ibid.*, p. 41.
[9] *Ibid.*, p. 43.

a. Formulates or clears proposals for the elimination of nonessential or nonproductive functions, methods, and procedures and for the establishment of new ones.
b. Formulates or receives and recommends for approval proposals for the establishment or modification of controls over expenditures.

5. Staff management of personnel and industrial relations
a. Reviews the conduct of affairs of organization components to insure that man power will be consistent with requirements and results. Encourages and assists in the preparation of operating and performance standards as guides for proper manpower control.
b. Reviews, edits, and approves job and position descriptions prepared by other members of management.
c. Conducts job evaluations and formulates proposals for equitable salary and wage structures. Prepares and disseminates company, departmental, and divisional wage guides. Advises and assists members of management in the administration of salaries and wages within their respective organizational components.

It is evident in the above case that the Organization Department is performing some functions that are frequently performed in smaller organizations by a personnel department, if they are performed at all. It is interesting also that the functions and responsibilities of the Organization Department extend beyond what may be interpreted strictly as organizational planning. They include many responsibilities placed on the Koppers Control Section in the general field of administrative planning. They do not, however, include any responsibilities for general administrative control.

It is believed that the differentiation of personnel management and labor relations from organizational planning results from the operation of the Law of Functional Growth. It may be quite justifiable in large-scale business organization. Organizational planning is merely a phase of administrative planning, however. The latter includes general planning for the use of physical as well as human factors. The development of this function of administrative planning is limited to a relatively small number of large companies at

this time. It appears probable, nevertheless, that the function will be developed in more organizations. It may be accompanied by complete differentiation of administrative control from administrative planning in very large concerns. It must be accompanied, in any event, by the decentralization of staff planning and control, and the development of staff parallelism.

Administrative planning and control do not involve the addition of any new functions to the work of an organization. They require merely the differentiation and development of functions that have or should have been performed somewhere and somehow in the organization during its growth. It is possible, therefore, to provide for their performance in small or medium-sized organizations. It may not be practicable, however, to provide separate, independent organizational facilities for their performance, because of expense limitations.

Line Responsibility for Plans

It was indicated in earlier discussions that the ultimate responsibility for all managerial and operative functions rests in the line organization. This includes planning. The technical staff executive is responsible for a leadership of ideas in the development of plans, policies, and methods in his field of specialization. His work is always subject to direction and supervision by a superior line executive. The coördinative staff executive is responsible for advice and assistance in control. He aids in the coördination of the various activities involved in the execution of the plan. His work also is subject to direction and supervision by a superior line executive. Any subordinate executive, either line or staff, may be requested to serve on a committee. The superior executive has an obvious right to appoint him, if he feels that the particular subordinate can make a significant contribution to the solution of the committee's problem. A committee appointment is usually a temporary technical staff assignment.

The introduction of staff functionalization does not, in any sense, require the line executive to abdicate his right to think for himself. This statement applies to any line executive on any organizational level. He has, in fact, an increased obligation to do so. Ability to make effective use of staff, whether his own or of others, is one of

the tests of a good executive. He should determine his needs for staff service, see that he gets the service he requires, and analyze the quality of the service rendered to insure that it meets his needs. There is some question as to whether he knows enough about his job, if he cannot do these things.

The limitations of staff competence and perspective are sometimes forgotten by the general executive. Plans can be no better than the people who make them. The mere establishment of a technical staff organization cannot assure, by itself, the development of good plans. Nevertheless, the employment of competent technical personnel is not the whole answer. Staff specialization tends to narrow the specialist and leads to loss of perspective. In consequence, the specialist's judgments may be honest but biased.[10] Furthermore, different phases of a plan may be developed by different specialists in different technical staff departments. It is necessary to correlate the detailed plans of subordinate line and staff executives. It is then necessary to consolidate them in a general plan for the organization. This is another reason why important staff plans should not acquire line authority without the approval of the superior line executive.

Mooney and Reiley, Urwick, and others have noted that this requires the superior line executive to be as good a planner as his subordinates, or even better.[11] This concept flows from the fact that the ultimate responsibility for plans remains with him, regardless of how much assistance he may receive from line and staff subordinates. This means simply that he should be at least the equal of his

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[10] Oliver Sheldon has said: "It is clear that, though functionalization ensures such a grouping of activities as enables the officials of the organization to concentrate upon particular lines of work, it does not guarantee that the best information, theory and advice are always available for the execution of such functions." —*The Philosophy of Management*, p. 142.

[11] Mooney and Reiley have expressed this idea as follows: ". . . The vital thing is the plan, and the preparation of a completely coordinated plan requires collective and coordinated staff effort. . . . The staff submits the result of its digested and combined thought, but the commander-in-chief, the supreme line authority, is the one who says 'yes' or 'no.'. . . The possession and exercise of this right of final decision presumes that the line commander is himself superior as a planner to any member of his staff."—*Onward Industry*, pp. 324–325.

L. Urwick expresses a similar idea in his monograph, *Organization as a Technical Problem*, p. 10. Also Luther Gulick and L. Urwick (eds.), *Papers on the Science of Administration*, p. 78.

subordinates in intelligence, superior to them in breadth of knowledge and understanding of the situation, and as well trained as they are in the application of a logic of effective thinking to the solution of problems in his business field. This does not mean that he must be a highly qualified professional expert in the various fields of business activity under his command, as we have seen. The administrative executive requires breadth, rather than intensity, of background, training, and experience.

The procedure for administrative staff planning was noted in connection with top management organization. The same general considerations apply to line leadership of staff planning at any level. They may be summarized as follows:

1. The definition of the mission and its objectives by the superior line executive. Intelligent planning is difficult unless this is done.

2. The appointment of a technical staff assistant to the superior line executive. His job is to receive plans from subordinate line and staff agencies, and to coördinate thinking with respect to them.

3. The establishment of a procedure that will channel plans proposals to this assistant.

4. The appointment of a coördinative staff assistant who assists in control. He may coördinate action with respect to the progress of plans development, as well as the work of organizing and executing them subsequently.

5. The analysis of plans proposals from line and staff subordinates, clarification of the problem, suggestions about the requirements of a general plan, preparation of a committee agenda, and similar action by the technical assistant.

6. The use of committee or informal conferences for arriving at a meeting of minds between interested line and staff subordinates concerning various plans proposals.

7. The appointment of a second-in-command who can relieve the superior executive of the burden of current operating decisions.

8. The submission of committee recommendations to the superior line executive by the technical staff assistant.

9. Provision for transmission by the coördinative staff assistant, when approved by the line superior, together with orders and instructions for the execution of the plans.

10. Staff control of the work of organizing and executing the plans by the coördinative staff executive.

Military Organization and the General Staff

The development of staff organization began in military organization centuries before any comparable development appeared in business organization. Its origins can be traced back to antiquity. The development of the military general staff did not begin, however, until early in the nineteenth century. Its great value was demonstrated in the Franco-Prussian War in 1871. The organization of a general staff corps was not undertaken in the United States until 1903, however. Provision of a general staff was forbidden the German Army following its defeat in World War I. It is obvious that such a staff was considered a factor of vital significance in the effectiveness of the German military organization. The military general staff has affected the thinking of many writers on business organization for these and other reasons.

There is no agreement among military authorities concerning the exact definition of the term general staff. Nelson says that it "refers to those immediate advisers who provide information, contemplative and supervisory services for their chief, the commander."[12] The term excludes the "special staff" whose services are largely those of technical facilitation. It participates in planning, however, within its areas of staff responsibility. Special staff includes the Engineer Corps, the Signal Corps, the Quartermaster Corps, the Chemical Warfare Service, and many others. The War Department General Staff was reorganized in March, 1942, to include the following divisions:

(1) *Personnel Division* (G-1) which is charged, in general, with those duties of the War Department General Staff relating to the personnel of the Army as individuals.

(2) *Military Intelligence Division* (G-2) which is charged, in general, with those duties of the War Department General Staff relating to the collection, evaluation and dissemination of military information.

(3) *Organization and Training Division* (G-3) which is charged, in general, with those duties of the War Department General Staff relating to the mobilization, training and organization of the military forces.

[12] Otto L. Nelson, *National Security and the General Staff*, p. 8.

(4) *Supply Division* (G-4) which is charged, in general, with those duties of the War Department General Staff which relate to the supply of the Army.

(5) *War Plans Division* (WPD) which is charged, in general, with those duties of the War Department General Staff relating to the formulation of plans and the strategic direction of the military forces in the theatre of war.

(6) *The Secretariat, War Department General Staff* is charged with the administration of the office of the Chief of Staff and will maintain a Message Center for the Chief of Staff and the War Department General Staff.[13]

Various changes in military organization developed during World War II. The Air Force was differentiated from the Army following the war.

There are many reasons why the average business executive finds the general staff concept a bit confusing. There is a clear-cut distinction between line and staff in military organization. The Chief of Staff of the Army is, nevertheless, the principal line officer in time of war. He reports, as such, to the President of the United States through the Secretaries of the Army and Defense. The distinction between staff planning functions and staff control functions is not clear-cut. The general staff in military organization coördinates both thought and action.[14] Some changes in thinking appear to have taken place among military authorities concerning this relationship, however. The War Plans Division was an addition to the original divisions of the General Staff during World War I. The Joint Chiefs of Staff found it necessary to have a Joint War Plans Committee during World War II. Such developments are analogous to the top administrative planning function in business organization. The evolution of the statistical control function during World War II did not result in the development of a general coördinative staff function that is analogous to top administrative control in business organization. It is obvious, however, that it reflected a need for better top control. Furthermore, G-3 developed some coördinative staff functions.[15]

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[13] *Ibid.*, p. 373.

[14] See General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 25, for a clear statement of its coördinative staff responsibilities. See also Otto L. Nelson, *National Security and the General Staff*, pp. 63, 65.

[15] A competent Army officer told the present writer that almost a direct line

There are some fundamentals of staff organization that apply to any organization of any kind anywhere. But there is no reason to believe that business staff organization should be on the same basis as military staff organization, or vice versa. The ultimate objective of military organization is national security. Its immediate objective is the destruction of the fighting power of the enemy. Military leadership must plan, organize, and control the activities of military establishments in time of peace for the accomplishment of these objectives in the event of war. Otherwise, it may be another case of "too late with too little." The ultimate objective of business organization is a maximum standard of living for our people. Its immediate objective is customer service, with due regard for the collateral social and personal interests that are involved. Business leadership must plan, organize, and control the activities of business establishments in time of peace for the accomplishment of its service objectives. Business organization tends to lose its significance as an economic institution under conditions of war or of socialistic state capitalism. The security functions of military organizations are performed under global conditions and in all elements—land, sea, and air. Any concept of organic military functions must take this into account. Any concept of organic business functions must be based on the concept of economic utility, since the business organization is basically an economic institution. It is strange, in view of these fundamental differences, that there are not more structural and operating differences between business and military staff organization. This suggests the presence of common principles that merit study by both business and military executives.

Classification of Staff Executives

Staff officers in military organization are the personnel who assist the commander in exercising the functions of command by professional advice and specialized assistance.[16] Staff executives in business organization are those who aid a responsible line executive in

relationship developed between special staff sections concerned with supply and G-4 of the General Staff, and that these sections were reduced to the status of secondary technical staff agencies as a result. This may have been the result of inadequate development of coördinative staff functions.

[16] L. Urwick, *Organization as a Technical Problem*, p. 20; and General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 24.

performing his managerial functions with professional advice or specialized assistance. Their functions are not a part of a primary functional hierarchy, as we have seen. They therefore do not possess primary line authority.

Staff executives in business organization may be classified on a number of bases in accordance with the nature of their duties:

1. *The organic function served,* such as staff sales executives, staff production executives, and staff finance executives in a manufacturing organization.

2. *The managerial function served,* such as technical staff executives and coördinative staff executives. There is usually no separate staff for organizing.

3. *The echelon or level on which they serve,* such as administrative staff executives and operative staff executives.

4. *The form of staff relationship* involved, such as the occasional and intermittent staff service of a consultant or a line executive who serves on a committee, or the rare condition in which the staff executive must exercise line authority under closely restricted circumstances. This has been called a "completely functionalized" relationship.

Unity of Command and the Integrity of the Line Organization

It is important that the integrity of the line organization be maintained. This idea may be expressed as a principle: The usurpation of line authority and responsibility by staff may result in the failure of the mission, since the primary values that justify the existence of the organization are created in the line. The principle assumes that the particular staff group has already received by delegation whatever staff responsibility and authority are necessary to enable it to assist the line properly. The acquisition of line authority by staff, whether by delegation or usurpation, tends to result in a "completely functionalized" relationship. This may be defined as one in which a staff element is brought into direct contact with the line elements that it serves, with direct control of all line action that falls within its specialized field. It may be developed in rare instances to take advantage of highly specialized staff knowledge in the conduct of operations under special circumstances. It may develop unofficially as a result of the unquestioning acceptance

of staff plans by the line organization. It may also develop unofficially as a result of organizational politics carried on by ambitious staff executives. There are other conditions that will be considered when the problem of completely functionalized relationships is discussed shortly. Line domination by staff tends to result in certain difficulties, regardless of how it develops. It becomes difficult to hold coördinate and subordinate line executives accountable for results when some staff executive is able to exercise final rights of decision and command over operations for which they are responsible. Friction, ill feeling, and poor coöperation may develop between line and staff, resulting in a serious loss of morale. The quality of staff planning may deteriorate because of failure to make use of line experience. The quality of subsequent execution by the line organization also may deteriorate, as the result of lack of confidence in staff plans. "Buck-passing" between line and staff heads may develop. Other difficulties arise. The end result may be serious loss of speed, economy and effectiveness of action. Fayol recognized this problem clearly. His Principle of Unity of Command says: "For any action whatsoever, an employee should receive orders from one superior only."[17] He stated his Principle of Unity of Direction as follows: "One head and one plan for a group of activities having the same objective."[18] These principles may be regarded as corollaries of the Principle of the Integrity of the Line Organization that was stated above. The staff specialist likes his field of specialization, or he would not be in it. He has a tendency consequently to overemphasize the importance of his specialty. Line domination by staff tends, therefore, to result in overemphasis on secondary objectives at the expense of primary objectives. The tail begins to wag the dog. The primary mission of serving the customer may be forgotten.

Staff Release of Orders and Instructions

Military executives usually exercise meticulous regard for the integrity of the line organization for the above reasons. They tend to use the chain of command to which they are attached as the principal channel of communication. This is much less true in business

[17] Henri Fayol, *General and Industrial Management*, p. 24.
[18] *Ibid.*, p. 25.

organization. The use of the line organization as the principal communications channel has certain serious disadvantages. The line executive can act as a gate valve for the flow of information up and down the line. It may be a matter of his judgment as to what is sufficiently important to be forwarded, and what is not. The flow of information may be slowed as a result of unnecessary "layering." The establishment of channels of communication that short-circuit the line tends to break it down. The problem is to relieve the responsible line executive's office of the burden of releasing orders and instructions, improve the quality of such releases, and establish parallel channels of communications, without breaking down line effectiveness.

The quality of instructions should be assured by their preparation by the proper technical staff group. It is assumed that such preparation has been preceded by adequate coördination of the best thought of the line and staff groups affected. Such instructions, including minor procedural changes, may be issued directly to these groups by the office of the responsible technical staff executive. This is proper when they are informatory and do not involve any significant changes in established objectives and policies. There appears to be a tendency, however, to route them through the office of the coördinative staff executive who reports to the same line superior. Today it is more likely to be the case, for example, that product plans and specifications, bills of materials, engineering change notices, and other product information are released by the product design department to line and staff groups in the manufacturing division of an industrial concern through central manufacturing control. The process design department may release information and instructions concerning the operations to be performed on each part of the product, the order of their performance, the equipment and tooling required, and other process information also through central manufacturing control. The latter department may prepare and release purchase delivery schedules to the purchasing department, man-power programs to the personnel department, production programs and schedules to the manufacturing plants, as well as progress reports to administrative management. There are some important advantages in using the office of the coördinative staff executive at each level as an office of issue. They will be reviewed later in

the discussion of control. Such use relieves technical staff groups of a routine service of facilitation without depriving them of any essential prerogatives.

Orders putting technical instructions into effect set up constraints on subsequent action. Orders initiating action on a project involve a release of authority to act. Dispatching constrains and regulates action by controlling the release of authority to act. It is definitely a function of control. It is for this reason that orders and instructions should be issued at each level through the office of the coördinative staff executive. There are exceptions in the case of emergency situations or routine interpretations of plans and policies. A coordinative staff executive assists the superior line executive in the control of line activities. His authority does not extend beyond the limits of his control department. Any release of orders and instructions by his organization is made on the authority of the superior line executive, therefore, and not on his own. It should be made in accordance with a standard control procedure covering the particular control problem. Such a procedure becomes a standing order of the superior line executive when it has received the concurrence of his subordinate line and staff executives and his own approval. The practice of signing routine orders for the responsible line executive, under his printed signature, by the coördinative staff executive in accordance with approved procedure has much to recommend it. It makes it clear that the control executive's authority is staff and does not extend beyond his immediate department. The practice of issuing orders directly over the signature of a staff executive violates the principle of unity of command.

The conditions under which a coördinative staff executive may issue orders and instructions without the personal approval of the responsible line superior should be understood. They are merely listed here, since they have been covered earlier:

1. The release of the particular kind of orders and instructions is prescribed in standard practice instructions (standard office procedures).

2. A condition arises that is not covered by standard procedure but is covered by policy, and the concurrence of coördinate line and staff executives has been obtained.

3. An emergency situation requires the temporary establishment

of a completely functionalized relationship. Such a situation may require the temporary centralization of authority and control. It may be desirable temporarily to delegate line authority to certain staff executives.

4. The superior line executive is absent and cannot be contacted when a serious emergency arises suddenly. It may be necessary for the coördinative executive to act on his own responsibility, since time is of the essence of the problem. He must hope that he is right.

The order should be brought to the attention of the superior line executive for his signature, if possible, when the proposed action involves significant deviation from established objectives and policies.

Staff Leadership and the Line Organization

It is generally accepted that staff leadership in relation to the line and other staff elements is a leadership of ideas and ability, rather than a leadership of authority. This is particularly true in the case of technical staff executives who must sell their plans and services. The staff executive does not usually have any final rights of decision and command beyond the limits of his immediate organization.

The young and inexperienced staff executive sometimes feels that he cannot be expected to exercise effective leadership in the absence of line authority. He wants to operate as well as advise. Yet there are many ways in which he can operate effectively without it. The competent staff executive has at his command the force of prestige. This prestige should be reinforced by definite specification of his staff responsibility and authority for a leadership of ideas in his field. "In the sphere of execution, superior knowledge of plans confers its own authority, and the line officer will hesitate to ignore what the staff officer recommends."[19] The danger, in fact, may be too much hesitation. Too many line executives are business mechanics rather than professional executives. They prefer to learn what they learn through trial and error. They are no great students of their own industry or of the profession of management. The technical staff executive must be, at least in his field of specialization. Otherwise, there is not much excuse for his place on the pay-

[19] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 340.

roll. The staff executive has an opportunity to gain line acceptance of his ideas through direct cross-contacts with line and other staff executives, through committee action, or through the mediation of a headquarters staff executive in his field. He had better reëxamine his thinking if these means fail to gain acceptance of his ideas. He can always take the problem to the office of his line superior, who presumably has the authority to order the thing done. He had better be right, however. The line superior is obligated to give his line subordinate the benefit of the doubt, other things being equal. The principle that the line executive should not be compelled to accept staff advice unless the good of the organization clearly demands it, is well established in both American and British practice.[20] The prestige of the staff executive will be lowered seriously if his line superior finds it necessary to overrule him too many times. His usefulness to the organization may come to an end quickly in such case.

Competent staff is extremely valuable. Business would not pay the cost of it otherwise. It exists, nevertheless, to serve the line. It is not an end in itself. The line must be protected against the bureaucratic tendencies that sometimes develop in staff organizations.

Functional Emergence

There are a number of principles and problems that affect staff organization. The Principle of Functional Emergence was mentioned previously. It may be stated as follows: The tendency of a given function toward differentiation varies inversely with the degree of similarity between it and the functions with which it is grouped. This tendency varies directly with the inclination of the function to become increasingly complex and technical with its growth and development. This principle aids in determining what new organization groups may become necessary, where further provision or development of executive leadership may be required, and what additional facilities may be needed, and in solving other problems associated with growth.

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[20] See Oliver Sheldon, *The Philosophy of Management*, p. 237; and James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 195.

Location of Dissimilar Staff Functions

The Principle of Dissimilar Staff Location says: A function is grouped usually with the organization to which it renders the greatest amount of service, when there is no other staff group performing similar functions and there is not sufficient work to warrant the development of the particular staff function beyond the stage of distinct differentiation. The possibility of certain difficulties must be accepted when this is the case. Such a grouping probably will place the function in a secondary staff position. The growth and development of the function may be directed toward the service requirements of the group with which it is associated, in such case, rather than of the organization as a whole. It tends to be dominated, in other words, by the group with which it is associated. Because of this domination, it may not develop a leadership that is sufficiently able and broad-gauge to make possible its complete differentiation subsequently. It may be necessary, when this time comes, to bring in outside leadership, with consequent morale difficulties and increased expense. It may also happen that this secondary staff relationship does not make possible an effective utilization of the required skills and knowledge. A distinct differentiation of the specialized function may be necessary, but there may not be enough of this work to occupy the specialist on a full-time basis. He may be given other work, usually of a lower grade, to fill in his time. The lower grade of work is overpaid, probably, because he expects to be paid at a fair rate for the highest grade of work for which he is employed. The amount and quality of work done depend on the individual. The quality of his supervision may not be too good, because his function is dissimilar to the principal functions of the group. Any skilled or professional operative who is attached to a department in a secondary position is likely to provide a good example of this problem. There may not be much that can be done about these difficulties initially.

Secondary Staff Executives

It has been pointed out that secondary planning and control functions tend to develop with the growth and development of a staff organization. Some performance of potential secondary staff

functions by the executive head of a staff group is necessary long before it becomes practicable to differentiate them distinctly. A staff department head may not be able to afford the services of an assistant to aid him in controlling the work of his department, for example. Nevertheless, he must coördinate the work of his unit chiefs. A secondary control function is obviously being performed, but responsibility for its performance is still integrated in the department's principal chain of command. There are also examples of potential secondary technical staff functions.

Certain morale problems of secondary staff executives may develop when such differentiation has taken place. The evolution of secondary staff functions takes place because of a need for specialized managerial assistance. It is no different, in this respect, from the evolution of primary staff. It implies, in both instances, a close service relationship with the functions of the chain of command to which it is attached. It implies also some basic functional dissimilarities. Complete differentiation of a secondary staff function is usually not practicable, except in large staff divisions. It may not be possible for the secondary staff executive to advance to the headship of the particular staff organization, or beyond the point where he is attached to its chain of command. This may be due to a lack of basic training in the specialized field of the department, as well as to any basic functional dissimilarities involved. If he had such training originally, it may have ceased to be professional beyond his extremely narrow area of intensive specialization. He may have a limited future in the particular situation. It may be difficult, in consequence, to induce able executives to take such a position. It may be difficult to hold them if they do. They may become disgruntled and do a routine executive or professional job, because of the resultant loss of morale. Yet these secondary staff functions frequently make important contributions to staff effectiveness.

There are a number of solutions of the problem that may work. Some secondary staff functions are extremely interesting. The responsible individual may be quite interested and happy in his work, and quite content to stay where he is. The writer has seen this happen. There is obviously no problem in such cases. It may be possible to make the head of a primary staff group within the department or division the staff control executive for the particular staff

organization. This implies that he likes the work of executive coördination as well as, or better than, the particular phase of staff work that he is heading. He has presumably a good basic background in the particular staff field and the prestige that comes from successful experience in the principal chain of command of the staff group. It is presumed also that the prestige of a secondary coordinative staff position in the organization has been established. The control executive may be more eligible, in such case, for promotion to the job of second-in-command than the heads of the primary staff groups. It depends on the size of the staff organization. The principle holds, in line and staff organizations, that the importance of specialized technical knowledge for executive success tends to vary inversely with the level on which the executive serves. A secondary technical staff operative or executive is usually not eligible for promotion to the headship of a primary technical staff organization. There are other alternatives, of course. It may be possible to promote a secondary operative or executive to a similar job in a similar headquarters staff group. This is more likely to be the case when staff parallelism has been well developed. It may become possible, with additional training, to make the individual eligible for transfer to a similar primary staff job. This may open up a new line of promotion. There is probably no problem if a static or dying organization is concerned. There will be when a new leadership takes over and imbues the company with a desire for competitive success. It will be well then to remember the Principle of Secondary Executive Development: Special measures to assure an adequate future for them may be necessary to develop and maintain an adequate supply of secondary staff executives.

Staff Parallelism

There is a separation of managerial from operative service with organization growth, as we have seen. There is a separation of administrative management from operative management with continued growth. Minor service levels and grades of service develop within both managerial and operative services. Staff functions evolve at various organizational levels, depending on the need for specialized services. We saw earlier that staff evolution tends to proceed through certain definite stages. One of them is staff eleva-

tion. The administrative phases of a staff function are differentiated in this stage from its operative management phases, in whole or in part. The administrative phases are placed in a similar headquarters staff group in a higher echelon. The result is a parallel staff development on contiguous service levels within the organization. There is no duplication of staff functions within a given establishment, for the reasons given. It may be stated as a Principle of Staff Parallelism that the parallel development of similar staff functions in related echelons facilitates the development and maintenance of staff coöperation and coördination.

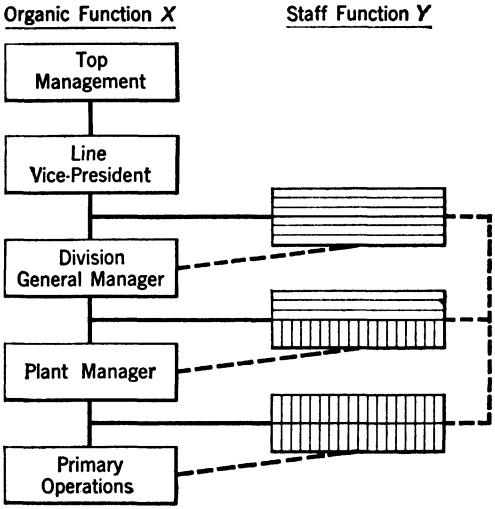

FIG. 38. Basic Structural Form of Staff Parallelism. The crosshatching indicates a changing basis of functional grouping. The major basis of grouping at each staff level complements the minor basis of grouping for the function at the next higher level. The minor basis of grouping at each staff level complements the major basis of grouping for the function at the next lower level.

Parallel staff development does not mean usually an identical structural grouping of functions at each service level. Staff groups on the administrative level of an organization must serve chiefly the heads of the primary line organizations and the top adminis-

trative executives. They must be organized, therefore, with due regard for the broad, basic requirements of the organic functions of the business. Staff groups on the operative level of the organization must serve chiefly the heads of the primary operative departments. They may be required, however, to render service to other staff departments at this level. They must also supply information to staff groups on higher levels. They must be organized, nevertheless, with due regard for the specific requirements of the primary operative functions of the line to which they are attached. The basic structural form of staff parallelism is disagramed in Fig. 38. The general structure of a large logistical command during World War II furnishes an interesting example. This organization was concerned chiefly with the functions of engineering, procurement, production, and supply. It was broken down geographically, within the United States, into districts, and these in turn into regions. Production contractors were provided with advice and assistance by the regions, except for the large prime contractors. A "resident representative" who reported directly to a district headquarters was sometimes stationed at the plant in the case of such contractors. The regional and plant representatives' offices had to be organized with due regard for contractor service. Any contractor might produce different parts and assemblies for different end products under different contracts. Command headquarters had to be organized chiefly on the basis of end products, insofar as the functions of manufacturing procurement and production were concerned. This headquarters was required to furnish its headquarters in Washington with information concerning its accomplishment of its mission of designing, procuring, producing, and supplying end products as ordered. It is evident that district and regional headquarters could not be organized on an identical basis, but they had to be on a parallel basis. The same thing was true basically of the functional relationships between district and command headquarters. It was, of course, a very large staff organization.

The organization structure of the General Motors Export Division in 1929 is a well-known example of staff parallelism in the field of business organization.[21] Its basic functional relationships

[21] Edgar W. Smith, *The Organization and Operating Principles of the Export Division.*

are shown in Fig. 39. The functions of production, supply, sales, and finance may be regarded as organic. This was a manufacturing as well as a distributing organization. It is interesting that staff functionalization was based directly on these functions in this case. The primary line organization extended from the president through

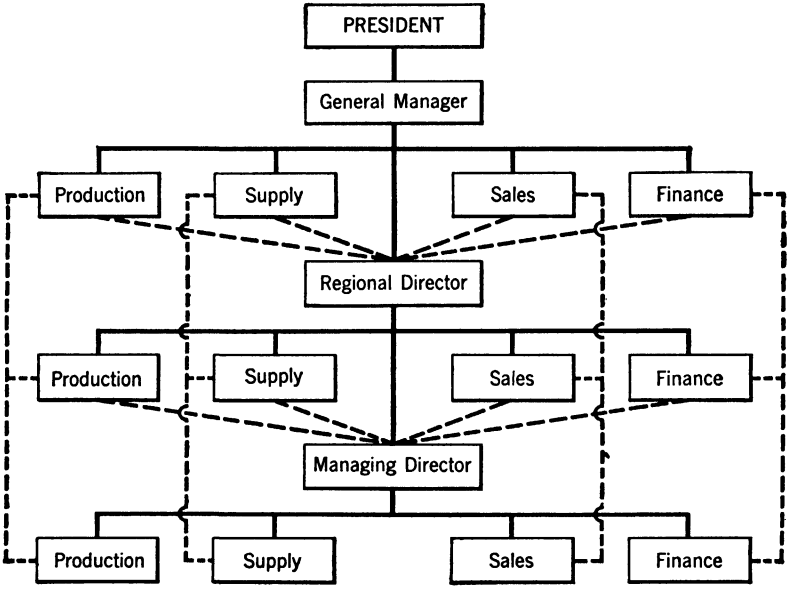

FIG. 39. Staff Organization, General Motors Export Division, July, 1929.

the general manager, the regional directors, and the managing directors to the production, supply, sales, and finance managers at the operating level of the organization. These functions at this level were line.[22] The heads of these same functions under the general manager in New York and the regional directors in the field were staff. It is evident that each staff head was responsible for all the staff services required in his echelon for the proper performance of an organic function. It was stated specifically that he had responsibility for "planning and results control."[23] It is clear, therefore, that each staff head functioned as both a coördinative staff and a technical staff executive, since he had staff responsibility

[22] *Ibid.*, p. 7.
[23] *Ibid.*, p. 6.

for the coördination of action as well as thought within his organic field. Hence it was similar in theory to the military general staff organization. No specific provision for top administrative staff planning or coördination was made on the organization chart. Interdivisional coördination of thought and action depends in such cases on self-coördination between line and staff division heads, or on coördination by the superior line executive with such help as he can get from his personal staff, or on both. In this respect also the structure of the Export Division's organization seems to have been similar to the general staff concept. This may be sufficient. It is not as strong a situation, however, as one in which specific provision is made for coördinative staff services.

Failure to develop staff parallelism properly may reduce the economy and effectiveness with which the organization operates. There is the difficulty and loss of time involved in obtaining assistance in solving a problem when responsibility for its various phases is scattered among a number of coördinate and superior staff organizations. Vacillation, hesitation, and loss of initiative may appear because of the resulting gaps and overlaps of staff responsibility. There are important advantages in its proper development that will be seen more clearly in the following discussion of headquarters staff functions. It should be remembered, nevertheless, that excessive overhead expense results when staff parallelism is carried down too far into the organization.

The proper solution of this problem requires concise, discrete definitions of staff functions by higher line authority, together with corresponding definitions of staff responsibility and authority. There should be specifications of the general basis of staff organization at each echelon. They should recognize the changing bases for grouping functions within staff components as the point of primary operative performance is approached. There must be some provision of flexibility in the general plan of staff parallelism, as in any organizational plan. It is imperative, of course, that there be no violations of the Principles of Unity of Command and Unity of Direction that might in any way weaken the integrity of the line organization.[24]

[24] Alfred P. Sloan, Jr., has given a strong, clear presentation of this idea. See James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 509.

Headquarters Staff Functions

Every executive in large business organizations has probably seen some unfortunate instances in which individuals have failed in good jobs as heads of important headquarters staff functions. There are many possible reasons. A common cause of failure is lack of understanding of the basic functions of such an organization in the first place. Such staff heads often wish to operate, rather than advise and facilitate. The mission of staff functions on higher levels is to aid line and staff functions on lower levels. It is not to dominate them. The heads of such functions are expected to exercise a leadership of ideas rather than a leadership of action. They should recognize, also, that they head administrative staff functions rather than operative staff.

The basic headquarters staff functions are the following:

1. Staff inspection.
2. Staff consultation.
3. Staff integration of new ideas and developments.
4. Location of potential leadership material in its field.
5. Assistance in organizing.
6. Operation of a parallel channel of communication.
7. Interdivisional coördination of thought or action.
8. Preparation and dissemination of administrative staff reports, either coördinative or technical.

Staff inspection is sometimes called staff surveillance or staff auditing. It may be regarded as a phase of policy control. Its objective is a determination of the degree of agreement between performance and approved objectives, policies, and procedures. It should be performed openly by each headquarters staff group for its field of specialization in accordance with written directives establishing its staff responsibility and authority. It is in no sense a "spy" or "undercover" activity. The corresponding function at the operative level in factory organization is quality inspection. Staff inspection of any kind anywhere must be handled tactfully. People like to be paid for their time. Many of them dislike being held accountable for results. They often resent the activities of the staff personnel who are required to check their results. This attitude may be ag-

gravated by such personnel. They become a trifle arrogant occasionally, because of a fancied authority that they usually do not possess. Their authority should be only a right of investigation. They sometimes develop a "checker-upper" attitude that is irritating. The remedy is, of course, a realization of the real contributions of staff inspection by higher line and staff executives. One contribution is the discovery of opportunities for more successful accomplishment by other line and staff personnel in the lower echelons. It is not to "get something on them." The remedy includes also the education and orientation of the point of view of the staff inspection personnel. Dismissal is the ultimate remedy if this cannot be achieved. Hine stated that the staff function of greatest vital necessity is that of inspection or review. He noted that it may be perfunctory and colorless or hypercritical and demoralizing.[25] It is certainly a function of great importance when performed properly.

There is an allied problem that is not particularly a staff difficulty. It is the problem of field contacts by line and staff executives. There is of course much real value in such contacts by headquarters administrative executives. It may be necessary for them to get occasionally a realistic, first-hand appraisal of a situation. It may be necessary occasionally to make on-the-spot decisions of primary importance in connection with important contracts or major emergencies. Occasional visits to field headquarters may be helpful to local morale, unless the general executive is too impressed with his rank and importance. It may give him an opportunity to get acquainted with subordinate but key personnel. It may give them an opportunity to discover that the "boss" is also human. The "boss" of a small business may have few staff members that are capable of handling field contacts properly. He may have little option, accordingly, but to handle them himself. There are other valid reasons for field contacts by headquarters administrative executives.

It is possible, however, to carry field contacts beyond the point of diminishing returns. The writer knew one executive, the president of a well-known corporation, who flew around the country on field contacts for an average of four days out of the week. He got back to his office in New York around Friday noon. He kept a room

[25] C. D. Hine, *Modern Organization*, Engineering Magazine Co., p. 94. See also James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 108.

permanently at one of his clubs. He said that he was usually too tired to go to his home in Westchester County on Friday evening. He worked Saturday morning and got home sometime in the afternoon. He generally had some social engagements on Saturday and Sunday evening. He rested most of the day on Sunday, however, so that he could do it all over again the next week. He was doing a good job, on the basis of results, using the technique of "brute strength and awkwardness." He got for this approximately $75,000 per year, plus a bonus. Such a procedure is a good formula for stomach ulcers or a coronary thrombosis. It is admitted that this is probably an extreme case. It is hoped so, certainly. But the writer has heard of other cases that were almost as aggravated. There are a number of organizational difficulties that may result from such a procedure, even though the executive is "expendable." It is possible that the executive is spending too much time on administrative or operative control problems. He may be making local decisions of an operating nature that probably could be made better by local executives. The latter may take advantage of his lack of detailed knowledge about local conditions to get a favorable answer that would not be given if his headquarters staff had an opportunity to examine the proposal. The subsequent job of modifying the decision may cause plenty of friction. One often wonders who is really running the organization in such cases. It may be necessary for a second-in-command to make important policy decisions that should be made by his superior. The latter must lose contact with his office to some degree, despite modern methods of transport and communication. The decisions must be held up until he returns. The difficulty may be that the particular executive is a chronic extrovert who likes to travel and make contacts at the company's expense, regardless of necessity. The difficulty may be also lack of understanding of the function of administrative control, lack of a second-in-command who can take over much of the burden of field contacts, failure to make intelligent use of staff, plus an exaggerated opinion of his ability to handle such contacts better than anyone else in the organization.

It is the duty of a headquarters staff group, whether it is concerned with personnel, procurement, engineering, or some other field of technical specialization, to act in a consulting capacity to

similar groups in lower echelons. This implies that a headquarters specialist in a particular group has intelligence, background, training, and experience that are as good as, or better than, those of a corresponding specialist on a lower level. This is usually the case, since the direction of promotion is usually toward corporate headquarters. One reason for staff parallelism is speed and ease of communication with the appropriate staff specialists. A divisional executive is expected to solve his problems if he can. He has a right to expect help from corporate headquarters when he encounters a problem that is beyond his previous training and experience. He has a right to expect that he can quickly locate the man who can give him a satisfactory answer within a reasonable time. The smaller the organization, the less staff there is, and the more likely it is that the right answer may have to be obtained from some outside source.

A headquarters staff group should act also as a clearing house for new ideas in the organization. It should have close contacts with similar staff groups on lower levels through its staff inspection and consulting functions. It should know where new ideas are being developed. It should make these ideas available to similar groups in other divisions, giving credit to the originating group. This can be done by encouraging direct cross-contacts, headquarters conferences, bulletins, training programs, and other means.

A headquarters group knows who the key men are in corresponding divisional groups. It knows who are strong and who are weak, who are developing and who have leveled off at their peak. It is usually consulted by the personnel division and the responsible administrative line executive when important transfers or promotions in its staff field are to be made at lower levels. It works also with the personnel division in the development of training programs for personnel in the operating divisions on lower levels, when the proposed training involves its field of specialization. It may assist the operating divisions in the installation of new procedures when such assistance is requested. It may temporarily supply the head of a staff group for its field of activity in a new operating division, drawing permanent personnel for subordinate positions from other divisions.

An important assignment is obviously the duty of assisting top management in the performance of its managerial functions. A head-

quarters staff group may be required to coördinate interdivisional thought if it is a technical staff function, or interdivisional action in the execution of plans if it is a coördinative staff function. Each headquarters staff group has its channel of communication with corresponding groups on lower levels. This channel parallels the primary chain of command. It should therefore be established by order of the top line executive. One reason for parallel channels is the necessity for direct, speedy communication that was noted above. Another is to prevent the responsible line executive in each subordinate major echelon from acting as a gate valve controlling the flow of ideas and information up and down through the organization. Otherwise, decentralization tends to give him the right of decision as to what information shall be forwarded in either direction through his office. The release of orders is a different case. Any orders for his organization should be issued from his office, unless exceptional conditions warrant centralization. The preparation and dissemination of administrative staff reports are an obvious duty.

The average person often wonders what managerial services are rendered by the "top brass" at corporate headquarters that justify the excellent salaries they receive. It is obvious that they can more than pay their way, provided that they are competent and are well-trained for their task. They have to be in most large corporations, or make way for someone else. The development of the headquarters staff organization is not an unmixed blessing, however. Headquarters staff executives may fail to coördinate proposals in advance with coördinate line executives and parallel staff executives in the lower echelons. They may fail to get the support of these executives as a result. On the other hand, a staff agency in an operating division may fail to coördinate important changes in organization structure, policy, and procedure with the parallel headquarters staff group. The divisional staff may feel that the headquarters staff "steals" good men and good ideas from them. Headquarters staff executives may report embarrassing divisional difficulties to top line executives before the divisional staff has had a reasonable opportunity to work out a solution. They may be accused, as a result, of attempting to build themselves up with top management. They may have the same human tendency as staff executives on lower levels to convert a leadership of ideas into a leadership of authority,

based on their headquarters prestige. They may occasionally acquire a feeling of superiority with reference to other personnel in the lower echelons. It may cost them their leadership of ideas when eventually they make an error in judgment, as everyone does. Other difficulties may develop that cause friction between headquarters and subordinate personnel. They can and must be avoided. An effective development of headquarters functions is a vital necessity in large organizations.[26]

Layering and Communications

The problem of "layering" tends to develop in large organizations. Layering may be defined as the condition in the control of organized activities in which the transmission of orders, instructions, and information through prescribed channels is required, but the intervening executives are unable to take any definitive action with respect to them. An example is a requirement that any outgoing communications, other than routine reports, must have the approval of the responsible executive in charge of the group in which they originate and of the line executive at each major level in the organization. The knowledge of and authority for a final decision concerning the problem may rest somewhere in corporate headquarters. The intervening executives may be able to make no constructive additions to the communication in such case, but they may be able to delay its progress if they feel that it may embarrass them in some way. It is evident that the advantages of staff parallelism and the contributions of headquarters staff groups may be vitiated when such a requirement is set up by divisional, departmental, or branch chief executives. Layering may be caused also by failure to make delegations of authority that are commensurate with corresponding delegations of responsibility. It may be due, of course, to controls that are too highly centralized. The remedy is the prescription of policies and procedures which require the direct forwarding of communications to the first office, either line

[26] Mooney and Reiley have summarized these functions as follows: "The departmental staff official at the home office of an industrial organization exercises a dual function. His first function is to inform or advise his line chief, either directly or through the form of coordinated staff service provided by a good committee system. The second is to inform and advise the staff services corresponding to his own in the lower links of the 'scalar chain.' "—*Ibid.*, p. 512.

or staff, that has the authority to take definitive action. The intervening line and staff executives should receive coördination copies of the communication simultaneously. The cause of layering may be a desire to protect one's position. It is more likely, however, that it is due to a misguided desire to protect the integrity of the line organization. Layering merely assures that the office of the responsible line executive is informed of all proposals affecting his organization, whether they originate inside or outside of it. There are other ways of doing this without destroying parallel lines or communication and slowing down the flow of information and orders. The principles governing the delegation of responsibility and authority afford the real protection for the integrity of the line.

Bureaucracy and Empire Building

There appears to be an inherent tendency in staff organization anywhere to develop vested interests and privileges. It has a tendency to defend these interests against the interests of the larger organization of which it is a part. This may be due to continuing preoccupation with a specialized field of activity and consequent exaggeration of the importance of its specialty. The staff executive tends sometimes to associate organization size with personal prestige. There may be a feeling that "rank is a function of command." There is a tendency, in consequence, to expand the particular staff function and organization to the limit that is possible within an established budget, or table of organization if there is one. This may be accompanied by "empire building." The latter condition develops when a strong executive is able to acquire functional jurisdiction in proportion to his aggressiveness, rather than in accordance with logical definitions and groupings of functions authorized by sound organizational directives. The result is usually some organizational instability, unbalance, and ineffectiveness. There may also be a tendency for established staff procedures to acquire the status of ritual, and to be regarded therefore as sacrosanct. Any questioning of their efficacy may be resented. There may also be a feeling of intellectual superiority among the particular staff members. It may be accompanied by the feeling that staff should have line authority over and control of line activities in their field. It is evident that the development of bureaucracy tends to reduce the

economy and effectiveness with which the entire organization operates. An aggravated condition would exist if all the above symptoms were present in a staff organization at a given time. The only remedy might be a complete "housecleaning" of the particular staff, beginning at the top. Such a radical and expensive procedure would be justified only in an extreme case. Otherwise, application of the principles of good staff organization, together with incentives that will reward staff executives for maximum results with a minimum expenditure of men, money, materials, and time, should supply adequate correctives.

Line and Staff Rotation

Line and staff provincialism can be corrected in some degree by rotation of executives between line and staff assignments. A reasonable rotation increases their flexibility and understanding of related line and staff problems. Greater understanding can be the basis of greater and more intelligent coöperation. What constitutes reasonable rotation depends on the size of the organization. It requires a determination of what and how much rotation is really necessary. Committee service, plus normal cross-contacts in the coöperative solution of joint problems, may be all that is necessary in a small organization. Definite tours of duty by junior line executives in staff jobs, and vice versa, may be desirable in some degree in large organizations. This has been accepted policy in military organization. It has some definite weaknesses, however. The assumption that any executive of a given grade should be able to assume responsibility for any activities anywhere within his major field of training and experience is likely to be fallacious in this day of specialization. An extreme application of this policy tends to produce jacks-of-all-trades who are masters of none.

Limitation of Staff Economy

Much of the criticism of staff by line is not justified, of course. It is forgotten, sometimes, that staff serves line. This relationship conditions the economy with which staff can operate. As Kimball noted, "Production, in general, depends upon more than one factor and usually it is possible to utilize the full capacity of any one factor only by permitting other factors to operate at lower capacity or

efficiency."[27] This statement may be modified as follows to apply to the economy of line and staff relations: It is usually necessary that secondary or staff functions operate with something less than maximum economy in order that the primary or line functions which they serve may operate with maximum economy and effectiveness. This is the Principle of the Limitation of Staff Economy. The expense of maintaining and operating a staff organization is "overhead." It should be held to the necessary minimum as closely as possible. A serious reduction in primary values created by the line organization may result, however, if the secondary values contributed by the staff organization are reduced too greatly. The determination of the necessary minimum requires, therefore, a determination of what staff services are really necessary. It may then be possible to eliminate safely those that are not. It may be possible also to supply necessary stand-by work that will keep the staff busy during slack periods. It may be possible in some instances to regularize staff work by reducing peaks. It may then be possible to reduce staff personnel. This cannot be done safely unless the implications of the principle are realized.

Assurance of Effective Staff Service

Criticism of staff may be unjustified also when staff does not have an adequate opportunity to function properly. There is sometimes a tendency of line executives to go ahead with the development and activation of their plans without consulting the staff executives who have a professional interest in the particular problem. The latter could probably make a substantial contribution to its solution, and are paid to do so. This tendency to ignore the staff organization may be due to a number of reasons. It may be due to a feeling that recourse to staff advice is a confession of weakness, to a feeling that time limitations make staff consultation impracticable, to a lack of understanding of the available staff services, to an absence of directives requiring consultation with cognizant staff offices, and to other causes. The problem is an ancient one. Mooney and Reiley refer to the Rule of St. Benedict. It dates from the early part of the sixth

[27] Dexter S. Kimball, *Industrial Economics*, p. 117. This statement and the Principle of the Limitation of Staff Economy are corollaries of the economic Principle of Proportionality.

century. It is intended to cope with this problem within the Benedictine Order.[28] Policies for handling this problem should rest on the Principle of Compulsory Staff Advice. It may be stated as follows: No decision on an important problem should be rendered or action taken by the responsible line executive until all who may be able to contribute significantly to the success of the mission through advice and assistance have had an opportunity to do so. The responsible line executive should be required by policy and procedure to consult with the cognizant staff executives before rendering a final decision and initiating action on important matters. The right of final decision and command must continue to rest with the responsible line executive, however, subject to review by higher authority. The exceptions to the principle are obvious. There may be conditions of extreme emergency that render the principle inoperable. The line executive still is accountable for the violation of it. There may also be problems that are so insignificant that the cost of staff consultation is more than the value of the staff contribution that can be made. The usual procedure is to specify what kinds of problems must be referred to which staff offices when they develop to a certain stage. What plans shall be developed initially by which staff groups, and what concurrences shall be obtained from which coördinate line and staff executives before presentation to higher line authority, may be established by directives. Such specifications should not be so detailed that an inflexible situation is created. An example in modern business is frequently the procedure for handling employee grievances. The policy is usually for the grievance to be settled amicably, promptly, and satisfactorily at the level of supervisory management if possible. Sometimes this is not possible. The steps in appealing the grievance may carry it up through various executive offices in the line organization. It may be possible to go from the president's office to impartial arbitration in some in-

[28] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 266. They state that "under this rule, the abbot of a Benedictine monastery must consult with elder monks before rendering decisions, even on minor matters. On matters of vital importance, he must consult everyone, even the youngest. The subordinates are not merely free to express their opinions. These opinions must be sought and solicited. This rule in no way abridges the line authority of the abbot in making the final decision. He is simply prohibited from making any decision until the rule is complied with."

stances. It is often required that the labor relations section of the company's personnel division be notified when a grievance is appealed above the jurisdiction of the departmental executive under whom it arose. A representative of the section must then be given an opportunity to sit in on further conferences, and given a voice in the discussions.

There can be no effective staff service unless the staff is able to give honest advice fearlessly. A dominant, dictatorial executive, possessing great native ability, can convert competent subordinates, both line and staff, into a group of "yes men." Such an executive may have the egotistical self-confidence that sometimes goes with great success. He may feel that people who do not agree with him must necessarily be incompetent, and take disciplinary action accordingly. Professionally qualified staff executives are usually able to get a job anywhere, and often will refuse to work under such conditions. Their loss may be a serious blow to the organization. There may be reprisals by coördinate line or staff executives as the result of an opinion by a staff executive that is inimical to their special interests. Such reprisals are not likely, of course, unless the top management is weak, preoccupied with other matters, or lacking in adequate top management staff. The Principle of Staff Independence is important, consequently, for these and other reasons. It may be stated as follows: The extent to which the responsible line executive receives competent, frank advice and assistance from staff subordinates depends on their ability to recommend or take whatever staff action is demanded by the situation without fear that conflicts of ideas between a staff executive and his line superior will jeopardize the former's position.[29] The development of staff independence is necessary, obviously. Staff advice and assistance are likely to be mediocre without it. It cannot be developed at the expense of line independence, however. Applications of the Princi-

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[29] Elliott Dunlap Smith has remarked that "the prospect of staff work under operating domination is not a happy one. Functionalization would lose most of its virtue. The scientific attitude would tend to be over-shadowed by expediency. Through the demand for the immediately practical, the resistance of tradition against fundamental developments would be almost insurmountable."—*The Operating Executive*, p. 4.

Mooney and Reiley discuss staff independence in connection with the organization of the Jesuits; see *Onward Industry*, pp. 268–269.

ple of Staff Independence are found in many modern business organizations. It is sometimes the policy, for example, that proposed demotions, transfers, and similar actions affecting the personal interests of designated key subordinates must be reviewed by the line superior of the executive to whom they report. This must be done before they are put into effect. A staff executive may be chairman ex officio of a committee for the consideration of problems within his field. Its membership may include line and staff executives from other organizational groups that are affected by the solutions of these problems. One objective of the committee is coördination of thinking. It is frequently the case that appointments to the committee and subsequent changes in its membership require the approval of the chairman's line superior. There has been a growing interest in career planning and follow-up in industry. There are many reasons for it, of course. One is to assure that good men are not stopped by violations of the Principle of Staff Independence.

CHAPTER 13

STAFF ORGANIZATION (*Continued*)

"Functional" Organization

It was suggested previously that there are only two basic forms of organization structure—line and staff. There are, of course, many possible variants of these basic forms. Some of them are typical of certain common organizational situations, and are significant for this reason. There are also various relationships between responsibility and authority that may be associated with these basic structural forms. One of them has been called "functional" organization by many writers.

The term is a misnomer in some respects. It refers usually to a condition in which a staff function has been brought into direct contact with the line and staff functions that it serves. This staff has received line authority by delegation. Such delegation gives it direct line control of action concerning problems that fall within its field of specialization. Peterson and Plowman have noted that a functional executive is "in a position to command as well as to advise within the limits of the special authority delegated to him."[1] The significant characteristic of this condition is, then, some delegation of line responsibility and authority to a staff organization. It might better be called a "completely functionalized" relationship for this reason. Any mechanical structure of relationships between groups of functions, and the responsibilities and authority that are associated with them, is necessarily functional in character.

[1] Elmore Peterson and E. G. Plowman, *Business Organization and Management*, p. 270.

Taylor's Shop Organization

The initial concept of "functional" organization may be credited to Frederick W. Taylor.[2] He felt that the conventional shop foreman in the industry of his day had so many and such varied duties that it was impossible for him to perform all of them efficiently. Taylor in consequence developed a shop organization intended to relieve this situation. It provided for eight "functional" foremen, as follows:

The Order-of-Work and Route Clerk planned the work, routed it through the shop, made schedules for various jobs, and determined the order of work.

The Instruction Card Clerk determined the tools to be used in performing an operation, the speeds and feeds of the machine selected for the operation, the best method of performing the operation, the proper time for its performance, and other matters of a similar nature. The information was recorded on an instruction card for use by the operator.

The Time and Cost Clerk secured the basic information for the cost and production records, issued and received the operator's job tickets, figured job costs, and performed similar functions.

The Gang Boss saw that work was moved up to the machine as required, that tools and auxiliary equipment were at hand, and that the finished work was moved promptly to the inspector. He performed similar preparatory services for production.

The Speed Boss was essentially a teacher who instructed the workman in the best method of performing the operation, as shown by the instruction card.

The Inspector determined the degree of conformity between quality standards for the work and the quality produced by the workman.

The Repair Boss was responsible for maintaining machinery and equipment in the shop in the proper operating condition.

The Disciplinarian performed certain functions of personnel management for the shop department. Certain other activities that are located today in a "personnel department" were carried on by Taylor's "planning department."

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[2] Frederick W. Taylor, *Shop Management*, pp. 96–109.

Each of the above functional foremen in each shop department reported to a functional supervisor. It was desirable, in Taylor's opinion, "that all of the bosses who are performing the same function should have their own foreman over them; . . . The functions of these over-foremen are two-fold. The first part of their work is to teach the bosses under them the exact nature of his duties, and at the start, also to nerve and brace them up to the point of insisting that the workmen shall carry out the orders exactly as specified on the instruction cards. . . . The second function of the over-foreman is to smooth out the difficulties which arise between the different types of bosses who in turn directly help the men."[3] The general structural form of the resulting shop organization is shown in Fig. 40.

Taylor's organizational plan has not been adopted by American industry for a number of reasons. It violated some important organizational principles. The advantages of specialization can be obtained, in most cases, without the development of complete functionalization. It was based on a differentiation of certain functions of operative management in the shop departments of concerns engaged in intermittent manufacturing. It could not be applied effectively to modern mass production on a continuous basis. Taylor's shop organization made some important contributions, nevertheless. It focused the attention of management students on the problem of staff functionalization. It contributed to the development of sound staff principles as a result. Important functions of many modern staff departments had their genesis in Taylor's planning department. Some of them are today in the cost department, the maintenance department, the personnel department, the production control department, and the departments for process planning that are known variously as the industrial engineering, manufacturing methods, process planning, or time-study department.

Organization Growth and Functional Organization

Our interest in functional organization is not entirely historical, however. Organization growth tends to result in increasing functional complexity. The latter is a result of an increasing need for specialization and division of labor. It is a natural and proper

[3] *Ibid.*, p. 108.

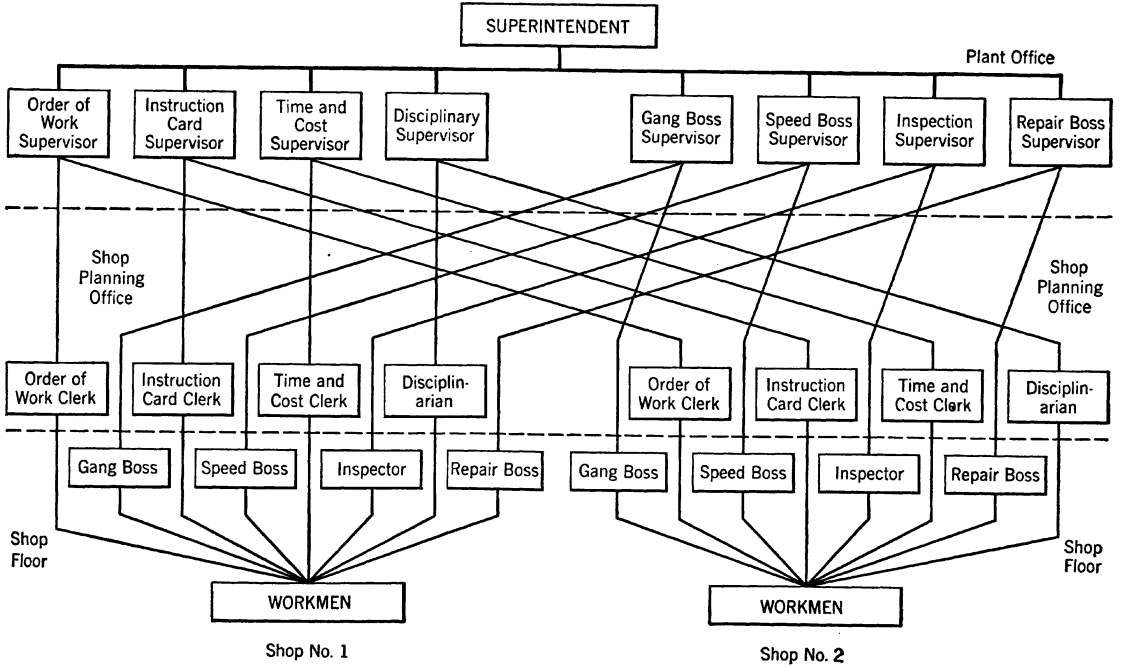

FIG. 40. Taylor's Shop Organization.

tendency to bring the specialists, and their specialized functions, into close contact with the functions that they serve. It makes their services more readily available. It should improve the quality of performance as a result. It appears logical to the specialist that he should be given control, within the field of his specialty, of the functions that he serves, in order that the organization may gain the full benefits of his specialized knowledge and ability. He must, of course, be given some measure of line authority over these functions if he is to control them in some degree. Some degree of complete functionalization necessarily develops if this argument is accepted by the line superior of the staff specialist.

Such a relationship may develop without the stimulus of organization growth. Various bureaucratic tendencies in staff organization have already been noted. The organization politician, whether line or staff, usually wants more authority to facilitate his personal advancement in the organization.

Mooney and Reiley have commented on the "mutability of collective staff functions," such as committees, councils, and similar groups, with particular reference to public and religious organizations. Such collective staff elements tend, in their opinion, to acquire line authority or to become merely ceremonial.[4] It is questioned that this is a principle in any major field of organization. The difficulties of any type of staff organization usually do not result from the lack of line authority. They are more likely to arise from the lack of functional definition, and from failure to apply properly the Principles of Staff Independence and Compulsory Staff Advice. A committee is basically a technical rather than a coördinative type of staff organization. It is poorly adapted to control responsibilities, as we shall see shortly.

There are, however, some situations in which a completely functionalized relationship may be desirable and necessary. Plant production control may be brought into direct contact with directly productive operations, with direct line control, under conditions of continuous manufacturing. There are some sound reasons for this, under these conditions. The same staff function must usually be decentralized under conditions of intermittent manufacturing. The reasons are found in the principles of decentralization. There are

[4] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 261.

also some examples of completely functionalized relationships in the field of staff quality control. There are frequently control laboratories on the plant floor in concerns manufacturing chemical or metallurgical products. The person in charge of such a control station is a technical staff executive or operative, depending on the size of the laboratory organization. He generally reports to a higher staff quality control executive, rather than to the supervisory executive in charge of the department in which the station is located. He may have final rights of decision concerning the operation of the process, insofar as it affects the maintenance of specified quality. If he does, it is obvious that a completely functionalized relationship has been established. It should be noted, however, that such staff work involves the routine performance of a facilitative function which requires a highly specialized knowledge. It facilitates, furthermore, performance of the managerial function of control, rather than planning. It should also be noted that such a completely functionalized condition relieves the departmental supervision of some of its responsibility for quality. It sets up a condition of dual accountability. Such a relationship is not usually created, therefore, except under conditions that make it imperative for the proper control of quality. Other examples of completely functionalized relationships could be given.

Functional Organization and Centralized Staff Control

Mooney and Reiley have noted that "undue centralization always tends to confer a measure of line authority on the staff. In its extreme forms, we may find this usurped authority running from the very top to the bottom of the organization. . . . With decentralization, this function returns to its true staff character."[5] The converse of the proposition is equally true. The development of completely functionalized relationships tends to result in centralized control. Such a relationship cannot exist unless a staff group is given a certain amount of line responsibility and authority that extends beyond its secondary chain of command. Every staff executive reports directly or indirectly to a higher line executive. The result is necessarily the development of some form and degree of centralized control.

[5] *Ibid.*, p. 68.

The relationships between line and staff responsibility and authority must change, of course, as a condition of "functional" staff organization develops. An attempt has been made in Fig. 41 to show graphically the changes that take place as the development progresses from "normal" staff relationships to "completely functionalized" relationships and centralized control. The distinction between these relationships has been expressed by Farquhar as follows: "The idea underlying the one is expert knowledge offered in an advisory capacity only; the idea of the other is expert knowledge coupled with authority to make that knowledge effective in practice."[6] The operative employee reports directly and solely to a supervisory line executive in Condition 1 in Fig. 41. The staff executive at the supervisory level merely facilitates and advises with respect to Function *X* of the operative's job. The supervisory executive and the coördinate staff executive report directly and solely to an intermediate line executive. Staff parallelism has developed between the intermediate and supervisory echelons. The relationships between the staff executives on these levels are also advisory and facilitative. The condition is one of decentralized operation and control. It has been called "normal" because it is most economical and effective in most instances, and it is therefore favored by most executives. In Condition 2, the staff executive at the supervisory level not only is in direct contact with Function *X*, but has been given line authority with respect to its performance. Hence he has control of it. The operative employee is accountable to this staff executive for its proper performance. He is, however, still accountable to the supervisory line executive for the proper performance of all the other functions and duties for which he has an operative responsibility. All other line and staff relationships remain as before. It is evident that a completely functionalized staff relationship has developed at the supervisory level with respect to Operative Function *X*. The tendency is, furthermore, to centralize control of this function in the office of the intermediate line executive. He must settle differences of opinion that cannot be resolved by normal cross-contacts, jurisdictional disputes that arise out of divided accountability, and other difficulties that no longer can be adjusted at the supervisory

[6] Henry H. Farquhar, in H. S. Person (ed.), *Scientific Management in American Industry*, p. 141.

level. In Condition 3 this "functional" relationship has been extended to include the staff executive on the intermediate level. This executive previously had only staff authority over staff executives in the same field on the supervisory level. He has now been given line authority over them. The staff executive at the supervisory level is

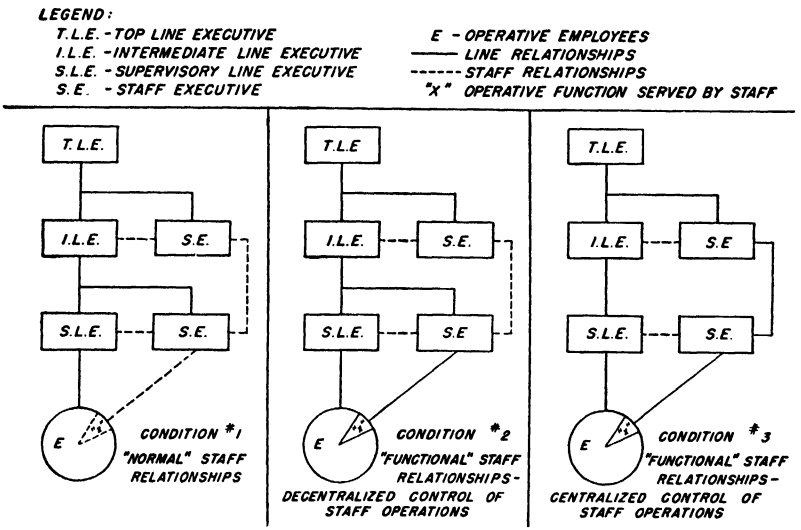

FIG. 41. Relationship of Responsibility, Authority, and Accountability.

now directly and solely accountable to his corresponding number on the intermediate level. All other line and staff relationships remain as in Condition 2. The effect is obviously to centralize control of Function *X* in the office of the top line executive, at least insofar as major operating problems affecting the function are concerned.

Centralized control of staff operations is possible without the development of a completely functionalized relationship. It can be illustrated also by Condition 3. This condition would exist if the line between Function *X* and the staff executive at the supervisory level were dotted, indicating a normal advisory and facilitative relationship. The condition also can be the cause of difficult operating and morale problems. The principal examples of this relationship that the writer has observed have been in the field of

motion and time study. There is no reason, probably, why it should be peculiar to this function. A completely functionalized relationship can take place above the supervisory level, of course. Taylor's shop organization shown in Fig. 40 is an example of this.

Advantages of Functional Organization

Most students of business organization do not advocate the development of completely functionalized relationships, except in a few limited and special circumstances. The proponents of functional organization usually are the staff executives who want more authority. The desire may be entirely honest, stemming from the fact that they have a highly professional knowledge of a specialized field but inadequate knowledge and understanding of organization. The arguments in favor of functional organization should be understood, however, since there are some situations in which it is desirable.

Functional organization represents, in theory, the ultimate in managerial staff specialization. Operative functions are performed under the direct supervision of highly specialized experts. They should be performed with greater economy and effectiveness. The minimum number of different managerial functions can be assigned to each staff expert. Men of average executive ability should give superior executive performance because of their limited but highly specialized background, training, and experience. The cost of a larger number of specialists should therefore be offset by a lower individual salary cost. This depends, however, on the extent to which operative functions and performance factors can be standardized. It may be possible, as a result of functional organization and standardized operating conditions, to economize by using a less expensive grade of operative labor.[7] This has happened to some extent in industries engaged in continuous manufacturing.

Disadvantages of Functional Organization

There are, however, some offsetting disadvantages that may be quite serious. The effectiveness of executive leadership, for example, may be decreased, rather than increased, by the development of completely functionalized relationships. The effect of increasing

[7] F. W. Taylor, *Shop Management*, p. 105.

specialization, coupled with centralized control, is to cause a loss of executive contact with the practical requirements of functions at the operative level. The responsible executive at the point of centralized control must rely on system and reports to a greater extent than is necessary when there is decentralized control. He may suffer a serious loss of business perspective because of the pressure of operating detail. This is hard to avoid when controls are highly centralized. There is necessarily a diffusion of executive leadership with the development of completely functionalized relationships. The primary line organization disappears gradually. This was illustrated in Fig. 40. There could be no primary line in a completely functionalized organization. Every executive would be a specialist and would be clothed with primary line authority with respect to primary operations involving his specialty. The burden on the top administrative executive tends to increase as the primary line organization disappears. He would be the only remaining executive who could make decisions for the organization as a whole, if complete functionalization ever reached its ultimate development. This load may be increased by deterioration of the quality of executive decisions at subordinate levels. These decisions may become the most expedient, rather than the most intelligent, compromises of narrow-visioned technical specialists.

Complete functionalization, once started, has a tendency to exceed the point of diminishing returns. Continued specialization causes the specialist to magnify unduly the importance of his specialty. He tends to insist on more and more authority to effectuate his plans and ideas, and to believe sincerely that he is right in so doing. The weaker and less able line executives in the lower echelons may relinquish more of their functions, responsibilities, and authority than they should. They cannot stand up to an aggressive staff executive who has some line authority as well as the prestige of position and specialized knowledge. The weaker line executives may also take too literally the dictum that a staff is something on which to lean.[8]

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[8] As Webster Robinson said: "The fact that even the relatively unimportant divisions are directed by experts leads each department to exaggerate its own importance, and places a premium on departmental loyalty and exclusiveness. . . . Over-specialized brains are too often individualistic. Their self satisfaction

Completely functionalized staff relationships tend to destroy single accountability. The greater the degree of functionalization, the more difficult it is to make clear-cut, concise, accurate distinctions between the objectives, functions, responsibilities, and authority of the functional experts. Operative functions are related to other functions that are complementary to them in the completion of specific projects. They are also related to similar functions with which they have been grouped to form organizational elements. The usual difficulties of divided accountability tend to result: a tendency to shift responsibility for results by claiming conflicting instructions from higher authorities, conflicts of authority between higher functional executives, loss of discipline, actual conflicts of orders and instructions, and many others.

A highly functionalized organization may suffer from poor coordination of action as well as thought. It is difficult, in fact, to understand how a coördinative staff agency could operate effectively in an executive organization that consisted chiefly of technical staff specialists, each of whom had line authority with respect to operations involving his specialty. There would, of course, be no line organization. The difficulties involved in integrating the decisions and orders of many functional experts would be very great. The development of centralized controls with complete functionalization would reduce the speed of final decision in large organizations. It would be more difficult to control emergency situations as a result. It would be necessary to set up a complementary form of committee organization to expedite the business of obtaining a meeting of minds. This would add to the difficulty of coördinating action. The result would be probably a degree of organizational inertia that could not be overcome by any coördinative staff executive. There would be, in consequence, a further increase in the executive load of the top administrative executives.[9] The develop-

builds departmental conceit and organization discord."—*Fundamentals of Business Organization,* pp. 58–59.

[9] Oliver Sheldon has said: "Functional management, therefore, holds no guarantee that without the coördination provided by the manufacturing manager the activities of the various functions will not be mutually conflicting."—*The Philosophy of Management,* p. 242.

Certain remarks of L. Urwick imply that the larger the organization, the more physical distances operate against the development of complete functionalization. See *Organization as a Technical Problem,* pp. 3, 16.

ment of completely functionalized staff relationships in large organizations tends to violate the principles of control for these and other reasons.

Complete functionalization tends to diminish morale as a result of these effects. Conflicts between higher functional executives block the efforts of subordinates and are discouraging. Such conflicts result in loss of respect for executive leadership. Increasing staff specialization may circumscribe opportunities for self-development and advancement for the rank and file. This also may be discouraging to the more ambitious. Increasing reliance on standard procedure and formal staff coördination stultifies self-coördination and the exercise of initiative. It becomes more difficult to develop and maintain loyalty. It is easier for the average person to be loyal to an individual than to an organization. This loyalty is far easier than loyalty to a set of abstract ideas, unless he has been completely indoctrinated with them. The diffusion of leadership in functional organization, with the breakdown of the primary line organization, tends to break down morale. The individual no longer has any personal executive leader to whom he is accountable and who personifies the organization. He has no one to whom he can attach his organizational loyalties. The best proof of this is the condition that is found frequently in large industrial organizations. They pay good wages and salaries, their working conditions usually are excellent, and they hold their working hours to the standard work week as closely as possible. They have highly developed staffs necessarily, but they do not have them operate under conditions of complete functionalization, except in special circumstances. Organizational morale, however, may not be as good as in some small concerns where wages, hours, and working conditions are poor. There is often a high degree of personal leadership in the latter concerns, and a minimum of staff. Further evidence is the increasing attention that large concerns are giving to supervisory management. Increasing functional differentiation and staff specialization mean necessarily an increasing subdivision of organizational objectives, as well as a diffusion of leadership. It becomes more difficult to see the significant relationships between the service objectives of the organization and the personal objectives of the individual. There is a tendency, in consequence, to put personal above organizational

objectives. The condition of organization that develops seems to be characteristic of many modern business organizations: Everyone is interested in the well-being of the organization, but only after he gets what he wants. It is evident that the development of completely functionalized relationships does not promote the development of good morale.

Conditions Governing the Development of "Functional" Organization

Situations have been noted above in which a limited "functional" organization is necessary. The following are, in the opinion of the writer, the principal controlling considerations in such cases:

1. It should be possible to differentiate distinctly the functions that are to be subjected to line control by a staff group. It is necessary to have sharp, clean-cut functional definition and specification to minimize the difficulties that were mentioned above. The broken lines enclosing Function *X* in Condition 1, Fig. 41, indicate that this condition could not be met.

2. The group that will be affected by the development should be thoroughly indoctrinated with the necessity for it, and with the controlling organizational concepts.

3. Line and staff executive personnel should be selected with regard for their compatibility and ability to coöperate with one another. The adjustment of their activities through cross-contacts is important.

4. The superior line administrative executive must take prompt disciplinary action when individuals take advantage of the weaker control situation that tends to develop.

It was noted previously that the principle of marginal utility applies to functionalization as well as to other economic activities. There is a point beyond which the benefits of increasing functionalization are more than offset by the losses that result. It is a safe rule obviously that the minimum degree of functionalization which will maintain satisfactory competitive economy and effectiveness is best.

Committee Organization

The committee is a common type of organizational element—so much so that some students of business regard it as one of the basic business forms. There are, however, only two basic structural forms:

line and staff. The committee is a distinct type of staff organization. It is capable of making important contributions to organizational effectiveness when it is used properly. When it is used improperly, it can be an expensive, time-consuming device that may not pay its way.

A committee is a group of individuals who meet for the purpose of effecting an integration of ideas concerning a solution for some problem. It may or may not participate directly in developing a solution for the problem. It is a device that is set up usually to assist a responsible line executive in the performance of his managerial function of creative planning for the work of others. It is attached to the line organization that he commands. Any differentiation and grouping of a committee's functions by means of subcommittees and a secretariat can lead only to specialization in some phase of planning, or in some service of facilitation that is associated with it. It cannot lead directly to specialization in some form of primary operative performance. It is therefore a type of technical staff organization.

We said earlier that executive duties have to do more and more with the function of creative planning as we progress from the first level of supervisory management toward the level of top administrative management. Conversely, the emphasis is more and more on operative control as we go from top administrative management to the level of minor operative management. It was also noted that the differentiation and development of staff functions increase with organization size, in accordance with the Law of Functional Growth. This tends to take place in geometric progression. The importance and effectiveness of the committee, as a managerial device, tend to increase with organizational size and the echelon on which it serves, as would be expected. It tends also to be more important as an administrative management device than as a device for operative staff management.

The board of directors heads the business organization in its corporate form. It has the ultimate responsibility and authority for the operation of the business, both line and staff, since it represents ownership. It is obviously a committee. The differences between the board and the committees of the organization will be considered shortly.

Committee Functions and Classifications

The basic staff functions are investigation, analysis, information, interpretation, recommendation, coördination, and facilitation. The functions of a committee usually constitute a specialized development of the basic staff functions. Committees may be classified in accordance with these functions as:

Investigational and analytical.
Educational.
Legislative.
Integrative.
Judicial.

There are frequently fact-finding committees that examine existing records, interrogate members of the organization, and gather facts by other means. Such a committee may use other staff organizations to do the necessary research work and to analyze and interpret whatever data are collected. It may, on the other hand, have its own secretariat for this purpose. This is often true, for example, in the case of important headquarters committees. The committee considers the facts, analyses, and interpretations that are submitted to it. It renders a report of the facts and its conclusions to higher line authority, with or without recommendations as directed.

There are also committees whose functions are chiefly educational. Their chief purpose may be to acquaint subordinates with the ideas, plans, policies, and methods of their superiors. The objective may be greater understanding and acceptance of these decisions on the part of the subordinates who are immediately responsible for their execution. Such a committee is usually a device to facilitate performance of the function of direction and to reduce the executive burden that it entails. These subordinates may be expected to ask questions and express opinions. The purpose of the committee meeting is as stated, however.

The legislative type of committee is one whose chief purpose is to assist the superior executive in the development of plans and policies. Its work may include some or all of the functions of the preceding types of committees. The joint nature of committee service is such that the committee members cannot readily collect, analyze,

and interpret the information that is required for the committee's work. The information must be collected and processed for the committee. A committee member may, of course, be the head of a staff department that provides certain investigational and analytical services for the committee. The committee's purpose is to advise a superior executive concerning the objectives, policies, organizational relationships, methods, physical and human resources, and

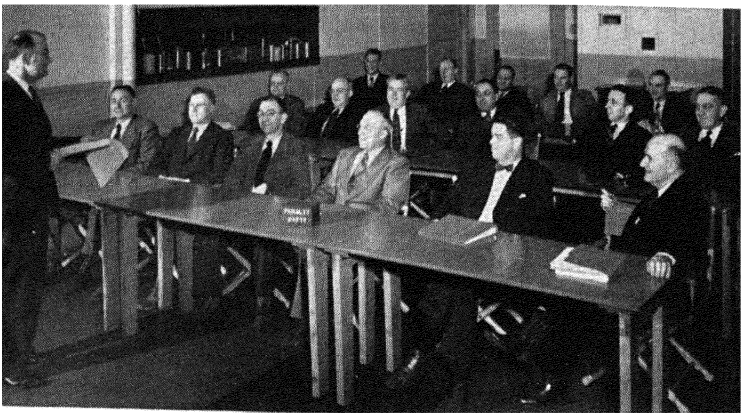

FIG. 42. A Weekly Conference of Manufacturing Executives. (Courtesy, Paul Utnehmer and The Babcock & Wilcox Tube Company.)

other factors that limit the accomplishment of a particular mission. It may make a recommendation of its own for accomplishing the mission. It may merely concur or refuse to concur in a plan that has been proposed by some staff department. The quality of planning is improved, in either case, when problems involve diverse but related functions. The improvement is the result of the integration of the backgrounds, training, and experiences of the executives who contribute to the solution of these problems through the joint action of the committee. Such joint action involves an application of the Principle of Participation. The committee usually does not have any authority to order the execution of its plans, or those in which it concurs. These plans are finally approved or disapproved by a higher line authority. The experience of participating in their formulation leads to a more intelligent understanding of their necessity and requirements, nevertheless. The participants develop

a proprietary interest in the plan. The result tends to be a more whole-hearted acceptance and intelligent execution of it. This experience of participation also has great training value for subordinate executives. It is one of the important values in McCormick's "multiple-management" plan.[10]

The findings and recommendations of a legislative type of committee are not likely to be ignored by the responsible line executive or other coördinate executives. The committee may not have line authority, but it may have great prestige. This depends on the quality of its membership, as well as the support that it gets from the executive to whom it reports. It is an instrument of the superior executive who appoints it. Its recommendations acquire line authority when he approves them. The directives that activate them, of course, have the effect of law within his organization, subject to review by higher line authority.

There may be committees whose objectives are integrative rather than investigational, educational, or legislative. Such a committee may have collateral effects in all these fields. Its principal purpose, however, is the achieving of a meeting of minds and an integration of ideas concerning the requirements for joint action in a particular situation. The latter may result from a shift in conditions affecting the execution of a plan that was approved previously. Plant executive committees are frequently a good example of this type. The integrative process sets up a basis of intelligent self-coördination for an effective handling of the situation.

A committee whose functions are chiefly judicial is one whose chief purpose is the interpretation of an established plan or policy with a view to determining the propriety of a past or proposed action with respect to it. An example is the action of a budget committee in deciding whether a proposed use of funds under a given budget appropriation is or is not in conformity with the intent of the appropriation. The decision is, of course, recommendatory. Grievance committees, suggestion committees, and safety committees are other committees whose functions may be chiefly judicial.

Committees may be classified on other bases, as well as with respect to their functions. They may for example be classified on the basis of the level on which they serve. There are departmental com-

[10] Charles P. McCormick, *Multiple Management.*

mittees, divisional committees, and corporate committees. They may be classified with respect to the problems that they handle. An example is a product committee in a manufacturing organization. They may be classified with respect to their status, such as temporary or permanent committees. Other bases for classification may be used. Any such classification tends to bring out the characteristics and requirements for effective committee service. It aids, therefore, in the design of committee organization, because a committee can combine a number of the functions and characteristics noted above. It is obvious that the plan for the committee's organization and operation should be adjusted to the requirements of its objectives.

The principal contributions of a committee have to do with the coördination of thought within the organization, rather than action. It is not an effective instrument for the control of current operations. Certain military procurement commands had product committees during World War II that attempted to coördinate action between prime contractors with respect to the execution of a given product manufacturing program. The practice fortunately was not general. The writer observed, in one instance at least, that such a committee contributed materially to the failure of its program. The reasons why a committee is a poor control device will become apparent when the disadvantages of committee action are reviewed. It should be noted, however, that effective but limited participation in operative control is possible in the case of committees whose functions are largely integrative. This participation takes place chiefly in connection with the phase of control that has to do with corrective action. A departmental or divisional committee can be called together quickly, when an emergency arises, to confer with the departmental or divisional chief concerning the correction of the situation. The close proximity of the committee members makes them readily available. The committee acts in an advisory capacity, of course, since the chief cannot evade his responsibility by shifting it to his subordinates and associates on the committee. It is likely to be more effective, however, in the administrative phases of corrective action than in the operative phases. The latter are concerned with the tendency of actual results to deviate from planned performance in the execution of an operative project. The former evaluates these and other related tendencies over a period of time with

respect to planned group action. It supplies a link between control and subsequent creative planning in so doing. A committee, is nevertheless, a technical staff rather than a coördinative staff type.

Committee Structure and Service

There are a number of considerations that affect committee structure and service. The principal considerations have to do with the selection of committee members, their points of view, effective committee size, continuity of membership, structure of the committee, and the leadership of its chairman. The principal basis for the selection of committee members usually is function. There is always a reasonable presumption that executives whose functions enter into or are affected by the solution of the problem should have the background, training, and experience that are required for solving their phase of the problem. It is obvious that the member should have whatever intelligence is required for such a solution, together with the ability to engage in objective thinking. His personality also may be a consideration, since compatibility is an important factor in coöperation that involves close personal contacts. The points of view and attitudes of committee members may be quite important. They have an obligation to consider jointly the particular problem before them from the point of view of the best interests of the organization as a whole. They should not be selected to represent personal and departmental interests. They are likely to do so, unless they are well indoctrinated with the idea of organizational service and unless their deliberations are evaluated for the information of higher authority with respect to this concept. Executives are no more selfish than political, military, labor, or other leaders. They are also no less selfish. They behave, in other words, like human beings.

It is not necessary that the members of a committee have personal knowledge of all the facts and principles required for the accomplishment of its assignment. It can be implemented with the necessary information by other staff sources. It is necessary merely that the committee be composed of individuals whose combined background, training, and experience assure competent, balanced examination of this information and consequent sound decisions on

the basis of it. There is a danger that a committee may be made too large in an effort to comply with this requirement. Large committees tend to be unwieldy, time-consuming bodies whose inefficiencies more than cancel their advantages. The most effective size calls for the fewest number of members whose combined knowledge, experience, and ability are sufficient to produce a satisfactory solution of the problem. Experience suggests that this number usually ranges from three to nine members, when the functions of the committee are deliberative.[11] This range bears a striking similarity to the normal span of executive supervision. This may be due to the fact that the psychological problem of span of attention enters into both of them.

Committee effectiveness is also a function of committee experience. Group reactions and individual reactions are not usually the same. The thinking of the individual committee member may be distorted by group influence. This is less likely to take place with increasing length of committee service. Effective service depends partially on knowledge of the personal characteristics and idiosyncrasies of other committee members. Some of them may have hobbies that they like to ride or notions in which they believe strongly. Account must be taken of them, whether they are right or wrong. A chairman's effectiveness may depend largely on his knowledge of his committee members. Individual resilience and flexibility of committee members are factors in the integration of ideas. The accomplishment of such an integration is often an important purpose of a committee. These qualities of resilience and flexibility are more likely to be found in experienced than in inexperienced members. All of this argues for long tenures of committee appointments. Committee action may become traditional and stereotyped, on the other hand, unless its viewpoint is rejuvenated occasionally by the introduction of new blood. Committee members may agree too well with one another. Their thinking becomes crystallized along certain lines. The answer often is overlapping tenures of individual committee members for a fixed period. The size of the organization may

[11] Examples of authoritative opinions on this subject may be found in the following references: W. B. Cornell, *Industrial Organization and Management in Industry and Business;* H. P. Dutton, *Principles of Organization;* W. R. Spriegel and Richard Lansburgh, *Industrial Management.*

be a factor governing reappointments. A small organization may not have a wealth of potential committee members from which to draw.

The structure of a committee should be as simple and inexpensive as possible. It is a supplementary form of organization. It contains the seeds of bureaucracy within itself, like any other form of staff organization. It may attempt to extend unduly the scope of its activities and to acquire line authority. This is more likely to be the case when it is headed by an ambitious chairman. A committee should not be permitted to perform functions that can be performed by established departments or other organizational elements for which an individual can be held accountable. Conformity with this principle tends to hold committee activities to the basic committee functions that were noted above. The usual committee organization consists of a chairman, a secretary, and the remaining committee members. It may have its own secretariat, operating under the committee's secretary. This is not usually the case in American business organization, except occasionally in large corporations. Any extensive technical staff service usually is supplied by the regular technical staff departments, or sometimes by an outside consultant in the case of a major staff study. The chairman of the committee may be the line or staff executive who is responsible for the solution of problems in a given field. Such ex-officio appointment gives him an opportunity to direct the discussion along the lines that are likely to be most fruitful. He benefits from the interplay of ideas that results from committee discussions. He has an opportunity, furthermore, to appraise the ability of the individual committee members and the quality of their judgment.

There are some offsetting disadvantages, however. A policy that makes the responsible executive chairman an ex-officio officer may defeat the objective of conserving his time. Furthermore, his presence as chairman may stop free, frank discussion. This may, of course, be the fault of the executive if he is a dictatorial type of individual who is highly impressed with his omniscience. Any intimation of his point of view may prejudice subsequent committee discussion and decision, regardless of his attitude, because of his prestige. The result may be merely an echo of his viewpoint, rather than independent advice. This depends in part on the caliber of

the committee members, as well as the principal executive. Men who have confidence in themselves and their professional ability are not usually "yes men." They can generally get a job elsewhere without too much difficulty. They make their own economic security. A solution of this problem of free committee discussion may be found in appointing to the chairmanship a staff subordinate of the responsible line executive. In the case of a legislative type of committee, he would be the technical staff subordinate who has the greatest professional interest in the solution of the problem. This staff executive would report to the line superior both as the chairman of the committee and as the head of the staff department that has the greatest responsibility for a leadership of ideas in the field in which the particular problem falls. The committee may be headed by the line superior's coördinative staff executive, or even by his second-in-command, when its functions are chiefly educational or integrative. Original, independent thinking is less necessary.

Committee Technique

The committee type of staff organization has been severely criticized by many students of management. Some of the critics have been highly successful executives. Use of the committee persists because it can make some contributions to organizational effectiveness that are hard to secure by other organizational means. It may be advisable, therefore, to look briefly at the problem of planning, organizing, and controlling the committee's work to get the maximum effectiveness that is practicable.

A few simple rules are generally recognized as sound. They are applicable to the operations of most committees. Notice of committee meetings, for example, should be given sufficiently in advance to make possible a full attendance. Most executives have plenty to do. Committee service interferes less with their regular duties when they have adequate time to plan their work with reference to a meeting date. The objectives and agenda of the meeting should be definitely determined in advance and stated in the meeting notice. The meeting may be a waste of time otherwise, since the members have had no opportunity to prepare for a discussion of the problem. It may be desirable to send a coördination copy of the notice and

agenda to the office of the executive to whom the committee reports. It gives him an opportunity to indicate any additional points that should be discussed, and to attend the meeting if he desires.

The committee's recommendation may require and be based on a considerable mass of data. This information should be collected and summarized in advance under the general direction of the secretary. The actual work of investigating, collecting, and summarizing may be done for the committee by one or more technical staff departments. The secretary may merely coördinate the collecting and summarizing work with the needs of the committee. A copy of the summarized data should be forwarded, of course, with the agenda and notice of the meeting. Advance coördination of the committee members by the secretary may make it possible to locate the points of agreement and disagreement in advance of the meeting. Much time can be saved by confining discussions to points of difference. Usually much time is wasted, and issues are confused, by discussions of points on which there was a high degree of agreement in the first place. The extent to which preparations for a committee meeting should be made varies directly with the magnitude of the problem that the committee is considering. It does not vary directly with the degree of emergency involved, since a committee is not designed to handle emergencies. It is possible to call an immediate meeting, but relieving an emergency of any magnitude usually requires personal direction by a line executive.

It is the responsibility of the chairman to see that the discussion is confined to the agenda. He should confine it to the areas of difference that require an integration of ideas. It happens sometimes that digressions by fuzzy-minded, talky individuals defeat the accomplishment of the committee's objectives. The chairman should not, of course, restrict discussion at the expense of a full, free, frank exchange of pertinent ideas. The discussion should avoid unnecessary detail. The development of detailed plans based on approved objectives, policies, and programs is a responsibility of technical staff departments. A heated discussion of details is usually of interest chiefly to a few members of the committee who are conducting it. It wastes valuable executive time of the remaining committee members. It may take the committee into by-paths that do not lead directly to the objectives of the particular problem. A phase of the

problem that involves considerable detail should be referred to a subcommittee, or better to the proper technical staff executive, with instructions to report findings to the committee. It is also the responsibility of the chairman to prevent the meeting being dominated by a member who has a dominant, pugnacious personality and a well-developed ego. It is possible for such a person to stop the presentation of ideas by other members by frequent interruptions and other tactics. His objective is usually the committee's adoption of his own ideas. He prevents it from performing its basic function of coördinating thought, if he is successful. The chairman should deter members from taking definite stands on important points under discussion before all the evidence is in. Otherwise, it may be difficult for the committee to perform its basic function again. Some people have a tendency to defend their position, once they have taken it, regardless of the facts. Coördination of thought depends on the retention of an open mind. There are other principles underlying the control of committee work. Some of them will become evident when the advantages and disadvantages of committee organization are considered shortly. Most of them emphasize the importance of the chaiman's position as leader. A committee, like most organizational groups, is not likely to be much better than its leadership.

One finds occasionally a standing committee that does not receive prompt, adequate reports of the results achieved by the adoption and use of its recommendations. It is more common to find that it receives inadequate statements—or none at all—from higher line authority as to why its recommendations are not adopted. Interest in the committee's work begins to wane. Attendance at meetings begins to dwindle. The performance of its functions tends to become perfunctory. Provision for reporting to it the action taken on recommendations and the results achieved does not in itself confer any line authority on the committee, or place it in a position to control the action directly. Such reports supply a basis for further studies and recommendations by the committee. They enable it to perform a judicial function of policy interpretation, when this is part of its assigned duty. Ordinary business courtesy requires the superior line executive to return a series of recommendations to the originating committee when he feels that he cannot approve them.

It should be accompanied by a frank, complete statement of his reasons for disapproval.

A committee is an expensive type of organizational element. The labor cost of the committee's work is the sum of the costs of the time spent by each member in meetings and on committee work, plus the time of the staff executives and operatives who may work directly or indirectly for the committee. The members usually are executives. Their time is expensive. The higher the level on which the committee serves, the more expensive it is likely to be. The bill for an important series of recommendations can be sizable. The cost may, however, be quite worth while. The size of the bill may not be realized, since the members' time is generally charged to departmental payrolls. It is desirable, nevertheless, to conserve the committee's time.

Only the problems should be presented to it that require an integration of ideas for their effective solution. It is desirable to assign problems to particular staff executives, if they can work out satisfactory solutions with the assistance of technical staff coördination. The staff executive can be held accountable for the discharge of a definite staff responsibility. It is hard to hold a committee accountable for anything. The committee can still perform its proper functions of coördinating thought and integrating ideas with respect to the particular problem. It is obvious that no problems should be presented to a committee unless their importance is commensurate with the value of its members' time. Stated meetings of the committee may be desirable for a number of reasons. But the frequency of such meetings should be in conformity with the above considerations.

Advantages of Committee Action

Some of the advantages of committee action have already been stated or implied. It should be necessary only to summarize them briefly. It has been noted, for example, that a committee can facilitate the dissemination of information and an integration of ideas. It may save time in so doing, if it is properly organized.[12] It may

[12] Henri Fayol commented on a committee's time-saving possibilities as follows: "In a conference which is attended by his principal direct subordinates, a manager can explain a program, get each man's opinion, make a decision, and

act as a deterrent to hasty action because of the time required to achieve an integration of ideas. Such an integration in a legislative type of committee should improve the quality of planning. This assumes that the committee membership includes the best brains in the organization in the particular field of the committee's activities. A committee may be used to stop unilateral action by line or staff executives, and to avoid the consequent dangers thereof, through the application of the Principle of Compulsory Staff Advice. It may promote a voluntary acceptance and interested execution of plans and policies, since it involves an application of the Principle of Participation.

Committee action involves more than an integration of old ideas. It tends to produce new ones. The committee process involves the combination of previous knowledge and experience of its members, and the relation of this knowledge and experience to the facts concerning whatever problem has been brought before it. The committee process is, then, a variant of the basic process for developing and combining ideas into plans. Committee action should carry greater assurance than individual action that problems will be solved with primary regard for the interests of the organization as a whole, rather than for the interests of particular members or groups. This is true only if the committee members have been completely indoctrinated with the concept that the interests of the organization must be superior to the interests of any element of it. This concept is likely to require support initially by the prestige and authority of the superior line executive. It is difficult for the organization politician to operate successfully, however, when this concept is so established. Such a concept sets up certain ethical criteria against which his acts can be evaluated.[13] It is evident that

be sure that his orders are understood, and that each man knows what part he is to play in carrying them out; all this can be done in a tenth of the time that would have been needed to reach the same result without a conference."—*Industrial and General Administration*, p. 72.

[13] The comments of two experienced successful manufacturing executives are interesting in this connection: "It is common practice for individuals to endeavor to sell their projects to the key men of an organization by the 'one-at-a-time' method. If such an individual is efficient in personal salesmanship, he may use different arguments on the various men in accordance with their respective temperaments. In this manner, a decision may be made which may prove costly to the business. If, however, the same individual must present his proposition to

committee service gives junior executives excellent experience, regardless of how well the committee functions. It is sometimes as helpful to see how things should not be done as it is to see how they should, provided that one is not unduly impressed by rank and title.

A committee is a staff organization, as we have seen. All these advantages should add up, therefore, to one major advantage: Well-balanced, competent advice for the superior line executive.

Disadvantages of Committee Action

These advantages of committee action are impressive. One might wonder why each of the principal divisions of a business is not headed by a committee rather than a chief executive, why committees cannot be line rather than staff. The advantages of the committee type of organization account for its widespread use in American business. The objectives and functions of the committee account for its staff nature. Its disadvantages indicate why its use is not more widespread.

The committee's advice may represent merely a compromise achieved by a bargaining process, rather than an integration of the best ideas of its members. This is more likely to be true when their first consideration is personal or departmental interests, rather than the best interests of the entire organization. Furthermore, group thinking and individual thinking are not always alike. The former is more likely to be influenced by emotionalism. Some people conform too readily to majority opinion because they lack the courage of their convictions. It is possible, in consequence, for an individual with an attractive, forceful personality and verbal facility to "stampede" a meeting into taking action that would not be taken if each member arrived at a decision individually. The possibility of such a result apparently tends to increase with the size of the committee. Decisions are executed, however, under the direction of individual executives. It happens, sometimes, that a recommendation which gets 100 percent support in a committee meeting gets considerably less than 100 percent support in execution, and may be unsuccessful for this reason.

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a committee, there is little chance that he will or can obtain agreement on a project designed for his self-interest, or that he can 'sell' an unsound idea to all of the members with the same arguments."—T. W. Frech and Zay Jeffries, *Business Ideals, Principles and Policies*, p. 55.

We have noted that a committee is a technical rather than a coordinative type of staff organization. It is not suited to the control of action. Too much time is required to achieve a meeting of minds. Action is progressing in the meantime, and possibly in the wrong direction. Committee service is intermittent. Its members may not be available when an emergency decision is required. The writer knows of one instance in which the executive committee of a corporation sat with its president daily and almost continuously. Controls were highly centralized for a concern whose operations were widely dispersed geographically. The long-distance toll charges, some of them international, should have been helpful to the communications industry. Most concerns would regard this arrangement as too costly. There are ways of controlling operations that are much less expensive. Any such continuous committee service means, of course, that the operations of important divisions must be directed largely by seconds-in-command. Committee action tends to diffuse responsibility for results unless its recommendations are approved and activated by orders of a superior line executive. No single committee member, including the chairman, could be held accountable for results if it were given authority to issue orders. About all that could justly be done, if the orders failed to produce results, would be to discharge the committee and hope that the next one would do better. There are other reasons why staff coördination of action by a committee is usually unsatisfactory.

It is possible also that a committee's advice may be a result of domination, rather than compromise or integration. It was noted previously that certain members often dominate the deliberations of a committee. The resulting conclusions may represent only the thinking of the dominant individuals. This effect is inevitable in some degree, since committee members are not equal in status, mental powers, or strength of personality. It is the job of the chairman to minimize these differences without stultifying superior abilities. It might be more desirable to let the superior individuals make the decision in the first place, except that the benefits of participation would be lost. Moreover, a committee may be dominated by a dominant, aggressive, and egotistical line superior to whom it reports. He may disregard the Principle of Staff Independence. The committee becomes, in such a case, merely a rubber stamp for the su-

perior's ideas. He may get support for his ideas, but it is not likely to be voluntary or 100 percent. There is also the difficulty that many committee decisions are made by a bare majority. Some people feel that any moral obligation to conform to a group decision varies directly with the size of the approving majority. The minority may feel that the majority is just too dull to appreciate the cogency of its arguments. A fiat decision in the first place by a superior line executive in whom the minority has confidence might get more voluntary, enthusiastic support.

The slow, cumbersome, expensive nature of committee action and the consequent interference with normal executive duties have been noted by many authorities.[14] It is sometimes argued that a committee is a more democratic form of organization. It is neither more nor less democratic than any other form, for reasons given previously. It may, in fact, be a cloak for undemocratic action and an instrument for an unscrupulous disregard for minority rights. This has been demonstrated in the field of political organization.

The Board of Directors

The board of directors in the corporate form of business organization is a committee. Its members are elected by the stockholders of the corporation. The board represents them in the conduct of the corporation's business. It exercises for them such rights of private property as are delegated to it by the charter of incorporation and the bylaws, subject to governmental regulation. Its acts are subject to approval by the stockholders. Such approval tends to be perfunctory in large corporations because of the use of the proxy. The right to plan, organize, and control the use of the corporation's property in the accomplishment of its economic objectives rests finally in the hands of the directors for all practical purposes.

This would appear to establish the board as an exception to pre-

[14] Oliver Sheldon, for example, says that a committee "consumes excessive amounts of time in arriving at decisions. If not carefully watched, time will be spent in committees when the members are urgently needed in their departments. There are often too many conferences and committees. In many cases, the problem could be handled better by an individual."—*The Philosophy of Management*, pp. 123–124. He might have added that excessive conferences may indicate the use of the committee as a defense mechanism. The present writer has seen executives rush into committee meetings to make joint decisions that they did not have the courage to make individually.

vious statements concerning the basic committee functions, since it has the authority to control operations. It was noted earlier, however, that the importance of creative planning tends to vary directly with the level on which it is performed. The importance of operative control tends to vary inversely. The time span covered by planning also tends to vary directly with the level on which it is performed. The board of directors of a large corporation is concerned chiefly with ultimate general objectives and with general policies as they underlie long-range planning. It is concerned, of course, with the general problem of capital provision. Its participation in the work of organizing may be confined chiefly to approval of general organizational plans and the appointment of the principal general executives. Its control of corporate activities is correspondingly broad. It is concerned chiefly with administrative control of basic programs. It is usually interested in an evaluation of policies with a view to modifying basic plans in the interests of a better accomplishment of general objectives.[15]

The board member in most corporations has little direct contact with operations, and that infrequently. It is usually necessary to delegate all rights to plan, organize, and control corporate activities, except the residual rights that cannot be delegated without abdicating the owners' rights of private property. There are some instances, however, in which the corporation has a "working" board. It may or may not be a "management" board in the sense that the members are also executive heads of subsidiary establishments or divisions. The Standard Oil Company of New Jersey is an example.[16] The directors are full-time salaried officials who have been promoted from the ranks to the "big board." Each is a working director who is available at all times for committee meetings or other board work, except as he may be absent from New York on corporate business. Each director has what might be termed a "sphere of influence" with respect to headquarters staff organiza-

[15] More thorough discussions of the functions of the board of directors will be found in Paul Holden, L. Fish, and H. Smith, *Top Management Organization and Control;* Melvin T. Copeland, *The Board of Directors,* Harvard Univ. Press; and Jackson Martindell, *The Scientific Appraisal of Management.*

[16] These comments on the Board of Directors of the Standard Oil Company of New Jersey are based on an examination of a manual covering the functions of the board, as of 1948, and conversations with certain officers.

tions and affiliated companies. A board member, for example, may be charged with responsibility for advising the board with respect to industrial relations policies, if this was his principal field of interest as a staff executive prior to his elevation to the board. He may at the same time be charged with the duty of acting as a liaison officer between the board and a particular subsidiary, such as the Esso Corporation. He is obligated to maintain a thorough, current understanding of the problems in the areas under his general cognizance. This includes in the case of the subsidiary all problems in all fields of management, not merely those in his particular field of management interest. This requires close contacts with the top management of the subsidiary. They may be made directly or through the corporate headquarters staff. The contact director has no line authority with respect to the subsidiary with which he works. Such authority inheres in the board as a whole. The director is expected to assist the subsidiary through advice. It is obvious, however, that a director will have great prestige and influence because of his position. The board is, of course, in a position to appoint the general officers of the subsidiaries. It would appear, therefore, to be more difficult to maintain the subsidiary president's independence of judgment and action, and corresponding single accountability, than would be the case in a corporation that does not encourage such close working relations between its individual directors and the top management of its subsidiaries. This point is offset, in some degree, by the indoctrinative effects of close working relations between the "Jersey" board and the subsidiary managements over a long period of time. These effects are undoubtedly augmented by the frequent interdivisional conferences of an educational and integrative nature. Many of them are conducted under the auspices of the board.

The board of directors is of course not a staff organization. It is the source of the delegation of functions, responsibilities, and authority within the corporate organization. It is similar to committees on lower echelons in that it is concerned largely with objectives, plans, and policies. Many of the principles that govern the work of all committees apply to the board of directors for this reason. It is different in that it can promulgate broad, general plans and policies on its own authority. The board is able to exercise a leadership of ideas in some concerns by plotting the corporation's general

course of action over the years. Its leadership is perfunctory in other concerns. It is not concerned with current action, except as general administrative controls enable it to evaluate progress in the accomplishment of its basic programs, and the contributions of the general executives who are responsible for it. The work of transmuting ideas into action is primarily the responsibility of line organizations, beginning with the chairman of the board and proceeding downward.

The Problem of Line and Staff Relationships

We have seen that problems of line and staff relationships develop from the need for a division of and specialization in managerial work. This need is usually an effect of organization growth. The development of staff organization tends to increase more quickly than the growth of line organization. It becomes a problem, sometimes, to maintain the integrity of the line with corresponding unity of direction and command. An understanding of the principles of good organization becomes increasingly necessary with business growth. There are certain attributes of good organization that must be developed and retained with further growth if competitive effectiveness is to be maintained. The nature of these attributes and the requirements for their development will be the subject of the next chapter.

CHAPTER 14

THE ATTRIBUTES OF GOOD ORGANIZATION

The Principal Organizational Attributes

It is often the ambition of the founders of a business organization to build an economic enterprise that will stand as a monument to them, as well as to amass a fortune. The concepts of continuity, growth, and permanence are necessarily in back of such ambitions, whether or not they are realized. Even the man who organizes a small business hopes that it will be permanent and will continue to pay him a living plus a profit on his investment. The record of business failures indicates that he is often disappointed. A common cause of failures is poor management. It should be due chiefly to a lack of knowledge of operating principles in the particular field of small business. The small proprietorship has a simple line organization with little if any staff. Yet it is surprising how many business difficulties stem from violations of organizational principles when the little business grows to the point where it is employing twenty-five or thirty people. Most small businessmen in the manufacturing field hope to grow far beyond this size. They must do so, in some fields, to maintain competitive effectiveness. They could not even start in business on such a small scale in other fields, because of capital requirements. A good working knowledge of sound organizational principles becomes increasingly necessary with increasing organization size.

The notions of continuity, permanence, and self-perpetuation in business organization have been recognized by various business scholars. They are related closely to one another. Urwick defines his Principle of Continuity as follows: "The structure of the organi-

zation should be such as to provide not only for the activities immediately necessary to secure the object of the enterprise, but for the continuation of such activities for the full period of operation contemplated in the establishment of the enterprise."[1] The contemplated period of operation is usually indefinite unless the organization has limited objectives. Sheldon believed that organizational permanence consisted "of two elements—regulated growth of coordination, and replacement and repairing of the ravages of time, fortune and death."[2] Continuity and permanence imply a continuing, balanced relationship between the objectives of the enterprise and the economic factors, forces, and effects that control their accomplishment. This concept must be coupled with the public's desire for an increasing standard of living, and apparently at an accelerated pace. Any mechanic understands that it is much more difficult to maintain a dynamic balance than it is to maintain a static balance, that the resulting "throw" may tear the mechanism apart when he fails to maintain it. It is far more difficult to maintain a dynamic balance in a business organization, since it is primarily an economic institution. It is next to impossible to measure and proportion exactly the economic factors and forces within or affecting a business organization. It is correspondingly difficult to achieve a complete, perfect accomplishment of business objectives with respect to all the interests involved. The factors and forces involved are constantly changing. The Air Force had an amusing motto during World War II that had more than a little truth: "The difficult we do at once; the impossible takes a little longer." The perfect economic balance in a dynamic industrial society is one of those things that take a little longer. We are committed, in the meantime, to a national policy of an increasing standard of living. This makes it necessary for business executives to study the attributes that enable the business organization to resist the destructive effects of business growth and organizational change.

Management involves mental rather than physical work. It rests more on the social sciences than it does on the physical sciences. It deals with ideas. It is not an exact science. Exact agreement concern-

[1] L. Urwick, quoted in L. P. Alford and J. R. Bangs, *Cost and Production Handbook*, Ronald Press, p. 1344.

[2] Oliver Sheldon, *The Philosophy of Management*, p. 135.

ing the principal attributes of a good business organization is not to be expected. The following are the principal attributes, in the opinion of this writer:

1. Effective executive leadership.
2. Sound business objectives and policies based on competent analyses of customer needs and desires that have been made with due regard for the general public and other collateral interests.
3. Sound functional relationships as determined by objectives.
4. Adequate physical implementation that will make possible the economical, effective accomplishment of objectives.
5. A complement of abilities, both executive and operative, to handle present business problems economically and effectively.
6. Organizational stability.
7. Organizational flexibility.
8. Organizational capacity for growth.
9. Organizational balance.
10. Good organizational morale.

The necessity for these attributes sets up certain organizational requirements. They have been discussed sufficiently in the case of the first five attributes. This chapter will be confined, as much as possible, to a consideration of organizational stability, flexibility, capacity for growth, and balance. Good morale is of such vital importance that it will be treated separately in subsequent chapters.

Organizational Stability

Organizational stability may be defined as the quality of an organization that enables it to adjust itself promptly to personnel losses without serious losses of economy or effectiveness. It is the quality that enables it to perpetuate itself, insofar as personnel is a factor in its existence.[3] The objectives in the development of organizational stability may be some or all of the following: (1) A

[3] Thomas R. Jones has stated a "Principle of Self-Perpetuation—The business must be so organized and the personnel so trained that the business may be promptly and smoothly adjusted to any shifting in its personnel."—*Theories and Types of Organization*, p. 33.

minimum loss or dilution of the organization's skill and knowledge content as a result of personnel changes, (2) a minimum of expense in connection with such changes as are inevitable, (3) lower executive salary costs because the organization is less likely to be a necessitous buyer of executive ability in the open market, (4) better morale because of a higher degree and greater equality of opportunity within the organization, and other values of a similar nature.[4]

Nature and Characteristics of Stability

Personnel losses take place at every service level in the organization. They may be the result of a variety of causes, such as the voluntary separation of an individual to take advantage of a better job opportunity elsewhere, to move to another part of the country for health or family reasons, or other reasons of a personal nature. People may be separated from the payroll for insubordination, inability to perform assigned duties, and for other just causes. Death and retirement take their toll. The effects of the business cycle cause personnel losses. It may be necessary to reduce, at every level, the numbers that are employed. Most concerns try to carry their key executives, if they can. The loss of such executives may have a more disastrous effect on the business health of the organization than the loss of a much larger number of operatives. It may not be possible to hold some of them, however, if it becomes necessary to reduce salaries. Some will quit and go elsewhere. A topnotch executive can usually get a good job any time, because of the vital importance of

[4] Frech and Jeffries noted the following: "There is a great need for continuity of employment of the personnel comprising the creative overhead. . . . Experience is cumulative and time is one of the factors. If an attempt is made to increase and decrease creative overhead with the business cycles, it will prove to be inefficient. A man with ten years experience can be discharged over night, but to replace him if he is efficient, requires years."—T. W. Frech and Zay Jeffries, *Business Ideals, Principles and Problems*, p. 61.

Henri Fayol had the following viewpoint: "It takes a long time to get to know the men and details of a big concern, to be able to decide on a plan of operations, and to feel confident in oneself and inspire confidence in others. It has, moreover, frequently been proved that one manager of mediocre ability, who keeps his position for some time, is infinitely preferable to a sequence of very able managers who move quickly to other jobs; the apprenticeship of a man in an important position is usually a very expensive matter."—*Industrial and General Administration*, p. 31.

See also Oliver Sheldon's point of view in *The Philosophy of Management*, p. 48.

the leadership function in any type of organization. There is the obvious danger that a concern may be left with those who are not quite good enough. Personnel losses may also result indirectly from lack of foresight in business planning by top management. This may result in loss of competitive effectiveness and in diminished opportunity for advancement within the organization. The mediocre individual may be satisfied to stay on at a fairly good wage or salary that reasonably represents his worth, provided the prospects for job tenure in the near future are fairly good. The superior individual is likely to move on to better opportunities in other organizations. An organization may start downhill because of the loss of competent executives. The ability and effectiveness of leadership are a limiting factor in business success. A consequence is insecurity of tenure at all levels, unless this condition is corrected. There are other causes of personnel losses. The problem of organizational stability has to do largely with eliminating them, if it is possible and practicable to do so, or compensating for them if it is not.

Measures of labor stability have been used by some personnel departments for many years. They are usually ratios comparing the continuity of employment within an organization element for a given class of labor with corresponding ratios for the organization as a whole.[5] They may be applied only to operative labor, since the personnel department in some concerns has little to do with the executive organization. High organizational stability and high operative labor stability are related concepts, but they are not identical. The short-run effects of high operative turnover, with its dilution of the operative skill and know-how content of the organization, can cause a breakdown of the organization. Nevertheless, organizational stability depends largely on stability of executive leadership in the long run. Labor turnover takes place largely among short-service employees in most concerns. A large proportion of employees of all service grades may remain permanently with the organization. There is nothing in a labor stability ratio to indicate whether or not a sufficient number of them are capable of advancing to posi-

[5] The following is an example of a simple stability ratio: If S represents the percentage ratio of labor stability, T the total number on the particular payroll at the end of a particular period, and N the number on the payroll who have been employed less than one year, then

$$S = [(T - N)/T] \times 100.$$

tions of greater operative, professional, or executive ability. A high stability ratio merely sets up the presumption that probably there are sufficient numbers, provided that the initial personnel selection and subsequent training and development were adequate.

Stability and stagnation should not be used synonymously. There are ways of increasing stability without producing stagnation. We shall look at a few of them later. The process of promotion from within may result in organizational inbreeding. It has also an indoctrinative effect that tends to create loss of mental flexibility and consequent "cast-iron" thinking. There is a tendency at every organizational level for long-service employees to feel that they have acquired a vested interest in their jobs. They may feel that it exists independently of the worth of their individual contributions to the organization's success. This feeling may cause an inversion of personal interests over the organization's service objectives that may lead to the defeat of its primary mission—customer service. There are other dangers in the development of organizational stability that should be recognized.

Considerations Affecting the Development of Stability

There are a number of considerations that affect the development of stability. The more important are (1) the requirements of objectives, plans, and policies; (2) executive selection and development; (3) promotion plans and policies; (4) organization structure; and (5) morale.

Changes in the needs and desires of the company's customers must result in corresponding changes in its service objectives, or it will fail. These cause changes in policies, functions, operating conditions, and methods, both managerial and operative. They therefore result in changes in the abilities required of operative and executive personnel. The rate of change of objectives also is an important consideration. A sudden drastic change may render valueless much of the practical experience within an organization. The writer observed this phenomenon in a number of instances during World War II. The "practical" individual will usually not admit this, if intelligence and practical experience are his principal stock in trade. He has nothing to sell when his experience becomes valueless. We have noted that static objectives in a dynamic society are not

to be expected. What is wanted is stability in forward motion, rather than static stability. This is a continuing phenomenon, then, rather than one that is associated with sudden, drastic wartime changes. It is necessary, accordingly, to supplement the individual's know-how with sufficient breadth of knowledge concerning the factors and forces affecting his work to enable him to adapt himself, or be adapted, to changing conditions. Otherwise, it may become necessary to replace him with someone who can do the job, regardless of his position in the organization. With rapid progress and a corresponding rate of change of objectives, the resulting personnel losses can cause serious organizational instability.

The avoidance of serious personnel losses depends on the ability of executive leadership at every level to anticipate changes in the situation and to estimate their requirements. The maintenance of organizational effectiveness requires the development of plans for coping with these changes. They should include changes that result from normal personnel losses. For many years industry has had retirement plans, training plans, promotion plans, and other plans that have been designed, in whole or in part, to give the business organization the attribute of stability. It is unlikely that any organizational attributes will be developed adequately in the absence of proper plans. Staff responsibility for a leadership of ideas in the development of such plans would appear to fall logically on the personnel department in the average business organization. Such departments have done a good job in this connection in some concerns, and a poor job in others. The failure to participate effectively in organizational planning may have been due to a number of reasons. The department has been headed in some concerns by mediocre staff executives who know too much about personnel techniques and too little about the principles of good organization. It has often been placed at a level that is too low to permit effective participation. Top management has sometimes not understood the nature and importance of staff personnel management. Other reasons can be suggested. Discussion of them belongs in texts on personnel management.

Executive Selection and Organizational Stability

Poor selection of executives, beginning with trainees for executive jobs, may ultimately cause organizational instability. The Law of

Functional Growth indicates that the requirements of functions and the complexity of functional relations increase with increasing business volume. This tends to take place in geometric progression. Functional growth is more than the addition of a certain amount of new business at the present volume. Success in a present job does not necessarily indicate capacity for growth. An organization may outgrow men who may be satisfactory at present or in the immediate future, unless they have a capacity for personal growth and the urge to develop themselves.

An executive may fail his organization at a critical time, in consequence, or it may gradually become apparent that he has been pushed beyond the limits of his ability. It is usually necessary to transfer or release him because of his leadership position. Some degree of instability is created because of the necessity of replacing him. An adequate supply of promotable key men and junior executives is good insurance against organizational instability. It is good business to attract, select, hold, and promote high-caliber men.[6]

A number of factors affect the selection of executive personnel. The principal factors are the availability of suitable personnel, executive judgment, and the selection methods used in the particular organization. The importance of an adequate supply of suitable personnel was noted above. The most important factor, probably, is executive judgment. The executive who has immediate responsibility for an organizational group should have the immediate right of decision concerning its membership. It is difficult, for example, to hold a department head accountable for the results accomplished by his department when some staff personnel executive who has no responsibility for these results has the right to select the employees from whom the results must be obtained. An executive's unrestricted right to select and promote may, however, contribute to organizational instability. It may make it possible for an executive short-sightedly to attempt to promote his personal interests through nepotism, favoritism, and organization politics in the selection process. Promotion strictly on the basis of seniority can in itself lead directly to organizational instability. Any improper basis of selection for advancement tends to result in depreciation of the quality of the organization's executive leadership.

[6] Donaldson Brown has made a good statement on this point. See *Decentralized Operations and Responsibilities with Coordinated Control*, p. 18.

The details of executive selection methods have been covered in various standard texts on personnel management. It should be sufficient to note here that the methods fall in two general categories: those that use psychological tests and those that depend on the pragmatic test of results. The executive job involves mental rather than manual work. The importance of mental capacity in the performance of executive functions tends to increase as one goes up the executive ladder. The job tends to be concerned more and more with creative planning. There should be, consequently, a hierarchy of intelligence within an organization that corresponds to the functional hierarchy on which the various chains of command are based. This is a normal result of the objective performance of the selection process. For this reason, some concerns use standard intelligence tests in selecting candidates for executive positions. Another function of the executive is the personal direction, motivation, and stimulation of his subordinates in the accomplishment of organizational objectives. Personality is therefore an important factor in executive success. A man with a good brain and excellent background and experience can fail as an executive if he lacks personality. The law of the situation suggests, however, that what constitutes a good personality in a leader depends on the characteristics and requirements of the led and of the particular situation. There are other factors in executive success, such as family conditions and relationships. Such factors as these are difficult to estimate accurately by mechanical means. Psychological tests of executive ability indicate chiefly potentialities. Tests on a specific knowledge content that is desirable for a particular executive job are not usually given. The pragmatic test of results cannot be eliminated for these reasons. Most large corporations keep personal history records of their key employees and operative executives. Merit ratings, records of transfers and promotions, citations by superiors for unusual contributions to the organization, training records, disciplinary actions, the original application blank and test records, and anything else that is significant in an employee's history with the company, go into his file. Quite a good picture of him and his capabilities may be built up over a period of years. The pragmatic test of results is not a substitute for intelligence tests, however. Results show what the individual has accomplished in the past. They suggest, but not ac-

curately, what may be expected in the future. There may come a time when the next step in advancement exceeds the individual's mental capacity.

Executive Education and Training

The ability of an organization to replace its personnel losses from within requires that some of its present personnel will be able to fill current vacancies as they occur. A person's present job seldom supplies all the knowledge and know-how necessary for a vacancy for which he is eligible. The concept of a span of executive supervision implies that an individual may be required in the next higher executive position to direct the activities of groups with which he may have had no first-hand practical experience. The higher one goes in an organization, the more he is concerned with problems of administrative management and the less with operative management. The background and experience required for the former are broader and less specialized than for the latter. Adequate knowledge and know-how of the right kind, nevertheless, are possibly more important for effective administrative management, since it is the function of top executive leadership. It is evident, therefore, that executive training should be a continuing function from the time when a superior young man is a trainee to the time, possibly many years later, when he is a mature administrative executive in a position of great responsibility.

The kind of training that he receives as a trainee, and the methods used to give it, should be different from the training he receives in later years. Some operative exeperience is helpful in most executive jobs. The trainee's initial assignment is likely to be an operative job in a line or staff department. He may work up from such a job through the chain of command to which he is assigned, and later through a related chain to which he is transferred. His initial training often involves some minor executive job that is concerned with departmental supervision. The training for such a job is necessarily detailed and specific. It is largely but not entirely the responsibility of his immediate superior. At the same time the trainee should be getting broader training in management. Such training is largely but not entirely the responsibility of the personnel division. It is difficult to estimate individual potentialities, despite the psychologi-

cal tests that may be given and the personal service records that are kept. Executive training is usually expensive, and the bill mounts over the years. Some concerns avoid it, depending on the superior individual to develop himself as an executive with whatever help he can get from his superior. In so doing, they risk an arthritic condition developing in the organization's joints.[7]

Most large corporations have developed organizations and procedures for executive training for this reason. They have in mind, of course, the development of other organizational attributes in addition to stability, since all of them are interrelated. A few concerns have undertaken career planning and control. An attempt is made to draw up a program that suits the individual's interests and abilities. Reports on him are received periodically. Careful records of his progress in accomplishing his program are kept. His record is reviewed periodically. An investigation is made when there appears to be little or no progress. The individual may have leveled off sooner than was anticipated. It may be, however, that some executive is holding a good man back to serve his own selfish interests. An effort is made to avoid pushing the individual beyond the limits of his ability. This avoids the development of a potential failure who may have to be transferred or dismissed, with consequent loss of the training investment. He may become a disgruntled, dissatisfied individual, and a bad morale influence, unless he can be convinced that he has achieved adequate success at whatever level is the limit of his ability. This may be hard to do because many people tend to overestimate their ability. An executive trainee may or may not be so designated. They frequently are in large corporations. The designation confers a certain status and is a stimulus to self-development for some people. An effort is made, in any event, to have no more trainees in the organization than are needed. The needs for growth as well as normal turnover must be considered.

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[7] Webster Robinson made a good statement about the advantages of developing executives from within the organization. See *Fundamentals of Business Organization*, pp. 103–104. He also commented as follows on the danger of not doing so: "To be permanently successful, an organization must retain its youth. Otherwise, it will lose its power to match the progress of younger competitors and will finally succumb to age, just as an individual does. . . . Youth is not limited to the age of the body, but also includes the age of the mind which is not necessarily a matter of years."—*Ibid.*, p. 35.

Many concerns have found themselves, in recent years, in a highly unstable condition. They have not developed the required executive replacement material during the past twenty years. This has been due to the depression of the thirties, the drafting of young men for military service, the influx of returning veterans to the universities, and related causes. Some surveys of executives by age groups and echelons have shown too many who are too close to retirement, and too few replacements. The presence of trainees beyond such requirements means, however, that many of them are being trained for opportunities that do not exist within the organization. This is not the way to build morale or conserve a training budget.

Viteles has observed that systematic training reduces the training period, decreases the cost of instructions, decreases waste, stabilizes the working force, increases the satisfaction derived from work, and produces other values.[8] This applies to executive as well as operative employees. Any job that is well planned and well organized usually is accomplished with greater economy and effectiveness than one that is not. The requisites for executive training are again a subject that falls more properly within the field of staff personnel management than within the field of general management. The general executive is interested in them from a policy viewpoint, however, because of the importance of executive training in the development of attributes of good organization. The principal requisites are (1) definite training objectives, (2) a definite training plan, (3) sound training policy, (4) progressive top leadership, (5) definite location of training responsibility, (6) sound training methods, and (7) sufficient appropriate information for training purposes.

Training objectives involve more than an adequate number of promotable persons of various grades and ranks who will be available at some predetermined rate during designated time periods. They involve also knowledge contents that will enable these persons to perform effectively what will probably be their assignments, both immediate and ultimate. The determination is difficult because training needs cannot be determined accurately. Changes in

[8] Morris Viteles, *Industrial Psychology*, p. 393.

customer needs and desires for a concern's goods and services will change its training objectives. They cannot always be anticipated. For this reason, the initial training is often the same for all executive trainees. They are moved through each of the basic departments of the business, getting a brief work experience in each. They usually secure, at the same time, some education in the fundamentals of the business. The training and education must be basic, since there is no certainty as to where the organization will need them. Their interests may change, furthermore, as a result of their experiences. The next general stage frequently involves their assignment to a particular department. They may still be under the general cognizance of the personnel department and its training section. It may and should continue to follow their progress. The trainees are now, however, the responsibility of their departmental executives. Their training necessarily becomes more detailed with respect to the department's work. Their advancement from here on should be handled through the established promotion system on the basis of merit. A great many concerns now have some form of merit rating. The trainee must compete against other able men in the organization who also have been marked as possible candidates for advancement. They may not have had the advantage of a formal training course. They may have equally good background and intelligence, and more practical experience. All candidates may be given committee assignments from time to time in or out of their departments. A candidate may be given educational opportunities that will broaden his managerial background and give greater depth to his thinking. The small concern must take advantage of public educational facilities. The large concern often has its own. It is not mandatory, of course, that the candidate take advantage of such opportunities. He is being tested in any event by the manner in which he handles his assignments. He may advance eventually to an important position as a major operative or minor administrative executive. The company has invested quite a bit of time and money in him by the time he gets there.

What is more important is that he represents probably the best executive leadership that is available in the organization. How good it is depends obviously on his development as an executive. This development should therefore be planned as far as practicable.

The principal phases through which the trainee should go, as he progresses toward designated training objectives, should be blocked out. The knowledge and experiences that he should get in each phase should be generally determined. They should not be determined in detail. A sound plan should include some statement of training policies. What should the policy be with respect to training costs after the initial training period has been completed, for example? Should the trainee pay part of the costs of any formal training courses that he may elect to take subsequently? His personal interests are being promoted, as well as those of the organization. The plan should indicate at least the general methods of training that are to be used in connection with each phase of the program. Supervised training on work projects and classroom techniques may be used in the early stages. Group and personal conference training methods are likely to be used in the later stages. There are other considerations that affect the problem of executive training. Some are financial. Some have to do with morale. The above discussion should be sufficient to indicate the general nature of the problem, however. There is one question that should be mentioned: Is such an approach to stability through executive development typical of a majority of business organizations? No adequate statistics are available. Executive training, beyond that gained by work experience, appears to be a matter of individual initiative and chance in most concerns. A successful executive is hired, at high cost, from another concern when the method of individual self-development fails. The extent to which this is true depends, of course, on the quality of management. A mediocre top leadership surrounded by mediocre subordinates is not likely to see the need for much executive training and development.

Promotion and Transfer

Transfer and promotion in position are the principal methods by which an organization can adjust itself to personnel losses with a minimum loss of economy and effectiveness. Procurement of key personnel from outside sources results usually in greater expense and other losses. Transfer may be defined as a change of assignment that is not accompanied by any substantial change of status in the organization. A promotion involves an improvement of the individ-

ual's status in the organization. It may or may not be accompanied by a change of assignment. An improvement in status may be accomplished by advancing the individual to a position of greater responsibility. Such a position usually carries with it greater prestige and leads to greater pay. This is promotion in position. The status of the individual may be improved by an increase in his wage or salary rate. This is promotion in pay. It may be improved by exempting him from certain regulations or by granting other intangible benefits. This in general is promotion in privilege. A vacancy in an organization can be filled either by transfer from a coördinate position or by promotion from a subordinate position. Both processes may be used in connection with a given vacancy. The transfer process is likely to be more important in organizational flexibility. Promotion is likely to be more important in organizational stability. Both processes affect the development of other organizational attributes.

There are two general types of promotion in position: line promotion and cross-promotion. Under a policy of line promotion, a vacancy is filled from the chain of command in which it occurs. Someone may be brought in from the outside to fill the vacancy when no one in that chain is eligible and ready for the promotion. A vacancy may be filled from any subordinate position anywhere in the organization under a policy of cross-promotion, if there are basic functional similarities between the two jobs that provide a sound basis for promotion. Objections have been raised to cross-promotion on the grounds that it involves too much training expense. For a number of jobs, cross-promotion must be frequently accompanied by transfers and additional training. Some executives object strenuously to losing a good man to a sister organization, although they do not object strongly to the promotion of a subordinate within their own chain of command. This tends to be true whether the organization is a department or a division. Line promotion may result in the loss of good men, on the other hand, since it limits opportunities for advancement to vacancies immediately ahead of these men in their organization. A few concerns consider the stimulating effect of promotion so important that they have promoted good men up and out of their own concerns to better jobs in other concerns. The intent is to avoid blocking the promotional path

for younger men who will follow these men. No condition of instability is created if the younger men have been trained and developed to the point where they can carry on as well as the older men whose places they take. It is a question, however, whether the benefits offset the loss of mature, experienced executives. Maximum utilization of the organization's personnel resources is usually not possible without both line and cross-promotion.

There are certain requirements that must be met by a promotion system if it is to contribute to organizational stability. The principle requirements may be summarized as follows: The work content of operative and executive jobs in the organization must be determined. Promotional relationships depend on functional similarities. The information developed by job analysis is the basis for job specifications concerning functional, physical, and personal requirements. Job classifications should be set up. Jobs should then be evaluated functionally and monetarily. All practicable opportunities for line and cross-promotions should be determined for each job. They should be set up in a promotion plan. This plan should include personnel records that show the location, characteristics, and status of the firm's inventories of promotable personnel. These records should include training reports, merit ratings, and other information, as previously noted, that show the state of the individual's development. The records should be simple and of limited scope for most operative employees. They are unnecessary for top administrative executives because these men have passed the pragmatic test of achievement. They should be quite complete for key employees and operative executives. The plan should provide also some method for correlating promotional opportunities as they arise with the individuals who should be considered for them. The plan depends on the selection of an adequate number of people who can be developed and made eligible for promotion.[9] Organizational stability requires that there be at least one individual

[9] H. P. Dutton says that "the policy of promoting from the ranks and in general of hiring only in the lower ranks, diminishes the need for accurate initial appraisal of the applicant, since a more thorough appraisal of performance is automatic before the individual reaches a point where his influence on profits is substantial."—*Principles of Organization*, p. 239. (The promotional process undoubtedly adds to the accuracy of selection. It does not in itself assure an adequate complement of the necessary intelligence, however.)

who can be promoted immediately, if necessary, to each key job. Most concerns would like to have such people about two deep in back of such jobs. It is not necessary, however, that the two backstops for each key job be in the same chain of command with it. The plan should provide for a periodic review of the status of individuals who are considered to have potentialities for advancement. It should set up central staff control of promotion, in both position and pay, to minimize the possibilities of favoritism and other organizational ills that have been noted. There are other considerations and requirements. But the above should be sufficient to make clear the nature of an orderly promotion process, and its relation to organizational stability.

Executive Obsolescence

The problem of executive obsolescence is one that has received considerable discussion in recent years. There has been some tendency to lower the retirement age for executives, on the grounds that the fast pace of modern business keeps them under intense mental strain and in consequence they burn out sooner than they did at the beginning of the century. The writer heard recently of a concern that was considering lowering the executive retirement age to fifty-five. There are executives in other concerns who are doing an excellent job at seventy. It is of course possible to account for this by physiological differences. One suspects, however, that there must be something wrong with the organization structure and management methods of a concern that burns out its best brains at the time when they should be at the peak of their powers, with a lifetime of knowledge and experience to work on. The suspicion tends to be confirmed when one reads allusions to coronary thrombosis, peptic ulcers, and high blood pressure as the characteristic disabilities of the "high-powered" executive. Such disabilities should not be necessary generally with good organization and management. It is a condition that is serious for the organization as well as for the individual. The sudden death of a key executive is usually a serious loss for any organization. A low retirement age would appear to be more logical in the lower executive grades than in the higher, and in the ranks of operative employees. The operative executive is concerned with the control of operative projects and must of necessity take the

responsibility for meeting deadlines. He may have to work under greater pressure than should be necessary with a good organizational setup, but some pressure is inevitable. It is possible to be "overage in grade" in a business as well as in a military organization. Promotional opportunities for executives in any organization are also limited by the mathematics of organization structure as well as by the personal limitations of the executives.

The great danger may be a high rate of executive obsolescence, rather than a high rate of executive depreciation. Some executives would like to coast to retirement after they have reached the limit of their promotional possibilities. Their salary and eventual retirement pay are the same whether they do or not. It was noted above that the promotion process has an indoctrinative effect that may tend to inhibit original thinking. An executive may have learned most that he knows about policies and management methods from the superiors under whom he worked in successive jobs. Certain ideas and concepts may have been thoroughly ingrained in his thinking. The effect is to cause him to resist new ideas—to find all manner of excuses, before the changes have been investigated thoroughly, why proposed changes in organizational or procedural arrangements cannot possibly work in the case of his organization. The same old rut is usually the easiest and the smoothest. A similar effect may be produced, without promotion, by the routine performance of repetitive duties.

Various remedies for this difficulty have been tried. The problem is to restore mental flexibility, and to supply up-to-date backgrounds and methods, to individuals who feel that they have progressed beyond the point where further education and training are necessary. They may be urged to take inspection trips through noncompeting concerns. Such trips bring them in contact with different ways of solving their problems. They may be urged to join discussion groups in or outside the organization. They may be asked to attend meetings of professional societies in their field. The executive may be assigned to committee duties outside of his immediate field. Such assignments force him to consider ideas other than his own. He may be detached temporarily from his normal duties and given responsibility for the solution of some special problem for which he has the background and aptitude. The job of directing

the collection, classification, and analysis of facts and devising a solution is often a broadening, stimulating experience. This is likely to be true if it involves a survey of principles and methods that are allied to those used in one's own field. It is common practice in military organization to rotate officers periodically through line and staff assignments. This is followed in some business organizations, but to a lesser degree. It can reduce the advantages of specialization, if carried too far. It can, on the other hand, keep executives from sinking too deeply into a smooth, well-worn rut.

Such policies have many advantages. They help in developing reserves of promotable personnel. They adjust the attitudes of older executives to current thinking on business problems, and keep them in line with progress in their fields. Obsolescence of their stocks of knowledge and experience is reduced to a minimum. They are more likely to retain a reasonable degree of mental flexibility. The results should certainly be greater executive interest, coöperation, and effectiveness. Such policies are common in some large corporations for these reasons. There are many organizations, however, in which such policies do not appear to be as common as they should.

Organization Structure and Stability

Many structural principles that affect organizational stability have been noted previously. The Principle of Functional Similarity, for example, requires that functions be grouped in organization elements in accordance with basic similarities in their objectives, work requirements, physical environment, and personnel attributes required. Such functional homogeneity reduces the range of specialized background, knowledge, and experience that is required for effective face-to-face leadership of the group. It is less expensive and easier to replace executive heads of groups, whether they are units, branches, sections, departments, or divisions. It is easier to select and develop candidates for jobs as seconds-in-command or understudies for key personnel. There are other structural principles that apply to this problem.

We saw earlier that overspecialization tends to increase instability. The need for staff specialization tends to increase with organization size. This suggests that large organizations are less stable than

small businesses, which is not usually the case. The need for technical specialization diminishes as the executive advances to higher echelons in the large organization. Breadth of background, training, and experience becomes more important. This tends to be true even in large technical staff divisions. The head of such a division must have a minimum proficiency in his professional field. He is likely, however, to be chosen as much for his executive as for his technical ability. It is not unusual to find that such a man has working for him men who are better qualified professionally than he is. This is quite likely to be true in the case of top line executives. What is wanted are the intelligence, breadth of background, and vision to direct successfully basic and sometimes long-range planning. Detailed planning is the job of subordinate leadership. Such basic planning is an important factor in organizational stability, as we have seen. There are other reasons for the greater stability of the large organization. Greater financial resources is usually a reason. The principles of centralization require increasing delegation of responsibility and authority with increasing organization size, within the limits of certain requirements that were discussed previously. Such delegation requires subordinate executives to stand on their own feet. They must develop the judgment, initiative, courage to make decisions, and leadership ability that are required for their situations, in order to survive. The large corporation is generally the one that is looking constantly for potential leadership material. Its internal resources of such material are relatively greater. It has better facilities for developing them. The large business organization is more stable than the small one for many other reasons. There is apparently one constant threat to its stability, however—the greater difficulty in maintaining good morale. The problem is most serious at the operative level, but it exists at every level. It involves more than high turnover, although that may be serious enough. Effective leadership depends on intelligent initiative at lower levels, interest in the organization and its work, prompt and faithful execution of directives, voluntary coöperation and cross-coördination, and other effects of good morale. They are harder to obtain in large organizations than in small. It is harder to develop a direct relation between the service objectives of the corporation and the personal objectives of an individual employee.

There is necessarily a minimum of contact between top management and the rank and file of the organization. There are other reasons that will be examined when we come to the problem of morale.

The General Method of Approach to Stability

The approach to the problem of organizational stability may be summarized as follows:

1. There must be some determination of the need for replacement personnel, particularly in the executive ranks. This involves the determination of probable rates of labor turnover by echelons and organizational components. This in turn involves study of collateral problems, such as the rate of change in objectives, flexibility, and growth requirements.
2. A supply of replacement material must be developed and maintained through proper personnel selection and training.
3. Adequate plans and policies for organizational stability must be made. They may include plans for training, career supervision, promotion, prevention of executive obsolescence, retirement, and others.
4. Line responsibility for the development of stability and other organizational attributes is a top administrative responsibility. Staff responsibility for a leadership of ideas in the development of such plans should be placed on the personnel department or a department for organizational planning, or on both.
5. Morale maintenance is a requisite for organizational stability.
6. The quality of top executive leadership is a limiting factor in the development of any organizational attributes. It should be improved to the extent that it is practicable.

Organizational Flexibility

Organizational flexibility may be defined as that quality in an organization that enables it to adjust itself to temporary changes in business conditions without serious losses of economy or effectiveness. The objectives of developing flexibility may be such values as the ability to meet changing competition promptly, the ability to adjust the organization promptly to changing loads of work, the maintenance of a proper relationship between wage and salary

expense with changing business volume, greater continuity of employment for permanent employees, and similar advantages. The need for flexibility has been recognized by management authorities because of the vital nature of such values.[10] The great depression of the thirties emphasized this need. Reich made the following comment at that time: "The success of the present-day organization depends to a great extent on its collective open-mindedness to new ideas, its sensitiveness to trends, its ability to change its mental attitude to suit new conditions, its facility in working together and achieving results quickly on new problems, and its elasticity in effectively expanding or contracting its operations as new conditions require. All of these elements determine mental and physical flexibility."[11] This statement is a good specification of the problem at any time.

The need for flexibility results from the effects of random, seasonal, and cyclical changes, rather than from secular changes in economic conditions, or from normal personnel losses. The problem has to do, therefore, with short-term temporary changes, rather than long-term permanent changes. These short-term effects cause changes in the volume of business. They may be caused by a competitor who has captured the initiative in his industry through a substantial improvement in the goods or services that he is offering to the public. They may be the result of seasonal changes in buying habits. A diminution of demand may result from costs and prices that are too high, or other aspects of the business cycle. The changes in business volume are reflected in temporary changes in the company's load of work, regardless of the reasons for them. Temporary adjustment of the organization and operation of the business in accordance with these changes are necessary. The company's continued existence in an industrial democracy does and should depend largely

[10] Thomas R. Jones has stated a Principle of Adaptability: "An organization must be so built up that at all times it is prepared to adjust itself to changing external conditions and to growth and improvement with the business."—*Theories and Types of Organization*, p. 35.

L. Urwick has stated a Principle of Mobility: "The vitality of an enterprise is measured by its power of spontaneous reaction to changes in economic conditions and of internal modification and arrangement to meet such changes." —In L. P. Alford (ed.), *Cost and Production Handbook*, Ronald Press, 1934, p. 1345.

[11] O. D. Reich, *Maintaining a Flexible Organization for Changing Conditions.*

on the economy and effectiveness with which it serves its customers.

The problem is intradepartmental rather than interdepartmental, since it involves temporary organizational changes. It has to do chiefly with the expansion or contraction of existing organizational elements. Any considerable organizational change usually causes changes in the managerial and operating procedures used by the groups affected. There is a tendency to forget that these changes are temporary, or should be. They have a tendency to "jell," in consequence. There is, for example, a considerable expansion of staff organization during the inflationary phases of the business cycle. Some of it may be permanent, but much of it should be temporary. It is seldom recognized as such. Retrenchment during the subsequent period of decline often is resisted by argument or indirection. It may not be resisted directly, because this would constitute insubordination. It may, however, be necessary to accomplish the retrenchment by executive order. There are other reasons besides lack of understanding. Some executives feel that a reduction in the size of their department reduces their importance in the organization. This is not necessarily so, if the relative importance of their functions remains the same.

Considerations in the Development of Flexibility

There are a number of considerations that affect the development of organizational flexibility. The more important have to do with (1) business forecasting, (2) the probable effects of changes in business volume on functional relationships, (3) conditions governing the effective utilization of personnel during periods of expansion or contraction, (4) flexible personnel, (5) flexible physical facilities, (6) flexible organization structure, (7) flexible procedures, (8) flexible policies, (9) good morale, and (10) a plan for organizational flexibility.

The smooth adjustment of an organization, or any of its components, to changing work loads, without serious loss of economy or effectiveness, requires a plan and some warning of the necessity for the adjustment. Otherwise, the adjustment must proceed on the basis of expediency, even with a plan. Organizing for a smooth adjustment takes considerable time, unless it is minor. Business forecasting is therefore an important factor in organizational flexibility.

Its accuracy decreases as the time span that it must cover increases. It is not highly accurate at best. Business plans, including those for flexible organization, must accordingly be flexible in themselves. Some forecasts of business conditions and probable volumes are necessary nevertheless.

The development of facts concerning the effects of changes in business volume on functional relationships requires the analysis of payroll and other records over an extended period of time. It facilitates an approximate determination of the effect of incremental changes in volume, above and below some "normal" figure, on these relationships. This normal may be the average volume for a base period. Variances in ratios or other measures of changing functional relationships may be determined for volumes that are 25, 50, 75, 100, 125 percent, etc., of normal. Examination of such relationships will probably show that all functions do not expand or contract at the same rate. Such measures should be expressed in terms of business volume, payroll, and other expense, relative to job classifications and organizational components. They should express the internal departmental changes, the changes between line and staff relationships, and other changes that have taken place in the past with changing business volumes. They should include seasonal and cyclical variations, as well as secular trend. They must be convertible into the number of people required. Many concerns do not have records that permit the development of such measures. They have good records of primary operations sometimes, but poor records of secondary operations. Yet staff functions tend to expand as fast as the line functions they serve, or even faster. They may not contract as fast, however.

It is desirable to make maximum use of the skills and knowledge in the organization during periods of seasonal or cyclical expansion. Otherwise, it may be necessary to hire more skilled, professional, and executive employees from the outside than should be necessary under a well-planned organizational expansion. Operating expense is increased unnecessarily. The organization assumes some obligation to take care of these additional employees during subsequent periods of contraction. Any job, whether operative or executive, is made up of a number of duties. Some of these duties require more intelligence, background, training, and experience than others.

Some duties are professional, highly skilled, skilled, semiskilled, or unskilled in the case of an operative employee. Some are concerned with administrative or operative management in the case of an executive employee. They may be professional or nonprofessional, and may fall in different grades of executive service. Job analysis techniques may be used to determine the kinds and characteristics of these duties and their proportions in each job. Part of the problem during expansion is to plan the new assignments that are required to handle the increased work load in such a way that they involve differentiation of the least valuable job contents from existing jobs. The new job should include a homogeneous group of similar functions, however.[12] In theory, everyone would move up in the occupational scale temporarily during an expansion, in a completely flexible organization. It would be necessary to hire only unskilled labor with a minimum of additional payroll and training expense. It does not work out this way in practice. Individuals and organizations are far from perfect. The converse of the above theory would tend to be true also. The new employees would leave the organization with the subsequent contraction of business to normal proportions. Their functions would be reintegrated with the original assignments. Various operatives and executives would have to step down to lower rated jobs. Some of the normal work assignments must be integrated during a depression. It is sometimes necessary in manufacturing plants to put minor supervisory executives back on machines. Their status is temporarily reduced to that of an operative employee. This is the traditional practice in military organizations, because of their great expansion during wartime. A distinction between permanent and temporary grades is necessary. A distinction is made between permanent and temporary membership in the armed forces also. Similar distinctions would be helpful in business organization.

No organization can be more flexible than its personnel. There would be little possibility of adjusting an organization to temporary business changes if each member of it could or would perform only those duties for which he was hired originally. The organization

[12] Northcott, Sheldon, Wardropper, and Urwick have a good statement of this point. See *Factory Organization*, p. 49.

would have little flexibility until the adaptability of its members had been increased through further education and training.[13] Personnel flexibility is important during periods of contraction as well as expansion. Integration of functions during contraction involves the reverse of specialization. The operative employee often must temporarily assume a wider range of duties of the same or of a lower grade. It may not be possible for him to be entirely a specialist. The executive employee steps down temporarily to a lower service level that does not require as great a range and caliber of leadership ability. Conversely, during periods of expansion, the operative employee may be specialized more and more in the highest grade of work that he is capable of performing. The executive employee may temporarily take on duties involving a greater range and caliber of leadership responsibilities. It may be possible in both instances to relieve employees of the more routine phases of their work in order to make more effective use of their abilities. The development of personnel flexibility involves a training problem in both instances. It is different for operatives and for executives, for periods of expansion and for periods of retrenchment. It is more important, of course, during expansion. More money is spent on training during such periods. Any plan for flexible expansion involves upgrading, which requires training. The training expense of temporary expansion can be minimized through planning by confining the training as much as possible to the lower echelons of the operative and executive organizations. "However, if the members of the organization are mentally sluggish and steeped in tradition, it may be far more desirable to bring about

[13] George Babcock recognized the organizational need for human flexibility many years ago when he was an executive at the Franklin Manufacturing Company. He devised a formula whereby an operative employee could increase his base rate through self-improvement. It provided, among other things, an incentive for the operative to learn additional duties. See *Taylor System in Franklin Management*, Engineering Magazine Co., 2nd ed., 1918, pp. 84–85. The formula is too complicated for many reasons. There is little need for such an approach today. It has been reduced greatly by greater mechanization and the attendant transfer of skill and knowledge to the machine, better training facilities and opportunities for advancement, greater use of classified base rates and merit rating, better organization and control of rate and job promotion, and other means. The formula is interesting historically, however.

mental flexibility by introducing new blood from outside than to maintain physical flexibility by promotion from within."[14] It is possible to maintain mental flexibility in an old organization, as we have seen, but some organizational surgery may be necessary occasionally.

The productive capacity of an organization depends on and is limited largely by its physical facilities. An increasing proportion of capital to labor in many industries is beneficial to the public interest. It results eventually in an increasing standard of living. But it tends to reduce organizational flexibility. It is easier to adjust the application of human capacities to changing conditions than it is to adjust the use of physical facilities. Transfer of skill and knowledge to a machine may reduce the gross amount of background and training that are required for its operation, but some special training is required nevertheless. Special-purpose equipment may be limited in its range of application, as its name suggests. Many manufacturing concerns prefer to use general-purpose production equipment with special tooling for this reason. The integration of equipment for continuous manufacturing tends further to reduce flexibility. It is a partial cause of the greater seasonal and cyclical fluctuations in the operation of continuous industries. A production line in a continuous assembly industry can produce only the part for which it is tooled up. It could not handle small lots of miscellaneous work, even if the equipment and tooling were available. This is one reason why the small concern often survives a depression. Its situation with respect to its physical facilities is more flexible.

Part of the problem of organizational flexibility has to do, of course, with the expansion and contraction of the organization's structure. The degree of line and staff functionalization that is necessary at the top of a cycle is unnecessary at the bottom. Conversely, organizational economy and effectiveness decrease during a period of expansion unless additional units, branches, sections, and departments are set up. Otherwise, units of operative and executive supervision become too large, channels of communication tend to become too long and break down. Other difficulties de-

[14] O. D. Reich, *Maintaining a Flexible Organization for Changing Conditions*, p. 5.

velop. It is usually easier to expand an organization than to contract it without loss of competitive effectiveness. This should be done on the basis of a logical plan that recognizes the temporary nature of some of the changes. The plan should apply chiefly to echelons up to and including the level of major operative management. This is largely departmental management. Divisional changes are likely to be fundamental, but flexibility involves temporary adjustments for the most part. This restriction is practicable. Only a small number of major echelons are required in a large organization. There is little necessity for changes in the number of major echelons with seasonal and cyclical changes, except in severe inflation or deflation.

There are many other factors that can cause structural rigidity. Rigid insistence on communications through established chains of command, with a minimum of cross-contacts and little application of the Principle of Participation, tends to create an inflexible situation.[15] Insufficient understanding and application of the Principles of Decentralization also creates inflexibility. Time is of the essence in the problem of flexibility. Prompt adjustment of the organization's situation to the requirements of change is necessary to stop losses due to maladjustments. The nearness of the authority to act to the various points of operative performance is an important factor in flexibility. This is the source of greater flexibility in many small organizations. Decentralization is in part an attempt to recapture some of the advantages of the small organization while retaining the advantages of the large one. Centralization in large organizations creates rigidities because of the more difficult problems of functionalization, specialization, standardization, communication, and coördination that affect the centralized control of operations. Union restrictions and governmental regulations are more likely to cause structural rigidities in large business organiza-

[15] Edgar W. Smith has made the following exception to this statement: "The lines of delegated authority and of informational and advisory contact have been provided, after all, to speed up the tempo of our business and to make our organization more flexible and more effective in its functioning; it is important, therefore, that judgment and common sense be exercised in the practice of these contacts, for vitiation of their spirit and intent through carelessness or lack of discipline can have as its only consequence the exactly opposite result of conflict, inefficiency and confusion."—*The Organization and Operating Principles of the Export Division*, pp. 10–11.

tions than in small. It may be stated as a principle, for these and other reasons, that the flexibility of a business organization tends to vary inversely with its size.[16] This does not mean, of course, that all large organizations should be broken up into small ones. There are important economic advantages in large-scale organization in many industries. It does mean, however, that the large organization should give close study to the problem of flexibility.

This study should include flexibility in policy and procedure. Policies are more flexible when they consist chiefly of fundamental principles rather than detailed rules. An organization is not likely to adjust itself easily and quickly to changing conditions unless its general policies are broad and basic rather than detailed and specific. A flexible procedure is one that can adjust itself to changing business volumes and conditions, without loss of effectiveness. It has two aspects; (1) its adjustment to current, temporary changes in project end values that do not involve changes in organization structure, and (2) its adjustment to changes in conditions and requirements that do involve structural changes. An example of the former is a well-planned cost system that can obtain more or less information, as needed, without any material changes in the design of the procedure or the organization structure. An example of the latter is an improvement in physical facilities and departmentation that requires a change in an operative procedure to meet changed objectives and organizational lines. A common case is a change in manufacturing methods that is required for an annual model. It usually involves changes in plant layout and organizational responsibilities. There will be another model next year. Another example is the modification of a control procedure as a direct result of a change in organization structure. A change in the former is necessary to maintain accountability. Plans for the development of procedural flexibility under the latter conditions should be made in conjunction with plans for structural flexibility. Such procedural plans are likely to be made in the lower echelons by the staff group that has staff responsibility for the particular method, subject to administrative coördination.

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[16] It is sometimes stated in military organization that "mobility decreases as size increases."—General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 32.

The willingness with which people coöperate in adjusting their work to changing conditions, the interest they take in new assignments, the fidelity with which they apply themselves to the mastering of new responsibilities, and similar attitudes are important factors in flexibility. Refusal to accept any adjustments in conditions of employment with changing conditions could lead to the complete breakdown of the organization and to complete lack of flexibility. These are morale effects. Interested coöperation in organizational and procedural adjustments requires belief that the leadership of the organization will accomplish the necessary changes with minimum detriment to the personal interests of the executive and operative personnel. This is the intent under any intelligent leadership. It may not work out this way, however. Seasonal variations, for example, can be handled largely by the expansion or contraction of existing organizational groups. No basic changes in structural relations should be required. Many concerns have been able to minimize the extent of such changes by various means, such as the development of complementary lines that have different seasonal peaks. It may be necessary, on the other hand, to furlough many of the permanent employees during the depth of a serious depression. There is no provision for the continuation of their purchasing power beyond the minimum supplied by unemployment compensation and their savings. Any solution that endangered the continued existence of the organization would, of course, be no solution. The accumulation of financial reserves for the regularization of earnings on a conservative basis during cyclical recessions might be an answer. Joint company-employee contributions would be desirable. The experiences with joint union-management control of such funds have not been such as to encourage the idea, however. It should nevertheless be possible to tell an employee when he is hired whether or not he may regard himself as a permanent employee. He can accept or reject the offer of employment accordingly. A new employee who is hired during a period of inflation has a right to assume, unless informed otherwise, that he is a permanent member, provided that he performs his duties satisfactorily. This obviously cannot be true in most cases. Many other morale problems develop from the need for organizational flexibility.

Minimizing the Need for Flexibility

An alternative to the satisfaction of the need for organizational flexibility is the elimination of the need for it. This cannot be done completely, but it can be accomplished in some industries to some degree. Various devices are used by different concerns, depending on their situation.[17] The development of off-season lines, sales in dull seasons, price reductions on purchases in advance of the normal season, manufacture to stock, and other devices have been used to reduce the effects of seasonal variation. A policy of withholding new products for introduction during periods of subnormal business, the deferment of expanding capital facilities until such times and the use of the concern's personnel in connection with it as far as practicable, the subcontracting of business above a normal volume with a view to recalling it for the benefit of the employees, and the distinction between temporary and permanent employees are examples of attempts to reduce the effects of cyclical variation. They are much less successful, in general, than attempts to minimize the effects of seasonal variation. A major depression may result from causes that are beyond the control of government. They usually cannot be controlled by a business organization or an industry. There are serious limitations to the idea of guaranteed annual wages as a means of insuring the continuance of purchasing power, for this reason. It is obvious that an individual business organization must proceed cautiously in accepting an obligation that in general has been beyond the ability of the government to discharge to date. Such plans could endanger the financial health of business and introduce rigidities into our economy that would redound disastrously to the detriment of operative employees as well as the general public. There are possibilities for a partial solution of the problem in this direction, nevertheless. It is probable, therefore, that they will be explored in the near future.

General Method of Approach to Flexibility

The need for organizational flexibility can be minimized, no doubt. Nevertheless, it remains an important organizational at-

[17] Pearce Kelley gave a good classification of methods for meeting rapidly changing conditions in W. J. Donald (ed.), *Handbook of Business Administration*, McGraw-Hill, 1931, p. 1511.

tribute after everything possible has been done. Hence its development is an important executive responsibility. The general approach to the discharge of this responsibility may be summarized as follows:

1. Provision of means for estimating probable seasonal and cyclical changes in business volume.

2. The securing of facts showing the effects of changes in business volume on functions, functional relationships, and personnel requirements for line and staff departments.

3. Job analysis to determine the least valuable and the most valuable work contents for each job, and their approximate proportions in each job classification.

4. The development of a general plan for setting up new work assignments, new units, branches, and other departmental elements, based as far as possible on differentiation of the least valuable work contents of existing jobs. Detailed plans, including adjustments in working hours and shifts, cannot be made in advance.

5. Examination of the principal managerial and operative procedures to determine what modifications may be required by changing business volume and functional relations.

6. Provision of training in additional work for key personnel, in accordance with the requirements for structural expansion or contraction.

7. Examination of the effects of physical facilities on the organization's ability to expand or contract its activities.

8. A study of the effects of expansion or contraction on organizational morale.

9. The determination of the policies that will guide the executives in adjusting the organization to changing business volume.

10. The formulation of a plan for organizational flexibility that will be understood and accepted by the organization. This is usually the simplest practicable plan.

Organizational Capacity for Growth

The growth of business volume is the cause of some of the problems that have been noted above. Some of the methods for developing organizational stability and flexibility tend, therefore, to improve organizational capacity for growth. There is an obvious

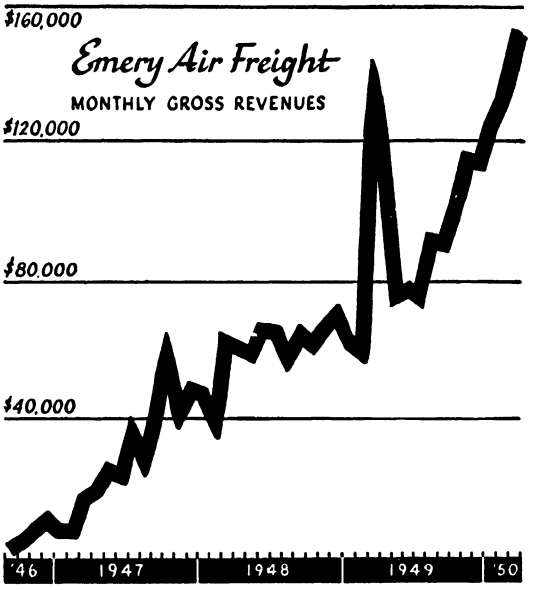
difference, however, between the temporary increases in business that are due to seasonal and cyclical changes and the permanent increases that are usually meant by the term business growth. Permanent increases are associated with the secular trend of business. This depends ultimately on the secular trend of the population and of purchasing power. Furthermore, the secular trend of business volume in a given organization depends on the quality of its executive leadership and other basic factors that are associated with its operations. The trend has been upward in most industries in the United States. It will be downward in an industry whose services are no longer needed, until such time as it offers goods and services that are wanted.

Business growth is reflected usually, but not necessarily, in increased organizational size. Increasing mechanization may temporarily offset the need for more personnel. There are other measures of business size in addition to number of employees, such as volume of sales or production, capital investment, and power consumption. Increasing "dosages" of capital, as the economist expresses it, tend to result in increasing need for personnel. This assumes that there is a reasonable degree of free competition which passes the benefits of technological improvements to the consuming public in the form of lower prices, that there are not too many rigidities in the cost and price structure, that the particular consumers' needs are expansible, and other conditions. Organizational capacity for growth is a limiting factor in the increase of business volume.[18] Its development is a major problem in successful concerns. It is not exclusively a problem of large organizations. The concern shown in Fig. 43 started literally from scratch after World War II. Its growth has been rapid. It is still small within its industry. Obviously it will have some important organizational growth problems if the indicated rate of growth continues.

A growth company is one that maintains or increases its share of its markets, over a period of years, while maintaining or increasing the rate of profit that it earns on the total net assets that it employs in its business. Organizational capacity for growth may be defined

[18] Herbert Spencer said: "Socially as well as individually, organization is indispensable to growth; beyond a certain point there can not be further growth without further organization."—Quoted by L. Urwick in *Organization as a Technical Problem*, p. 7.

as the ability of an organization to adjust its personnel, assets, and structure to permanent changes in business volume without serious loss of economy or effectiveness. It is concerned usually with the



A BUSINESS STARTS

Contrary to popular opinion, most companies do not start with $15,000,000 cash and X-million in publicity (a la Kaiser-Frazer and Lustron Corp.). This chart shows the month-by-month growth of little, Manhattan - based Emery Air Freight Corp. which claims to be the only nationwide air forwarder (IR, Sept. 29, 1948). The company's first job was on Aug. 5, 1946 and consisted of two canvas bags of cancelled checks bound from New York to Cleveland. Fee: $17.08. But the shipment was so important to founder-president John Colvin Emery he rode to the airport with the bags on his lap. Revenues in September 1946 were $3,500 and Emery was off.

For all 1946 revenues were $30,399; in 1947 they reached $357,000 and for 1949 they were a record $1,105,000, thanks partly to an Air Express strike in the early months. Gross soared to a new monthly high in March 1950 and is still rising. Better yet the little company earned more money in the first quarter than all last year—and last year's net of $25,934 was the first in the company's 44-month history.

FIG. 43. The Growth of a Small Business. (Courtesy, Merrill Lynch, Pierce, Fenner & Beane.)

permanent expansion and development of the organization. The objective in developing this capacity is the maintenance or improvement of competitive effectiveness in meeting the increased needs and desires of customers for more goods and services of better quality at lower prices under whatever conditions of time and delivery they demand. The company's personal objectives are the rewards of

success, both tangible and intangible, that result. Organizational growth usually is the result of the successful achievement of service objectives, and in itself contributes to further success.[19]

Considerations in the Development of Capacity for Growth

Growth may be a requirement in some industries for the proper discharge of an organization's economic obligations. The development of organizational capacity for growth accordingly becomes an executive responsibility. Failure to discharge this responsibility satisfactorily can result in serious business difficulties internally and externally. The internal difficulties may have to do with decreasing executive effectiveness, and poor coördination and cooperation resulting from a stubborn tendency to cling to outmoded organizational and procedural forms. Profit margins decline and other troubles arise. External difficulties may result from the progressive loss of competitive position. These difficulties may also develop because of lack of organizational flexibility, but for different reasons.

The significance of these difficulties is, of course, the fact that they inhibit normal growth, because of some mishandling of basic factors or the malperformance of functions. They therefore indicate fundamental considerations that should be taken into account in the development of organizational capacity for growth. The principal considerations are:

1. The character, direction, and rate of change of business objectives.
2. The characteristic attributes of the industry that affect growth.
3. The basic processes for organization growth.

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[19] Frech and Jeffries, two experienced executives, have said: "It is difficult for a business organization to maintain a large volume of sales unless its rate of growth is at least equal to that of its competitors in the same line of business. If the rate of growth of the competitors is greater, such competitors will eventually be able to, and will, offer better values, and such better values will continue to increase their rate of growth until progress for the organization which has lost its proportion of the total business will eventually become impossible." —*Business Ideals, Principles and Policies*, p. 27.

Northcott, Sheldon, Wardropper, and Urwick consider that one of the aims of good organization is "to insure that the enterprise is in a position to grow and expand without dislocation, despite changes in persons and methods."—*Factory Organization*, pp. 15–16.

4. The problems of functionalization that affect growth.
5. Capital requirements and physical facilities for growth.
6. The quality and supply of executive leadership.
7. Adequate growth plans and policies.

The character and direction of change in business objectves must eventually govern the character and direction of growth of the business organization. Ultimate objectives represent fundamental economic values that the public probably will need or desire over a long period of time. They have stability for this reason. The starting point of thought in planning for growth should be the characteristics and requirements of the concern's ultimate objectives. An estimate of its progress in accomplishing them tends to broaden the understanding of growth requirements in terms of more goods of better quality at lower cost, together with other conditions of good customer service. It may lead, accordingly, to research that will result in new goods and services for new needs, expanded uses for present goods and services, the same values at lower costs, and other constructive developments. The characteristics of the objective condition the company's thought with respect to growth possibilities. Certainly a concern or industry whose objectives are limited and inelastic should have fewer growth possibilities than one in which the reverse condition is true. The rate and direction of the secular trend are significant considerations in growth planning. A comparison of the secular trends of the business and the industry indicates how well, relatively, a company has been accomplishing its objectives, both ultimate and immediate.

Growth Characteristics

A distinction should be made between establishments, concerns, and industries in considering business growth characteristics. An establishment may be any business organization that is capable of continued, independent operation. It may, however, be a member of a larger, integrated business organization that is pursuing the same basic objectives on a broader scale. The latter and its competitors are members of an industry. The Lincoln-Mercury Division of the Ford Motor Company is a business establishment. The Ford Motor Company is a member of the automotive industry, along with

General Motors, Chrysler, Studebaker, and other large automobile manufacturers. Basic growth characteristics affect all three categories. They are more significant in the case of the establishment.[20]

Some characteristics indicate strongly the possibilities of growth and the development of large establishments. If there is a strong, universal, and continuing demand for goods or services involving national distribution, it is probable that a large establishment will be necessary for good customer service and effectiveness. The term "large," as used here, means above the national average for the basic type of economic activity, such as manufacturing, distribution, transportation, or finance. This is very likely to be true in a basic manufacturing industry, such as steel, in which the natural resources required are limited in extent and concentrated geographically. The exhaustion of good grades of ore that are readily accessible and the necessity for discovering and exploiting new ore resources that are more remote require heavy expenditures and large organizations for exploration, development, transportation, and research. This problem is far beyond the abilities of any but very large, well-integrated concerns. A large establishment is at least indicated when the product must meet difficult quality standards to perform its service functions properly. It may be a producers' good that is bought to tight specifications and is subject to technical tests when it is received at the factory. It may be a consumers' good that can be tested adequately by the customer or is subject to governmental quality regulations. The small concern can and does produce high-quality products on a small scale. Competition tends to require eventually quantity production of high quality at low cost. This usually demands a high development of manufacturing methods. Operative functions become more differentiated. They tend in consequence to become more mechanized, complicated, and technical. Long runs in large quantity tend to become necessary to meet the requirements of low costs. Highly complex assembled products for which there is a mass demand require mass production to meet the quality and price requirements for mass distribution. The nature and volume of the demand must be such that the product and the production factors entering into its manufacture can be

[20] Willard Thorp made a thorough analysis of growth characteristics in *The Integration of Industrial Operations,* Census Monograph No. 3.

standardized. Mechanization and a highly developed professional staff organization, together with a large volume of business to permit continuous production operations, are necessary. The problem of coördinating the activities of many staff departments and divisions with the requirements of a great many production and assembly operations in different plants is complicated and difficult, despite decentralization. Products such as automobiles, radios, and washing machines require organizations that employ thousands of people for these reasons. There are concerns that make complex products of great value and size for which there is a small unit demand. A large organization is required to produce them nevertheless. They require many thousand man-hours of work. The big turbogenerator installations made by large electrical manufacturers are an example. The proportion of man-hours to machine-hours tends to be higher than in concerns that must handle a high unit demand. Apart from other considerations, the increasing size of the product may be a factor in the development of large-scale organization. Heavy capital requirements are characteristic of the above situations. Corresponding capital applications are necessary for the production and distribution of large quantities of goods and services of increasing quality at decreasing costs and prices. These factors and conditions have their greatest effect in manufacturing industry. The growth of large establishments and concerns is suggested, however, whenever these general conditions exist and their continued development is necessary for the proper satisfaction of the public's economic interests. The case of the manufacturers of cargo planes during World War II is possibly an exception. The need for their services diminishes greatly with the cessation of military operations at the conclusion of a war. The need for an organization continues because of a continuing threat of war and the need for civilian air transport. It is a growth industry, but the major problem appears to be organizational flexibility.

There are, conversely, certain characteristics that indicate the desirability of small establishments and suggest minimum growth possibilities. A manufacturer of nonstandard products made to the customer's specifications is an example. It is a service industry that caters to the special requirements of the buyer. Quality may be high, but so are costs. Unit demand is likely to be relatively low

because few buyers can afford such personal service or they need it infrequently. Establishments are likely to be small for this reason, and because of the necessity of giving special attention to special requirements. Skilled labor is likely to be the principal cost factor in the goods or services produced by such concerns, since a high division of labor and the mechanization of operative functions is not possible. The market, furthermore, is likely to be local, which tends also to reduce the potential volume of available business. Attention to special requirements usually requires conferences. They can be held more readily when people are near each other. Time frequently is a consideration in providing special service. Such considerations tend to localize markets, despite the fact that modern means of communication and transport tend to diminish the limiting effects of time and distance. There are many examples of establishments that have limited growth possibilities because of such business characteristics as these. The merchant tailor is an obvious example. The tool and die manufacturer is another. The automotive industry is usually thought of as one in which only large establishments can exist. This is true in general. There are, however, small manufacturers of special automotive equipment. The writer knows of one in Ohio who employs approximately 250 people. The plant does an excellent business, but it will never rival the Pontiac or Dodge plants in size.

There are other factors that may limit the growth possibilities of an establishment. The raw materials required for the manufacture of a product may be widely distributed and readily available. Transportation costs, in addition, may be high. The manufacture of common brick tends to be a local industry for this reason. The susceptibility of goods to spoilage or rapid depreciation is another factor. The milk-processing and cannery industries are served by small establishments, partially for this reason. Establishments that distribute their goods or services directly to the ultimate consumer tend to be small. The need for giving special attention to small-scale individual requirements tends to localize operations and limit size. Even the largest department store is small compared with a large manufacturing establishment. It should be noted also that the capital requirements of the average individual establishment, under the above conditions, tend to be relatively small. The available

business may be split among a large number of competing concerns, with the lion's share going to a few that are very well managed. Failures may be high, but there are always new entries into the field because of low capital requirements.

The factors and forces that limit the size of the business establishment do not necessarily limit the growth and development of the concern. Growth through the processes of economic integration may still make it possible to render an economic service beyond that which is possible for the individual establishment of limited size. Organizational integration may be defined as the process by which a concern increases the scope and magnitude of its business operations by the addition of other establishments to its organization structure. These establishments may be set up by the concern itself, or they may be acquired by purchase, merger, or consolidation. Vertical integration expands operations by acquiring establishments in all phases of the work of serving the customer from primary resources to the ultimate product, a consumer's good. The company attempts to achieve better control of the principal economic factors in its business by engaging in all phases of activity on which it depends, from the production of raw materials to the distribution of finished products, to the extent that this is practicable. Such integration may contribute greatly to the economy and effectiveness of manufacturing operations, for example. The integrated manufacturer has greater assurance of adequate continuing supplies of raw materials. His manufacturing costs may be reduced because he is in a better position to require from his subsidiary more uniform quality in accordance with his specifications. He may be able to procure the material at a lower cost because he controls the subsidiary and is thus able to introduce good managerial and operative methods. He can operate with relatively lower inventories. He may be able as a result to make a good profit on the basis of low inventories and a high turnover, rather than on a low turnover and a high markup on prime cost. There are always offsetting disadvantages, of course. Large steel companies, for example, must risk the closing-down of their primary operations by a strike in their coal mines.

A concern may also expand through horizontal integration. Growth in this case is achieved by the addition of establishments that operate on the same economic level. It is found most frequently

in the distributive industries. A local drug-store chain may not operate outside of a given city. Each unit of the chain provides similar customer services in the section of the city it serves. There are national chains in other fields. Horizontal integration may contribute to the economy and effectiveness of establishments through the services of headquarters staff functions, central warehousing services, lower prices for purchased goods and supplies resulting from the integration of purchasing power, and better management in other areas. Some concerns are integrated in some degree both vertically and horizontally. The degree that is practicable in either case should be governed by the extent to which it results eventually in more goods and services of better quality at lower cost. Otherwise, the consuming public does not benefit from any contribution to its standard of living. The stockholders of the concern may not benefit from increased earnings. It may be merely a stockjobbing deal.

Functionalization and Organizational Growth

The internal growth of an organization is accomplished through the processes of functionalization that were discussed previously. An increasing volume of business means increasing work for the organization. Increase in the amount of work in a function is reflected usually in an increase in the personnel required for its performance. A general increase in business volume necessitates functional differentiation generally throughout the organization to divide the work load and provide the requisite specialization. The complexity of the organization increases in accordance with the Law of Functional Growth.

Growth begins necessarily in the primary line organization of a business. It results initially in an increasing differentiation of managerial and operative functions. It leads first to primary operative specialization with the development of the line organization. Managerial specialization develops subsequently, with the evolution of the staff organization from the primary line. Staff personnel tend to increase in geometric progression as line personnel increase in arithmetic progression up to a point of optimum organization. It is equally helpful in organizational planning for growth, therefore, to have the same kinds of ratios that were discussed in connection

with organizational flexibility: percentage ratios of staff to line payrolls for various business volume for departments and classes of employees, similar ratios of staff payrolls to the secular trend of business, and other data that show progressively the effects of growth on functionalization. Growth planning requires a determination of target volumes of business by approximate target dates over a considerable period of time in the future. The term "target" as used here refers to the business objectives at which the concern is shooting. It requires an analysis of objectives, based on marketing analysis, as well as an extension of past secular trends into the future. Functional analysis based on the Principle of Functional Emergence, together with growth data and the practical experience of the organization's executives, should indicate the general areas in which functional differentiation and growth are most likely to take place. It should permit the provisional determination of target organizations corresponding to the target volumes for corresponding dates. The writer observed recent efforts of a chain-store organization to expand operations. It has a definite plan for expanding its business with target volumes at various future dates. It appears to have done a good job of planning its growth requirements for capital and facilities. It appears to have done an equally poor job of organizational planning for growth. It is behind in the accomplishment of its "five-year" plan. It should be remembered, of course, that any forecasting is hazardous. No creative planning is possible, on the other hand, without some foresight. A target organization based on target volumes of business represents merely a working hypothesis. It should be revised as the target date is approached and the situation becomes clearer. It is, in other words, a problem in continuous planning.[21]

Growth and Optimum Organization Size

We noted previously that there appears to be a principle of marginal utility in functionalization. There is a point of diminishing returns beyond which further functionalization in an establishment appears to reduce rather than increase operating economy

[21] Henry S. Dennison said that "continuous reorganization is the constant rebuilding of structure to meeting changing personnel and environment."—*Organization Engineering*, p. 183.

and effectiveness. It is probably an effect of the increasing complexities resulting from more organizational service levels, records and systems, communications systems, line and staff relationships, and the other effects of increasing functionalization with increasing business volume. These disadvantages may be offset by increasing mechanization and a more effective use of capital. Lower costs with the same or better quality, greater financial stability, and other advantages of greater capital application may in turn be offset by higher break-even points and loss of flexibility, as well as the further development of the difficulties noted above.

It has been generally recognized, in consequence, that there is such a thing as an optimum organization size for an establishment. It may be defined as the size, by whatever unit it is measured, which can render the maximum service to the public that is consistent with a competitive economy and effectiveness. This requirement must be consistent with a satisfactory return to capital and satisfactory conditions of employment for labor.[22] This is not a recent concept by any means and is not associated directly with attacks on large organizations in recent years on the grounds that "bigness" is bad *per se*. Willard Thorp noted in 1929 that "at any given time and with any given stage of the industrial arts, there appears to be a size of plant which is most efficient."[23] John H. Williams believed in 1930 that there is no optimum size for organizations in general.[24] It is probable, certainly, that there is an optimum size of establishment for every industry and for every major change or development in the situation of that industry. The optimum size of organization for a concern can be extended by the development of superior executive leadership, decentralization of operations and their control, the processes of economic integration, and other means. The

[22] E. A. S. Robinson has defined it as "that firm which in the existing condition of techniques and organizing ability has the lowest average cost of production per unit, when all those costs which must be covered in the long run are included."—*The Structure of Competitive Industry*, Harcourt, Brace, 1932, p. 14.

[23] See *Recent Economic Changes in the United States*, McGraw-Hill, 1929, p. 190.

[24] John H. Williams, *Is There an Optimum Size of Organization*, Taylor Society Bulletin, February, 1930.

Oliver Sheldon had noted earlier that there are distinct limitations to the size of an undertaking beyond the factor of business volume. See *The Philosophy of Management*, p. 134.

limitations affecting optimum size are merely extended, however. They are not removed.[25]

Executive Leadership and Organizational Growth

The growth of an organization tends to be limited by the growth and development of its executives, particularly its top leadership. A distinction should, however, be made between the requirements for organizational stability and those for growth. Stability requires that there must be a certain number of junior executives and key men in the organization who can take over present jobs that entail greater responsibilities when they are vacated. These men must have the mental capacity, background, training, experience, and personality needed to perform the present functions under present conditions with present methods, at least in jobs on the next higher service level. Growth capacity requires that there must be a certain number of junior executives and key men, usually a smaller number, who have the potentialities for continued effective leadership in their present or in higher positions as the breadth and magnitude of their executive responsibilities expand permanently with permanent growth in the concern's business volume. They must have the mental capacity, background, training, experience, and personality needed to perform new functions under new conditions with new methods involving larger groups, more complicated functional relationships, and greater command responsibilities. They must have the superior mental alertness and vision to foresee, evaluate, and anticipate long-range changes in business conditions, and the courage to make the financial, organizational, and other changes that these changes dictate.

There are no statistics that show how many concerns have stable organizations but little capacity for growth, because of the limitations of their executive leadership. The field usually narrows rapidly under competitive conditions, when an industry experiences

[25] The problem of optimum organization size apparently exists in military as well as in business organization: "The maximum size of a unit is limited by the ability to exercise command and the mobility to perform its intended task in combat. The minimum size depends on the necessity for economy of men and material, but is limited by the requirement that the unit be able to accomplish its intended combat task."—General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 32.

rapid permanent growth. Those that failed must have lacked capacity for growth in some respect. There are other causes of business failure beside poor leadership, however. Poor management, nevertheless, is an important cause. Executive promotion on the basis of merit, rather than seniority is the policy in well-managed business organizations. Weight is of course attached to past experience and past performance. Such measures may not give a good forecast of an individual's future performance. It is possible for a job to outgrow an individual because of his mental limitations, even though his relative rank remains the same. A mediocre executive can give satisfactory performance longer when the rate of change in organizational objectives and organizational growth is slow. It is possible to solve many problems satisfactorily by the time-consuming expensive process of trial and error, under such conditions. The executive may be elevated, as a result, to a more responsible position than his abilities entitle him. He may fail badly if a change in the conditions in the industry substantially accelerates its rate of growth. This condition of rapid growth was simulated frequently during World War II. The rapid expansion of many concerns, together with the necessity for manufacturing new products, made the practical experience of many executives obsolete to a considerable degree. Some of them lacked the breadth of background to adapt themselves to new problems and conditions. Sometimes they were permitted to continue because they could not be replaced by anyone who was any better. Occasionally it was necessary to replace them at high cost. The tendency to advance mediocre individuals under normal conditions may be accentuated by a feeling of loyalty to one's subordinates. It may be hard to tell a subordinate who has worked faithfully that he has reached his limit. It is easier to give him the benefit of the doubt, without thinking of the ultimate effects on the organization's interests. The quality of the planning and organizing for growth is likely to be mediocre or spotty if this happens too frequently. Executive obsolescence, nepotism, favoritism, organization politics, and other organizational difficulties that have been noted may also prevent the development or maintenance of the capacity for organizational growth.

The remedy, insofar as executive leadership is concerned, is basically the same as that mentioned above: organizational plan-

ning, better initial selection of executive raw material, further education and training for advancement, ultimate rewards that will continuously sustain the individual's interest in self-development, a broadening of experience through transfer and rotation, good control of the promotional process, and similar methods. Career planning and guidance may be helpful in large organizations. This requires knowledge of permanent new executive jobs that may be open, and approximately when. Some thought should be given to probable changes in the functional content of present executive jobs, particularly with respect to the changing proportions of administrative and operative management work. The organization's inventory of executive personnel and their growth possibilities should be known. Its capacity for growth may be limited dangerously, unless some such measures are taken.[26] These measures and the policies on which they are based should, of course, be embodied in a plan for organizational growth.

General Method of Approach to Organizational Growth

Organizational planning for growth is closely related to the problem of developing other organizational attributes. There are some substantial differences, as we have seen. Growth planning is the function of specifying the factors, forces, effects, and relationships with respect to required organizational expansion over a long-term period. It specifies what should be done, how it should be done, what policies should control the work of organizing for growth, where changes probably will take place, and other considerations that affect the accomplishment of growth objectives. The principal considerations may be summarized as follows:

1. Estimation of the long-term service demands on the organization. This involves the determination of such matters as:
   a. The characteristics and requirements of the ultimate general objectives of the company and the industry.

[26] Henry S. Dennison summed up the problem as follows: "An organization which hopes to hold its place over a period of years, and especially if it wants also to grow, will have to undertake to prepare its members for the new complexities of the future. Research, analytical thinking, and broad facilities for training its members to plan ahead, will characterize the great majority of the existing organizations which will remain successful twenty years hence."—*Organization Engineering*, p. 116. This will probably continue to be the case.

b. The growth characteristics of the industry.
c. Marketing problems, such as the nature and direction of changes in consumer demands, potential needs for the company's goods and services that may be developed, areas in which it is not getting its proportion of the community purchasing power, the strength of competition, and other similar problems.
d. The secular trend of sales volume for the organization and the industry.
e. The further developments in the goods and services that probably will be necessary to meet competition and the expanding desires of the public.

2. Determination of the effects of secular growth on the work of the organization. This involves such matters as:
   a. The basis of functionalization within the industry, with respect to organic functions, basic organizational form, typical line and staff relationships, and other functional problems.
   b. Job and other functional analyses in the particular company.
   c. The history of the company's secular growth to date, if this can be determined from existing records.
   d. The probable further differentiation of functions and corresponding development of line and staff groups, in the light of the practical experience of company executives and the Principle of Functional Emergence.
3. Determination of the effects of secular growth on personnel requirements. This involves such matters as:
   a. The changing ratios of line and staff personnel strength, both operative and executive, by organizational elements and service grades, relative to the secular trend of sales.
   b. The present inventory of key operative and executive employees and individual growth potentialities.
4. Determination of the effects of secular growth on capital requirements. This involves such matters as:
   a. Changing ratios of investment in capital equipment with the secular growth of the business, by organizational elements and equipment classes.
   b. Similar ratios for other classes of capital requirements.
   c. Classified equipment lists and other asset records.

d. The history of changing break-even points, costs, and other factors that suggest the probable optimum size of an establishment in the industry.
e. The history of the development of operating methods with respect to mechanization.

5. Development of plans for organizational growth. This involves such matters as:
   a. Intermediate and ultimate target volumes of business in terms of secular sales over a long period. This may be a five-year period, with overlapping five-year forecasts made annually, or a longer period if practicable.
   b. Target organizations and their structure that probably will be required to handle the target volumes as they develop. This must take into account the limitations imposed by the requirements of effective units of operative and executive supervision, and other structural considerations.
   c. Personnel procurement and training programs to assure adequate leadership for new or expanded groups within the organization.
   d. Corresponding programs for capital provision and the expansion of physical facilities.
   e. Annual review of growth plans, including general policies and basic business procedures, or a more frequent review when conditions warrant.
   f. Location of responsibility and authority for each phase of the plan for organizing for growth.
   g. Provision of administrative control of the work of organizing.

Organizational Balance

Organizational balance is a condition in which the relative development of the various functions and organizational elements conforms as closely as practicable with their relative importance. The measure of importance should be their relative contributions to the achievement of the organization's service objectives.[27] It is not an

[27] L. Urwick has pointed out that "each portion and function of an enterprise should operate with equal effectiveness in making its allotted contribution to the total purpose set before the enterprise as a whole."—See L. P. Alford (ed.), *Cost and Production Handbook*, Ronald Press, p. 1345. See also W. B. Cornell, *Organization and Management in Industry and Business*, p. 53.

exact measure, of course, because many contributions are intangible. There is obviously an optimum relationship between functions, physical factors, and personnel for each organization element, and for the organization as a whole, for a given volume of business in a given industry. It is a condition of maximum economy and effectiveness. The objective of an attempt to develop and maintain organizational balance is a continuing optimum relationship.[28]

An exact solution of the problem is never possible. The concept of balance is relative. It involves dynamic rather than static balance, since we have a progressive economy. A condition of optimum functionalization is difficult to attain. It would obviously result in perfect balance if it were achieved. It would require the development of each function exactly to the point of marginal functionalization.[29] Fortunately it is possible to have good balance without such perfection.

There are external and internal forces that affect the operations of a business organization which tend continually to destroy its balance. Some of them can be minimized. Others are beyond the control of the organization. Various organizational difficulties frequently indicate the causal factors in lack of balance.

Factors and Considerations in Organizational Balance

The specific nature of the limiting factors in the problem depends on the situation of the particular concern. They can be determined only by investigation and study of it. The general factors in the problem are necessarily the basic business factors that affect all problems of business organization.

The primary service objectives of the organization, for example, determine ultimately the amount, kind, and rate of work that it must perform. It is the customer's privilege to change his mind as to what values he wants, and how much of them. These changes are usually in the direction of a higher standard of living under normal

[28] Webster Robinson stated it as follows: "The fundamental idea of balance is the preservation of harmony between all the various activities of the business. Control accomplishes this end by eliminating the two principal causes of lack of balance, i.e., neglect of an essential part of the business, and over-emphasis on some one part."—*Fundamentals of Business Organization*, p. 151.

[29] E. D. Jones has a good statement of the application of the principle of marginal utility to functionalization in his *The Administration of Industrial Enterprises*, p. 155.

peacetime conditions. He expects to get more of whatever he wants at a lower cost. Changes are constantly being made, as a result, in products or services, processes, equipment, or other factors that affect the amount of work that must be done and its balance in the organization. Ineffectiveness and high cost resulting from poor functionalization may develop if this condition is not recognized. The performance of certain functions may continue on the same scale as previously after the need for them has diminished. Records may be kept and reports issued that are seldom used. Functions may be centralized that should be decentralized; occasionally the reverse is true. Functions may be split unnecessarily when new organizations are set up, but unneeded organizations are continued. It is always difficult to determine with reasonable accuracy the relationships between cost, worth, and necessity in the case of staff groups. These groups produce collateral and secondary values. Job evaluation helps but it cannot solve this problem completely. It deals with relative job worth rather than necessity. Staff groups have a tendency to expand their services beyond a reasonable need for them and to continue them after the need has ceased. The illogical organization structure that results may increase command difficulties, cause friction, and lower the quality of coöperation.

A balance of work requires a balance of personnel to do it. This requires more than a balance of man power in terms of numbers of people and hours of work. It requires a balance of the skills, knowledge, and experience that are necessary for its performance. There are likely to be man-power surpluses in some departments and shortages in others under a condition of functional unbalance. Surplus man power means excess costs and probably low morale. A man-power shortage means inability to accomplish the mission that has been assigned to the department. A balance of work requires similarly a balance of budgets and physical facilities. There is obviously such a thing as an optimum provision and use of capital in its various forms. A good balance of physical factors is not likely to result unless there has been a competent functional analysis to determine the requirements for an effective work balance. An unsatisfactory condition with respect to organizational stability, flexibility, capacity for growth, or morale may also be the result or the cause of organizational unbalance.

The responsibility for any such conditions falls necessarily on the organization's executive leadership. Its job is to plan, organize, and control properly the work of the organization. This leadership may therefore be a cause of organizational instability in itself. Executive bias can develop, perhaps unconsciously, because of previous long service in a branch that is under the executive's command. He understands the problems and difficulties of this branch and gives them sympathetic attention. For this reason it may be easier for the head of the particular branch to get a budget appropriation or more personnel than it is for some other executive whose responsibilities are equally important. A strong, ambitious executive may expand his functions unnecessarily and build up the number of people on his payroll to increase his apparent importance in the organization. His pugnacity or superior ability may give the functions under his command a significance that is out of proportion to their contribution to the organization's success. Such developments may be compounded by a tendency to build organization structure around individuals rather than functions. The remedy is more careful selection and training of junior executives, their indoctrination with concepts of organizational service, good top leadership, and the elimination of the organizational politician. Organization manuals and standard procedures prevent unauthorized changes in organization structure and business procedure. They help in the maintenance of balance, provided that they are not inflexible and are kept up to date.

General Method of Attack on the Problem of Balance

Good operating plans, together with sound plans for the development and maintenance of organizational stability, flexibility, and capacity for growth, should result in satisfactory organizational balance. No specific plans for such balance, beyond those discussed previously, should be required. The problem, as before, involves the analysis of organizational objectives, functional analysis, the provision of personnel and physical factors in the right kind, extent, and degree for proper performance, the control of organizational and procedural changes, and related problems that have been mentioned earlier. There should be periodic audits of organization structure and procedure, together with administrative controls, that

will permit top executives to evaluate the condition of balance that exists.

Organization Charts and Manuals

Russell Robb once said: "We can conceive of no real organization without a structure of some kind, without a definite plan."[30] Organization charts and manuals record and make available certain essential information concerning the organizational plan. They are therefore part of the organization's basis for intelligent coöperation and self-coördination in the accomplishment of its objectives.

An organization manual is chiefly a set of organizational specifications. They are based on job analysis and job specification. The manual gives general information concerning each organization element, such as its name, organizational location, title of its executive head, principal subdivisions, their objectives and duties, the responsibilities and authorities of the executive head, the chain of command in which he is located, the structural relationships between his group and others with which he must work, and similar information. A manual is advantageous to the organization in many ways. It facilitates the definite placement of authority and responsibility. It clarifies the general nature of the functions and responsibilities of other executives with whom one must work. It indicates the position of each executive in the organization structure with reference to the lines of responsibility, authority, and accountability that affect his work. It provides in convenient form basic information that aids in the solution of various organizational problems. It assists in the formulation of policy decisions for the continuous development and improvement of the organization. It is both a cause and an effect of organizational planning.

An organization chart is a graphic or semigraphic presentation of certain information concerning functions, functional groupings, and lines of responsibility, authority, and accountability in the organization. This is information that is contained in the organization manual. A chart does not take the place of the manual, however. It secures the advantages of a graphic presentation at the expense of a complete presentation. Organization charts are usually part of an organization manual, because of their self-indexing,

[30] Russell Robb, *Lectures on Organization*, p. 17.

ready-reference qualities. They are often issued independently to the rank and file of an organization or to the public for general information purposes. The average person, customer, or employee is not interested in the details. The average stockholder may not be either, even though they are his concern. Various types of organization charts have been used in different concerns. The two that appear to be most common are the "inverted tree" type and the functional type. An example of the first is shown in Fig. 26. It emphasizes command relationships between lines of responsibility, authority, and accountability, but gives a minimum of information concerning objectives, functional content, and the nature of responsibilities. The functional type gives more information but does not show command relationships as clearly. It is less graphic. An example of this is shown in Fig. 22. Almost any good general book or magazine on management will furnish examples of organization charts.

Organizational planning has to do with the application of the principles of functionalization. It is concerned with the determination of organizational requirements and relationships relative to the requirements of the organization's objectives. Organization charts and manuals should facilitate the accomplishment of these purposes, as well as guide executive and operative employees in their day-to-day relations. Consequently, they should meet certain requirements. They should be simple enough to be readily understood by the average person who must use them. It should be possible to produce them cheaply in whatever quantities are needed. It should be possible also to revise them cheaply and quickly when organizational changes become necessary. They are likely to be more harmful than helpful when they are out-of-date and inaccurate. The method of production should be such, therefore, that standard office duplicating equipment can be used. It is believed that organization manuals and charts should be available to all members of the organization. Highly accurate organizational information that the members do not know about cannot be of much help in maintaining effective relationships within the organization. The writer recalls a case during World War II in which he had a little difficulty in getting the organization chart of a manufacturer of troop-carrying gliders. The only copy was in the lower left-hand desk

drawer of the vice-president in charge of manufacturing, who regarded it as "top secret." The unit cost of this glider was about 50 percent above that of a competitor for the same design of product. Part of the problem involved poor organization. A similar case has come to the writer's attention since the war. The organization chart of a large civilian air-transport company is kept in the president's desk. It is not available to subordinate executives. The five top executives were asked to sketch their understanding of the organization's structure. The result was five different organization charts, none of which agreed exactly with the president's chart. They were all similar, of course. The reasons for this secrecy sometimes are interesting. There may be a feeling that jealousy and friction may result if people learn their true position in the organization. This overlooks the fact that the more aggressive will assign status and authority to themselves when it is not done officially. There is usually plenty of jealousy and friction in such organizations. The top man just doesn't know about it. Secrecy may be due to a realization that the organization and its structure leave a lot to be desired. There is no point in broadcasting one's errors of omission or commission. It may be due, of course, to an honest belief that a company has a superior organization structure and that this is an important factor in its competitive success. Good structure is an important factor. It should be designed, however, to fit the organization and its problems. The principles involved are well known to students of organization. Consequently, there is little if anything in an organization manual that can be regarded as "classified" information. The tendency among well-managed concerns is to make such information readily available to all who have legitimate need of it. This is evident from the ease with which it can be obtained. The only surprising thing is the number of good concerns that still do not have such information in well-organized form.

CHAPTER 15

ORGANIZATIONAL MORALE

The Nature and Importance of Morale

Great leaders have always recognized the importance of morale, by whatever name they called it. It was usually associated with military organization before the Industrial Revolution. This was often the largest and most important form of organization in ancient civilizations, which were built on a union of church and state, and based on military power. Morale is equally important in modern military organization.[1] It will always be an important problem in any organization.

The Industrial Revolution took place during the latter decades of the eighteenth century. Recognition of the undesirable social effects of rapid technological progress came early. Some attempts to improve their condition, usually unsuccessful, were made by workingmen almost from the beginning. They continued with varying success during the nineteenth century. The development of the modern labor organization did not begin until the formation of the American Federation of Labor in 1886. There were always a few progressive industrial leaders who recognized the social, political, and economic desirability of linking improvement of employees'

[1] Napoleon is said to have considered it to be responsible for 75 percent of the value contributed by the four elements in battle efficiency—numbers, arms, training, and morale. Following World War I, Colonel Edward L. Munson said: "Fighting strength may be increased not only by the usual accepted way of increasing the number of units, but by increasing the fighting power of each unit. If the morale of a certain million men could be doubled, it would add the equivalent of a million men to the fighting power."—*Management of Men*, p. 39. The mathematical expressions have no significance, of course, but they indicate the importance that these authorities attach to morale.

working conditions and living standards directly with the development of an industrial economy. General recognition of the importance of morale in industry developed with the growth of large business organizations. It was undoubtedly stimulated among executives by the loss of their employee leadership to professional labor leaders and politicians, the general loss of public confidence in executive leadership, the passage of labor legislation that tended further to weaken the leadership position of the executive, and other events that followed the depression in 1932.

Most executives realize clearly today the importance of morale in business organization. They are usually less clear concerning the nature of morale and the requirements for its development and maintenance. This is not surprising. Morale is a powerful force in an organization, but one that is highly intangible. Most definitions of it are correspondingly vague. They refer to it as *esprit de corps,* or by other terms indicating the general spirit of the organization. Many definitions define good morale rather than morale.[2] Morale can range through an infinite number of degrees from excellent or completely positive to disastrously low or completely negative Standard dictionaries usually define it as a state of mind with reference to confidence, courage, zeal, and the like among a number of persons who are associated together in an enterprise. There is a distinction between individual and group morale, however. It is important because when they are in groups people frequently act differently than they do as individuals. Morale is, then, a mental condition of individuals or organizations. It determines their attitudes.[3] Hence it conditions the degree of their acceptance of leader-

[2] The following are a few examples:

Webster Robinson: "That element which quickens its vitality and welds into an unselfish and voluntary cooperation toward a common goal, the varied interests of the members of an entire personnel group."—*Fundamentals of Business Organization,* p. 199.

Ordway Tead: "That attitude which results from the mobilizing of energy, interest and initiative in the enthusiastic pursuit of a group's purposes."—*Human Nature and Management,* p. 173.

Edward L. Munson: "It is a state of faith. It is belief in ability to see anything through to a successful conclusion."—*Management of Men,* pp. 4–5.

[3] Douglas H. Fryer says: "Morale is individual well-being, in which the standards of morale are the psychological frames of social groups."—*The Handbook of Applied Psychology,* p. 17.

ship and the quality of their coöperation in the accomplishment of organizational objectives. An industrial society can be overthrown by the destruction of the morale of its industrial organizations. This is standard procedure for subversive groups and military organizations. It is further evidence of the importance of organizational morale.

Morale and Business Objectives

It was noted, in the discussion of objectives, that a value may be any satisfaction of a need or desire. An economic value may be any satisfaction of a need or desire for which one is willing to exchange other values. A need or desire develops basically from a fundamental urge. These urges underlie common bases of motivation. They may result partly from inheritance and partly from environment. They induce common tendencies toward action, such as the gregarious tendency, the pugnacious tendency, the play tendency, the creative tendency, the sex tendency, and others.[4] The scale of values of an individual or group of individuals is determined, certainly, by its philosophy of life. Totalitarian states have demonstrated that it can be influenced greatly by indoctrination. The latter obviously is not an inherited tendency. It was suggested previously that an analysis of objectives is a requisite for the successful solution of management problems, including those having to do with organizational morale. Such an investigation requires a determination and understanding of the bases of motivation and the assumptions on which the particular value concepts rest. Value, in any event, is basically a mental phenomenon.

A business organization is primarily an economic institution. It exists for the creation and distribution of certain economic values. These are its primary service objectives. They are values that satisfy the needs and desires of customers. The sum total of all such values, wherever created and distributed, represents the sum total of the

[4] Inherited tendencies to act were formerly called "instincts." Psychologists today disapprove of the term. They prefer the term "mental set": "The influences of heredity and environment are interwoven in us as the warp and woof of our existence. What heredity contributes is vague but important. . . . Mental set is the name used to describe the psychological past affecting particular response situations in the individual."—*Ibid.*, p. 93. The term includes everything that motivates us.

material benefits produced by an industrial society and available to it.

The Primacy of the Service Objective

Business organizations are dependent on the customer's dollar for their continued existence. This may not be true in a socialist state in which the government owns and controls the means of production. It is true in a nonsocialist state that is based on the right of property, the customer's right of freedom of choice in the market, and the requirement that the maximum practicable degree of free competition be maintained. Payments by customers for goods and services rendered are the principal source of income, under these conditions. Poor management results in poor customer service. The latter, if continued, may result in insufficient sales income. The company lacks the money and credit, in such a case, that are needed to pay invoices, meet payrolls, and cover other business expenses. The penalty may be bankruptcy.

The determination of morale policies and procedures requires a decision as to whether these basic business conditions may be expected to continue. Government subsidies to bolster the finances of so-called "depressed" industries are characteristic of socialist states. They usually represent an arbitrary diversion of economic values from one group of people to another for political and social reasons, rather than economic. The latter group is obviously operating an industry that is consuming more values than it is producing. Otherwise, it could have no real need for the subsidy, even though it had a real desire for it. It is the majority opinion in the United States that an economy that is based on private competitive enterprise is more likely to achieve high per capita production and a high standard of living than one that is not. There is less tendency to subordinate the economic objectives of business organizations to political objectives. There is greater decentralization of "centers of initiative." It appears more probable that technological progress will be rapid under these conditions. There are other well-known reasons. Clear popular understanding of the relation between private property, free enterprise, and individual liberty does not, however, appear to have been one of them.[5] It is probable, furthermore, that

[5] See, for example, a Gallup poll that sampled public opinion on the "welfare

alternate periods of inflation and depression will continue to be characteristic of an expanding dynamic industrial economy in a democratic society, but with some amelioration and diminution. The following discussion assumes that belief in the fundamental soundness of private enterprise will continue to be a controlling influence in the economy of the United States.

The payments to the various groups associated with the business enterprise represent important satisfactions of their needs and desires. These include the satisfactions desired by groups outside the business organization, such as vendors, financial agencies, and governmental agencies, as well as by inside groups such as employees and investors. The members of these internal groups must subordinate their personal objectives to the organization's service objectives at least to the extent of supplying competitive quality and service at competitive costs and prices. Otherwise, the customer may exercise his right of freedom of choice in the market. There can be no satisfaction of any interests, internal or external, if the business fails because of the continued transfer of patronage to competitors. A test of morale is accordingly the extent to which the individuals and groups composing the organization will voluntarily subordinate, in a reasonable degree, their personal objectives to the organization's service objectives. Few concerns could have passed this test well during the past twenty years.

The primacy of the service objective is an important principle in any form of organization. It says merely that an organization may fail when important individuals or groups of individuals within it place their personal interests ahead of the organization's interests. Fayol recognized its application to business organization at the turn of the century.[6] Evidence of its truth is the readiness with which the primacy of the service objective is conceded by the members of an organization during great emergencies when their personal interests are seriously threatened by its failure.[7] There is no implication in

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state," socialism, and individual liberty as an important political campaign issue. It was released to the press in April, 1950.

[6] Henri Fayol, *Industrial and General Administration*, p. 23: "In any undertaking, the interest of an employee, or a group of employees, must not take precedence of the interest of the concern as a whole."

[7] We should be able to qualify Winston Churchill as an expert in the field of political organization: "It is probably easier to form a cabinet, especially a

this statement that the process of morale development and maintenance is one of creating unselfish individuals. There is not likely to be any great change in human nature within a foreseeable period of time, despite the developing art of indoctrination. Any practical morale process must take human beings as they are, not as one would like them to be. A basic condition to any such process is, therefore, the following: The individuals and groups composing an organization must believe that by subordinating their personal objectives to primary service objectives they will at some future time gain the same or other desired values in greater amount, or, if they do not make this subordination, they will lose values that are more desired.

We saw earlier that objectives may be tangible or intangible. This applies to personal as well as other categories of business objectives. An employee's desire for a feeling of "worth-whileness," for example, may be an intangible objective. It appears nevertheless to be the basis of strong motivations. Any effort to acquire for oneself any values of any kind is selfish. It must be curbed and channeled. Otherwise, an attempt to fulfill this basic condition of morale development may result in violation of the Principle of the Primacy of the Service Objective, and possibly in the destruction of the organization.

The Morale-Building Process

The basis of the morale-building process is, accordingly, the process of integrating interests. It is any process that develops and maintains identities and interdependencies between the organization's service objectives and the personal objectives of its members.[8] The interests of individuals and groups are most acute, of course, with respect to the values they desire for themselves and for those immediately dependent on them. The process has to do, therefore,

coalition cabinet, in the heat of battle than in quiet time. The sense of duty dominates all else, and personal claims recede. Once the main arrangements had been settled with the leaders of the other parties, with the formal authority of their organizations, the attitude of all those I sent for was like that of soldiers in action, who go to the places assigned to them at once without question."—"Their Finest Hour," *Life*, February 7, 1949, p. 60.

[8] Mooney and Reiley said: "Good morale is not in itself an objective; it is the by-product of a greater objective, namely, the integration of every member of the organization with the common purpose."—*Onward Industry*, pp. 527–528.

with creating the conditions that will assure an adequate satisfaction of personal objectives. It must do this in a manner compatible with competitive effectiveness in accomplishing the primary service objectives of the organization. It must instill confidence in both executive and operative personnel that their personal objectives will be satisfied reasonably over a period of time. The attitudes of all classes of employees are conditioned by the degree of success with which the particular morale-building process meets these requirements.

It may be difficult to meet these requirements in the case of operative employees for a number of reasons. It is obvious that only average intelligence can be assumed in the average operative. His political, economic, and business background may be limited. His vision and foresight may be restricted accordingly. He is likely to be more interested in what he can get for himself today than in greater benefits that he may be able to get at some time in the future. He may live by the year, but he may be more interested in his present hourly rate than in a future annual wage. He may, however, be motivated quite as much, or more, by psychical as by physical values. Some of our worst strikes have taken place in industries that have paid the best wages, provided the best working conditions, and operated on standard hours. They may have been due in some cases merely to a desire for more of whatever values the employees desired at the time. The pronouncements of political and other publicists may have inculcated in the average employee a feeling that what he wants he needs, and what he needs is his right. The idea certainly can stimulate progress, but dangerously. It may be that he lacks sufficient background for an independent analysis of the situation. Industry, on the other hand, has been spending much money in an attempt to give him an adequate basis for understanding. It is a long-run rather than a short-run factor. The average employee's reactions to a situation are more likely to be emotional than logical. They can be modified by indoctrination, of course. He tends, nevertheless, to adjust his thinking to the realities of the situation, over a period of time, by a mental process of trial and error. It works, provided the rate of change in his situation does not invalidate the pragmatic test of results. A revolutionist wants a highly accelerated rate of political, social, and economic progress, even though it defeats itself in the end. The unsettlements, incon-

veniences, and even hardships that may attend rapid change may create dissatisfaction and loss of confidence in the present leadership. The rank and file may turn to an outside leader in the hope of securing a restoration or improvement in the situation, and "security." The development of organizational morale is difficult and takes time. Morale can be broken down quickly, however. No responsible executive can outpromise an irresponsible outsider. The notion that we can and should decelerate progress is hardly realistic. These and other problems make it difficult to create integration of interests in a business organization. Morale development and maintenance are still a leadership responsibility that cannot be avoided or relinquished because of present circumstances.

Principal Functions of the Process

The morale problem, like any other, must be broken down into its principal elements before a general method of approach to solving it can be developed. It requires a determination of the basic functions that should be performed and the general order of their performance. There is no universal agreement on this. The following is the writer's analysis of the principal functions in the morale-building process:

1. Development of good leadership at every level.
2. Analyses of individual and group interests and objectives, and their relation to organizational service objectives.
3. Establishment of common concepts and yardsticks of values.
4. Provision of the values, both tangible and intangible, that are desired by individual and groups in the organization, in adequate and proper amounts.
5. Prompt discovery and equitable adjustments of conflicts between personal and organizational interests, as they develop.
6. Continuous identification of organizational and personal objectives.
7. Morale maintenance.

The necessity for making analyses of primary service and personal service objectives has been discussed previously. The job of an organization is to acquire, create, distribute, or preserve values. It cannot do this well unless it draws up specifications of what these values should be. This requires a meeting of minds between the par-

ticipating parties as to what are proper values in adequate quantities for which parties. There can be no meeting of minds in the absence of common concepts and yardsticks of values. This requires education leading to a reasonable acceptance of a common economic, political, and social doctrine.[9] The alternative is a *modus vivendi* based on a balance of power, which breaks down eventually into strife and an exercise of force to gain one's ends. The sequence in the exercise of force appears to be economic, political, physical, and military. It is difficult to develop and gain acceptance of a common doctrine in business organization, and it takes time. This is due partly to the nature of its economic mission, and to other reasons that will be discussed later. Some provision of values must be made for the members of the organization in the meantime. A business organization does not exist primarily for the benefit of its stockholders or employees. These benefits are likely to be the principal interest of the latter in the organization, however. They are the reason for the organization of the company by its owners in the first place. The distribution of these benefits is likely to be determined by the amount of pressure that the interested parties can bring to bear. There is no well-formulated doctrine of economic service in the public interest that is known, understood, and accepted by the general public. There are plenty of vague generalizations, of course, and such a doctrine appears to be developing. But in the meantime there is no adequate basis on which to mobilize public opinion against the efforts of pressure groups to distribute the material benefits of our economy in their own interests. They have been aided by politicians who have furthered their own ambitions by the votes of members of these pressure groups. Executives have in many cases lost the economic leadership of the operative employees in their organizations. They have had no fundamental philosophy or doctrine on the basis of which personal and organizational interests could be integrated. They have yet to convince their

[9] F. J. Roethlisberger questions whether acceptance of a sound argument depends on understanding, because people hear what they want to hear; and whether understanding results if an explanation is logically clear, because people are not entirely logical beings. He doubts that people get things done by authority of position and that supervisors are capable of listening objectively to their subordinates. See "A New Look for Management," A.M.A. General Management Conference, June 9, 1948.

employees and large segments of the public that they represent any interests except their own and those of their stockholders. It is partly because of a lack of sound managerial doctrine that they have been unable to do so. Their problem would still require public support, even if they had a common, acceptable philosophy and understood the morale problem. Any group will place its personal interests ahead of those of the organization of which it is a part, unless there are constraints to the contrary. This statement involves no particular criticism of any persons or groups. They are merely doing what comes naturally, in the absence of an economic, political, and social doctrine that will set up such constraints. Evidence of our lack of such a doctrine is found in the pragmatic test of results. The responsibility in the field of business for the development of a philosophy of management rests on top executive leadership. It must be said in fairness, however, that some of the best contributions have come from this source.

Some business organizations, fortunately, are exceptions to some of the above statements. They have been blessed with brilliant leadership. They have developed sound managerial philosophies. They have been able to express them in simple, nontechnical terms. They have been able to secure considerable acceptance of them, whether or not the majority of operative employees are nonlogical thinkers. They have been able to retain the leadership of their employees in an adequate degree, despite the intervention of outside pressures beyond their control. They have a continuing morale problem, nevertheless. Conditions within the business organization are constantly changing. This must be the case, if the company is to maintain its competitive position in a dynamic industrial society. The relation between personal and organizational interests is also necessarily changing. These changes tend to result in daily conflicts between individual and group interests and the service objectives of the organization. They must be discovered promptly and adjusted equitably, if an integration of interests is to be maintained. Major conflicts of group interests must be resolved periodically. Any agreements between executives and employees must be carried out promptly and completely. This is necessary in order to maintain confidence in executive leadership and an integration of interests. Morale development and maintenance require also the continuous

identification of organizational and personal objectives. This identification may develop naturally from indoctrination with a common economic and business philosophy that is linked directly to the company's operations. It is more likely to develop from direct evidence of the dependency of the employees' interests on the accomplishment of the organization's service objectives. It is a continuing function because conditions change constantly, new employees are hired as old ones leave, and memories grow dim. It is always difficult to see the economic forest because of the trees of the daily task. Morale maintenance is just as continuous as machine maintenance, and more important in many respects.

Morale Effects

The economic reasons for the expenditure of large sums of money on moral development are found in its organizational effects. A favorable state of mind among the individuals and groups composing an organization is reflected in favorable attitudes toward the organization, its work, and its leadership. It is reflected directly in the economy and effectiveness with which the organization accomplishes its mission. Good morale is necessary for successful executive leadership, and is a measure of it. Most executives, if forced to choose, would probably select an organization with good morale in preference to one with a good structure. They would, of course, like to have both.

The specific effects of good or bad morale depend, therefore, on the characteristics and requirements of the leader, the led, and the particular situation. There are, however, certain effects of good morale that are usually characteristic of any situation in which it is found. These effects are the basis of morale measurement, since they result from favorable organizational attitudes. The principal ones are (1) willing coöperation, (2) loyalty to the organization and its leadership, (3) good discipline, (4) strong organizational stamina, (5) a high degree of interest in the job and the organization, (6) organizational initiative, and (7) pride in the organization. Willingness to subordinate one's personal interests to those of the organization underlies all these effects. Willing coöperation, for example, is characterized by enthusiastic willingness to work with one's associates in the accomplishment of group objectives. Coöperation may

involve any degree of voluntary association in work. People must always coöperate under the direction of leadership, even in small groups. Any coöperation involves subordination of personal desires to the interests of the organization. A person cannot just do whatever he wants to do, whenever he feels like doing it, and in any manner that happens to appeal to him. The organization cannot get anywhere if he does. Prison labor coöperates in accomplishing the purposes of a correctional institution, or else. This coöperation is involuntary. It is obtained under duress, with the threat of physical force in the background. There is forced subordination of personal interests to those of the institution. The leadership of the organization necessarily tends to be negative, because of the negative morale of its members, the inmates. Economy and effectiveness under negative leadership are usually the minimum that can be sustained by close supervision backed by authority. Willing coöperation is at the upper end of the morale scale. It must be given. It cannot be compelled. It is not likely to be given voluntarily unless the members have a favorable attitude toward the organization, its work, and its leadership.

It can also be shown that the other effects listed above are a reflection of good morale. The term loyalty may indicate any strong attachment to family, friends, associates, organizations, or leaders. Organizational loyalty indicates a strong attachment to an organization and its leadership. It induces individuals and groups to strive voluntarily for the advancement of the common purpose in the face of difficulties and hazards to personal interests. Military organizations develop it in time of war in new and expanded groups that are composed chiefly of raw civilian recruits. Some business organizations have developed a high degree of loyalty among their rank and file. They are usually small organizations, or autonomous divisions of large ones. It seems to be more difficult, however, to develop loyalty in business concerns than in other organizations, probably because of the competitive requirements. Loyalty is needed badly at times, when competition gets tough, general business is depressed, or other difficulties threaten the well-being of the organization. The test of loyalty is, of course, adversity. It is easy to be loyal when no subordination or sacrifice of personal interests is involved. Like any other morale effect, loyalty can range through an infinite number

of degrees, from complete loyalty to the organization to complete disloyalty, treachery, and treason. Members at the stage of complete disloyalty may sell out the organization to an outside leadership for any substantial benefit, tangible or intangible. Loyalty cannot be bought, but allegiance can. Loyalty also is something that is given voluntarily.

Discipline may involve any degree of conformity with the rules, regulations, and executive orders that are necessary for the conduct of a joint undertaking. These directives are derivatives of plans and policies. They establish guides for coöperation and coördination in the accomplishment of the organization's objectives. Conformity to direction calls for reasonable subordination of personal interests to the organization's needs. What is reasonable involves a question of equity. Discipline is related to equity through disciplinary action.[10] The function of disciplinary action is the conditioning of behavior by the application of rewards or penalties. Its objectives are a minimum of undesired behavior, an integration of interests, a maximum of desired behavior, and assurance of correct action in the future. It is a phase of control, and will be discussed later in that connection. It will be sufficient to note here that it is usually not possible to develop strong morale by weak, ineffective disciplinary action. It is evident from the connection between the two that discipline can exist in an infinite number of degrees, from highly positive to highly negative discipline. Good discipline implies voluntary conformity with executive directives. There is always a presumption that these directives are necessary for the accomplishment of the organization's objectives, or they would not be issued. Prompt, willing execution of orders is an important factor in coördinating action. The latter is the function of relating action to the objective with respect to the correct time and order of performance for effective execution. The determination of what directives are necessary is an executive responsibility. Highly negative discipline is the condition in which there is complete refusal by an organization, or some component of it, to accept its duly constituted leadership and to comply with the

[10] Henri Fayol's principle of equity "connotes not only a strict interpretation of the letter of the regulations, but still more a sensitive understanding of their spirit; that mixture of inspired common sense and human wisdom which can always break all rules to keep the Golden Rule."—L. Urwick, *The Elements of Administration*, p. 91.

directives of this leadership. Negative discipline is insubordination and mutiny. A strike in an industrial organization obviously indicates a complete breakdown of any integration of interests that may have existed, and of morale. Good discipline is always important under any conditions. It may mean the difference between defeat and victory in an emergency.

Organization stamina refers to the ability of the organization "to take it" in the face of adversity. It is related to but different from organizational loyalty and good discipline. Individuals or groups may quit trying when their assignment becomes difficult or hazardous. They may, on the other hand, continue to make a maximum effort long after hope of success has dwindled to almost nothing. It is obvious that the latter indicates greater power of endurance than the former. Sometimes an organization succeeds because of its staying power. It wears down its competition. Organizational stamina is also related to courage. It depends not only on confidence in the ability of the top executive leaders, but on their courage. An organization is not likely to go forward for any great length of time after its leaders give up and quit, unless this leadership is promptly replaced with another in which the rank and file can have confidence.

A high degree of interest in one's job is fostered by a liking for one's work. Interest depends partially on good personnel selection and training for this reason. It results from some satisfaction of the creative urge that most people have in some degree. It is not likely to exist in a high degree, however, when there is no interest in the organization and its work. This is particularly true in large manufacturing plants, because of the division of labor. Satisfaction of this urge leads to a feeling of "worth-whileness," since it is usually associated with a contribution that is believed to be worth-while. Most people enjoy overcoming obstacles encountered in making a contribution, provided that, with some extra effort, it is within the limits of their powers. It is a challenge. This is the idea in back of the so-called pugnacious tendency. It can be so well developed that an individual enjoys a fight just for the sake of the fight. This interest in the job and the organization may involve the play tendency. Most people enjoy competition before it gets to the vicious, cutthroat stage. We speak of "competitive sports" and the "game of business." This can be traced back to other fundamental urges.

Large production control boards showing shipments against contracts were maintained on the shop floors of many manufacturing plants during World War II. Each employee knew how well his group and his company were doing with respect to the assigned mission. The organization was given an "E Award" if it did a good job. Such measures had a salutary effect on employee morale, provided that they were not canceled out by poor management in other directions. In many manufacturing plants in peacetime an operative employee may run a machine that performs an operation on a part that goes into a minor subassembly. This subassembly may be a component of a major assembly that enters directly into the final assembly or finished product. The latter may go directly to the plant shipping dock, and hence to a dealer who sells it to a customer. The original employee loses sight of the part when it goes from his machine to another machine where the next operation is performed on it. It is a good bet that in some plants he does not understand what his operation contributes to the fabrication of the part, let alone the function of the part in the end product. He may have only a vague idea of the product's contribution to the ultimate consumer's standard of living. It is almost certain that he does not know the competitive position of the company, and whether it is winning or losing the battle of competition. There is no point in secrecy, since professional labor leaders and the company's competitors usually know. Yet the employee is expected to display a high degree of interest in his job and his company.

A voluntary and intelligent exercise of initiative is a morale effect that is associated with job and organizational interest. It is evidenced when an employee takes necessary action promptly and effectively, in accordance with the requirements of established policies and directives, without an executive order. An exercise of initiative involves some hazard to an employee's personal interests, particularly when it raises a question as to whether he has exceeded his authority. It is not likely to be exercised unless he has an interest in his job and the organization, and confidence in the judgment and integrity of the executive leadership. These effects of interest and initiative are closely related to organizational pride. This has its basis in a belief in the superiority of the organization with which one is associated. This depends again on belief in the worth-while-

ness of the job the organization is doing and on confidence in its executive leadership.

There are executives in the United States who have done an excellent job of morale development in terms of these effects. There are more who have not. It may be due to a lack of understanding of the morale problem. One occasionally hears some executive refer to the necessity of getting better coöperation or more job interest as though it were something that is procured directly. One does not develop morale effects. One develops morale. Desirable morale effects are the results of good morale.

Morale Factors

An attitude may be defined as an indication of a mental condition that predisposes an individual or group to react to certain situations or circumstances in certain ways. We say, for example, that a person has a "defeatist attitude." Favorable attitudes result in desirable morale effects, such as willing coöperation. Attitudes are affected by the feelings of individuals and groups concerning the nature of the relations between their personal interests and organizational objectives. A morale factor, therefore, may be anything within or outside the organization that affects the personal interests of its members in relation to those of the organization. These personal interests include more than money. A morale stimulant is any factor that tends to produce favorable attitudes toward the organization and its leadership. A morale depressant is a factor that tends to produce unfavorable attitudes. It is possible for a particular morale factor to be a stimulant or a depresant at different times and in different circumstances. The importance of different factors can also change. The following are usually morale factors in any business organization. There may be many others that are peculiar to particular situations.[11]

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[11] There are the usual differences of opinion concerning the basic morale factors. The following excellent list was given by Thomas Spates, vice-president of General Foods Corporation, before the Society for the Advancement of Management at a convention on December 6, 1946: (1) The moral tone of the business, (2) good leadership, committed in writing to high principles, (3) the practice of consultation both up and down the line, (4) the practice of keeping people informed, (5) freedom of expression, (6) a total work environment that appeals to the dignity of the individual, (7) sympathetic appreciation of individual differ-

1. Worth-while objectives that are compatible with the public interest as well as the personal interests of the organization's members.
2. Good leadership based on a sound philosophy of management.
3. Homogeneity of group characteristics and interests.
4. Symbolism, and a degree of identity of organization and personal interests.
5. Decentralization and the delegation of responsibility and authority.
6. The techniques used for handling men, including those for order-giving and disciplinary action.
7. Individual and group opportunity, including financial and nonfinancial incentives.
8. A satisfactory physical work environment.
9. Training, education, and indoctrination.
10. Organizational confidence based on equity as well as material success.

Objectives are an obvious morale factor for reasons that were mentioned previously. The term includes the personal objectives of operatives, executives, and owners, as well as the service objectives of the organization. An effective integration of objectives requires acceptance of the Principle of the Primacy of the Service Objectives. This is not likely to happen until the economic and social worthwhileness of these objectives has been demonstrated. There must also be a general belief throughout the organization that their ac-

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ences, (8) steadiness and certainty of employment, (9) equitable wage and salary structure, (10) recognition through individual evaluation, (11) a plan of promotional opportunity, and (12) a training program designed to help everyone to perform, in the best possible manner, assigned tasks with a view to achieving definitely stated objectives.

F. F. Bradshaw and H. E. Krugman list nine major groups of morale factors: (1) Food and physical welfare, (2) reproduction (home-making), (3) desire for achievement over difficulties, (4) desire for activity, variety, and novelty, (5) release from emotional tension, (6) security of status, (7) worthy group membership, (8) sense of personal worth, and (9) a sense of participation. They break down these groups into 99 morale subfactors. See *Handbook of Applied Psychology*, pp. 300–302.

For earlier analyses, see Richard Lansburgh, *Industrial Management*, Wiley, pp. 82–88, and Edward L. Munson, *Management of Men*, pp. 54–55.

complishment is a prerequisite for an adequate satisfaction of personal objectives. Good morale depends in part on the belief that the individual will be able to enjoy a greater sum total of these values through association with the particular company than he could through association with the average company in the community. A reputation of being "a good place to work" is a morale stimulant. The employee's pay is, of course, the amount of cash that he finds in his pay envelope at the end of the pay period, plus deductions. His compensation is the sum total of the tangible and intangible values that he receives as the result of his association with the company during that period. Intangible values are no less real than tangible values. An attempt to substitute intangible values for the going rate of pay would, however, be regarded by most people as exploitation, if it took place to any substantial extent.[12] The term "going rate of pay" is ambiguous. Going rate of pay over what period? The writer was told recently about a southern manufacturer who paid less than the hourly wage rates in his community. The annual wages of his employees were as good as those in other local companies, or even better. The company's costs were low, which put it in a favorable competitive position. It had succeeded in regularizing production and employment to a much greater degree than had other concerns in the community. As a result, its employees had a superior measure of economic stability and security. The company had a number of employee service plans that produced certain financial and nonfinancial "fringe benefits." Obviously, any such benefits cost money. They were, apparently, benefits that the employees really desired and appreciated, rather than "talking points." The executives felt sincerely that they were representing the employees' best interests. The employees evidently agreed. They had rejected an outside union in a number of Labor Board elections prior to the passage of the Taft-Hartley Act. Employees who left to take jobs at higher hourly rates elsewhere frequently tried to get back their old jobs with the company. It would appear that organizational morale was good. It could not fairly be said that the employees were exploited in this case. The company's morale situation

[12] The term "exploitation" usually refers to an attempt to require or induce people to contribute as much as, or more than, can reasonably be expected from them for less than they can reasonably expect to receive in return.

would have been stronger, however, had it paid the prevailing hourly rates, assuming that it could then maintain annual rates. A charge of exploitation can be damaging, whether or not it is true. The management may as well be guilty of it if the employees and the community can be persuaded that it is true. This suggests that an analysis of business objectives, as a point of departure in planning for morale development, should consider more than the immediate interests of customers and operative employees.

The importance of leadership as a morale factor is generally recognized. Leadership that is technically competent is not enough. It must be leadership that the employee can follow with confidence that his interests will be benefited thereby. Some executives cannot qualify because of lack of ability or ethics. Most executives try to do a good leadership job, as they see it. They have a difficult task in discharging their morale responsibilities, even when they have the requisite leadership ability. An outside group whose principal interest in an employee is political exploitation, for example, can always charge that the company's management can and should do more for its employees, whether or not it is true. The charge is one that any employee would like to believe. The immediate benefits are tangible. The consequences of whatever situations are created lie in the future. The outside group cannot be held accountable in any event. It can always find somewhere some "liberal" support for its position. Under such circumstances, a leader with skill, ability, personality, and courage is required to develop and maintain morale.

The leadership factor may also affect morale in other ways. Good executives are usually in demand. Confidence in the ability and fairness of a leader is, in part, the result of association with him. Executive turnover tends, therefore, to destroy morale. The elimination of poor leadership is something else, of course. Some executives seem to have been born with a knack of getting people to work for them enthusiastically and coöperatively. Others may be quite competent in a professional field, but they are less able to mobilize the interests of their subordinates and direct their energies in the accomplishment of group objectives. Hence they may not measure up as well to their morale responsibilities. A competent, interested,

ambitious executive is likely to have plenty of drive. Too much, sometimes. He tends to be impatient of the greater time that may be required initially for the use of positive leadership methods. There is a temptation to use a negative approach, relying on authority and the stimulus of fear to "get action." Continued use of negative leadership tends to break down morale.

The responsibility for morale development and maintenance rests necessarily on executive leadership. Agencies outside of the organization can create conditions which will affect its morale. Executive leadership is, however, the principal agency that can bring about an integration of interests. There is such a thing as being too conscious of this responsibility. It may result in overidentification of the personal interests of the led with those of the organization. Undue solicitude by the executive for the personal interests of his men tends to exaggerate the importance of these interests, relative to the service objectives of the organization. It may result unwittingly in an inversion of the normal relations between these interests, and a violation of the principle of the Primacy of the Service Objective. The consequence may be the breakdown rather than the development of good morale in the organization—the reverse of what was intended. The leadership of a business organization may not be able to avoid such an effect entirely. It may be forced into overidentification by the monopoly position of a labor union.

The necessity for a sound philosophy of management that is acceptable to investors, employees, and the public has been emphasized a number of times. There can be no basis for effective thinking in the solution of business problems without it. It is necessary for the development of a scale of values that can be integrated. The evolutionary formulation of such a philosophy has been taking place since the turn of the century, and the pace has been accelerated since the depression of 1932. It has become a major business problem, judging from the time and money that are being devoted to it by the top leadership of large business organizations. The principles of indoctrination should therefore be as important to business leaders as they are to military leaders, church leaders, labor leaders, or political leaders. They will be given a brief discussion later. Nevertheless, there are some factors affecting the development of a

community of ideas and unity of action that should be noted here. One of them is organizational homogeneity.[13] The principle is this: It is easier to develop and maintain morale when there is homogeneity of objectives, ideals, backgrounds, and philosophical concepts within the group. The problem involves the selection and assignment of individuals to the various groups composing the organization. It has to do with the organization structure in this respect. Account must be taken of it in the development of any organization. Ideas can be modified in some degree by education over a period of time. Homogeneity is a problem in indoctrination in this respect. Indoctrination is difficult in a business organization, however. Executive leadership deals chiefly with adults, rather than adolescents. The employees of an organization join it with certain beliefs that have been firmly inculcated in their minds previously by various educational agencies.[14]

Symbolism also is a factor in the development of a community of ideas and unity of action. The average individual has no great capacity for logical analysis of abstract problems. He usually lacks vision beyond the immediate future. He has difficulty in understanding many of the problems that we have discussed. Any reasonable degree of accuracy in their discussion requires the use of a terminology with which he is not familiar, or a genius for simple expression. He has no great interest in or understanding of these problems, even though they affect his interests directly. Hence he may like symbols that stand as concrete evidences of the objectives, ideals, and traditions in which he believes. He has something tangible to which he can tie his loyalties and enthusiasms. A common symbol is the outstanding leader who can capture the interest and

[13] The principle of homogeneity in morale development is related to but different from the principle of homogeneity in structural development. The latter is a corollary of the principle of functional similarity. The following is a military statement of the principle of structural homogeneity: "Homogeneous Assignment —like duties in an organization are grouped. Every duty and responsibility in an organization is assigned to some individual."—*Curriculum, Senior Officers' Military Management Course*, p. 9, U.S.A.F. Special Staff School, Air University, Craig Air Force Base, as revised November 24, 1949.

[14] H. E. Burtt believed that it may be desirable to separate different social types to prevent friction from a clash of ideals and ideas. This is sometimes done forcibly for political reasons in totalitarian countries. See his *Psychology and Industrial Efficiency*, p. 310.

imagination of the rank and file. The difficulty is, of course, that loyalties may be attached to him as a personality, rather than as a symbol of the organization and the objectives for which it stands. The "E Award" flag was such a symbol during World War II. The house flag of a few business concerns may be an effective symbol. A service pin is in some. Other examples in business could be given. The British Crown is an outstanding example in the field of political organization.[15] Symbolism has been least developed in the field of business organization. It remains true, nevertheless, that in any field a symbol that is generally accepted acts as a catalytic agent to fuse personal and organizational interests into an effective whole.

Decentralization and the delegation of responsibility and authority may have considerable influence on morale. Intelligent, voluntary exercise of initiative was mentioned previously as an effect of good morale. There can be no exercise of initiative, intelligent or otherwise, in the absence of adequate delegation. An attempt to hold subordinates accountable for results in such case arouses a feeling of injustice. It can lower morale seriously, particularly in individual instances. Decentralization increases the number of centers of initiative within the organization. Increased rights of decision provide greater satisfactions for creative and other urges. They foster a "feeling of belonging" to the organization, rather than of being a cog in an economic machine.

The techniques for handling men include those for order-giving and for disciplinary action. The attitudes of subordinates toward their executive leadership at any level may be influenced greatly by the manner in which the techniques are applied. The result may be a liking and respect for the executive, or it may be quite the reverse. The manner in which the executive performs his managerial functions affects greatly the personal interests of his subordinates, whether his contacts with them are direct or indirect. The reaction toward the executive and his leadership is important, because he is one of the principal morale factors in any organization. These techniques usually come into use with the execution of some plan

[15] Mooney and Reiley see in the British Crown "the power of an adequate symbolism to focus this sentiment, and to stimulate its intensity through this means of concrete expression. Organizations, after all, are composed of people, and people live largely by their sentiments."—*Onward Industry*, p. 197.

at some level of the organization. The intent is the constraint of action by individuals and groups to assure effective execution. Hence they enter largely into the function of control, either operative or administrative. They are associated particularly with the functions of direction, supervision, and corrective action. They will be discussed later in connection with these functions.

Adequate satisfaction of present needs and desires may sustain morale for the present. It cannot do so indefinitely. One occasionally reads some comment to the effect that the American people should be content with their lot. They enjoy far more economic benefits than the people of other countries. This point of view is of course unrealistic. People at every economic level and in every walk of life are selfish in some degree. Their wants are extensible. Economic and social progress depends on mass production of goods and services. It obviously requires mass purchasing power for mass consumption. Individuals differ greatly in the kinds and amounts of values they desire. These differences depend on many things, including the intelligence, background, and ambition of the individual. Morale development and maintenance require, then, provision of opportunity in addition to the reasonable satisfaction of present needs and desires. Opportunity cannot be provided indefinitely for one economic group by exploiting another, whether it is inside or outside of the business organization. An opportunity is any conjunction of circumstances that favors the successful gratification of certain needs or desires. The provision of opportunity has to do with the creation of such a conjunction. It must be done in such a manner that the gratification of these needs and desires is made possible through the achievement of the organization's service objectives. Otherwise, such provision will not meet the requirements for an integration of interests. An incentive may be any stimulus to action. A positive incentive may be any value, over and above what may normally be expected, that may be gained through superior performance in overcoming difficulties in the accomplishment of assigned objectives under specified conditions. A negative incentive may be any value that is less than may normally be expected. It represents a loss because of inferior performance in overcoming difficulties under certain conditions. An incentive system in a business organization is merely a method of creating economic opportunity for

the individuals and groups that compose it. The term "economic opportunity" is used broadly in the sense that any values for which a person is willing to exchange his services are economic. A limited use of negative incentives cannot be avoided. Some negative disciplinary action will be necessary occasionally, as long as people continue to act like human beings. Dependence on negative incentives as the principal means of getting results cannot develop good morale, since it involves a negative integration of interests. It will not produce as great results, in the long run, despite the fact that some of the wonders of the world were built with slave labor. The reasons were discussed in connection with negative leadership. It may, however, produce more results faster in a limited period of time. This source of strength of dictatorial leadership is usually more than offset by weaknesses in other directions.

It has been generally recognized that objectives may be tangible or intangible. The satisfactions that they represent may be physical or psychic.[16] It is evident, then, that incentives in business or any other form of organization may be either financial or nonfinancial. A good incentive system usually provides a maximum of both. It may provide individual opportunities or group opportunities. Many incentive systems do both. They are likely to make a greater contribution to organizational morale if they do. Individual incentives usually stimulate results to a greater degree when the end result represents the accumulation of a large number of individual contributions that can be distinguished individually. Group incentives are more effective usually when individual contributions cannot be distinguished individually. The bases of human motivation are such that individual incentives generally provide a stronger stimulus to action than group incentives. The same kind of work may require different incentive methods under different conditions. The economy and effectiveness of light machine tool work under conditions of continuous manufacturing, for example, may be greatly improved by the use of group incentives. It is impracticable to attempt to distinguish individual contributions under these conditions. The op-

[16] E. D. Jones, for example, distinguished between monetary values and the pleasures derived from working, from achievement, from the esteem of others that results from accomplishment, and others. See *The Administration of Industrial Enterprises*, pp. 183, 219.

erations on a part probably are highly integrated by the physical layout of the production line, mechanical conveyors, and other means. The quantity and quality of results may not be checked until the finished parts come off the line. The only contributions that can be measured are group contributions. The economy and effectiveness of the same kind of work might be lowered by the use of group incentives under conditions of intermittent manufacturing. Each operator on each machine may perform different operations on different parts. Here the group cannot police itself. It can do this on a production or assembly line, because of the close physical integration of work activities. Individual performance tends to sag with group bonuses, under conditions of intermittent manufacturing, to the level that can be sustained by supervisory management. The same thing tends to happen under continuous or intermittent manufacturing, when the size of the group is extended beyond the limits of good face-to-face leadership by supervisory executives and the ability of the group to police itself. We would be back on a day-rate basis, for all practical purposes, if a single incentive group included all the employees in a plant with several thousand employees, and probably the results would be the same. The writer had occasion to check the production records of a plant during World War II, in which about half the operative departments were on production standards with individual incentives and the remaining departments were on production standards with a straight day rate. The records were on IBM cards, which made possible a quick check over a long period of time. The departments operating on individual incentives were producing at approximately 120 percent of standard. Those on day rate were operating at approximately 70 to 80 percent of standard. It is believed for various reasons that the discrepancy would be as great under peacetime conditions, even though the possibility of strong disciplinary action should be better.

There are many principles that underlie the development and successful operation of an incentive system. They are the basis of policy decisions concerning such a system. Consideration should be given the characteristics of primary service objectives, for example, and the emphasis that may safely be placed on them. The accomplishment of these objectives may be measured in terms of quantity,

quality, time, and expense. Emphasis on quantity per unit of time may cause deterioration in quality, and vice versa. Undue emphasis on expense may promote economy, to the detriment of quality or quantity. There is usually an optimum balance between these considerations. It is difficult to determine and more difficult to maintain, like most ideas that are associated with the term "optimum." Some satisfactory approximation of it, however, is necessary for the maintenance of competitive effectiveness. The additional values that the individual or group may be able to gain through superior performance under stated conditions should be sufficient to lead to the desired action. The monetary reward for meeting a given performance standard should be commensurate with the effort that is required. Experience has shown that, otherwise, operative employees tend to fall back to their guaranteed hourly base rate of pay. The amount that is sufficient appears to range from 10 to 30 percent of base pay, with superior operatives earning more. The level of effort required to meet a performance standard and earn incentive pay should be the same for all tasks, within the limits of employee discrimination. Otherwise, differences in the ease with which employees earn incentive pay may cause a feeling of injustice, dissatisfaction, and considerable friction. This is one reason for the use of "effort rating" by motion-and-time-study analysts in many plants.[17] The conditions of work must be standardized for maximum effectiveness, and the standard must be maintained. Standards of performance depend on standards of condition for their validity. Otherwise, a standard of performance may be entirely fair initially, and entirely unfair eventually. Incentive earnings should represent additional payments for additional contributions to the accomplishment of primary service objectives. They should not be a gift. All payments come eventually from the consumer's dollar. Incentive earnings should be clearly distinguished from base earnings for this

[17] Responsibility for planning and administering an incentive system and interpreting incentive policies should be placed on the personnel department, in the opinion of the writer. Responsibility for planning methods, standardizing conditions, and determining fair performance standards should be placed on an industrial engineering or methods department in industry. It is a staff responsibility in both instances. Such decisions should be open to examination, discussion, and concurrence by employees' representatives, since their personal interests are directly affected.

reason, and also to maintain their incentive value. An incentive plan for operative employees should have the maximum simplicity that is compatible with equity. They are not likely to be satisfied with a complicated plan that they cannot understand, even though it represents a triumph of exact justice. The above comments refer chiefly to financial incentives for operatives. The problem of financial incentives for executives is more difficult and perhaps more important.

It was noted above that a good incentive plan should provide as many nonfinancial opportunities as possible, in addition to adequate financial opportunities. In going through a well-known manufacturing plant, the writer noticed a wall board in a certain department. A number of miniature ladders were mounted on it. His guide, the company's chief industrial engineer, said that there was a ladder for each employee in the department. The number of rungs in each ladder also corresponded to the total number of departmental employees. A flag on one rung of his ladder told an employee where he stood in terms of productive efficiency relative to his associates in the department. It told everyone else too. The positions of the flags were changed monthly on the basis of average individual efficiency. The writer was told that the employees seemed to get as much of a "kick" out of the board as they did out of their incentive pay. Anyone whose flag was moved to a lower rung came to the office immediately to find out why. The "kick" could come only from the satisfaction of fundamental urges underlying the pleasure that a person derives from the esteem of his associates, friendly competition, and other intangible factors. The picture in Fig. 12 shows a general executive presenting an "order of merit" award to an engineering department supervisor "for his thorough knowledge of the theory and application of stoker equipment; his unusual understanding of combustion engineering problems and his ability to analyze and explain them to others."[18] The award was made by the company's board of directors and presented at its direction. Public recognition of a difficult job that has been well done provides certain intangible but important satisfactions to any em-

[18] This citation appeared in the *Westinghouse News*, June 21, 1949. (This is a periodical that is published privately by the Westinghouse Electric Corporation for its members.)

ployee, whether he be executive or operative, line or staff, provided that the general level of morale in the organization is satisfactory. There are many other incentive principles in addition to those mentioned above. A complete inventory and discussion of these principles lies in the field of personnel management and is beyond the scope of this book. The intent of this discussion is merely to show their relation to policy-making for morale development.

Good working conditions are good business. In a manufacturing establishment, the term refers to the implementation of the worker with the best machines and tools that can be procured, maximum protection against industrial accidents, good lighting, the provision of fatigue-reducing materials-handling equipment, orderliness, neatness, and other attributes of good housekeeping, and similar conditions. Maximum economy of manufacturing operations depends on maximum production per employee as well as on maximum production per square foot of factory floor space. It is not likely to be obtained under poor working conditions. A satisfactory working environment connotes something more, however. It includes pleasant eating facilities and other factors that are associated with the employees' physical environment. It can contribute many satisfactions, or dissatisfactions that affect employee attitudes, both executive and operative.

The importance of adequate performance of such functions as training, education, and indoctrination has been discussed adequately. Many personal values cannot be made available to employees if these functions are performed poorly.

All these factors, and others that may be important in particular situations, tend to develop employee confidence in the organization and its leadership, if they are handled properly. The result should be fair treatment. This involves proper and adequate consideration of and provision for the needs and desires of each individual and group in the organization, whether executive or operative. It must take into account intangible as well as tangible objectives. It must consider the contributions of these individuals and groups to the achievement of the organization's service objectives, and the consequent ability of the organization to provide the desired values. Fayol stated his Principle of Equity as follows: "In order to encourage the staff to put all of the good will and devotion of which

it is capable, into the exercise of its duties, we must treat it with friendliness, and equity is the result of combining friendliness with justice."[19] Justice includes fair treatment also for suppliers, investors, customers, and the general public, as well as employees.

Morale Measurement

It is one thing to agree with William James that everything that exists must exist in some amount, and everything that exists in some amount can be measured. It is another thing to do it. Morale is basically a condition of mind. It cannot be seen, felt, or weighed directly, like most fundamental forces in nature. It must be measured indirectly. Attitudes are effects of morale. They condition the actions of individuals and groups in the organization. The quality and degree of organizational morale can be measured indirectly by measuring the attitudes of individuals and groups. Some indication of the causes of high or low morale can be obtained, furthermore, by correlating attitudes concerning morale factors and related morale effects. There are only two basic methods for getting the facts for morale measurement, since morale is an intangible mental condition. One is the procurement of opinions that indicate attitudes. The other is observation of the acts of individuals and groups for the same purpose. The morale analyst is not interested, however, in the opinions or acts of individuals as such. Organizational morale is a problem of group morale. It is therefore a problem of administrative management. Individual morale affects group morale, and is affected by the conditions surrounding the performance of daily tasks. Hence the morale of the individual operative employee is a problem of operative management and particularly supervisory management.

Much thought and money have been spent on the problem of morale measurement and evaluation during the past twenty-five years, but chiefly by a relatively few concerns. Many of them are well known for their good morale. There are no general statistics on morale in business organizations. It is a conservative statement, certainly, that the average concern has not distinguished itself highly in the field of morale development. There is probably a greater awareness of the problem, and its vital importance, today than ever

[19] Henri Fayol, *Industrial and General Administration*, p. 30.

before. Quite a bit has been written about the problem. Out of it have come methods of morale investigation and analysis that are helpful. Some of them may be classified as "formal" methods, in the sense that they are usually applied under controlled conditions outside the employee's normal working environment. They have to do for the most part with the procurement of opinions. The "informal" methods do not. The principal methods for morale investigation and analysis may be classified on this basis as follows:[20]

A. Formal methods
   1. Interview methods
      a. Controlled
      b. Uncontrolled
   2. Statistical methods
      a. Rank-order method
      b. Questionnaire method
B. Informal methods
   1. The "listening-in" method
   2. Qualitative morale estimates
      a. Estimates by supervisory executives
      b. Estimates by personnel counselors

The interview method attempts to get statements of opinion from an employee in personal and private discussion. The discussion is guided in the controlled interview by the questions of the interviewer. These questions are worked out carefully in advance to assure that attitudes are disclosed concerning all the morale factors and effects that are considered to be significant in the problem. Notes on the employee's answers may be recorded on an appropriate form at the time of the interview. This practice may prevent full, free, frank discussion by the employee. An alternative therefore requires

[20] E. H. Fryer divides morale measures "roughly into two classifications: (a) Conviction inventories or surveys, which are concerned with attitudes, beliefs and opinions, and (b) participation measures, which are concerned with the actual behavior of the group or individual."—E. H. Fryer and E. R. Henry (eds.), *Handbook of Psychology*, p. 19. F. F. Bradshaw and H. E. Krugman classify them as (a) opinion polls (b) participation measures, and (c) multidimensional attitude studies. Participation measures are measures of actual behavior as indicated by absenteeism, turnover, efficiency measures, attendance at group events, suggestions, and others. Multidimensional attitude studies include interviewing techniques. See *Ibid.*, p. 298.

the interviewer to memorize the principal questions and to record the answers after the interview. The controlled interview assures that all the questions that are deemed significant will be covered. It is less flexible, of course, than the uncontrolled interview. Because it is unguided, the latter may bring out significant morale factors and effect whose existence had not been realized previously. They might not be discovered in a controlled interview based on a formal list of questions. The intent in the unguided interview is to overcome the employee's reserve and induce him to talk freely of his own volition. The hope is that whatever is on his mind will come out. The interviewer merely stimulates and maintains the employee's flow of comment by his own remarks, when and as they are needed. The uncontrolled interview has another advantage in that it is not required to conform to any preconceived logic concerning the particular morale situation. The average member of an organization is more likely to be guided by sentiment than by logic in his reactions to situations. Roethlisberger distinguished between logical and nonlogical behavior. He observed that employee behavior is more likely to be nonlogical.[21] The effectiveness of the controlled interview may be limited, therefore, by its own logic. The same charge can be made against statistical methods. The uncontrolled interview requires a highly trained, experienced interviewer who has a good working knowledge of psychology. He must make mental notes of what appear, in the course of the conversation, to be significant comments. But an estimate of significance requires some understanding of the bases of motivation for what may be nonlogical behavior. Patterns of behavior must be established within and between groups, since the primary interest at this stage is organizational morale. This may be difficult too. Each interview may follow a different pattern. Group attitudes cannot be determined and evaluated, however, unless a group pattern can be established. The success of an interview method depends largely on the interviewer. He can gain the employee's trust that the information he gives will be held strictly confidential, or he cannot. He can make the employee feel at ease and gain his interest in the problem, or he cannot. The interviewer's personality thus may be as important as his know-how. Whether controlled or uncontrolled, the interview

[21] F. J. Roethlisberger, *Management and Morale*, p. 83, and chap. 6.

must be regarded as formal when it is held by appointment in an interviewer's office that is not in the employee's normal working environment.

Statistical methods of collecting morale information are less flexible than any interview technique. They have certain offsetting advantages, however, that have led many concerns to use them. They permit a morale survey to be made more rapidly than is possible by the interview method. The coverage of possible morale factors and effects may be as great. The data collected are more comparable. The expense of a survey may be much less. It may be easier to convince the employee that his answers cannot be identified. Statistical methods have the disadvantage that completeness and accuracy may be limited by the requirements of the accurate statistical treatment of the data. No worth-while information is likely to be collected beyond what is specifically requested. Questions should not be ambiguous. They should not be "loaded" so that they suggest the answer desired. Other well-known weaknesses of a statistical approach must be avoided.

Statistical methods come back fundamentally to some form of opinion poll. The state of mind of individuals and groups is affected by what they think are their interests and the important factors affecting them. Their beliefs may or may not coincide with the facts in the case. A major problem of morale development, when they do not coincide, is the modification of beliefs to bring them in line with facts. The details of any method of investigation should be planned to fit the requirements of the particular situation. There can therefore be many differences in detail in the methods used in different business organizations. We are not concerned with such differences here. The two general methods of approach noted in the classification of morale investigation methods should be sufficient to bring out the general considerations that will be useful to the general executive.

The rank-order method of morale evaluation was developed by the late J. David Houser.[22] Its principal features are as follows:

1. Employee needs and desires that are considered important in the particular morale situation are defined as accurately as possible.

[22] See the article by Houser in H. C. Metcalf (ed.), *Business Leadership*, pp. 116–126, and his book, *What People Want from Business*, McGraw-Hill, 1938.

2. Each individual in a random group of employees ranks these defined needs and desires in what he considers the order of their importance.

3. Each individual in a random group also ranks these needs and desires in the order in which he believes the management gives them consideration.

4. The executives of the organization rank these same employee needs and desires in the order in which they believe they should be considered.

5. Correlations between these rankings are made and their significances are determined. A coefficient of rank correlation can be computed, if desired.

The analysis of the data rests chiefly on evaluations of the significances of the correlations. The degree of agreement between (2) and (3), for example, indicates the degree to which management is satisfying the needs and desires of its employees. The degree of agreement between (2) and (4) indicates the degree of executive insight into employee needs and desires. If no more than this is done, there still remains to be discovered why they believe what they believe.

The term "questionnaire method" is reserved usually for techniques that use objective question-and-answer forms designed to collect employee opinions concerning morale factors and effects, as well as personal objectives. A question on such a form might be the following:

(32) How is this company regarded in the community as a place of employment:

a. One of the best in the city .....
b. A good place to work .....
c. Just another place to work .....
d. A poor place to work .....
e. One of the worst in the city .....

Some questionnaires use the graphic rating-scale device. Others use a random arrangement of questions to get away from numerical or other associational "halo" effects. The word "halo" refers to any bias or distortion of questionnaire results caused by the characteristics of the questionnaire or the rater. The use of a questionnaire in

collecting employee opinions is shown in Fig. 44. There is more assurance, probably, that the company will obtain a frank, honest opinion when the questionnaires are completed by employees on the company's time and premises under controlled conditions. The confidence of the employees in the purposes of the investigation and in the secrecy of their answers must of course be established. This is not too difficult. Only check marks are required in answer-

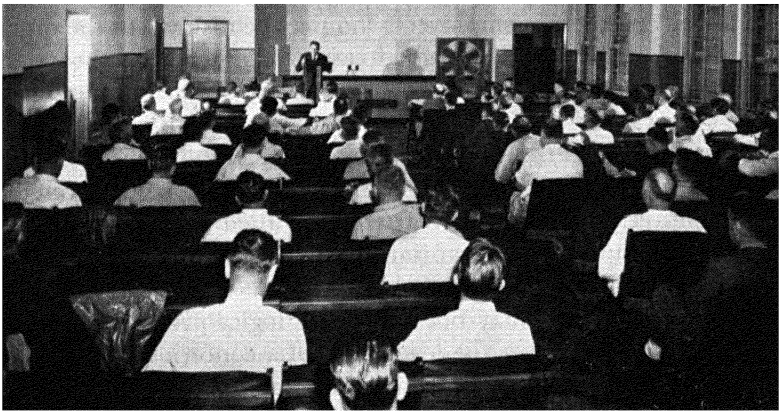

FIG. 44. A Morale Survey. (Courtesy, Elmo Roper and the Standard Oil Co. of New Jersey.)

ing the questions. The questionnaires are not signed or numbered serially. The only identification mark usually is the number of the department to which the men belong. This does not identify the individual. It is necessary for reasons that will be seen shortly. Tellers can be picked at random from the group. They can shuffle the stack of forms in front of the men when they have been handed in. The questionnaires can be scored to evaluate the various attitudes. Rank-order comparisons by organizational areas, similar to those discussed above, can be made. Some analysis of causes in areas of low morale can also be made.

The informal methods of morale investigation may use interview techniques, but they may rely more on observation of the employee. The distinguishing feature is the conduct of the investigation while the employee is in his normal working environment. The "listening-

in" method uses an undercover agent. The morale analyst takes a job as an operative employee. His immediate supervisors may not know that he is anything else. He is likely to be accepted by his fellow employees as such. They are more likely to "take down their hair" and say what they really think about the company, its executives, and various conditions affecting their interests. Reports by the analyst should be made by organizational areas, trends of thinking, the morale factors and effects that they indicate, and their significance with respect to employee objectives. They should not "put the finger" on specific employees who may be disloyal to the organization and its leadership. A good case can be made in theory that this method should get the best results. Whiting Williams made some very valuable contributions to an understanding of employee morale through its use. It is, however, not used in business organization today, so far as the writer knows. Its use will be discovered by the employees sooner or later. It will be called a spy system by any dissident group in the organization. The negative reaction of the rank and file that follows does not promote the integration of interests. The reaction may not be strictly logical. An outside group that wishes to take over the leadership of a concern's operative employees may send its own agents into the organization as employees. Their purpose is to spot discontented individuals who can be used as a base for the development of general discontent. Plenty of discontent can be heard merely by listening in places where the workmen normally gather. The use of military techniques such as espionage and counterespionage is an outgrowth of a situation in which the public condones industrial warfare, whether economic, political, or otherwise, in the settlement of industrial disputes. Most executives do not care to use the "listening-in" method for this very practical reason. A further objection is that this method embodies a negative approach to the morale problem if it is used to spot individual dissidents. A positive approach seeks to develop such a strong, positive morale that troublemakers cannot get anywhere.

This is the idea in back of the methods that are based on the use of qualitative morale estimates. Morale is an intangible organizational attribute. Exact quantitative measurements of it are not possible. All morale measurements are relative rather than absolute. They should be based on facts to the maximum degree that is prac-

ticable. The analysis of a morale situation and the evaluation of the existing state of morale depend finally on qualitative judgment, since the facts and measurements must be interpreted. It should be possible for executive and other staff personnel, with proper training, to make such judgments with reasonable accuracy during the course of their normal work by observing the worker at his work, and by analyzing the significance of other normal contacts with him. His attitudes are often reflected in his acts.

Such qualitative morale estimates are used at times in military organization. It would certainly be unwise to commit an important body of troops to a critical action before a check of its morale had been made. There is obviously no time to hold an opinion poll, and any use of the interview method must be limited. It may be necessary for a staff officer from headquarters to survey the morale situation quickly. He may observe various morale effects such as voluntary observance of the courtesy of the salute, the records of disciplinary action, the general appearance of the troops, the extent to which enlisted men volunteer for disagreeable tasks or must be assigned, and others. He may check such known morale factors as mess conditions, the granting of leaves, and other conditions that affect the men's interests. On the basis of such evidence, he arrives at certain conclusions concerning the state of morale in the particular body of troops. Morale may be excellent, or it may be unsatisfactory.

The same thing can be done as well, or perhaps better, in the business organization, except for one important difference. Most military officers who have permanent commissions in a military establishment are professionally trained. Most business executives are not professionally trained. The business organization has an offsetting advantage, however. It is not designed to operate under conditions of extreme war emergency. Normally, conditions do not change as rapidly. It should be possible to get more reports from more executives or staff operatives over a longer period of time. These reports should cover both morale factors and morale effects. A morale index, however, represents an evaluation of morale effects. They are the evidences of the attitudes that reflect states of mind. Judgments based on observations and conversations are not likely to be of maximum value unless they are comparable between ob-

servers and organizational areas. They are not likely to be comparable unless the observers have the necessary intelligence and have been given a good basic understanding of organizational morale problems, and there is some common scale of morale effects for the evaluation of morale situations. The following is an example of a simple crude scale. It can be refined, of course, by setting up degree scales for each of the morale effects indicated. If this is done, the result is a form of morale rating scale. The simple scale will, however, bring out differences in group attitudes.

A Scale of Morale Degrees

High Morale: All employees of all grades and ranks show great interest in the organization. They are enthusiastic about the job it is doing. Subordinates coöperate promptly and willingly with their associates and superiors. Compliance with policies and directives is prompt and voluntary. All the employees display great devotion to duty. They cheerfully accept temporary duties in addition to their normal assignments. Operative employees speak to their supervisors in a friendly manner. They come to the supervisors frequently for advice on personal problems. The accomplishment of group objectives in terms of quantity, quality, time, and expense is excellent. The number of cases requiring negative disciplinary action is negligible. All the employees appear to be intensely loyal to the organization and its leadership.

Satisfactory Morale: The individual shows considerable interest in his job and in the work of his department. He shows less interest in the work of the organization as a whole. There is evidence of respect and some liking for executive leadership. The concern is regarded as a good place to work. There are no serious disciplinary problems. Coöperation is satisfactory. There is a spontaneous, intelligent exercise of initiative. The accomplishment of group objectives is good. The competitive effectiveness of the organization is probably quite satisfactory.

Neutral Morale: The organizational interest of executives and operatives is centered chiefly on the pay envelope or salary check. There is no particular feeling for or against the organization and its leadership. There are no important evidences of loyalty or disloyalty. There is an increasing number of disciplinary cases, however. Results depend largely on executive direction and supervision. There is not much evidence of dissatisfaction with conditions affecting employee interests. The competitive effectiveness of the organization may or may not be adequate to maintain its usual position in the industry.

Unsatisfactory Morale: There is little respect and some dislike for executive leadership. The company is just a place to work until one can get a job elsewhere. Operative executives have a feeling of frustration. Operative employees feel that they are not being treated as well as they should. There are frequent cases of insubordination. Accomplishment of group objectives is poor. Results depend on close supervision supported by authority and disciplinary action. The employees are surly. They seldom seek the advice or assistance of their supervisors. Organizational attitudes generally are negative. Competitive effectiveness is unsatisfactory.

Low Morale: There is an active dislike of executive leadership. Operative executives and employees have no confidence in the purposes of the organization and its ability to accomplish them. There is a feeling among the executives that a good man cannot get anywhere in the organization unless he has a "drag." Operative employees feel generally that they are getting a "raw deal"; that "the management" has no interest in them beyond what it can get out of them; that they have little hope of getting "their rights" unless "the company" can be forced to grant them. A feeling of discouragement and frustration is general among all ranks and grades of employees. The concern may be losing rapidly in competition with others in the industry, except as superior physical efficiency can sustain its position.

A strike represents a breakdown of whatever integration of interests may have existed previously. It may not indicate completely negative morale, however, in a highly unionized organization. Some employees may strike because of fear of "goon squads," social ostracism by their more enthusiastic union friends, reprisals after the strike has been settled, or for other reasons that do not necessarily indicate completely negative morale. Absence of strikes, conversely, does not necessarily indicate high morale. The employees may not have been organized and may therefore lack the leadership required for a strike. There is obviously no problem of morale measurement when a strike takes place. Nothing can be done about the morale situation until the strike has been won or lost. Morale development is not possible until the members of the organization are working together under normal conditions for the accomplishment of common objectives.

An important purpose of morale measurement is to detect the deterioration of morale before it declines to a dangerous level. The difficulty is that morale can change quickly from a satisfactory to

an unsatisfactory condition before it is realized, unless competent checks are made periodically. It is relatively easy to recognize a condition of very high or very low morale in an organization. It is usually not easy to determine the intermediate degrees without some means of morale investigation and analysis. The difficulty is illustrated in Fig. 45. It is evident that a formal morale survey,

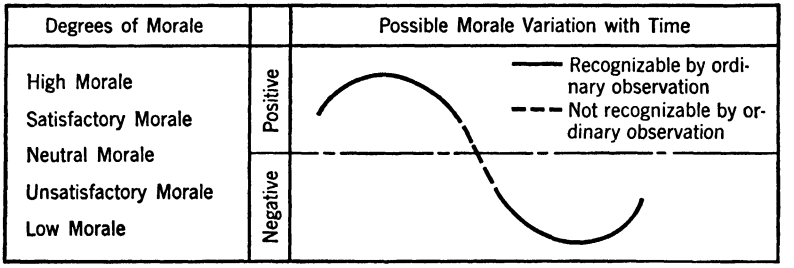

FIG. 45. The Problem of Morale Variation.

made annually by a questionnaire method together with formal interviews and inspection of records, may not be adequate. There is too much danger in a large organization that the morale condition may deteriorate seriously in the course of a year. It is believed, therefore, that a combination of formal annual surveys, supplemented continuously during the year by qualitative morale estimates, is desirable. This combination is illustrated in Fig. 46. These estimates can be made by personnel counselors attached to the personnel department, in addition to their normal duties. No reports are made on an individual employee to the department or to his supervisor. Any employee conversations must be held in strict confidence. An employee's attitude is likely to be improved merely by talking over his troubles with someone in whom he has confidence. The reports of counselors should state only the general behavior and general trends of thinking observed among employees by departments or other organizational groups. These groups should be large enough to prevent the identification of individuals. A further extension of the counseling function is to have the counselor evaluate, perhaps monthly, the morale of the groups with whom he is in constant contact on the basis of his report, using a morale scale. It is believed that supervisors should also be required to rate the morale

of their groups, if for no other reason than to supply a check on their judgment. This should, in addition, focus their attention on individual cases of low morale that require attention before they become grievance cases. The objection is sometimes raised that the supervisor is not competent to estimate morale, that he is more interested in mechanical than in morale problems. He can be made sufficiently competent with proper selection and training. The morale condition of a group is a test of the leadership competence of its executive head. This test is seldom applied to supervisory management until it is too late. Supervisory interest in morale problems would increase rapidly if it were applied frequently.

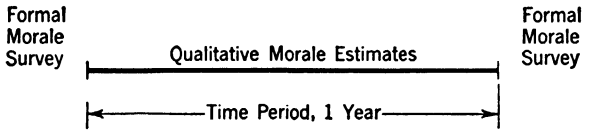

FIG. 46. A Plan for Continuous Morale Surveys.

Evaluation of Morale Survey Results

The evaluation of morale survey results is related to the attitudes of organizational groups as indicated by the expressed opinions or observed acts of their members. Degrees of favorable and unfavorable opinion can be defined for both morale effects and morale factors. The results of any survey method, whether formal or informal, can therefore be scored and evaluated. An index of morale for an entire organization is the median score of morale effects for all the groups that compose it. The basic group may be the department. The morale of a group is at least better than that of half the departments if its morale index is above the median. It is poorer if it is below the median, provided that the survey methods are valid and reliable. It is a reasonable presumption that a factor or circumstance is a morale factor if it receives a high score in departments with high morale, and a low score in departments with low morale. This information should help the departmental supervisors in determining where there is a malperformance of functions or a mishandling of factors in the departmental situation that is hurting morale. It is possible, of course, that a particular morale factor might receive a significantly low score in all departments.

This might suggest that responsibility for the poor handling of this factor rests on general rather than departmental management.

There is no such thing as the complete collection of facts concerning an organizational morale situation. Many morale factors lie outside the organization. There is no such thing as a highly accurate evaluation of the facts that can be obtained. We know enough about the problem, however, to make a reasonably accurate estimate of the situation. At least, there is little excuse for being caught unawares by the appearance of a serious morale situation, as has happened in some concerns.

CHAPTER 16

MORALE AND THE INTEGRATION OF INTERESTS

Communications and Morale

Industry has stressed in recent years the importance of communications in morale development and maintenance. An integration of interests implies a mutuality of interests. The basis of this mutuality is found chiefly in the primary service objectives of the business organization. An integration of interests requires a meeting of minds concerning certain questions. What are these primary objectives? What requirements for their satisfactory accomplishment must be met before there can be any lasting satisfaction of collateral objectives? What are the personal objectives of individuals and groups in the organization, and what are the requirements for their adequate satisfaction? There are other questions that must be answered, as we have seen. A meeting of minds with respect to such questions obviously requires an exchange of information. This exchange must take place between executives and operatives within the organization for a number of reasons. The executive represents the principal leadership responsibility in the organization in the accomplishment of its objectives. The right of private property requires him to exercise due regard for the interests of the customer and the general public, as well as the investor. He must, of course, exercise due regard for the interests of suppliers, bankers, and other creditors. He must exercise due regard for the interests of the operative employees in the organization to retain his leadership of them. He must get from them information on what they regard as their interests, and why. He must give them information concerning the nature and requirements of

the other interests that he must represent or with which he must deal, and tell them why. The executive's problem of communication in morale development and maintenance is a two-way proposition. It requires him to tell as well as to listen.

The preceding discussion of morale investigation can be considered, then, to be partly a problem of management-operative communications. Employee opinions are not collected and analyzed primarily for the purpose of compiling morale statistics or computing morale index numbers. The primary purpose is to get information from employees by means of opinion polls, conversations, and observation in order to determine what changes in conditions affecting their interests should be made. This information indicates what the employees should be told about these conditions and interests in order to achieve a meeting of minds. In our larger, more progressive concerns today, this can be any information that the employees want. The use of shop counselors can be helpful. The supervisory executive is and should be an important factor in getting and giving information to the operative employee. He is in constant contact with him in exercising a face-to-face leadership, for better or for worse. Selection, training, and the modifying influence of personal conferences with superiors and subordinates can improve the quality of this leadership.[1]

There are various other ways of getting from employees information that will indicate their opinions and attitudes. The more common devices are the suggestion system, the exit interview, executive contacts with operatives above the supervisory level, and staff contacts in addition to shop counselors. The suggestion system is well known. It has been discussed thoroughly in many publications. Its principal purpose is to obtain from employees suggestions that will improve the economy or effectiveness with which they accomplish their primary service objectives. They should be and are paid for these suggestions in some proportion to their value. Such objectives are represented ultimately by values for which the customer pays. These suggestions represent thought and action over and above the

[1] Henry S. Dennison believes: "Among men not incurably incompatible, sufficiently frequent face-to-face contacts will help in the development of smooth cooperation. . . . Working together is the best way to learn to work together." —*Organization Engineering*, p. 33.

employee's normal line of duty. Awards may be made on the recommendation of a committee which includes one or more employee representatives. A small proportion of the award, in addition to the suggestor's reward, may be put into a general fund for distribution periodically among all the employees to promote group interest in the system. A notation of an accepted suggestion is usually made on the employee's service record. It is considered part of his total record in connection with transfers and promotions. He may be cited publicly, in the company magazine or newspaper, for meritorious service in making a suggestion. The size of the award is published as an incentive to others. The suggestion system represents, in part, a practical application of the Principle of Participation. Reasons for the rejection of employee suggestions should be stated promptly, completely, and privately. Suggestions are frequently received for the betterment of certain working conditions or for other changes that promote primarily the personal interests of individuals or groups. There is usually payment on the basis of a fixed scale for practicable suggestions of this kind. It is necessarily less generous. Employees can be urged to use the suggestion box for complaints that they do not wish to discuss with their supervisor for some reason. It should be possible to identify the department in which the complaint originates, but not the employee who makes it. A single anonymous complaint has no significance in itself. A number of complaints from the same department at different times about the same difficulty suggests that it is a local problem that needs attention. It may suggest also that the local supervisory management does not have the confidence of its employees, since they do not see fit to discuss their grievance with their supervisor and to follow the established grievance procedure if their complaint is not satisfied. A number of complaints from different departments at different times about the same difficulty suggests, of course, that the problem is not local. It suggests a general situation that requires attention by higher authority. The suggestion box can be an important instrument in the facilitation of employee-management communications.

The exit interview is another means of getting employee information. Payroll clearance may be necessary for a number of reasons before an employee can get his final pay check on leaving the organization permanently. He can be interviewed, of course, when

he comes for the check. His reasons for leaving, and his opinion of the organization, its leadership, the conditions of work, and other factors affecting morale can usually be obtained. Many concerns classify them on a "separations register" by department, cause, and condition. Periodic summary reports, including index numbers of labor turnover, are helpful in estimating morale. Their accuracy is limited, however, by the fact that the employee is not in a normal organizational relationship when he is interviewed. Some employees may feel that they have nothing to lose. In such case they may make a frank but biased statement. Other employees may say what they think will look good on the final record, or nothing. They know that the next employment department will check their previous employment record. They do not wish to leave a record as a "troublemaker." The Principle of Converging Evidence is usually important in any investigation that has to depend largely on opinion for its original facts. The reasons for separation may be helpful in supporting conclusions concerning causes of employee dissatisfaction, that are based on other facts from other sources.

The line organization has many shortcomings as a channel of communication between organizational service levels. Parallel staff channels of communitcation are usually established in large organizations for this reason. Professional staff operatives from staff departments in higher echelons frequently come in contact with personnel on lower levels. Such operatives have been trained, presumably, to think objectively and analytically about problems in their professional field. Their contacts with the personnel in other departments are often the result of problem situations. These operatives should be able, with training, to make helpful estimates of morale situations in departments that they contact frequently. Business organizations do not make much use of staff personnel to procure morale information, except in the case of professional operatives from the personnel department itself. There are a number of reasons for this. The most obvious is that a concern may not have thought of it, or may have no facilities for training in morale analysis. A more fundamental reason is the tendency of highly-technical training to narrow the vision. The specialist may not see any problems in front of him except those in his field of specialization. It is also probable that he is not interested in them.

The personal contacts between line executives above the supervisory management level and operatives can bring in useful information. An operating executive should get away from his desk occasionally and go on the floor of his shop or store to retain his perspective. He should know the older employees in the company. He can and should talk with them for a moment as he goes through a department. People like to discuss general operating problems, as well as their own, with someone whom they like and can admire as a leader of the organization. This is particularly true when they have some assurance of a sympathetic hearing. Some of these employees are leaders of small unofficial cliques. The executive should of course suggest that any complaint be taken up at once with the employee's immediate superior. Otherwise, he may undercut the latter's leadership position. Furthermore, he cannot act regularly as a shop counselor. He should have other duties that are equally important. Such contacts can give him the "feel" of the organization, however. They can help him to make his own informal estimates of the morale situation. Maybe he should analyze himself if no one will talk frankly and freely with him.

The Presentation of Management's Viewpoint

The previous discussion had to do chiefly with the problem of securing information from employees, both executive and operative, concerning what they regard as their interests, and why. It had to do also with the determination of where the concern is failing to satisfy these interests and what causes the failure. It is equally important that the executive give subordinates information concerning the nature and requirements of the other interests that he must represent or consider. This should include facts showing where and how the company is or is not satisfying these interests, and the causes therefore. It is believed that it should also include a statement of what management thinks, how it thinks, and why. In other words, management should state its philosophy frankly, if it has one. Otherwise, the executive should forget the problem of morale development until it formulates an acceptable philosophy. There can be no meeting of minds, and therefore no integration of interests, until the employees are able to understand why executives think the way they do. The employees must do more

than understand, however. They must accept the philosophy as reasonably sound with respect to all the interests involved, including their own. A common scale of values depends on a common philosophy, since values ultimately are mental. This means in industry a philosophy of management that is generally accepted, not only in particular concerns and industries, but by the public. This requires more than statements concerning the objectives of the organization and its leadership. It requires information on the policies, methods, structural relationships, and other factors that condition the accomplishment of objectives.[2]

An attempt to meet these requirements involves the process of indoctrination. This term, "indoctrination," has been avoided by most management writers. The reason, of course, is the perversion of the process by totalitarian states for the purpose of perpetuating an oligarchy. Yet the origins of the word "doctrine" are quite respectable. The term refers to any formal statement, either express or implied, of objectives, ideals, principles, points of view, and general modes of procedure. A doctrine is laid down for the guidance of others, either with or without the authority to compel its acceptance. It can relate to either physical or psychical phenomena. It is thought of commonly, however, as relating to the general phenomena of human relations and conduct. A philosophy is a body of doctrine. Its purpose in business organization is to make clear the significance of concepts of business objectives, standards of business conduct, executive leadership, policies, methods, and other relationships, and their application in rendering an economic service for producers and consumers. The basic importance of a philosophy of management in all phases of business organization and operation is evident.

The distinctions between education and indoctrination are significant in the morale-building process. Education is concerned with introducing the individual to various points of view about certain phenomena with a view to enabling him to develop his own philosophy. He is brought into contact with various doctrines represent-

[2] L. Urwick has said: "Provided the objective is desirable and legitimate, there can be built a unity of doctrine which translates itself into a unity of spirit, a moving force ensuring the maximum continuous and coordinated efficiency."—*The Elements of Administration*, p. 69.

ing all points of view concerning a particular set of problems. He is not required to accept any of them. The student in a university may have a course under a professor who sincerely believes in certain views that many of his colleagues in his field may regard as quite radical. The student's next course in the subject, if he has a balanced program, may bring him under someone who believes with equal sincerity in certain other views. They may be regarded by many of this teacher's colleagues as quite conservative. The radical probably regards him as a reactionary. Other courses under different instructors will probably present various viewpoints between the first two. The student is expected to analyze and weigh the different doctrines that have been presented to him, select those that appear sound and usable, and weld them into a working philosophy of his own. Whether or not he can do so depends on his intelligence, maturity, and many other factors. He is not educated, however, if he leaves the particular university without some philosophy, at least in his major field of interest. If he has no philosophy, he has developed no basis for effective thinking. He must have accepted certain doctrines in whole or in part, if he leaves with some philosophy. He must have been indoctrinated somehow in this case. Indoctrination is merely a process that inculcates a doctrine in the minds of individuals or groups with a view to gaining some degree of understanding and acceptance. The process of education is one of self-indoctrination.[3] Acceptance of any particular doctrine is voluntary. The concept of a university as a place where all points of view may exist, and the principle of academic freedom, are based on such ideas as these. Authoritarian indoctrina-

[3] E. A. Burtt warns, however: "Education on its informative side thus becomes, throughout by far the greater part of human history, an instrument for indoctrinating youth in the accepted beliefs of the group."—*Principles and Problems of Right Thinking*, p. 38. (It can also be an instrument of counter-indoctrination.)

George W. Hartman says: "Education both permits and encourages choice among alternative conclusions after reflection upon data; propaganda neglects or definitely discourages this. . . . Education is democratic and propaganda authoritarian in spirit."—E. H. Fryer and E. R. Henry (eds.), *The Handbook of Applied Psychology*, p. 24. (The term propaganda, as used here, refers to organized publicity as a means of influencing attitudes. It is neither democratic nor authoritarian in this sense. Whether or not it is democratic or authoritarian depends on the intent underlying its use.)

tion, on the other hand, inculcates an understanding and compels observance of it. It cannot compel acceptance, but it hopes to gain it by various devices. It attempts to achieve complete indoctrination. The minds of individuals and groups would be closed to all lines of reasoning, except the "party line," if it were possible to accomplish complete indoctrination. This is incompatible with the idea of a democratic, industrial society. It is therefore not in the public interest. It would be disastrous in a private concern that must operate under conditions of free competition. It is impossible, fortunately, to achieve complete indoctrination in such a society, because of freedom of speech, freedom of the press, freedom of assembly, and other freedoms that permit the free exchange of fact and opinion. A high dgree of indoctrination is possible, and may be desirable, under certain conditions. The objectives of religious organization require it, for example.

The right of the executive to make use of indoctrinative processes can hardly be denied. He is charged with leadership responsibilities. Unity of action depends on unity of understanding. It depends on a common scale of values that is related to the common objective. A common doctrine is the basis for the establishment of such common understandings and criteria. Education involving some degree of indoctrination is necessary for effectiveness in any organization.

Executive policy concerning the nature and degree of indoctrination requires very careful consideration. The purpose of indoctrination is the inculcation of certain concepts to the end that the responses of certain individuals and groups to certain general types of situations will be conditioned. The objective is some assurance that they will react to similar situations in the future in the desired manner. The degree of assurance depends on the degree of acceptance as well as on the degree of inculcation. Acceptance depends in part, but not entirely, on rational thinking, but based on accepted facts and principles. The average individual is a sentient rather than a strictly logical being. The process of indoctrination may be either facilitated or inhibited by emotionalism under certain conditions.[4]

[4] Edward L. Munson said: "Logic does not appeal to the crowd for the reason that it responds to sentiment rather than reason."—*Management of Men*, p. 81. F. J. Roethlisberger makes the same point in *Management and Morale*.

The degree of indoctrination that is proper and desirable depends on the objectives of the particular educational process. It may be high when the problem involves the inculcation of concepts concerning operative objectives, principles, and procedures. The degree of decentralization that is practicable, for example, tends to vary directly with the degree of indoctrination of the organization. An installation crew may be required to set up a piece of equipment in a distant location. A customer of the particular manufacturing plant has bought and paid for it. Customer satisfaction, and possibly repeat business, may depend as much on a good installation job as on the original design and production of the equipment. The installation crew and its immediate supervisors cannot be in constant contact with headquarters, despite modern high-speed communications and transport facilities. The probable influence of the various factors affecting the successful installation can be forecast in advance, but not completely or with exact accuracy. The crew is on its own to a considerable degree. The effectiveness with which it handles unexpected situations depends largely on how well an intelligent understanding of sound installation principles and practice has been inculcated in the minds of the members through training and experience. Another common example is the telephone repairman. He works alone frequently. It is true that he checks with his headquarters by telephone after the completion of each job. This is for control purposes, usually, rather than for detailed instructions on how a particular job should be done. The housewife who asks a question about the telephone company and its operations generally gets an intelligent, courteous, complete, and accurate answer. She also gets a satisfactory repair job. The telephone repairman is usually an effective public relations operative, as well as a good mechanic. Business organizations in other fields also have done a good job of developing such abilities in their executive and operative employees. A considerable indoctrination with operative objectives, policies, and practices is necessary wherever considerable individual and group initiative is required. This may be necessary because of large organization, the hazard of unexpected local emergencies, the lack of adequate communications methods, the rapid growth and development of the business, and other factors that call for decentralization and the delegation of responsibility and

authority. An extensive geographical dispersion of business activities is a common cause.[5]

Indoctrination for morale development lies in the field of administrative management. It has to do with the development of a community of ideas concerning values and organizational relationships between owners, managers, and operatives on the one hand, and customers and the general public on the other. It involves consideration of the property rights of employees in their services and of owners in their capital. Most opinions about such values, conditions, and relationships have an emotional as well as a factual base. They concern the foundations of an industrial economy. They therefore have political and social as well as economic significance. No high degree of indoctrination is either possible or desirable. Employees of all grades and ranks are being bombarded constantly with ideas on these subjects by discussions in newspapers, magazines, radio broadcasts, television, movies, and public meetings. It is obvious that the process of indoctrination for morale development must be one of self-indoctrination. The executive must and should proceed on the assumption that the members of his organization will develop a sound philosophy, provided that the doctrines presented are sound with respect to the legitimate claims of the various public and private interests that are involved. The term "sound" in this connection refers to any philosophy that is compatible with the successful operation of an industrial economy based on the right of private property and the concept of "free enterprise." There is always the danger that indoctrination may result in a closed mind if carried too far with respect either to operative or administrative management, or to operative performance. The optimum condition of indoctrination is one in which individuals and groups are provided with the knowledge and understanding that are necessary for

[5] In discussing the management problems of the General Motors Export Corporation, Edgar W. Smith made the following comment: "A willingness to operate under the accepted principles of our line and staff organization plan, heretofore only partial in its manifestation, can be accomplished arbitrarily by the exercise of the necessary supervision and discipline; but it can be accomplished much more satisfactorily and effectively by the voluntary inculcation of a personal desire to abide by what is inherently recognized to be the most appropriate, the most flexible, the most effective form of organization and operation that could be conceived."—*The Organization and Operating Principles of the General Motors Export Corporation*, p. 15.

effective group accomplishment of organizational objectives. For morale development, it requires merely an acceptance of management's philosophy to the extent that will cause employees to think as well as listen to opposing arguments, that will prevent their being stampeded into action which is contrary to the organization's interests by emotional appeals to their short-term personal interests. Such appeals often are opposed to their long-term interests. This degree of indoctrination is all that is needed, provided that management's philosophy is sound. The principle is clear, no doubt. The optimum degree of indoctrination is the least degree that will permit the organization to accomplish its objectives with maximum competitive effectiveness. This applies in the accomplishment of any business objectives in any field of management at any level. The risks of closed minds begin to be incurred when a concern goes beyond this point. It is a serious risk, because "cast-iron" thinking can be fatal in a competitive society.

The Principles of Indoctrination

The executive leadership of American business has avoided its responsibility for developing a sound general philosophy of management, with some notable exceptions, until recent years. It has apparently preferred to concentrate its attention on the physical problems of business that are clear-cut, less controversial, and usually more profitable in the immediate future. It has been forced, in large corporations, to accept this responsibility by the action of politicians, certain types of labor leaders, and "liberal" publicists. It is committed to this responsibility, whether it likes it or not. This responsibility must include an obligation for the education of employees and the public with respect to this philosophy, within the limits of self-indoctrination noted above.

The executive therefore should have a working knowledge of the principles of indoctrination. He should understand their significance for a number of reasons. Some principles cannot and should not be used in a democratic society. Some can be used in such a society, but not in a private business. A considerable body of literature dealing with such principles and their application has developed in recent years. Little or nothing has been written concerning the use of these principles by the executive leadership of a business

organization. The following statements of principles, and their interpretations, represent the writer's conclusions. It is believed that the principles with which management should be familiar are those having to do with (1) time, (2) repetition, (3) continuity, (4) veracity, (5) simplicity, (6) paternalism, (7) confidence in leadership, (8) rationalization, (9) doctrinal prestige, (10) loyalty, (11) counterindoctrination, and (12) progress. It should not use those involving (a) emotionalism, (b) exaggeration, (c) exclusion of ideas, and (d) half-truths.

Any degree of indoctrination is time-consuming, since it involves an educational process. In consequence, time is an important factor. The indoctrination of an organization with either an operative or an administrative philosophy of management cannot be accomplished quickly. The repetitive presentation of a doctrine to individuals or groups over a short time tends to induce its acceptance. The repeated use of political slogans, subversive propaganda, and some forms of advertising are examples of activities that use this idea. Repeated presentation seems to facilitate the inculcation of concepts and ideas, and the development of a feeling of confidence in them. It leads to their acceptance in some degree. Techniques for the application of this principle have been highly developed in authoritarian states, partly because of their control of education and all forms of communication.

There is a further reason for continuity in indoctrination. The mental faculty of retentivity is limited in most people. A political group that is in office, for example, counts on the probability that the public will forget its mistakes. The group that is out of office maintains a continuous, repetitive drumfire of fact and assertion to make certain that the public will not forget. They must of course avoid the monotony and satiety that may result from continuous repetition. The efforts of executives to present management's viewpoint have often been sporadic, as well as amateurish, in the past. Communists or others who wish to take over the leadership of a company's operative employees never cease their work. Their propaganda operations are frequently skillful.

Their weakness is often their careless distortion of the truth. They have no responsibility for the economic and social results of business operations. They cannot be held accountable for the results of their propaganda. But observance of the principle of veracity is

a practical as well as an ethical necessity for the executive. He must continue to live with his employees as long as he is able to hold his job. Morale is an important factor in organizational effectiveness. It depends on confidence in leadership. An evaluation of the truth and soundness of a statement by a leader does not require a high level of intelligence and education among the rank and file. Such evaluation can be made adequately by comparing statements of policy, procedure, and anticipated results with actual methods and accomplishments. A citizen, for example, votes against the political leader who is in office when this comparison is unfavorable and the voter has become sufficiently dissatisfied with his condition. He is not necessarily voting for the candidate for whom he casts his ballot. The business organization is primarily an economic rather than a political institution. Much the same thing takes place, nevertheless, when subordinate executives and operative employees do not wholeheartedly support the top leadership in the pursuit of its primary objectives. It is necessary that a business doctrine be based on what the executive honestly believes to be sound principles, and that its presentation be adequately supported by verifiable facts.[6]

It is obvious that the particular doctrine must be stated in terms that are sufficiently simple to permit the group to understand it. An accurate, detailed explanation of important business problems frequently requires technical discussion that is anything but simple. But the fundamentals in the solution of any problem usually can be stated simply. An examination of company newspapers and magazines will frequently uncover a well-written article in which an organizational problem involving relationships between organizational and personal objectives is simply discussed in terms of fundamentals. It has only the minimum of detail that is necessary to give it tangibility. The principle of veracity is observed without violation of the principle of simplicity. There is a danger, of course, that the presentation will have a paternalistic flavor if the writer "talks down" to his reader. Anyone resents what appears to be an underestimation of his intelligence, regardless of whether this is actually the intent. Most people dislike economic and social preachments by

[6] W. E. Hocking pointed out the futility of an attempt to manipulate morale by tampering with the truth. Morale can only be evolved by man himself through his own reactions to his own data. See *Morale and Its Enemies*, pp. 21–22.

self-appointed mentors. They feel quite capable of deciding what is and what is not good for themselves, particularly in the field of the social sciences, without the benefit of *ex-cathedra* pronouncements from above. Any statement of management's philosophy should therefore be objective and factual. It should, in other words, be "laid on the line." The educational phases of morale development must depend on self-indoctrination when problems involving the relation of organizational and personal interests are under discussion.

The degree and rapidity of acceptance of a doctrine depend on confidence in leadership. This is one reason why persons who wish to take over an organization sometimes attempt first to discredit its leaders. Acceptance depends on the belief of the rank and file of the organization in the purposes, honesty, and ability of the leader who promulgates the doctrine. Complete unquestioning acceptance is not to be expected for a number of reasons in addition to those noted previously. Such acceptance would be undesirable in a business organization if it were possible. People tend to rationalize their actions. Individuals and groups are consequently inclined to accept a doctrine that justifies their hopes and desires in the immediate future. They often tend to do so without too much inquiry into its soundness in terms of subsequent long-term effects on their interests. They believe what they wish to believe. Employees are constantly presented with opinions that diverge from those of their executive leaders. These opinions are often presented in a manner that plays on the employees' prejudices or immediate personal interests. They emphasize management's sins of omission or commission, which are many. They infer that these errors are inherent weaknesses of management in a democratic society that is based on the right of private property and free enterprise. There has been little discussion of them as evolutionary effects of a process of trial and error in developing professional executive leadership. Some of the people who have advocated various degrees of socialism have been sincere and have held positions of prestige. There is a Principle of Doctrinal Prestige: Individuals and groups tend to accept with a minimum of questioning the beliefs that have been accepted by a majority of the people in the particular social universe with which they are associated. The philosophy of modern management certainly has lacked

prestige during the past twenty-five years. This is due, however, to the sins of previous generations of executives, rather than to the philosophy itself.

What people believe at a given point in time may be more important, in a democratic society, than whether or not it is true. They tend to rise to the defense of ideas with which they have been thoroughly indoctrinated when they are confronted with opposing ideas that tend to undermine their beliefs. It makes no difference whether the opposing ideas are offered by the leaders of their own organization or by outside leaders. There may be certain doctrinal loyalties in the business organization with which the executive must reckon under a condition of free enterprise. This principle can be tested easily in some concerns merely by listening to the jeers which great executive policy statements when they concern employee-employer interests and relationships. Adverse doctrinal loyalties can be eliminated in a socialist state that is based on a high degree of state capitalism. Their force and effect can be contained effectively by the police power of the state. Use of the police power in doctrinal disputes of an economic, political, or social nature is foreign to the basic concepts of a democratic society, except in serious emergencies affecting the general public interest. It may however be necessary, in defense of the rights of private property of owners in their capital and employees in their services, when economic or physical force based on monopoly powers is exercised by business executives or labor leaders in promoting their personal objectives. It may become mandatory when the public interest is jeopardized. Conversely, the members of an organization tend to rise strongly in defense of their executive leadership when its statements of objectives, policies, and procedures do not offend their doctrinal loyalties. American management has been highly praised for an outstanding job in developing a high per capita production and distribution of goods and services, and making a corresponding contribution to a high standard of living. It has been a good vote-getting technique, at the same time, to condemn management as being "reactionary." This suggests that American management has generally done a poor job of selling its philosophy to its employees and the public.

Counterindoctrination is a difficult and hazardous undertaking, however. A strong presentation of a counter doctrine to well-indoc-

trinated individuals or groups tends to create a strong negative reaction. It often causes a violent emotional disturbance in them. The reaction tends to be directed toward the source of the counter doctrine and may be accompanied by physical force. One does not argue, for example, with a person who is completely indoctrinated with some political philosophy. The argument is likely to become heated very quickly. It is not likely that the individual will be convinced. For the same reasons one does not argue, either, with a person who is completely indoctrinated with some religious philosophy. A fundamental economic philosophy has political implications. It becomes almost a religion for an individual who may be completely indoctrinated with it. Belief in a doctrine can nevertheless be broken down by repetitive presentation of a counter doctrine. The presentation should be stopped when negative reactions begin to appear. It should not be repeated until they have subsided. Propaganda against the church is continuous in communist countries, but not constant. It is possible that this is the reason for such semicontinuous antireligious propaganda, even though the government has complete control of the means of education and communication. It should be remembered, finally, that a purpose of education is to further progress in all fields, not to stop it. Any philosophy of management must be compatible with continued progress in all areas in which the public interest is concerned. The processes of education in private industry are and must continue to be those of self-indoctrination. A closed mind and progress are not compatible. It should be remembered also that self-indoctrination, as well as authoritarian indoctrination, can lead to complete indoctrination and a closed mind. This is not likely, except in individual instances, in a society that retains freedom of speech, communication, and education. An example of its effects in business organization is nonlogical opposition to changes in operating methods that have been used for years.

Certain well-known principles of indoctrination have not been mentioned.[7] It is believed that their use in American business or-

[7] George W. Hartmann lists the following six propaganda techniques. He credits them to Clyde Miller: (1) "Name Calling"—weakening the influence of an opponent by fastening on him a label that suggests to the public some offensive characteristics; (2) "Glittering Generalities"—stimulating approbation and ac-

ganization would be impracticable as well as improper. An example is the use of emotional appeals designed to sweep the rank and file off its feet and preclude any rational analysis of a proposal affecting its interests. This device has sometimes been used effectively by politicians and labor leaders. It has rarely been used effectively by business executives, because it usually involves violations of the Principles of Doctrinal Loyalty and Counterindoctrination. Adolf Hitler discovered the Principle of Exaggeration. It says in effect: If the truth cannot be presented, exaggerate the statement about the situation so greatly that its truth or falsity cannot be checked by most people. The statement is likely to be accepted if it comes from an authoritative source. It appears that Hitler must share with the communists the dubious distinction of discovering the Principle of the Half-Truth, which says: Half-truths that lead to a desired conclusion may be accepted by the rank and file in the absence of knowledge of the whole truth. The Principle of the Exclusion of Ideas can be charged to the communists. It may be stated as follows: The exclusion of ideas that are foreign to the tenets of the particular doctrine facilitates the development and continued acceptance of the doctrine by the rank and file of the organization. This is the idea in back of the "iron curtain." It develops unity of thought and action in support of the incumbent leadership by depriving the people of knowledge of competing doctrines that might raise doubts as to the wisdom and effectiveness of that leadership. It is an ancient device in the field of religion. We have had examples of it in the United States, despite the fact that this country is a democracy. Under certain interpretations of the Wagner Labor Relations Act, there was some denial of the right of an executive to present his

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ceptance by the use of slogans that suggest desirable characteristics; (3) "Transfer and Testimony"—identifying the particular purposes that are being promoted with a venerated symbol; (4) "Plain Folks"—creating a feeling of identity of interests between the leader and the led by engaging in their common activities: this attempts to develop a liking for the leader by implying that he has no feeling of superiority with respect to them, that he is one of them; (5) "Card-Stacking"—the outright invention, suppression, or warping of data in the interests of some end; (6) "Band Wagon"—playing on the tendency of people to want to be on the winning side regardless of the merits of the debate. See E. H. Fryer and E. R. Henry (eds.), *Handbook of Applied Psychology*, pp. 26–27, for a discussion of these techniques. It is believed that they are essentially political in nature. They cannot be used safely or effectively by the business executive.

viewpoint to his employees on controversial matters affecting the interests of a union that had bargaining rights in the plant. It was an obvious attempt to control the thinking of employees in the interests of labor leaders. There are other examples of perversions of sound principles. There is no intent behind them to present a doctrine completely and let the individual make his own decision as to its soundness. Their use has no place in a democratic society. This statement does not of course apply to religious indoctrination.

Educational Activities for Morale Development

Business organizations have used many techniques for presenting management's viewpoint to employees and the public. Simple statements of their belief concerning sound social and economic principles and practices have been widely distributed. They deal usually with solutions of the basic problems of business organization and operation that affect the public interest. They require some ability to engage in abstract thinking, despite their simplicity. They are seldom tied up directly with the organization and operation of the particular concern. They are often written by people who have made no study of the operating end of the company, and who perhaps do not have the background for such a study. A simple, generalized approach may be satisfactory for the informational needs of the public. Employee understanding and acceptance would certainly be facilitated by a better tie-in. Nevertheless, these statements appear to have had some effect on the viewpoints and attitudes of employees and the public. They have been presented effectively through such mediums as newspaper advertising and radio broadcasts, as well as pamphlets and articles in company periodicals that are privately printed and distributed. Inspection of such periodicals often brings to light articles that do deal specifically with certain organizational or operational conditions in a department or division. They are purely descriptive in most cases. There is occasionally a simple analysis of operating problems and a statement of the general approach to their solution. The employee-reader must discover any fundamental significances in the situation for himself. It is doubtful that he can do this in most cases. Such articles may, however, contribute to the development of interest in the organization and of organizational pride. Examination of them frequently

shows that they are written by department heads or staff operatives. These men may have excellent practical experience and technical training. They often lack a broad managerial background. They cannot be expected to comment on fundamental significances that they cannot see themselves. There is sometimes another reason—the fear that management will be accused of "preaching," and the knowledge that most employees dislike it in the fields of economics and labor relations. A simple analysis of an actual situation in terms of basic objectives and policies is not preaching, provided that the approach is objective and the analysis is backed by facts.

Various devices have been used to illustrate the relationships between service and personal objectives in a business organization. The intent, of course, is to emphasize the need for coöperation and to foster the development of an integration of interests. One of the oldest devices is the customer-work formula. It has been stated in various ways. The general idea can be expressed as follows:

$$\text{Customer needs} + \text{Capital} + \text{Labor} + \text{Management} = \text{JOBS}$$

Cancel out any term in the left-hand side of the equation and there are no jobs. This may suggest that all the factors in the formula have equal weight. But this is not the case. The customer's needs must be the primary objective under a condition of private competitive enterprise. The customer's right of freedom of choice in the market place is a fundamental tenet of an industrial democracy. Some companies have recently tried to make this customer more real to the average employee, particularly when the customer is the ultimate consumer. Some articles in company periodicals have taken the employees on a vicarious tour with one of the company's star salesmen. They have had an opportunity indirectly to meet the customer and hear why he likes the product. It is unfortunate that they do not usually have an opportunity to hear why he does not like the product. The real measure of how well a concern is serving the customer is found not in conversation, but in sales. It was suggested previously that more current employee information concerning the organization's competitive position in the market would be helpful in large concerns. There is not much point in secrecy about this. Competitors usually can make a sufficiently accurate estimate of it. There are other simple ways in which the dependence of em-

ployee personal objectives on the satisfactory accomplishment of organizational service objectives can be made clear.

The importance of capital to labor in creating jobs has been shown in various ways. A common method is to express the balance sheet in terms that show the amount of capital per employee that is required to run the business. It indicates the investment that is required to make a job for one employee under the particular conditions of business operation. The amounts vary from a few thousand dollars in distributive industries to a great many thousands in heavy manufacturing industries. The employee statement of the balance sheet may be accompanied by the same balance sheet in its normal accounting form. There is usually a simple statement of why this investment per employee is necessary to make one job. The profit-and-loss statement is often expressed in terms of receipts and expenditures per dollar of sales. The results are sometimes shown graphically in the form of a pie chart. This indicates the distribution of the customer's dollar in the particular business or industry. The percentage distribution to investors in the form of dividends is generally small in comparison with the percentage distribution to employees in the form of wages and salaries. It may be less than the amount paid directly to the government, depending on the amount of profits that are "plowed back" into the business. These points usually are emphasized. There is a question as to whether the practice of lumping top executive salaries with other wages and salaries makes for good public relations, even though there is no ethical objection to it. They may look large individually in some concerns to people like the writer who do not earn them. The total of the top administrative salaries in a large corporation is often a very small percentage of the total sales income, however. The management of a concern can check the validity of its top salary scales, if it wishes to do so, by an extension of the technique of job evaluation. A few companies are beginning to do this. Other concerns have been giving employees information about applying simple ratio analysis to balance sheets and profit-and-loss statements. The employees can make their own analyses and compare them with the results obtained by competing concerns. They can make the same financial tests that any stockholder can make. The same simplified information is being given to the stockholders themselves by some corpora-

tions. There may be more stockholders than employees in some cases. A great many of them are no more able to analyze the company's financial condition than the average employee. The writer saw recently in a company newspaper a series of articles that dealt with the problem of corporate financial organization. The intent was to give the employees a better understanding of the company's financial structure. Various other means have been used to show the importance of capital, the dependence of the employees' interests on it, and the reasonableness of any distributions to investors. The increasingly frank, complete provision of such information to everyone, including the public, is admirable.

There is, however, a principle of overidentification of personal interests within an organization with its service objectives. Overidentification attaches a degree of importance to personal objectives, through excessive emphasis, that elevates them above service objectives. The result may be low morale, rather than high. A business organization does not exist primarily for the purpose of making work for employees, so far as the public is concerned. Neither does it exist primarily for the purpose of making profits for investors, so far as the public is concerned. The objective of a business organization is an economic service for the portion of the public that includes its customers. A profit is an objective of businessmen. It is legitimate as well as necessary, so long as it is truly a reward to capital for the successful acceptance of business risk in rendering an economic service under competitive conditions. There is no moral obligation to share profits with employees, either executive or operative, under these conditions. The owners of a business are required to make advances to labor in the form of wages and salaries regardless of whether they can or cannot sell their goods and services to the public at a profit. The nature of profits, as a reward of capital, is indicated also by the legal position of employees as preferred creditors. It may, on the other hand, be sound policy to offer employees extra incentives for superior performance in the form of profit shares, bonuses, or other forms of financial incentives. It is a question of business policy rather than business ethics. But it is important to the public interest that the nature of a profit be kept clear, since private enterprise depends on private investment.

It appears, therefore, that the usual methods of presenting the contributions of capital should be supplemented with other information. These contributions have to do with the implementation of the business organization to the end that it can perform its economic mission more effectively and economically. There is nothing mysterious about a break-even chart, for example. Much has been written about it as a tool of management. There has been little use of it in employee publications as a means of giving a simple explanation of the processes of internal profit formation. Even a casual understanding of it indicates that the break-even point is merely a point in operations. There can be no such thing, for all practical purposes, as a nonprofit business under either private or state capitalism. It is either a profit business or a loss business. The management of a business with a poor profits record would probably not be interested in publicizing any such analysis. It might show that over a period of time the organization and its members had been consuming more values than they had been producing in terms of relative worth. A break-even chart can be used also to show how increasing capital application with increasing labor costs tends to increase the rate of profit-or-loss formation above or below the break-even point. Some private economic research agencies have shown graphically the relationships between increasing capital investment, increasing per capita production, increasing national income, and an increasing standard of living accompanied by decreasing hours of work for operative employees. A few concerns, whose business life has been long enough to permit it, have shown the same relationships in terms of greater production of better quality at lower cost. Any such analyses and explanations should be tied in with the long-term effect of capital investment on increasing real wages and the number of available jobs.[8] This permits the integration of the interests of employees and investors through

[8] General Mills, for example, has provided the public with information concerning its corporate growth and jobs. This has been done in coöperation with a union official in the industry. There is nothing new, as a matter of fact, in anything that the writer has said about industry's educational activities in the fields of labor relations and public relations. Almost everything suggested has been done somewhere, sometime, by someone. The writer has not made a survey of company periodicals and publications everywhere. There are thousands of them. There are undoubtedly many good examples of which he is unaware.

the catalytic agency of the service objective. There are other contributions of capital that can and should be made clear.

Management is, of course, a form of mental labor. A distinction is made between managerial labor and operative labor. The distinction is significant, and should be maintained, because of the importance of the executive's leadership contribution. Both forms, obviously are necessary. A good descriptive job of presenting the benefits of private capitalism to employees and the public has been done. Opinion polls have indicated considerable acceptance of it, despite many serious strikes of national import. Some attempt has been made to explain the contributions of management. The idea of a simulated tour has been applied to the problem of acquainting the employees with top management. Such a tour is one of the few ways in which this can be done in a large corporation. It may be physically impossible for the president to meet each employee personally. This loss of personal contact between top leadership and the led can be a cause of poor morale. The employee-reader of such an article in a company periodical may be taken vicariously on a tour of the general offices. He meets the principal general executives. He may discover that they are also human. He does not discover, usually, why they are worth the large salaries they are known to receive. The contributions of top management may be vital, but they are often intangible. They bear fruit at some time beyond the immediate future. This is not as easy to explain as the contribution of an operative employee. But opponents of private capitalism can be expected to give an explanation.

Reference has been made frequently to the privately published periodical and pamphlet literature of industry. It should be recalled that many channels and mediums of communication are available in business organizations. One of the most important should be the chain of command, both line and staff, ending in the first-level supervisor.

Management is gradually developing a philosophy of management. It is recording it in the journals and pamphlets of management societies and trade associations, as well as in the public and private press. It is making its viewpoint available to employees and the public in various ways. Some of its contributions are excellent

and some are poor, as would be expected. It is, nevertheless, slowly writing an "American Primer" of management in private enterprise in a democratic industrial economy.

Labor Relations and Property Rights

The act of employment involves the establishment of a contractual relationship between the owners of a business and an individual or a group of individuals for the purchase and sale of the latter's services under certain specified conditions. The relationship may or may not be stated in written form. There are certain elementary requirements of a valid contract that are significant with respect to this relationship. It should represent an agreement, accomplished through a meeting of minds between the contracting parties, concerning the nature and conditions of an equitable exchange of values. The agreement should be free of the taint of duress, or other undue influence. It must involve an exchange of valuable considerations. There are other requirements.

There can be no purchase and sale of any values unless each party to the contract has beneficial interests in whatever considerations he is offering. They must be transferable to the other party. They are not transferable as either a gift or a sale, unless he has a property right in them. The employee who sells his services to an employer must have a property right in them. Otherwise he has nothing to sell. An individual who has no beneficial interest in his own services is obviously a slave.

The state owns or controls the means of production under socialism. Labor is a basic means of production. There has been, in recent years, a limited condition of "directed labor" in English manufacturing industry; it was an abridgment and diminution of the property right of the laborer in his services. A condition of "directed capital" in both English and American agricultural industry is an abridgment and diminution of the property right of the farmer in his investment. The right of free capital to engage in private enterprise and the right of free labor to engage in either individual or collective bargaining depend on the maintenance of the underlying right of private property. A property may be anything of economic value to which one has legal title. A statement of title is merely a statement of property rights. A property right is the right of owner-

ship in the particular thing that enables one to possess, enjoy, or dispose of it in his personal interest, but with due regard for the public interest. Any restriction of the right to possess, enjoy, or dispose of it obviously diminishes the right of private property, regardless of whether the restriction is or is not necessary.

It would appear to follow, then, that executives who change wages, hours, and conditions of work by unilateral action in the case of individual employment contracts, or who deny the right of employees to be represented in the sale of their services by agents of their own choosing, are breaking down the right of private property in labor on which the free enterprise system rests. Those labor leaders who condoned the "sit-down" strikes, or more recently the use of caravans of automobiles carrying armed "goon" squads, are breaking down the right of private property in capital on which the system of collective bargaining rests. The intent is obviously the interdiction of the legitimate exercise of certain rights of private property by certain business leaders, or other employees, through the use of economic or physical force. The right of collective bargaining does not, of course, include the right to use force of any kind, by either capital or labor, for the purpose of compelling acceptance of proposals. It sets up reciprocal obligations based on the public's right to satisfactory economic service. They are conveniently forgotten, however, unless an aroused public opinion forces political leaders to act because of fear of losing votes.

The property right that enables a person to sell his services cannot establish a property right in his job. Private enterprise is an economic institution. The existence of a business organization depends, in a free economy, on the customers' patronage. The act of employment establishes a contractual relationship for the purchase and sale of personal services. As a result, the employee transfers a beneficial interest in his services under agreed conditions when he takes the job. The owners of the business obligate themselves to pay wages under the conditions of the contract for services rendered in producing goods or services, regardless of whether or not these can be sold. A job exists, however, only so long as customers continue to purchase the goods or services of the concern in which the employee works. A business organization exists to serve the public. The public does not exist to serve capital or labor.

The relationships between the owners, the organization, and the employees that are created by the act of employment include more than a contractual relationship for the purchase and sale of services. These relationships are strengthened by an increasing period of satisfactory performance in the accomplishment of primary service objectives. These objectives are assigned by and must be accomplished under the direction of executive leadership. The loyalty of the individual to the interests of the organization requires corresponding loyalty of the organization to the interests of the individual. A long-service permanent employee acquires a greater right to preferential treatment in the matter of personal benefits than is enjoyed by the short-service temporary employee. Such personal benefits include preferential treatment in layoffs, vacations, eligibility for participation in personal service plans, and other opportunities to satisfy one's personal objectives. It is a moral right, however, not a legal right. It cannot create a property right in the job without breaking down the right of private property. An attempt to create a right of job ownership tends, therefore, to break down both the right of collective bargaining and the right of private enterprise.

Conflicts of Interests

A meeting of minds between employers and employees with respect to a fair exchange of values, in which due consideration is given to the interests of customers and the general public, is difficult to accomplish. It depends on the development and acceptance of a common philosophy of management by operatives, investors, customers, and the general public. It is difficult to get agreement without it. It is a requirement for a common scale of values that will facilitate an integration of interests. The primacy of the service objective must be a basic principle in an acceptable philosophy. Such a philosophy appears to be evolving. The record in the public press gives ample evidence that we are a long way from its final development and general acceptance. In the meantime, the values to which the employee is entitled under mutual agreements mutually achieved must be provided promptly and completely. Otherwise, there will be further loss of confidence in executive leadership and consequent low morale.

It would not be possible to avoid completely occasional conflicts of interests, even if there were such a philosophy and it was commonly accepted. The reason is found in the dynamic nature of American business. Business is always moving forward, even during depressions, and normally at a rapid rate. An agreement covering conditions and requirements of employment can become partially obsolete almost before a meeting of minds has been accomplished. It usually does not, but some change in conditions during the life of an agreement is inevitable. An adjustment of the conditions or of the agreement in individual cases may be necessary by mutual consent. The successful handling of such dislocations of individual interests as they develop requires:

1. Their prompt discovery.
2. Conference to accomplish a meeting of minds concerning any adjustments and changes that are necessary.
3. A prompt adjustment in accordance with agreements and understandings that may be accomplished.

The importance of a grievance in the minds of individuals or groups tends to increase, apparently in geometric progression, with the time that it is permitted to continue without proper attention. A grievance is the feeling that one has suffered unfairly the loss of a valuable consideration in his employment situation. The individual feels that he has been deprived of desired values, either tangible or intangible, through no fault of his own. The longer he thinks about it, the more important the loss seems to be. A feeling of resentment against the organization and its leadership tends to grow. It may cause a serious deterioration of attitudes if nothing is done about it. We said previously that there are various ways in which information on employee interests, and conflicts between them and organizational objectives, may be obtained. They include suggestion systems, reports by personnel counselors, and exit interviews, among others. An important source is the employee's superior, whether he is a major executive or a supervisor.

The Supervisor and Individual Grievances

A conflict of interests may result in an individual or a group grievance. An individual grievance is one that requires adjustment

of the worker or the conditions of his employment for one or a very few employees. A group grievance involves general rather than individual or purely local interests. It involves a relatively large number of employees who are located in different units or components of the organization. The conflict may involve a few units in a department or the entire company. An individual grievance can often be handled in a mutually satisfactory manner by direct contact and conference between the employee and his superior. The employee may, of course, be either an executive or an operative. Group grievances require group conferences. The personnel composing the group normally works under different executives in the organization. It is often necessary to bring about the final meeting of minds through committee conference between executives and employee representatives, when the relationships between personal and organizational interests in important components of the company are involved. The conference is obviously an important factor in accomplishing a reintegration of interests when conflicts between personal and organizational objectives have developed.[9]

The individual grievance has basic importance. It is not true, of course, that organizational morale is merely a summation of the mental conditions of individual members of the concern. It is probably a resultant of these individual conditions, however. It is desirable that the individual's grievance be adjusted promptly and equitably at the lowest level in the organization that has the ablity and authority to do this. There are a number of reasons for this, in addition to the tendency of unadjusted grievances to increase with time. The leadership position of the immediate superior is weakened if he is unable to take definitive action with respect to the personal interests of those under his command. A prompt, amicable adjustment of an individual grievance is more likely to be obtained if there is an easy informal approach to the problem. This

[9] "Conferences should also promote acquaintanceship and good fellowship among key men. These men should work with one another toward the common objectives. It is reasonable to expect them to work together better if they are well acquainted and if they have at least occasional personal contacts."—T. W. Frech and Zay Jeffries, *Business Ideals, Principles and Policies*, p. 56. The same thing can be said about conferences with operative employees or higher executives. They should develop an understanding of and a respect for the other man's viewpoint.

sort of approach is more likely to be used during a conference between the individual and his superior. The procedure for handling grievances grows more formal the higher it carries the grievance in the organization. It brings in higher company executives and employee representatives whose time is important and limited. Most grievances of individual operatives would be dignified beyond their intrinsic importance if they received the personal attention of the company's president and the vice-president of an international union. There are other reasons why conferences between superior and subordinates have basic importance in the adjustment of individual grievances at whatever level they may occur.

This has been recognized quite generally in business organizations. They usually have a definite procedure for handling such grievances, particularly in the case of operative employees. This tends to be true whether the employees of a concern are or are not represented by a union. It is common practice to state and explain the procedure in the employees' handbook. The procedure is often stated in the union contract as well, when there is one. The pattern is basically the same in either case:

1. The first step is usually conference between the employee and his immediate supervisor. If he is not satisfied with the results for any reason, then he has the privilege of:

2. Conferences with higher supervisory executives within the department, either with or without the assistance of a union shop steward. If he is still dissatisfied, he has the right to:

3. Submit his complaint in writing to higher line authority. The Principle of Compulsory Staff Advice may be applied at this point. A copy of the complaint should be sent to the labor relations section of the personnel department. A representative of this section should have staff responsibility for a leadership of ideas in the solution of the problem. Line responsibility for a leadership of action should remain in the chain of command in which the dispute originated, insofar as the company is concerned. A copy of the complaint should also be sent to the office of the business agent or the chairman of the union's grievance committee, depending on the procedure, if the organization is unionized. The employee can, if he desires:

4. Carry his appeal up through the chain of command to the

head of the company. The employee's representatives may urge him to drop his grievance at this or a lower point, if they feel that his claim is weak. They may, on the other hand, carry the case on to:

5. Compulsory arbitration, if the decision of the company president is unsatisfactory and they feel that a fundamental principle is involved. Some procedures do not provide for compulsory arbitration.

6. The final decision should be transmitted to the employee by his immediate superior, regardless of the level at which the decision is made and whether or not it confirms his own original decision.

The handling of operative grievances is related directly to the problem of disciplinary action at the supervisory level. The latter is a phase of control. It will be discussed in that connection. The handling of grievances is so important in the problem of operative morale, however, that a few of the applicable principles will be mentioned, at the risk of duplication.[10] They will clarify the general approach. Executives at every organizational level, for example, should be thoroughly indoctrinated with a sound philosophy of management. They should be trained to view the employee's problem objectively. They should assist him to analyze it and determine the requirements for a fair adjustment. This is particularly true in the case of supervisory executives. There is no assurance otherwise that their decisions will represent a sound as well as a fair integration of interests. Any subordinate should be able to lodge any complaints or criticisms with his superior at any time, without fear of jeopardizing his position in the organization or his opportunities for advancement. Subordinates should feel that their superior is glad to listen to legitimate complaints. All grievances should be considered carefully, completely, and promptly by the superior. In many concerns, however, he is so loaded down with detail that he could not act effectively as a local labor relations executive even if he wanted to. The superior should reach a definite decision with respect to the particular grievance, if possible. He should state the decision and give the subordinate the reasons for it. The decision should of course be based on all the available facts. But account must be taken of the fact that the subordinate's reactions may be

[10] A good discussion of the technique of handling grievances is given by E. H. Schell in his book, *Technique of Executive Control.*

emotional rather than logical. Emotional pressures should be relieved and the subordinate put in a normal state of mind if possible. Emotional reactions make it difficult to engage in rational thinking. For the same reason, any display of impatience, irritation, or anger by the superior reduces the probability of reaching a satisfactory solution. The subordinate's confidence in the superior's ability to work out a fair solution of his difficulty is promoted by evidence of the latter's sincere, sympathetic interest in the case and his willingness to get and face the facts.

It may be desirable to adjourn the initial conference until the facts can be obtained and the employee has had an opportunity to cool off. The facts may show that the employee has no just grievance. He may still insist on some satisfaction of it, because his reaction may not be entirely logical. Sheffield has pointed out that it is sometimes possible to modify individual attitudes.[11] It may be possible, for example, to get the employee to discriminate between essential and nonessential wants. Perhaps he will consider a different means of getting what he wants. It may be possible to shift his interests and desires from one want that cannot be satisfied to another that can be. The latter may be one that was not realized as strongly at first but is actually more important. It may be possible to introduce a new want in substitution for the one that is desired. The superior may be able to show that any satisfaction of his present want must be at the expense of greater or more desirable values that otherwise he would get in the future. It does not follow that the company cannot satisfy the individual because it cannot satisfy his particular grievance. An honest effort should be made to satisfy his original grievance if at all possible. A clear distinction between the points of agreement and of disagreement in the discussion should be made in any event. The supervisor should retain the initiative by urging the employee to appeal the case, when he feels that he has done all that he can legitimately to satisfy the grievance.

It is evident that the departmental executive must have intelligence, background, training, and prestige that are considerably above those of his subordinates. This is not always the case. It may account, in part, for the fact that the labor relations job done by

[11] A. D. Sheffield, in H. C. Metcalf (ed.), *Business Leadership*, p. 137.

the supervisor frequently does not satisfy his superior. This is another reason why there is a trend in large organizations toward larger departments, bigger jobs for departmental managers, and better supervisory salaries.

Group Conferences and the Labor Relations Section

A group grievance has been defined as one in which the interests of a relatively large number of employees who are located in different units or components of the organization are involved. The values at issue are general rather than local in the organization. They represent the personal objectives of groups rather than of specific individuals. Group personal objectives again are not the mere summation of the personal objectives of the individuals in the group. But they are a resultant of them. The contention of some executives that individual conferences between an executive and an employee concerning the latter's personal interests can be an adequate substitute for group conferences and collective bargaining is fallacious for this and other reasons. Ability to wait is of the essence of the bargaining power. The disparity in bargining power between the individual employee and management is obvious. A monopoly of the right to work in the hands of either business or union executives has been shown by practical experience to be contrary to the public interest. The right of collective bargaining, on the other hand, is fundamental. Its denial by management is a denial of the right of private property on which private enterprise rests. The solution of this problem, including the prevention of the use of economic, political, or physical force for coercive purposes, does not appear to be in sight. It may rest on the Principle of Managerial Decentralization and the restriction of the right of collective bargaining to the individual establishment. Its solution must be left to the future.

A large and complicated body of statutory and administrative law and procedure has grown up in the field of labor relations. There is a library of literature on the subject of collective bargaining theory and practice. It would be impossible, as well as pointless, to review it here. Most large industrial organizations have labor relations executives who are expected to maintain a good working knowledge of the field of labor relations. They are staff executives attached to

the personnel departments of industry. Their function is to advise and facilitate the work of management with respect to developing an integration of interests within the organization. The director of personnel and industrial relations may therefore conduct collective collective bargaining negotiations for the company, with the assistance of his staff. He may have certain legal powers of general agency, subject to the requirement of final approval, for the company, of any resulting agreement by higher line authority. The latter can delegate but it cannot relinquish its responsibility.

The collective bargaining process as a means of promoting industrial morale in the public interest can certainly be improved. The record of strikes does not indicate any great contribution to industrial peace. Collective bargaining may have contributed indirectly to higher general living standards by stimulating the mechanization of work, but not by intent. The public interest has been ignored in many national strikes following the breakdown of collective bargaining. A part of modern strike strategy has sometimes been a deliberate attempt to cause general public inconvenience and suffering. The objective is to lead politicians to take action against management that will force it to concede the particular union demands. The same result may be achieved when government executives do not take the required action against the union. The assumptions are that the public is interested chiefly in its immediate comfort and convenience, that its memory is short, that union executives can deliver their members' votes to the particular politicians on the basis of short-term benefits of victory, that any adverse long-term consequences can probably be blamed successfully on management. There is much more to strike strategy than this, of course.

The collective bargaining process has not always produced an agreement that is in conformity with the public interest. A bargaining procedure has been described as a haggling process in which one party gives as little as possible for as much as he can gain. This has appeared to be a good description of collective bargaining in many cases. The process certainly tends to emphasize personal objectives at the expense of organizational service objectives. This can happen easily when local union employees are represented by national officers whose personal interests are in national politics. There may be the added difficulty that some union representatives are so highly

indoctrinated with the philosophy of unionism that it becomes a religion. The means may become the end in itself. There may be the difficulty of a closed mind that is usually found in a person who is thoroughly indoctrinated.

There are, on the other hand, many charges against management that can be made. Executives may be equally well indoctrinated with traditional management practices. There is growing realization that the professional executive has a responsibility to the public interest, that executive responsibility carries a collateral obligation to exercise due care for the collateral interests of investors and employees. There are many executives, however, who either do not accept this responsibility or merely give it lip service. They have been relieved of any great accountability to stockholders through the proxy device. They must, of course, conform to government regulations affecting their business operations. They operate, nevertheless, as though their executive authority were based on an industrial version of the divine right of kings. Some of them have forgotten that their authority is received by delegation from the public, through owners, under the right of private property. Business is a game for them. The object of the game is to win, whether at the bargaining table or elsewhere. There have also been cases in which management appears to have conspired with labor, while each belabors the other in the public press. It has been alleged that a monopoly of the right to work has sometimes been used to maintain a monopoly of the right to produce and sell, through control of the labor supply. The industry has made a monopoly profit and labor has received a monopoly wage, as a result of the "stabilization" of the industry. If a census of such practices could be taken, it would probably be found that they are characteristic of a small number of leaders on both sides. It is not necessary to prove or disprove the truth of such charges. It is common knowledge that both management and labor have at times abused the right of private property, despite the fact that this right is a basic factor in the maintenance of free enterprise and free labor. Nevertheless, the right of collective bargaining cannot be denied because of such abuses. The situation provides ample opportunity for students and practitioners of personnel management and labor relations to make a significant contribution to the public interest.

Union-Management Relations

Some of the problems involved in establishing constructive union-management relations have been indicated. There has been much discussion recently of executive prerogatives and "management sharing." It is believed that management cannot share its responsibility with labor leaders in the sense of relinquishing its obligations for the accomplishment of the organization's service objectives. Owners and managers can be held accountable for the proper accomplishment of the organization's objectives. Professional labor leaders are accountable only for the accomplishment of the personal objectives of employees. Union members cannot always hold their leaders accountable for the proper discharge of this responsibility. Management sharing in the above sense leads to a loss rather than a gain of democracy in an industrial society. Democracy is a political concept that has to be established through political principles and processes that make the state subservient to the citizen. It is not an economic, military, or religious concept. Management sharing in the sense of joint determination of the employee's wages, hours, and conditions of employment through some form of bargaining does not need to be established. It is inherent in the property rights of owners in their capital and employees in their services. It is believed that many people who talk about "management sharing" are really thinking about a greater application of the Principle of Participation. An effective application of it must be made under executive leadership, however, for reasons that will be stated shortly. The problem of union-management relations is still in the process of solution. A better answer than we have at present must wait on the future.

Continuous Identification of Interests

An identification of personal objectives with organizational service objectives is a necessary part of the process of integrating interests. This process must be continuous, since business conditions are changing continuously. This identification tends to be lost unless the relations between these interests are adjusted as business conditions change. The basis for an equitable adjustment is adequate customer service under the particular conditions, rendered with due

regard for the requirements of collateral objectives. Such adjustments can be a cause of serious organizational friction, as we have seen. The decision as to what is an equitable adjustment is the result of a subjective determination, regardless of the completeness of the facts that are assembled. Some organizations consider the customer chiefly because his patronage is necessary for the continuation of business.

One means of continuous identification is the development and maintenance of "focal points" for common interests. Such a focal point may be defined as any activity in which the participation of the organization's members involves a maximum of common interests and a minimum of conflicts between service and personal objectives.[12] The Principle of Focal Points may be stated as follows: The experience of coöperating in an activity that involves a minimum of conflicting interests makes it easier to coöperate subsequently in a situation that may require substantial subordination of personal interests for the accomplishment of the organization's service objectives.[13] Focal points for common interests may act, therefore, as catalytic agents. They tend to fuse organizational and personal interests into an effective whole with respect to the rendering of an economic service. Their action should result in greater friendliness toward executive leadership. They should develop some appreciation of the fact that any personal values, tangible or intangible, that may be derived from the particular activity are dependent on the organization's success in accomplishing its economic mission. No personal values of any kind can be supplied to anyone by a concern whose doors have been closed by bankruptcy.

A common type of activity that may perform this catalytic function is the employee service program. It is set up specifically in many business organizations for the purpose of enabling employees

[12] As W. M. Vermilye said, the term focal point "is intended to indicate an object or an intangible concept toward which the emotional mental processes of a group of individuals tend to converge and from which action may be expected to radiate."—*Human Understanding in Industry*, p. 2.

[13] Henry S. Dennison has noted the significance of this principle in the following words: "For the attitude of friendliness is as tonic and releasing as that of dislike is restrictive. Part of the economic values of company athletics, club facilities, and social activities lies here. To offer a wide variety of contact points is to increase the chances that friendly contacts will develop."—*Organization Engineering*, p. 89.

to enjoy certain values, in addition to the basic values having to do with wages, hours, and working conditions that are provided by the contract of employment. It may include many different projects and activities that serve the employee's personal objectives. Some of them provide nonfinancial values of a social and recreational nature, such as organized athletics, games, hobby clubs, music groups, and a great many others. Some of them provide financial benefits in addition to base and incentive pay for work done in connection with the job. These include such programs as group life insurance, group annuities or pensions, Blue Cross or other health insurance programs, credit unions, and other programs of a similar nature. All these programs cost money. It comes ultimately out of the pocketbook of the customer. It is paid only partially, if at all, by the owners or stockholders of the business. There is no reason why it should be, provided that the profits of the business are earned under conditions of free and fair competition. It may be questioned, furthermore, whether business is under any moral obligation to pay such "fringe benefits," provided that it provides fair wages, hours, and working conditions. It is an economic institution whose mission is to supply the public with more goods and services of better quality at lower prices in a manner that is compatible with the public interest. It is not a social agency or a political institution. It obviously ceases to be an economic institution when its economic objectives become subordinate to collateral objectives, whether social or political. The record of socialism suggests that, when this happens, living standards may be expected to deteriorate shortly thereafter. It is obvious, furthermore, that the accident of employment should create no moral obligation to pay fringe benefits. It may place one employee on the payroll of a well-managed concern that can easily provide generous fringe benefits, another employee on the payroll of a concern with fair management that can supply less generous benefits only with difficulty, and a third employee on the payroll of a concern with poor management. The latter concern may be fortunate if it is able to stay in business without paying any fringe benefits. It is believed that fringe benefits or "extra compensation" should not be offered in lieu of adequate base and incentive pay, or be confused with it. An attempt has been made in recent years to establish as a principle the contention that business has a

primary obligation to provide social security and other extra benefits for its employees. Whether any such principle exists is questionable.

It may be good business, of course, to pay fringe benefits on a sound basis. Employee service programs had been set up in many large corporations long before the advent of the New Deal. This suggests that there are sound economic reasons for them. They have to do, necessarily, with greater economy and effectiveness in the accomplishment of service objectives as a result of good morale. Organizational success, as we have seen, depends on such morale effects as loyalty, willing coöperation, organizational pride, and others. Loyalty, for example, is a two-way proposition. The leaders must protect and promote the legitimate interests of the led. The latter may transfer their loyalty and allegiance to outside leaders otherwise. Economic security is a value that is desired in some measure by all employees. The form that assures reasonable comfort and financial independence after retirement, through some type of pension plan, has recently been the subject of labor relations controversies. Individual independence, on the other hand, is associated directly with the concepts of freedom and democracy. It implies an obligation to create one's own economic security to the maximum degree of which one is capable. The ability to do this is lower individually among operative than among executive employees. Even the latter find it difficult today to build up an adequate competence through investments because of high taxes and other difficulties. The principal source of the employee's economic well-being is usually the business organization of which he is a part. It is natural for him to turn to the executive leadership of this organization for assistance when he finds himself unable to provide a minimum of financial security for his old age. An opportunity for an outside political or other group to assume leadership in accomplishing his personal objectives is created if he does not obtain satisfactory assistance from his executive leadership. The transfer of loyalty and allegiance to outside leaders for this purpose may create serious problems. It may result in attempts by employee representatives to place the accomplishment of the operatives' personal objectives ahead of the company's service objectives. There may be a serious

deterioration of morale, and a consequent deterioration of organizational effectiveness.

Some managements have provided desirable forms of extra compensation directly, when part or all of their operatives were unionized. They have sometimes been charged with "unfair" labor practices by professional labor leaders. The announcement of the new plan was not made through these leaders, thus giving them no opportunity to claim some credit for providing the particular benefits. Such charges also are evidence that executive leadership in the ac-

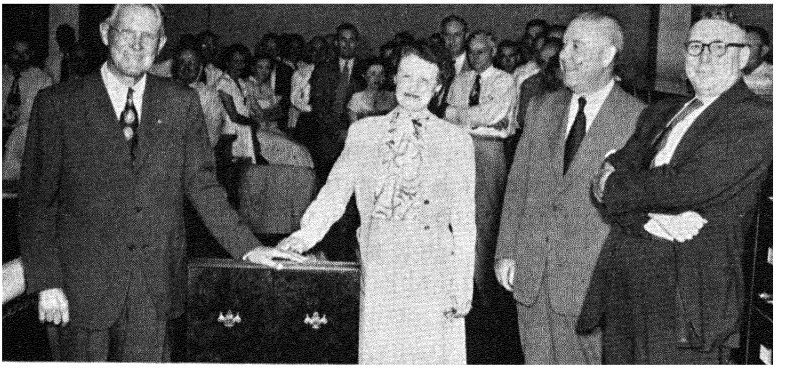

FIG. 47. Retirement and Recognition of Service. (Courtesy, Westinghouse Electric Corporation.)

complishment of personal objectives is a fundamental factor in the development and maintenance of organizational morale. The problem is, of course, to hold the professional executive accountable for the satisfactory accomplishment of all classes of business objectives —service, collateral, and secondary—without negating collective bargaining and the employee's private property rights in his services, or the owner's rights of private property in his capital. There is no solution of this problem that is entirely satisfactory at present. Like many other labor relations problems, it depends on the further evolution of both business and labor leadership.

The mere adoption of an employee service program cannot assure good morale, unless the principles of morale building are applied effectively. Although it may be possible to buy allegiance, one can-

not buy loyalty. Frequently an organization will have high morale, but a very ordinary personal service program. This is more likely to be true in the small organization. Its big competitor, which provides every known variety of "fringe" benefit, may at the same time be out on strike. The big organization may be vulnerable to attack because of its size. Sometimes the very superiority of its management invites attack. It makes a generous profit that results eventually in better dividends for investors, lower prices for customers, and higher real wages for employees. A union organization is in part a political organization. There is an obvious temptation for the union leaders to apply economic, social, and political pressures to divert some of this profit to its members in the company, in the form of immediate financial benefits. This helps to maintain the particular leadership in power. The latter can make any charges of "unfairness," and cannot be held accountable for any long-term impairment of the industry's economic health. It is difficult for the executive leadership to develop and maintain good organizational morale under these conditions. This is not the whole answer, however. The intangible or psychical forms of personal objectives may be as important as the tangible or physical forms, or perhaps more so. Top leadership in the large organization tends to lose its "personal touch" in handling personnel problems. This is one reason for the partial decentralization of the labor relations function. Emphasis tends to be placed on the tangible benefits provided by service programs. This may have the effect of an attempt to buy allegiance, even though that is not the intent. Another reason is management's failure, until recently, to point out the substantial costs that may be involved in providing fringe benefits through employee service programs. Cases have been reported in which the cost of such benefits per share of stock in the company has been more than the stockholders have received in dividends. Service plans for extra compensation, such as pension plans, may increase the company's break-even point. Any substantial increase may have serious implications with respect to the long-term financial health of the organization. Management has also failed, in most concerns, to make clear that the customer is the ultimate source of these extra benefits. The funds that permit extra compensation, above fair basic wages, hours, and working conditions, should come from a superior job of serving the customer.

They are largely a result of good management, except for fortuitous circumstance over short periods of time. They are not benefits to which the members of a particular concern have an inalienable right, regardless of whether or not they are earned. They are earned by the rank and file to the extent that it coöperates with its executive leadership in the superior accomplishment of the organization's primary service objectives. They cannot be enjoyed continuously even then unless this leadership is capable of good management.

This concept offers no means of determining the extent to which such benefits are earned by operative employees. It can lead, therefore, to a violation of the Principle of Sacrifice. This principle says: The temporary sacrifice of personal values in the accomplishment of objectives that are believed to be worth while results in a feeling of worth-whileness and constructive participation. This in turn tends to result in a feeling of unity with the organization. This principle is borrowed from the field of religious organization. The record of its application there goes back beyond the dawn of recorded history. It operates, however, in any field of organization. The feeling of worth-whileness in connection with personal service plans should be produced by an understanding of the conditions under which extra compensation becomes possible in a competitive society. It should be produced also by participation in the operation of such plans, individually or through elected representatives. The principle requires, however, personal contributions of time or money by each individual who enjoys the extra benefits. The most practical form of contribution, when large numbers of employees are involved, is money. The amount of the required contribution should be commensurate with the values that the employee expects to gain ultimately from the plan. This raises the question as to what constitutes a commensurate contribution. It is one that will cause the employee to stop and think whether he really wants the proposed benefits sufficiently to authorize a reasonable payroll deduction. It is not basically important that the company bears 80 percent of the basic cost and the employees 20 percent, or 70–30, or 60–40, or any other proportion. It is important only that a commensurate contribution be required. Most people will vote for something that they will get for nothing. They will usually object to the subsequent removal of the benefit, whether or not they need it. It is doubtful that

a proposed service benefit will improve organizational morale when no substantial number of employees is sufficiently interested to authorize a reasonable payroll deduction. It is obviously impossible to integrate interests when there are no interests on one side or the other to be integrated. It may be, of course, that the employees do not realize the importance of the proposed benefits to their interests. When extra benefits are obtained without any corresponding obligation or sacrifice through the intervention of outside leaders, the effect may be to lower morale in the business organization and to increase it in the outside organization.

The Principle of Participation

Continuous identification of organizational and personal interests can take place also through participation in decisions affecting the work of the individual or group. The process of identification is not limited to participation in personal service programs. It is not limited to individual or collective bargaining for the purpose of determining the personal benefits to be derived from a contract of employment. The Principle of Participation says: Active participation in the successful accomplishment of a common enterprise that is believed to be worth while tends to create a feeling of worthwhileness. The participant develops an interest in the enterprise. This interest may be transferred to the organization and its executive leadership. Participation under these conditions provides some satisfaction of the creative desire. Participation in a superior accomplishment may produce a feeling of superiority and confidence that leads to the development of organizational pride. Effective application of the Principle of Participation promotes an integration of interests in other ways. This principle is related to but different from the Principle of Sacrifice. The Principle of Participation involves primarily the constructive contribution of creative effort in the accomplishment of a common objective. It may involve some personal sacrifice of values, but they are usually intangibles. The Principle of Sacrifice involves primarily a voluntary contribution of values, other than work, to the accomplishment of a common objective. The values are usually tangible and material. They may or may not be accompanied by a constructive contribution of creative effort.

Recognition of the importance of the Principle of Participation has become more general in recent years. There are many instances of its application. There has been an increasing tendency, for example, to give supervisory executives greater opportunity to participate in the formulation of plans and policies affecting the work for which they are responsible. This includes an opportunity to influence decisions whose scope extends beyond the limits of the unit, branch, section, or department for which the supervisor is responsible. Preliminary statements of such plans and policies may be "fanned out" to the subordinates whose functions will be affected, and through them to their subordinates. How far down this process continues depends on the location of the points of application of the plans and policies. The executives at the lowest level affected are expected to return their copies of the statement to their superiors on the next higher level with their comments and criticisms. The superiors add their own comments and criticisms, and so on until the statements are returned to the point of origin. The process frequently pulls in some valuable suggestions. They are taken into account and influence the final decision accordingly. The right of final decision remains of course with the executive who has administrative responsibility for the organizational groups that will be affected. The application of the Principle of Participation has been carried down to the level of operative performance in many concerns. The suggestion system derives much of its morale-building influence from the operation of this principle. A public utility company frequently gives its clerical operatives a limited right of decision concerning factors that affect their work. The decision concerning the colors to be used in redecorating the offices was left to them when it came time to repaint the walls.[14] There is, however, a related principle that must be applied when operatives or subordinate executives participate in making decisions that are the responsibility of higher executives. It may be called the Principle of Limited Choice and may be stated as follows: The right of decision of subordinates concerning a choice of alternative courses of action must be limited by the responsible executive to those that will provide

[14] R. R. Hirschman, general commercial manager of the Indiana Bell Telephone Co., *Public and Employee Relations*, Supervisors' Seminar, Seventh-Eighth District Blue Cross Association, April 28, 1950.

acceptable solutions of the problem. The limitations should be dictated by the law of the situation. The causes of the limitations should therefore rest on policy, technical, or other requirements for the satisfactory accomplishment of the objectives of the action. Effective application of the Principle of Participation is still possible, despite the limitations. But the subordinates must know and understand the reasons for them. Thus, in the case cited above, the employees' choice of wall color was limited in accordance with this principle.

Morale Maintenance

The problem of morale maintenance is largely one of maintaining an integration of interests within the organization. The preceding discussions have dealt for the most part with the interests of operative employees. This group includes by far the greatest number of employees in the business organization. The problem exists at every organizational level, however. The morale of supervisory executives has not been good in many concerns in recent years. The results of supervisory morale surveys indicate that the supervisor wants (1) a responsible job with recognition and respect that will entitle him to feel that he really belongs in the management group, (2) reasonable job security based on supervisory merit, (3) opportunity for self-development and advancement in the organization, (4) pay that is commensurate with his responsibility, (5) the right to be heard, including assurance that no action affecting his group will be taken without consulting him or getting his recommendation, and (6) knowledge of changes in company plans and policies in advance of their general release to the organization, and at least as soon as union shop stewards know about them. It is evident that most of these supervisory needs and desires cannot be satisfied once for all. The manner in which such values should be supplied, as well as their nature, must be changed to conform to changing customer demands for service, as well as changes in the general business situation. Higher executives have felt discouraged frequently. They have sometimes felt frustrated by their inability to perform their leadership functions effectively, because of political forces beyond their control. They have not been too successful in making the public understand the vital contribution of top business leadership.

They have resented the attack on executive salaries by people who rely on the public's ignorance of their organizational significance. They have other difficulties. The top leadership contribution is relatively the most important of any group in the business organization. The morale of good top executives is important because they usually have a high scarcity value. There is always the question of the investor's legitimate interests. The problem of morale maintenance is complex and difficult for these and other reasons.

CHAPTER 17

OPERATIONS AND THE BASIS OF CONTROL

The Organic Nature of Control

Some control of organized activity is a universal necessity. There must be some control of group activities, if only self-control based on self-restraint. Such informal control breaks down quickly, however, except in very small undertakings. Authorities have always included control as a problem of prime importance in discussing the accomplishment of joint undertakings in any field of human activity. Every pioneer in the field of management had to give some consideration to it, unless he was discussing a specialized technical problem. He had difficulty in avoiding it even then.

The universal necessity for control in some degree arises from the universal necessity for leadership in the accomplishment of joint objectives. The larger and more complicated the organization the greater the necessity. Management is the function of executive leadership. It is a mental activity. Its organic functions are the creative planning, organizing, and controlling of the activities of an organization, both mental and manual, in the accomplishment of its objectives. Planning determines and specifies the factors, forces, effects, and relationships that are required for achieving the objectives of an assigned mission. It determines the requirements for the satisfactory accomplishment of these objectives. It decides what functions must be performed where, by whom, under what conditions to make possible the provision of the values represented by these objectives. It selects the principles and formulates the policies that are necessary to relate functions, physical factors, and personnel effectively and economically to objectives. It does other mental work that was

analyzed during the foregoing discussion of business planning. A plan, in consequence, supplies a basis for action. It is not action, however, insofar as the accomplishment of the particular mission is concerned. There are always certain basic conditions for the effective, economical execution of a plan. These conditions must be present before action begins. Their creation or provision is necessarily antecedent to action. It is the work of organizing. In a business concern it may include the provision and training of an initial organization, the installation of procedures, and the provision of facilities and other physical factors of fixed and working capital. It may include the development of an initial demand for new goods or services through the instrumentality of advertising and sales promotion. It may include many other activities that must be completed in a minimum degree before operative action begins. Attempts to avoid the work of organizing or to carry it on simultaneously with the production of new models of war matériel, during World War II, caused confusion and expense. It is possible that the delays due to the resulting mistakes more than canceled any savings in time that were made. It is occasionally the case that some or all of the work of organizing is unnecessary, because the antecedent conditions are already present. This does not mean that the function of organizing is not universal. It means merely that someone has already provided the conditions.

The conditions for an effective, economical accomplishment of economic objectives do not exist freely in nature in an industrial society. Plans and conditions do not apply themselves to the accomplishment of these objectives. They are applied by people working in an organized relationship under executive leadership. These people work on assigned tasks that are separate and different. Their tasks should be determined logically in accordance with the principles of specialization and effective division of labor. They must be related to one another to form a constructive unity of action in the accomplishment of organizational objectives. The actions of individuals and groups do not relate themselves. They must be related by executive leadership. This is true even in small businesses that employ few people. A high degree of self-coördination may be practicable in such a concern, and it may be depended upon for much of the organization's effectiveness. It is still necessary for the "boss"

to correlate and coördinate his employees' work by personal direction and supervision. He must see that the work is done in accordance with whatever plans he carries in his head and transmits verbally. The planning done by the "boss" may be poor. The conditions of work may be mediocre. Control may be poor, as indicated by too many failures to give the customer what he wants when he wants it. The quality of the work may be high, on the other hand, and overhead low. The boss makes a living, or thinks that he does because he lacks knowledge about his costs. He may fail, when he tries to expand, because of poor management. It is the logic of good management that establishes the organic nature of control.

The Objectives of Control

The ultimate objectives of control are, of course, the ultimate service objectives of the business. They are better customer values. These are concretely more goods of better quality at lower prices, together with such customer service as may reasonably be expected. The function of control is to correlate and coördinate action in accordance with a plan for the accomplishment of such objectives. It must be done in a manner that will permit satisfactory accomplishment of collateral objectives.

The immediate objectives of control are derived from the objectives of the particular plan. They are, in general:

1. Assurance of correct performance as specified by the plan.
2. A well-coördinated action.
3. A minimum of losses due to interferences with the proper execution of the plan.
4. Greater turnover of fixed and current assets.
5. Customer satisfaction, as a result of the provision of desired goods or services, when and as agreed.
6. Greater confidence in and respect for executive leadership.

These immediate objectives break down, in the case of a manufacturing operation, into such values as assurance that accurate, up-to-date information for the fabrication and assembly of the product is in the hands of the operating organization, time relation between the various phases of a program or the operations on the

product that will assure good coördination of action, assurance of the best possible utilization of machine capacity and manpower, a minimum loss of customer good will due to delivery failures, a maximum turnover of working capital tied up in inventories and work in process, and many others. They are secondary values. They facilitate the satisfactory accomplishment of primary service objectives in terms of quantity, quality, time, and expense.

Organization Structure, Business Procedure, and Control

The term business operations is sometimes used to designate activities that enter directly and immediately into the achievement of primary operative projects. The latter are projects whose successful completion results directly and usually immediately in the creation of customer service values. A broader meaning includes all the activities of the business organization, whether managerial or operative, line or staff, that are necessary for the accomplishment of business objectives. The term will be used here in this sense.

The accomplishment of the primary service objectives of an organization depends, of course, on the successful completion of primary operative projects. It may be represented by the cumulation, over a period of time, of values that constitute the final objectives of these projects. The general relationship is shown in Fig. 48. The total plan for manufacturing Product X includes the product design and specifications, the process plans and specifications, organization plans, personnel plans for man-power provision and training, procurement plans, financial plans for capital provision, marketing plans, and many others. The procedural steps and flow lines for Product X are shown in Fig. 48. They represent only part of the process planning that is required. The staff planning of process was shown in Fig. 26 as being performed on the level of minor administrative management. It could be. It is probable, however, that part of the work has been decentralized to a major operative level, and possibly attached to the offices of the plant managers. It is undoubtedly the case, in any event, that there is much participation in process planning that cannot well be shown on an organization chart. The same thing can be said for the other technical staff functions that participate in the development of manufacturing plans.

The reason for emphasizing in Fig. 48 the operative procedure

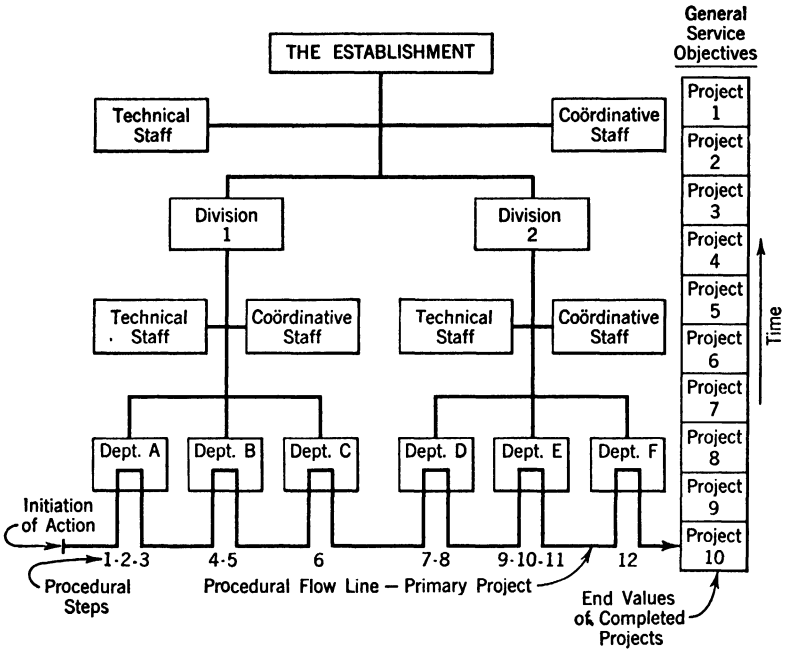

FIG. 48. Objectives, Organization Structure and Procedure.

for making Product X is this: A business procedure of any kind is a structure of relationships between functions, physical factors, and personnel. It is set up as the basis for the economical and effective accomplishment of the final objectives of a project or type of project. The project, in this case, may be 100 pieces of Product X that are being processed on a production order. This product may be a finished part that is a component of an assembled product. The steps in the procedure are operations that must be performed on the raw material from which the part is made. They give the finished part the form utilities that have been specified in the product plans. The ability of the part to function properly in the assembled product is the end value that constitutes the final objective of the project. There is an order in which the work of making the part must be performed. It assures that the values added to material by personnel will cumulate into the desired end result with the greatest economy. In this case, it is the order of operation numbers shown in Fig. 48. Any procedure, including this one, specifies what are

regarded as the optimum complementary and sequential relationships between the functions that must be performed in accomplishing a project. A well-coördinated condition of action is an objective of control. Coördination of action is the function of constraining and regulating the execution of a plan with respect to the correct time and order of performance of the functions required for the accomplishment of a project or program. It depends, therefore, on the order of performance established by procedure. It assures that the desired cumulation of values will take place effectively and economically.

Operative control is project control. The coördinative staff groups shown in Fig. 48 under the divisional heads are performing staff control functions of a major operative nature. They are evidently controlling for their division chiefs the progress of the order for 100 pieces of Part X as it moves between departments in each division. This movement is in accordance with the order of operations established by the operative procedure for the part. This plant must be engaged in some form of intermittent manufacturing, since it is controlling the progress of limited quantities of product. This would not be done in a mass-production plant engaged in continuous manufacturing. Hence it is possible that production control has been decentralized to the departmental level, as shown in Fig. 26. Control by each department of the operations it performs on an order is still project control. These operations must be performed in the manner, order, and time specified by the releases of information and authority that are received from the divisional staff control group. Departmental project control is minor operative control.

Administrative control is group control. It is the function of constraining and regulating group action in the completion of programs. The latter summarize the results that are anticipated from the completion of specific projects during a designated period of time. These results also may be expressed in terms of quantity, quality, time, or expense, depending on the nature of the program. They are usually set up to show anticipated results by organizational groups and classes or types of projects to be completed. They generally do not designate the individual projects that will be undertaken, since this would create a rigid situation and tie the hands of operative executives. The cumulation of the end results of completed primary projects, over the designated period of time, results

in some accomplishment of the general service objectives of the organization for that period. The relation of project and organizational objectives also has been shown in Fig. 48. The information that shows this cumulation is obviously obtained from operative control reports summarized by organizational groups and classes of projects. The comparison between planned objectives and accumulated results may show, at the end of the period, that a particular organizational group has discharged its responsibilities in a good, bad, or indifferent manner. It is evident, in any event, that good administrative control of business operations is not possible unless the organization has a definite structure that has been specified clearly, together with accurate definitions of the service objectives, functions, responsibilities, and authority of the executive head of each group, whether line or staff, at each organizational level.

Control has a unique property. Control of the execution of a plan must follow the work of creative planning and organizing. Control may be superimposed on the latter functions, however. The development of a plan for a new product is in itself a major undertaking. The subsequent work of organizing and executing the plan may be late, with respect to the advertised dates when the new product will be available to the public, if the completion of the plan is late. Initial execution may still be late if the plan is completed on time but the work of organizing is not completed as scheduled. Therefore the performance of these functions also must be controlled. The administrative control of planning and control is again a program control. The operative controls of various phases of planning or organizing are applied by the particular technical staff groups who have staff responsibility for their accomplishment. These internal controls of technical staff departments are frequently poor. The consequent errors and delays often are costly. They may seriously affect the competitive position of the company.

Coördination

Coördination was defined, during the discussion of coördinative staff organization, as the function of developing and maintaining the proper relation of activities, either mental or physical.[1] Coördination of thought has to do chiefly with achieving a meeting of

[1] Henri Fayol said: "To coordinate means to unite and correlate all activities." —*Industrial and General Administration*, pp. 9, 74.

minds concerning plans and their requirements. It is often a technical staff responsibility. It may be regarded as a phase of planning. The results of planning are frequently effectuated by technical orders, specifications, and directives. They may be issued by the executive head of the staff group that has principal staff responsibility for drawing up the particular type of plans, with the express approval of his line superior. The authority to issue technical orders in the name of his line superior may be delegated to the particular staff executive under certain conditions. These may include the written concurrence of other line and staff executives whose work will be affected and the concurrence of the technical executive of the line superior. The latter is an administrative type of technical staff executive. He may issue them through the office of the executive assistant or other coördinative staff executive of the line superior. The concurrence of such an executive merely authenticates the fact that the necessary line and staff approvals and concurrences were obtained before the issuance of the technical order or instructions. There are some advantages in making the office of the coordinative executive at each organizational level an office of record and issue as well as a control center. How such technical orders are handled is a policy decision in each concern, however. Technical orders effectuate the results of planning, in any event, when properly coördinated and approved. They acquire thereby the force and effect of a standing order. Technical orders do not activate the execution of a plan. Any standard office procedure is usually a good example.

The coördination of action has to do with relating the activities that enter into the execution of the plan. It does this with respect to time and the correct order of performance, in accordance with the requirements of the plan. The purpose of coördination, as we have seen, is the economical creation and cumulation of values into an effective end result.[2] The coördination of action is obviously a phase of control.[3]

[2] A. Hamilton Church expressed this idea as follows: "Coordination is the synthetical principle. It requires that all the divided units of effort, taken together, shall amount to the result desired exactly, i.e., without gap or overlap."—*The Science and Practice of Management*, p. 131.

[3] W. H. Leffingwell, a pioneer in the field of office management, said: "A manager may be said to have effective control of an office when the work he has planned to do is always done in the order, time and manner in which he planned it should be done."—*Office Management*, p. 44.

It was noted above that control depends on and is affected greatly by the factors of business procedure and organization structure. Coordination must therefore also be affected by these factors. This has been recognized by students of the subject all during the development of scientific management. Mooney and Reiley, for example, said: "The end and aim of formal coordination within the structure of an organization is simply the correlation of function."[4] According to J. O. McKinsey, "The discussion of the coordination of functions, therefore, resolves itself into a discussion of the coordination of the functionaries."[5] Fayol stated his Principle of Unity of Management as follows: "There must be one manager and one plan for all operations which have the same object in view. It is an essential condition for unity of action, for coordination of all one's resources, and for seeing that all efforts are directed towards the same end."[6]

There are basically two methods of coördination: (1) informal or self-coördination, and (2) formal or executive coördination. Self-coördination is the voluntary relation of one's activities, either mental or physical, to those of others with whom one should coöperate. It depends, therefore, on some exercise of individual initiative. It may be accomplished in two ways: by voluntary cross-contacts, such as were discussed in connection with Fayol's "bridge," and by individual initiative in securing concurrence with a proposed action before it is taken. Self-coördination is important in any organization. Its importance diminishes rapidly, relative to executive coordination, with organization growth. The reason is the rapid increase in the complexity of business operations with growth. Executive coördination is the formal relation of activities through an exercise of authority. Executive coördination also may be achieved in two ways: by direct personal coördination and by staff coördination. Personal coördination of thought can be accomplished directly by executive decision. This is necessary sometimes when subordinates cannot voluntarily achieve a meeting of minds. Personal coördination of action can be accomplished by executive direction

[4] James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 46.
[5] J. O. McKinsey, *Budgetary Control*, Ronald Press, 1922, pp. 17–18.
[6] Henri Fayol, *Industrial and General Administration*, p. 23.

and supervision. What is to be done, the order in which it is to be done, and when, can be established for the subordinate by verbal orders and instructions based on executive interpretations of plans. The executive can oversee action as it takes place to make certain that it is done as specified. As a result, action is coördinated with respect to time and order of performance. Staff coördination is the work of relating activities that has been assigned to a staff organization under specified conditions. It is work that, if the executive had no staff to assist him, he would have to do personally or it would not be done at all. Staff coördination of thought was discussed in connection with technical staff organization. Staff coördination of action was discussed briefly in connection with coördinative staff organization. It will be discussed further, since we are dealing here with the function of control.

It should be noted, finally, that coördination takes place both horizontally and vertically within an organization. Coördination that takes place in connection with operative control tends to relate action between organizational elements on the same operative level. Its organizational effect is horizontal. Coördination that takes place in connection with administrative control tends to relate action between organizational elements on contiguous levels. Administrative control tends to follow the chain of command upward. The direction of coördination therefore tends to be vertical.

The Evolution of Control Theory in Business Organization

The work of controlling is more tangible than the functions of creative planning and organizing. Control is the function of constraining and regulating action in accordance with the requirements of a plan for the accomplishment of an objective. It is achieved through the proper correlation and coördination of the activities of the business organization. It may take place at any managerial level, either operative or administrative. Operative control constrains and regulates action at the point of operative performance, either line or staff, in the accomplishment of specific projects. It is easier to see and understand. Its importance in creating usable or salable values is evident. Much has been written on the subject of operative controls of various kinds, as would be expected. Administrative control is less tangible. It is program control

rather than project control. It constrains and regulates the action of groups in the achievement of organizational objectives, either general, major, minor, or individual, rather than the final objectives of an operative project. It is exercised over longer time spans. It is much more difficult to visualize, analyze, and understand. Very little has been written on the subject to date, except in the area of accounting and finance. Such control depends on operative control. It is a reasonable assumption, therefore, that the organic functions of control are the same for both administrative and operative control. The history of the evolution of operative control theory and practice should forecast future developments in the field of administrative control, if this is the case. Some of the significant developments in this evolution are shown in Fig. 49.

It is evident from a reading of Taylor's *Shop Management* that he had a thorough understanding of the fundamental importance of control in factory operations. His "planning department" was, in fact, primarily a control group. There is little evidence, however, that he recognized the organic nature of control, or the fact that it must necessarily break down into organic subfunctions that are fundamental to control anywhere. It remained for those who came after him to develop a theory of control. The same thing can be said of Henri Fayol in France. He approached the problem of management from the viewpoint of the administrative executive. He believed that the basic functions of administration were planning, organizing, commanding, coördinating, and controlling.[7] The functions of command, coördination, and control, as he used the terms, had to do with the constraint and regulation of action. They may therefore be regarded as phases of control. It is believed that the first significant contribution to the development of a control theory was made in 1912 by Harrington Emerson in his book *Twelve Principles of Efficiency*. His "Eleventh Principle—Written Standard Practice Instructions" separated creative from routine planning. These instructions were intended to be "a means of recording and conserving progress" without destroying initiative. They were records of the "permanent laws and practices of a plant." They were originated and released for the purpose of restraining and regulating

[7] *Ibid.*, pp. 8–9.

Management[a] Functions	F. W. Taylor 1903	Henri Fayol 1908	Harrington Emerson 1912	A. Hamilton Church 1914	John A. Otterson 1917	Webster Robinson 1925	Oliver Sheldon 1930	H. P Dutton 1931	R. C. Davis[b] 1934, 1940	Holden, Fish, Smith 1941
Creative Planning		Plan		Design		Direction and Forecasting Results	Design	Information and Decision	Creative Planning	Objective Procedures and Criteria
Organizing		Organize		Equipment			Equipment		Organizing	Organization
Controlling		Command Coördinate Control								
DEFINITION OF CONTROL: The function of constraining and regulating action in accordance with the requirements of plans for the accomplishment of project and/or group objectives.	Recognized the importance of control but did not make a detailed analysis of it.	Recognized the importance of control but did not make a detailed analysis of it.	Written Standard Practice Instructions	Control	Planning		Planning		Routine Planning	
			Standards and Schedules		Scheduling	Forecasting Results			Scheduling	
					Preparation				Preparation	
			Dispatching	Control	Production			Dispatch	Dispatching	
						Direction			Direction	
						Supervision			Supervision	
			Records	Comparison	Inspection	Recording Results	Comparison	Progress Record Report Follow-up	Comparison	Results Appraisal
			Discipline Efficiency Reward	Comparison		Placement of Responsibility			Corrective Action	
Operative Performance				Operation			Production	Performance		

[a] R.C. Davis, 1934. Balderston, Brecht, Karabasze, and Riddle adopted the same breakdown in 1949.

[b] The breakdown of the control function in 1934 included standardization. This was eliminated in 1940. R.T. Livingston used the same breakdown of control functions in 1949 but reversed the order of dispatching and direction. He added appraisal as a ninth function. Hugo Diemer gave a good description of the preparation function in manufacturing in 1925.

FIG. 49. The Development of Management Control Theory. (Based on the writings of selected authorities.)

action in accordance therewith. The "Eighth Principle—Standards and Schedules" developed from the use of time rates of performance under standardized conditions for the purpose of establishing a basis for a time coördination of action. It will be recalled that Emerson used a railroad timetable as the basis for one of his principle examples. His "Seventh Principle—Dispatching" was also taken from railroad practice. It was clearly the function of controlling action through the release of orders. He did not state a principle of preparation. He did say, however, in commenting on von Moltke and the Franco-Prussian War, that "the big task was carried through because of perfect preparation."[8] He recognized, of course, that preparation must proceed dispatching. His "Sixth Principle—Reliable, Immediate and Adequate Records" was clearly an effort to define the principles and functions of comparing actual and "ideal" performances. The purpose of such comparisons was not clearly stated. He seems to have been aware, however, that it was the prompt location of discrepancies in performance that would make possible prompt corrective action. There was no recognition of the function of corrective action as such. His "Fourth Principle—Discipline" and his "Twelfth Principle—Efficiency Reward" dealt, nevertheless, with the problem of obtaining conformity with whatever rules, regulations, and plans requirements are necessary for the organized accomplishment of group objectives. Emerson was attempting to develop a philosophy of management rather than a theory of managerial control. He could not avoid some discussion of control principles, even though he did not recognize control as an organic function of management. But he did make a contribution to the thinking of those who came after him with reference to control problems.

A. Hamilton Church also had been thinking, concurrently and independently, about a philosophy of management. He too was interested in determining a basis for effective thinking for the solution of management problems. He stated his understanding of it in his book, *The Science and Practice of Management* in 1914. He distinguished between the "determinative element" and the "administrative element" of management. The latter had to do largely

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[8] Harrington Emerson, *Twelve Principles of Efficiency*, p. 245.

with carrying out the policy laid down by the former.[9] The "determinative element" was similar, apparently, to what we have called administrative management. Church did not understand it, and he said so.[10] The "administrative element" was similar to what we have called operative management. Furthermore, he confined his discussion to the "administration" of manufacturing operations. He broke down the "administrative element" into "the organic functions of administration." There were five of them: (1) design, which originates; (2) equipment, which provides physical conditions; (3) control, which specifies duties and gives orders; (4) comparison, which measures, records, and compares; and (5) operation, which makes.[11] His "design" function was primarily that of creative planning. It had to do chiefly with the original determination of the characteristics and requirements of product and process in a manufacturing establishment. It included the provision of information and instructions for the operating division concerning the requirements, methods, and conditions for making the design. No clear distinction between the functions of creative and routine planning was made, however. His "equipment" function was primarily that of organizing. It had to do with the provision or creation of the physical factors and conditions for making the product, such as the manufacturing premises, power equipment, materials-handling equipment, and operative equipment. It also included certain facilitative services that are associated with equipment. There was no clear recognition of the function of preparation for the execution of specific undertakings after the work of organizing is completed. Church did recognize the need for scheduling, but not as an organic function.[12] His "control" function did include some recognition of progress control. It covered the development of organization and organizational instructions, and the release of orders. He regarded it as "that function which coordinates all of the other functions and in addition supervises their work."[13] There was a definite recognition in this function of routine planning and dis-

[9] A. Hamilton Church, *The Science and Practice of Management*, p. 1.
[10] *Ibid.*, p. 2.
[11] *Ibid.*, p. 37.
[12] *Ibid.*, p. 501.
[13] *Ibid.*, p. 74.

patching, as we have defined the terms. The "comparison" function was "that which concerns itself with the setting up and comparison of standards."[14] Thus it was similar to Emerson's "records" function. It depended, however, on "three elements: (a) recognition of what facts are truly significant; (b) accurate record and convenient presentation of these facts; (c) judicious action based on study of the facts."[15] It therefore included elements of what we have called corrective action. "Operation" was "that function which has to do with the application of machine processes, trades, and skills to effect changes in the status of materials in accordance with the specifications of Design."[16] It consisted largely of operatve performance, as shown in Fig. 49. But it seems to have included some process analysis and supervision by operative management. Church greatly influenced the thinking of later students of management.

The first real development of a theory of staff control was made by John A. Otterson in 1917.[17] He was president of the Winchester Repeating Arms Company at that time. His ideas were developed and applied under pressure of war conditions. They were inspired partly by the writings of Emerson and Church a few years earlier. Otterson thought that he had developed a general theory of management. He broke management down into five functions: (1) planning, (2) scheduling, (3) preparation, (4) production, and (5) inspection. Planning, as applied to control, was essentially routine planning. Scheduling had to do with the determination of when or at what rate the various steps in the completion of an order should be accomplished. An important contribution was the recognition of "preparation" as an organic control function. It was concerned chiefly with checking to assure that tools, materials, and other factors in production would be available for a given order when needed. It was not responsible for the actual provision of these factors. The preparation section of a control department coördinated supply through the operation of a balance-of-stores unit, coordinated tool manufacturing, and performed similar functions.

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[14] *Ibid.*, p. 81.

[15] *Ibid.*, p. 347.

[16] *Ibid.*, p. 330.

[17] The subsequent statements are based on the present author's own experiences in the Winchester organization.

The "production" function was concerned chiefly with releasing orders and instructions and with "expediting" their progress when necessary. It was similar, therefore, to the records and comparisons functions of Emerson and Church. Inspection was essentially the function of comparison. Otterson's five functions were set up initially to operate as coördinative staff services. The result was an effective control group attached to each of the four divisional headquarters and to each major echelon in each division. Failure to recognize that these were essentially coördinative staff functions led to an attempt to use them as the basis for reorganizing a technical staff division in the company. The attempt was unsuccessful, as would be expected. Otterson's philosophy attracted considerable favorable attention during World War I.

Robinson stated "Eight Fundamentals of Business" in 1925.[18] This also was a statement of management philosophy rather than a theory of control. Nevertheless, his fourth fundamental was direction, his fifth was supervision and his sixth was control. Direction was the source of all decisions and the origin of all judgments. It therefore included the function of creative planning. It also provided for the use of written instructions and their release as a means of transmitting decisions. Hence it had some of the facilitative aspects of the routine planning and dispatching functions. It was largely a personal responsibility of executives, however, and accordingly included the transmission of decisions by verbal orders. Direction could plan the work, but only supervision could insure its performance. Robinson believed that supervision is not definable. "Intangible, yet powerful, it exercises a regulatory force over every phase of operation." Its aim is to watch over the performance of work. He recognized both the personal and impersonal aspects of supervision. Personal supervision regulates by direct contact the operation of every member of the concern. Direction is related to supervision by such indirect supervisory factors as policies, standards, schedules of work, and written instructions. Robinson's contribution to the theory of control, it is believed, was his recognition of direction and supervision as constraining and regulating forces in the execution of plans. He saw that the executive and his subor-

[18] Webster Robinson, *Fundamentals of Business Organization.*

dinates must retain a large measure of personal responsibility for their performance. His concept of the control function was rather narrow, on the other hand. He considered that it involved three principal elements: forecasting results, recording results, and placing responsibility for results. Forecasting results established "what should be as a measure of the correctness or efficiency of what is." It therefore had certain characteristics of planning as well as scheduling. The recording function was essentially the function of comparison. Placement of responsibility recognized certain aspects of the function of corrective action.[19]

Oliver Sheldon likewise was interested in 1930 in developing a philosophy of management.[20] He distinguished between administration and management. "Administration," he said, "is concerned in the coordination and organization of the corporate activities, the determination of business policy and the ultimate control of the executive." It is administrative management, in other words. "Management" is concerned with the execution of policy, within the limits set up by administration, and with the employment of the organization for the particular objects set before it. It is operative management, in other words. The function underlying both "administration" and "management" was finance. Sheldon broke down management into four functions: production, preparation, facilitation, and distribution. Production concerns the actual making of the product. It is the same as Church's operation function. Preparation includes the activities that necessarily precede manufacture. He included in it Church's functions of design and equipment. Preparation, therefore, covers the functions of creative planning and organizing. Facilitation consists of the activities that are contributory to production. Sheldon broke it down into four subfunctions: transport, planning, comparison, and labor. Transport includes certain supply functions. Planning is distinct from design. It is not control. It draws up the necessary regulations which control puts into effect. It is similar, in other words, to Otterson's function of routine plan-

[19] *Ibid.*, pp. 107, 108, 137, 138, 139, 142, 147.

[20] Oliver Sheldon, *The Philosophy of Management*. The principal discussions concerning control are found on pp. 52–63 inclusive. Sheldon's book may be considered to antedate Robinson's, although it was published later. It contains no footnote references to material published after 1921.

ning. Sheldon's comparison function is practically identical with that of Church. Distribution is the business of disposing of the products. Production, distribution, and finance are organic operating functions of a manufacturing business, for reasons that were noted previously. Sheldon did not distinguish clearly between them and the organic functions of management. He made no attempt to break down control into its organic functions. He recognized, however, the inadequacies of the preceding analyses of management. His discussions threw additional light on the problem of control.

H. P. Dutton in 1931 made what amounted to an analysis of the organic functions of management.[21] He believed that the principal steps in carrying out any activity are information, decision, dispatch, performance, progress record, report, and follow-up. "The facts of the situation are obtained, and previous experiences which may aid in deciding a course of action are assembled" in the information stage. "With the facts before an individual or a group, the results of various possible courses of action are visualized, and that course which is most promising is selected. Details of the plan are completed" in the decision stage. "Provision is made for issuing the orders and initiating the action called for by the plan, either immediately or at suitable times as the action progresses" in the dispatch stage. The plan is put into action in the performance stage. The comparison of actual with planned performance is made in the stage of progress record, report, and follow-up. Here Church's comparison function reappears again. Dutton recognized that this comparison makes corrective action possible in case any part of the plan fails. His analysis boils down essentially into the functions of planning and controlling. He too did not attempt to develop a theory of control. He did describe a simple method of approach to the management of an activity that led easily into a consideration of control. It summarized well much of the thinking that had been done previously.

The present author completed the foundations of his philosophy of management in 1934.[22] Because of his experience and research,

[21] H. P. Dutton, *Principles of Organization*, p. 117.

[22] The results of his research were first published and distributed in mimeographed form.

he believed that the organic functions of management are the creative planning, organizing, and control of the action of others in the accomplishment of group objectives. This was supported later by the conclusions of other authorities.[23] The organic functions of control were considered to be standardization, routine planning, scheduling, preparation, dispatching, direction, supervision, comparison, and corrective action. Standardization was dropped as an organic function of control sometime prior to 1940.[24] It is basically important to control, but it is equally important to planning and organizing. The significance of the remaining eight control functions will be discussed shortly.

Holden, Fish, and Smith published their studies of top management in 1941. This is major administrative management, as we have defined it. They believed that "control is a basic process and whatever the type or whatever the subject, it embraces the following elements: 1. *Objective*—What is desired, 2. *Procedure*, which consists of (a) *Plan*—How and when it is to be done, (b) *Organization*—Who is responsible, and (c) *Standards*—What constitutes good performance, 3. *Appraisal*—How well was it done." Their analysis also can be resolved into the organic management functions of creative planning, organizing, and controlling. They did not develop any definite theory of control. In their discussion they recognized the functions of scheduling, dispatching, direction, supervision, comparison, and corrective action, but not as organic phases of control. An important contribution was their recognition of control as a basic management function that must be applied effectively in the field of administrative as well as operative management.[25] General

[23] Balderston, Brecht, Karabasz, and Riddle also concluded in 1949 that the functions of management are planning, organizing, and controlling. See *The Management of an Enterprise*, p. 6.

[24] The author's text, *Industrial Organization and Management*, listed in 1940 only the remaining eight functions. R. T. Livingston stated in 1949: "Production Control as used in industry consists of 1. Routine planning, 2. Scheduling, 3. Preparation, 4. Direction, 5. Dispatching, 6. Supervision, 7. Comparison, 8. Corrective Action and 9. Appraisal."—*The Engineering of Organization and Management*, p. 188. It is believed that these functions are not merely production control functions. It is felt also that "appraisal" is not an organic control function, but rather a phase of the comparison function in administrative control.

[25] Paul Holden, L. Fish, and H. Smith, *Top Management Organization and Control*, p. 77.

Brehon Somervell was responsible for some significant developments of the administrative control function during World War II. Reference has already been made to his subsequent application of them in the Koppers Corporation. Other corporations have been studying and developing the field of top management control. The next significant development of control theory and practice may take place in this field.

The Eight Control Functions

The relations between the eight control functions—routine planning, scheduling, preparation, dispatching, direction, supervision, comparison, and corrective action—were diagramed in Fig. 32. The general structural relations between the control functions on adjacent service levels and other line and staff functions were illustrated in Fig. 26. Each of the eight functions will be discussed in more detail later. The discussion will be confined at this point to their basic nature.

Routine planning is concerned with the routine provision of information concerning the particular plan that is to be executed. Product and process plans for a standard part for a standard assembled product may be applicable in a manufacturing plant for a number of years, except for minor changes. It is obvious that the release of manufacturing information for the current production of an order of parts can have little to do directly with the creative planning of the product and process that was completed months or years previously. These plans, when approved by or for higher line authority, have the force of a standing technical order. Compliance with them is mandatory, except as deviations or modifications may be approved by the proper authority. Plans could not perform their function of supplying a common basis of action if this were not so. The release of plans information, therefore, sets up certain constraints and supplies a basis for regulating the subsequent execution of the plan. Hence it is a phase of control rather than of creative planning. This is one reason why the office of a coördinative staff group is frequently used as an office of record and issue as well as a coördination center. Change in the direction of progress is the rule in American industry rather than the excep-

tion. An important mission of routine planning is, therefore, coordination of technical staff planning services with the needs of the line and other staff agencies for technical information and advice.

Scheduling determines when or at what rate the principal phases of the plan must be completed to meet the final time objective of the project. It is the function of converting the quantitative time requirements set up in the plan into chronological time objectives for the project and each of its phases. These phases and the order of their performance are stated in the procedural plan or program for the accomplishment of the mission. Hence a schedule provides the basis for the time coördination of action in the accomplishment of the mission. A schedule has the force of an operating order when it has been approved by or for higher line authority. The individuals and groups who are specifically responsible for accomplishing particular phases of the mission are required to conform to schedules to the best of their ability. The function of scheduling, therefore, assists in constraining and regulating action with respect to the accomplishment of time objectives. It is evident that an undertaking cannot be scheduled until something is known about the plan for the execution of the project, and its requirements. Scheduling normally follows routine planning for this reason.

Preparation is the function of assuring that the factors and conditions required for the execution of the plan will be available as needed. This means that they should be readily at hand when and where they are needed in the kind and amounts required for proper performance. It is not the function of preparation to provide the required factors and conditions. Its function is to give reasonable assurance that they will be provided by the responsible technical staff agency. They were established originally by the plan. Therefore, their provision is primarily a technical staff service of facilitation, rather than of planning. The primary purpose of preparation is the coördination of technical services of facilitation with the needs of the line or other staff agencies for these factors and conditions. It is for this reason a phase of control. It cannot be performed effectively until routitne planning and scheduling have been completed. Inability to complete preparation requires corrective action by higher authority. Another purpose of preparation

is to avoid interference in execution by discovering and eliminating causes of interference in advance.

Dispatching is the function of assuring proper coördination through controlling the release of authority to act. Its principal mission is the facilitation of coördination within the chain of command to which the control group is attached. It does so by withholding the release of authority to act from subordinate units on lower levels until the possibility of loss of coördination because of premature action is at a practicable minimum. It accomplishes its purpose by controlling the release of orders. An accompanying routine release of information concerning plans, procedures, schedules, and other performance factors assists in defining the nature and scope of the responsibility and authority to act that is released. Such release is in part, however, a facilitative service for the function of direction. The authority to act in the execution of a project, or some phase of it, cannot be released safely until the dispatching authority knows what constitutes sound action, when that action should take place for effective coördination, and where. It should have some assurance that subordinate groups will be able to complete their assignments as ordered. Otherwise the controlled release of authority tends to break down coördination, rather than assure it. For these reasons, dispatching normally follows the performance of routine planning, scheduling, and preparation for the particular step in the execution of the undertaking to which it relates.

The control functions of routine planning, scheduling, preparation, and dispatching tend to be performed in advance of execution. They assure correct performance of the steps or phases of the project to which they relate before operative action starts. Hence they have been called preliminary functions of control. The remaining control functions tend to be done concurrently with or immediately following the execution of the particular step or phase of the project to which they relate. Their purpose is to constrain and regulate action on the step while it is in progress, or before the next step begins. Direction, supervision, comparison, and corrective action have been called concurrent control functions for this reason.

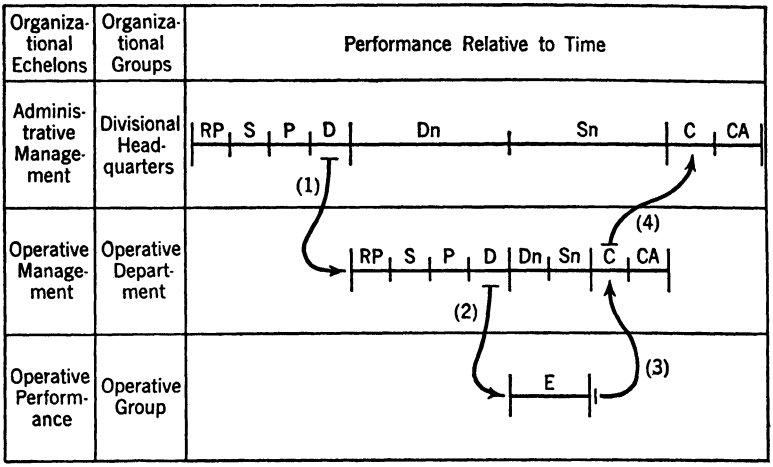
Direction is the function of instruction concerning the requirements for proper execution of the plan. Its primary purpose is the constraint and regulation of action by explanation, interpretation,

and, if necessary, demonstration. It supplements information and instructions that are supplied by higher authority through its own performance of dispatching and direction. Dispatching facilitates direction by forwarding routine information and instructions through routine channels. Direction tends to be a personal command responsibility of the line executive who is accountable for the success of the action. It therefore involves exercise of face-to-face leadership in most instances. Direction does not usually take place until facts, instructions, and orders have been placed in the hands of subordinates and they have had an opportunity to study them. Hence it tends to follow dispatching. Any direction that precedes dispatching generally takes place on the next higher level, as indicated in Fig. 50.[26]

Supervision is the function of assuring that execution is taking place in accordance with plans and instructions. Its primary purpose is to determine whether the personnel understand the information about and directions for the work in which they are currently engaged. This work must involve action on some step or phase of the current project. Supervision also involves the determination of whether directions are being followed in a manner that will result in correct execution as planned. These determinations are accomplished usually by face-to-face contacts with the personnel to whom responsibility for the specific action has been delegated. They may result in further direction if conference or observation indicates that execution is not proceeding satisfactorily. Direction and supervision are the only two functions that can constrain and regulate execution on a lower echelon while it is in progress. The other functions of control must usually be performed either before or after completion of the particular step or phase of the undertaking to which they relate.

Comparison is the function of determining the degree of agreement between actual and planned results on the work that has been completed by a given time. Its performance depends on prompt reports of results from subordinate groups following the completion

[26] There are occasions when direction may precede dispatching on the same level, as R. T. Livingston has recognized (*The Engineering of Organization and Management*, p. 188). However, this is not believed to be the normal relationship.



LEGEND: The Functions Of:

C – Comparison
CA – Corrective action
D – Dispatching
Dn – Direction
P – Preparation
RP – Routine planning
S – Scheduling
Sn – Supervision
E – Operative execution of a phase or step in the completion of a project

—— Lines of formal flow of authority and information. No attempt has been made to show informal or cross-contacts that enter into control

The Flow of Authority and Information

(1) Release of authority for executing a program or major project to a responsible executive.
(2) Release of authority for executing a minor project or one of its steps to an operative group or individual.
(3) Return of information showing the status of the assignment.
(4) Reports showing the status of the project or program by organizational groups.

FIG. 50. Organizational Levels and Control.

of the step or phase on which they have been working. Its primary purpose is to determine where significant deviations from planned performance are taking place, and to report them promptly to the responsible line authority. It is concerned also with evaluating the economy and effectiveness of action in terms of quantity, quality, and expense, relative to time. Much of the work of comparison is statistical. It necessarily follows direction, supervision, and execution.

Corrective action is the function of promptly removing any interferences with planned execution, and of restoring effective coördinated action. Its primary mission is avoidance of failure of the undertaking. Serious losses may result from inability to achieve the

objectives of the project because of such interferences. Corrective action depends on reports from comparison concerning the status and condition of action on the project. Such action is usually accomplished by executive action of the responsible line executive, because it deals with exceptional situations of an emergency nature.

It was shown in connection with Figs. 32 and 33 that the functions of routine planning, scheduling, preparation, dispatching, and comparison may be differentiated from line executive functions and assigned in large part to a staff control group. It was said above that direction, supervision and corrective action are basically line functions. They tend to remain so, except for routine limited facilitative services that may be performed for them by the control group. It was pointed out, in the discussion of coördinative staff organization, that it may be necessary to evolve and develop staff control groups for either primary or secondary chains of command. These control groups may be attached to a chain of command on any level where such coördinative staff service is required. We also saw that there is an order in which the eight organic control functions are normally performed. This order supplies a basis for the design of the control procedure. This design must be developed in accordance with the principles of good business procedure to meet the requirements of the particular control situation. It is evident that the eight control functions have a general pattern of relationships to one another, and to the other line or staff functions that they serve.[27] The nature of these relationships, as well as the manner and order of performance of the control functions, can and frequently must be modified to meet specific requirements. Nevertheless, the pattern is fundamental. It supplies, in consequence, a useful basis for the initial analysis of control problems. It should be remembered, however, that business enterprises are not managed by formula.

Delegation and the Decentralization of Control

The manner in which the control function is performed is greatly affected by the extent to which control has been decentralized. This was brought out when the delegation of responsibility and authority

[27] Attempts have been made to illustrate the general nature of control relationships in Figs. 21, 32, 33, 48 and 50. There are, of course, intangible relationships in control that cannot be shown graphically.

was discussed. It is necessary here merely to determine more specifically how it is affected.

Delegation is a process whereby certain of the executive's functions and duties are assigned to a designated subordinate, together with certain of his responsibilities and authority for their performance. The assignment of work relieves the superior executive of it and transfers it downward in the organization to the person in the particular position. Delegation gives him responsibility for the proper performance of the functions and releases to him the authority for the discharge of this responsibility. Delegation is primarily to the position, however, rather than to the individual. It relieves the superior of none of his responsibility and authority. He is still accountable to higher authority for results. The subordinate may use the delegated authority within the limits specified only so long as he holds the position. He is accountable to his superior during this time for the satisfactory completion of his assignment. The process of delegation must meet certain requirements if control is to be effective. The basic requirements are as follows:

1. The objectives and functions of the assignment should be analyzed carefully to determine the conditions and requirements for their accomplishment. They should then be defined and specified accurately.

2. The division and specification of responsibility should be based on proper groupings of functions, as dictated by the principles of functionalization.

3. Correct functionalization, in terms of organization structure and business procedure, should be established for purposes of coördination and coöperation.

4. Authority should be delegated to executive and operative positions in amounts commensurate with the duties and responsibilities that have been specified.

5. A means of evaluating results and assessing accountability must be established.

Decentralization is the result of the assignment of functions and the delegation of responsibility and authority for their performance. Decentralization of operative functions, responsibility, and authority, without managerial decentralization, necessarily results in complete centralization of control in the hands of the top executive

leadership. The ultimate in the decentralization of managerial responsibility and authority is abdication of leadership obligations and prerogatives. These are the extreme conditions of centralization and decentralization. The first condition is impracticable, except in very small concerns. The second condition is impracticable in any business organization. A high degree of centralization in the small concern gives it certain competitive advantages in the form of better coördination, greater speed of action, more accurate adjustment and relationship of business factors and forces in the particular business situation, a better quality of executive decisions, greater organizational flexibility, and others. The same degree of centralized control in a large concern tends to produce the reverse effects. The organization tends to become slow and cumbersome, despite the use of modern high-speed means of communication. Records, filing cases, and charts tend to be substituted for personal knowledge and understanding of the situation at the operative level. The problem of coördinating all thought, as well as action, at the top level raises difficulties that become insuperable in large corporations. The quality of executive judgment begins to decline, despite the employment of more able executives at higher salaries. Other difficulties arise. The law of the situation forces decentralization eventually, if executive vision is unable to see it at first.

The change may not be readily apparent from an examination of the company's organization chart. Even the functional type of chart is limited in the amount of organizational information it can convey. The existence of a central control point, for example, does not indicate either centralized or decentralized control. With centralized control, the authority of the central control point is extended directly to the point of performance. With decentralized control, it is extended only to some intermediate control point or points. A central control point is necessary in either case. The two conditions are illustrated in Fig. 51. Fig. 50 suggests that operative control has been completely decentralized.

The degree of decentralized control depends on the factors and forces that are operating in the particular control situation. The principles that relate them to the objectives of decentralization were discussed in connection with the delegation of responsibility and authority. It was noted that the degree that is most effective

and economical tends to vary directly with organization size, functional complexity, the physical dispersion of activities, the availability of competent executive and operative personnel, the extent of indoctrination with managerial and operative philosophies, morale, the quality of organizational planning, and the quality of subordinate leadership. It tends to vary inversely with the speed, accuracy, and capacity of the means of communication within the organization. It also varies inversely with the extent to which the factors, forces, and effects to be controlled can be standardized. The nature and extent of such standardization depend on the objectives of the undertaking and their requirements. It is evident that fewer

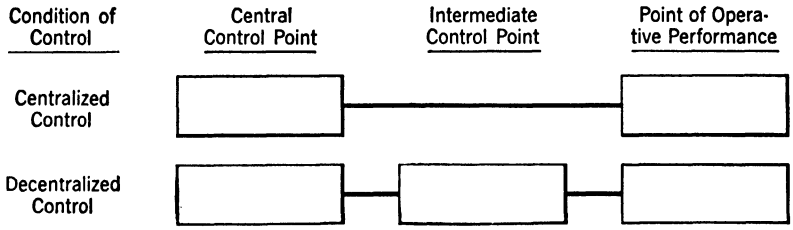


FIG. 51. Centralized and Decentralized Control.

decisions on current action will be needed if the conditions affecting it can be standardized and held continuously in the proper relation to one another and to the project's final objective. A higher degree of centralization obviously is possible under such conditions. The duration, extent, and frequency of emergencies affecting the action must be considered. A higher degree of centralization is usually necessary when the risk of serious emergencies is high. Time is of the essence in handling emergencies. It may be necessary for this reason to bring the top executive authority which has the ultimate responsibility for results directly into contact with the subordinate executive who is in immediate contact with the emergency. Organizational instability and a high personnel turnover may force a higher degree of centralized control than would otherwise be desirable. There is a constant dilution of the skill and knowledge content of the organization, both executive and operative This tends to nullify the effects of indoctrination, making it impracticable to delegate any considerable rights of decision and command.

The trend in American management is toward the maximum de-

gree of decentralization that is practicable. Controls cannot always be highly decentralized, however. We saw previously that centralized line controls tend to develop automatically as we go down the scale of organization size and approach the one-man concern. Controls are sometimes too highly centralized in large concerns. There are a number of reasons. One reason may be that the top executives do not know how to decentralize without losing control of the organization's activities.[28] This is why the principles and conditions of decentralization have been reviewed here.

Staff Organization and Control

The staff agency that assists the line organization in controlling action is the coördinative staff. The staff agency that assists it in coördinating thought is the technical staff. The term control cannot be used appropriately in connection with thought in a democratic industrial society. The condition of free competition is essential for the maintenance of such a society. This makes it imperative that there be no constraint or regulation of thought in the business organization in the sense of original thinking being stifled. Effective competition, however, requires that there be some effective coördination of thinking. Unity of action depends on unity of thought. It is necessary for the successful accomplishment of the organization's service objectives.

The term staff agency connotes nothing with respect to overhead expense. Such an agency may vary from a large department or division in a large corporation to part of an individual's time in a small company. There are many intermediate degrees of staff organization size as we go from the large organization to the one-man business. The important considerations in effective line and staff relations for control are therefore the requirements and principles of sound functionalization and control. They are modified by the conditions peculiar to the business and the industry. The particular form of organization structure for a given control situation is an effect, rather than a cause.

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[28] Lounsbury Fish has expressed the feeling that an important cause of centralization has been management's lack of ability to assess accountability. See *Organization as the Mechanism of Management*, A.M.A. General Management Conference, June 9, 1948.

Functional differentiation necessarily increases with increasing volume of business and resulting organization size. The relations between the staff organization and control are more evident in large business concerns for this reason. The large manufacturing company is a basic factor in an industrial economy. We shall use it again for the purpose of illustrating these relations.

Many large concerns are engaged in the manufacture of durable producers' goods. They have thousands of employees. The product made by such a concern may require many thousands of man-hours of work. The time needed for the completion of a single item of product may be many months. It may be made largely or entirely to customer specifications. When the product is completed, it may be installed at a location thousands of miles from the point of fabrication. The operative employees are usually well trained and highly skilled in their work. Both the executive and operative organizations are stable and thoroughly experienced. It is probable, so far as the stated conditions are concerned, that the control of manufacturing operations is highly decentralized. There may be two or more executive service levels in the major echelon of operative management that was shown in Fig. 50. Each fabricating department should control the action of its operatives in completing certain steps in making a certain quantity of parts for the product. The fabrication of these parts is presumably authorized by a production order. The interdepartmental control of action on the order should be the responsibility of divisional and plant operative controls, as shown in Fig. 48. Each executive head of each line group at each level of operative management would be completely accountable, under completely decentralized operative control, for satisfactorily executing the operations assigned to him. All eight control functions must be performed at each organizational level under this condition. Complete responsibility for operative results requires complete delegation of the rights of decision and command. A schematic diagram of the relations between the line and staff phases of control under these conditions is shown in Fig. 52. The foreman in a large modern concern that is operating under conditions of intermittent manufacturing and job-order control is a department manager. The policy in some modern manufacturing concerns has tended toward fewer department managers of higher quality who

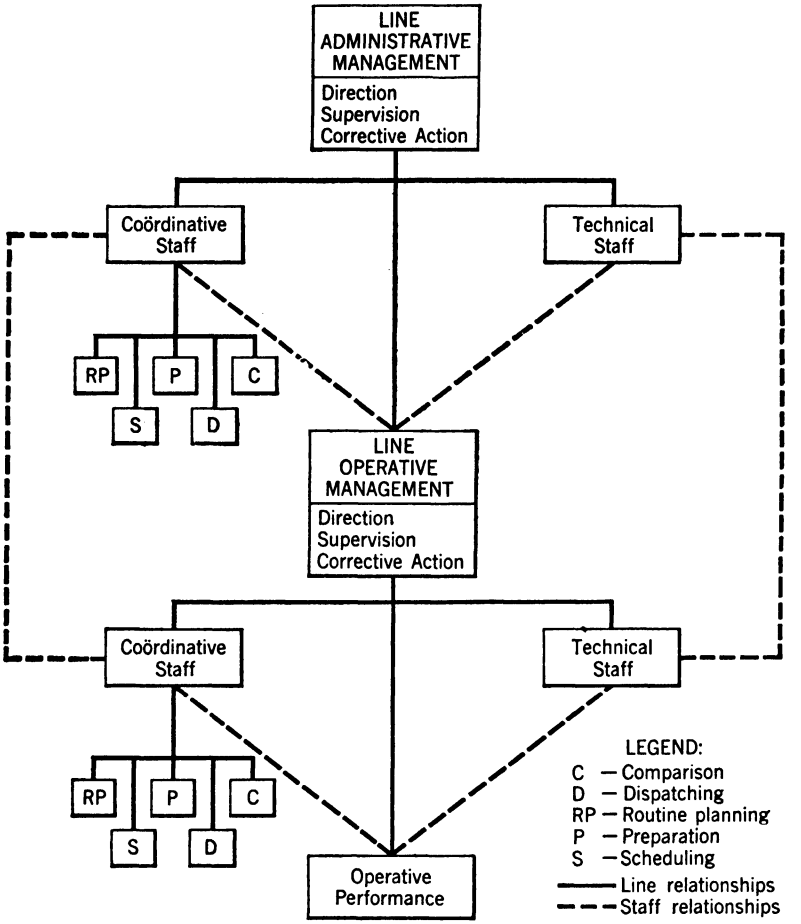

FIG. 52. Decentralized Staff Control.

have greater responsibilities in the field of operative management and are paid accordingly. This involves recognition of the need for a higher quality of executive leadership at the operative level in the manufacturing organization. Such managers may have from 50 to 150 operatives under them, and sometimes more. The coördinative staff functions in Fig. 52, under line operative management, may be carried on by a single clerk who reports to the department manager. A "dispatch clerk" may serve a number of departments

when they are small. He must be attached to a control group on a higher level. This may, for example, be part of the superintendent's office. Hence there is nothing in the diagram to indicate greater or less expense than is necessary under conventional management. The complexities of control procedure are more likely to be an important expense factor than the differentiation of staff control functions.

Many large concerns manufacture durable consumers' goods. They may also employ thousands of employees. Their product also may require thousands of man-hours for its fabrication. There may be important differences in manufacturing conditions, however, that distinguish it from the preceding example. The volume of business, in terms of physical units of goods produced and sold, may be much larger. It may not be practicable to manufacture them to stock, because of high unit costs and high capital absorption, the impracticability of providing the storage space that would be necessary for regularized production, and possibly conditions of competition that permit the concern to take only a small unit profit. The company must work closely to its demand curve under these conditions and make a satisfactory return on invested capital through high turnover. Superior management is required in other respects. Competition may make progress in developing its products and services mandatory. It may also make economy and low costs equally necessary. It is necessary in consequence to integrate engineering changes in annual models. Otherwise, it may not be possible to standardize the product and process for maximum economy and minimum price. It may be necessary and possible to centralize production control under these conditions at the level of major operative plant management. The company secures the advantages of centralization that were noted previously. They are reflected concretely in greater ability to operate with minimum inventories, because of more effective coördination. The turnover of work in process may be so high that the company is working in some degree on the capital of those who supply it with certain materials and purchased parts. Its working capital requirements, at least, are at a minimum. Other manufacturing economies are possible under these conditions that give the large concern a competitive advantage. There are usually offsetting disadvantages in the form of

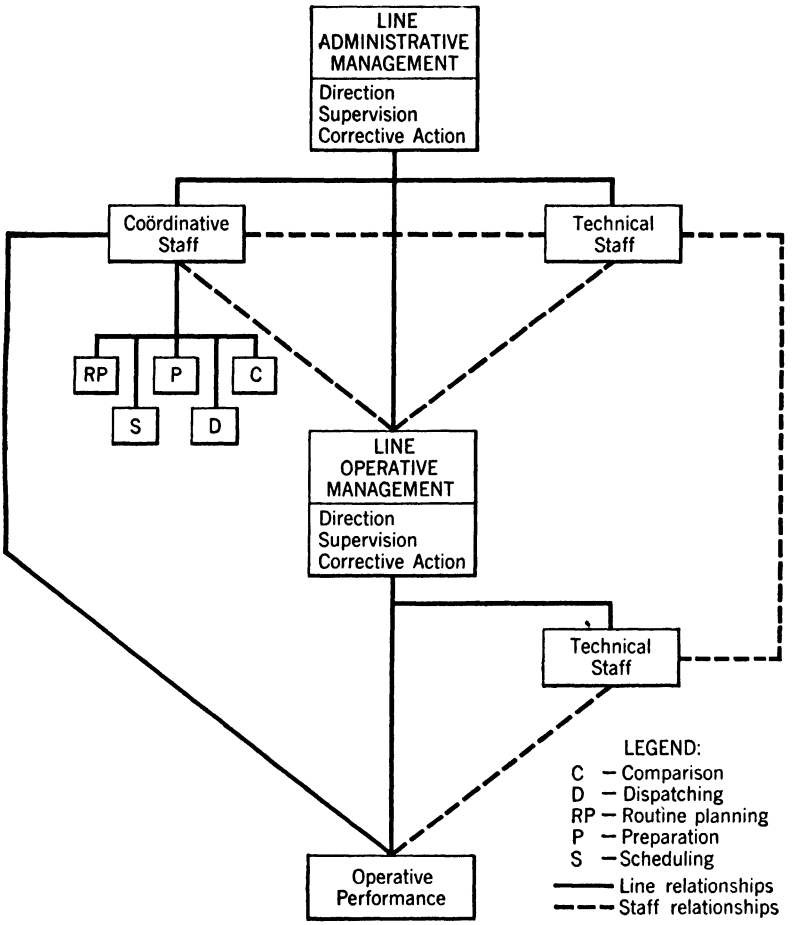

FIG. 53. Centralized Staff Control.

greater inflexibility, higher break-even points, and others. The advantages may vanish quickly during a depression when business volume falls rapidly. The necessity for centralizing control at a higher organizational level obviously causes important changes in the organization of the control function. An attempt has been made to show them schematically in Fig. 53. A centralized operative control has been developed on one of the higher levels. The control group on this level has been placed in direct contact with the opera-

tive groups with direct control. Line operative management is relieved of responsibility for the preliminary functions of control. It retains responsibility and authority for the concurrent line functions of control. It could not exercise operative leadership otherwise.

The operative executive spends the largest proportion of his time on control, and the smallest on creative planning. His participation in management tends to decrease as controls are centralized, unless countermeasures are taken. The supervisors in some large mass-production plants have been relieved of all managerial responsibilities, except the line functions of control and certain organizing functions that are associated with them. Their morale tends to be lowered, as a result. They do not have an opportunity to prepare themselves for higher managerial responsibilities through experience. These and other difficulties have been recognized and countermeasures are being taken.

The degree of centralized production control in a mass-production plant is usually not as high as that suggested by Fig. 53. It might be possible to centralize control in the office of the plant manager, since control of production under continuous manufacturing depends basically on controlling a continuing flow of materials and work in process through fixed channels. It is literally a flow control. The control groups under the superintendents, general foremen, and department managers in Fig. 26 would, of course, be eliminated. It is evident, in any event, that the development of centralized staff control of action tends to centralize control in the superior line executive. Staff no longer requires the concurrence of subordinate line executives to control action that is not covered by established policies and procedures. These subordinate line executives still have managerial responsibilities, including line control. They therefore have direct access to the superior line executive. A serious dispute between the coördinative staff executive and the line organization is likely to end in the office of the superior line executive.

Administrative Control and Centralization

Administrative control is superimposed and depends on operative control, as was shown in Fig. 50. Administrative control is chiefly

group control. The largest proportion of the administrative executive's time is likely to be spent on planning. The requirements for centralized administrative control of activities in a business organization are usually not present. Control is decentralized, therefore, except as decreasing organization size requires functional integration. There may be a number of administrative levels in a large organization. Some administrative responsibilities are inherent in any executive assignment at any level. They become less and less significant, however, as we approach the level of operative performance. We may find consequently that administrative control is highly decentralized down to the level of plant management in a large mass-production plant. Below this level in the plant, controls may be centralized.

Types of Control

The problem of control is different in different industries. There are types of control that are associated with different conditions within an industry. A particular concern may find it necessary to use different types of controls in different divisions of its business. The parts and service division of a concern engaged in the continuous manufacture of a durable consumers' good, for example, cannot use the same kind of production control as is used to control the production of current models. The type of control of its office operations would be still different. The same basic principles underlie effective, economical control of all types. There can be no one best control system for all the concerns in an industry. The application of these principles will be discussed further in subsequent chapters.

CHAPTER 18

THE PRELIMINARY CONTROL OF OPERATIONS

The Significance of Preliminary Control

Control has been defined as the function of constraining and regulating activities that enter into the accomplishment of an objective. These constraints and regulations should be based on the requirements of the plan for accomplishing the objective. Otherwise control degenerates into expedient executive action for the management of the particular mission. The work of controlling an undertaking is not likely to be more effective than the work of the creative planning and organizing on which it rests.

The control function may be broken down into eight organic subfunctions, as shown previously. These functions are routine planning, scheduling, preparation, dispatching, direction, supervision, comparison, and corrective action. We saw that direction, supervision, and corrective action are essentially line functions of control. The remaining five are potential staff control functions. The extent to which they are differentiated from the line depends on the size of the organization.

The size of the organization tends to increase with growth in its volume of business. The increase in business volume creates the necessity for further division of labor and specialization. This is accomplished through functional differentiation, both line and staff. A line organization develops by functional devolution from an organic business function. There is a gradual separation of managerial and operative functions. The managerial functions become differentiated eventually in various service levels of operative and administrative management. The operative functions become differentiated

eventually in various levels of unskilled, semiskilled, skilled, and professional operative service. Various staff functions evolve from the line in whichever echelons may require specialized managerial service. A secondary chain of command for each staff organization tends to devolve with the continued growth of the business. The complexity of the organization increases accordingly. In consequence, the coördination of the organization's work becomes more difficult with its growth. Staff coördination of action tends to become more important, relative to self-coördination and personal executive coördination. It cannot eliminate the necessity for them, however.

It is evident that the eight control functions may be performed on any organizational level where some control of activities is necessary. All control functions, both line and staff, may be performed at the level of minor operative management if operations can be highly decentralized. There is necessarily a distinct differentiation of staff operative control from staff administrative control as this takes place. The former is fundamentally project control. The latter is fundamentally group control. Fig. 50 showed that certain of these functions, under complete control at any level, should be performed in some degree before execution of the phase of the undertaking to which they relate directly is begun. These functions are routine planning, scheduling, preparation, and dispatching. It is the purpose of this chapter to discuss these functions more completely than has been possible up to now. The discussion will be confined largely to operative control of the activities of organizational groups, either line or staff. The same fundamentals underlie the control of primary and secondary projects. They apply also to any field of organized business activity. Administrative control functions, both preliminary and concurrent, will be discussed later.

Business Volume, Continuity, and Control

The volume and continuity of the demand for goods and services affect greatly the requirements for control. They therefore condition the characteristics of control procedures. They are chiefly significant with respect to specific items that the concern produces or sells. It would be possible, for example, to have a very large volume of

business that is spread over a large number of items of high unit value during a given period. The volume and continuity of demand for each item would be less, certainly, than it would if the same dollar volume were spread over a small number of items of low unit value during the same period. This difference in unit demand greatly affects the degree of standardization of goods or services that is practicable. Accordingly it affects the practicable degree of standardization of the organizational and procedural relationships that enter into their production or distribution. It affects the degree of decentralization. It consequently affects the type and kind of control procedure that is applicable. The same eight functions underlie the production control procedure in a plant making washing machines or sewing machines as in a plant making special machines. Demand is probably large and reasonably continuous in the first case for the duration of the model year. Control has to do chiefly with constraining and regulating a continuing flow of highly standardized products and their component parts down fabricating, subassembly, and assembly lines to the shipping dock. The operative project may be the scheduled daily run. Control in the second case must constrain and regulate individually the movement of limited lots of parts and subassemblies to the final assembly floor. There can be little standardization of product or process, because the special machine is made to the customer's specifications. It is not necessary in the first case to perform all eight control functions at the level of minor operative management. This is one of the economic advantages of large-scale mass production, since less paper work is required. It is probably necessary in the second case. The effects of these factors may be summarized in the Principle of Continuous Control: It becomes increasingly possible, with increasing volume and continuity of demand, for a single, simultaneous performance of control functions to constrain and regulate adequately the performance of a series of steps in the production of a large number of standard projects, when they are executed under standardized conditions.

Routine Planning

A business plan specifies the characteristics of and relationships between certain functions, physical factors, personnel, and policies

as they enter into the accomplishment of certain business objectives. It supplies the organization with a basis for answering such fundamental questions as what are the objectives of the mission, what should be done to accomplish it, how it should be done, why it should be done that way, how much time is required for each phase of the mission, what physical and human resources are needed, where each phase should be done, who should be responsible for it, and other questions. Detailed answers to these questions are worked out by subordinate line and staff groups for the parts they play in accomplishing the mission. The business plan, including its subsidiary plans, is accordingly a basis for business action. The original answering of these questions involves some degree of original thinking, at whatever level it is performed. It has been called creative planning for this reason.

There would be no need to change a business plan if the economic, political, and social situation of the particular concern could be held indefinitely in the *status quo*. There would of course be no progress. Such a condition would violate the spirit of the free enterprise concept of an industrial economy. It is largely a theoretical condition, so long as we retain free competition, the customer's right of freedom of choice in the market, and the right of private property. In return for this right, business has an obligation to contribute to an increasing standard of living by providing more goods of better quality at lower prices with improved service. This boils down to the accomplishment of the concern's primary service objectives with increasing economy and effectiveness. It costs money, on the other hand, to change plans and develop new ones. In consequence, a compromise between stable plans and continuous improvement of customer values is usually required. This is one reason for the policy and practice of having annual models in manufacturing establishments. Product and process plans are stabilized for the coming year. As many parts and subassemblies are carried over from this year's model into next year's design as is practicable. The requirements of the mechanical functions that must be performed by the product to give the customer the planned additional satisfactions at a reasonable cost determine what is practicable. No changes in production plans for the old parts and assemblies may be necessary if no engineering design changes are required. These plans

must be issued again, nevertheless. They still tell the production organization what operations should be performed on what material in accordance with what quality requirements, and give it other manufacturing information. No original decisions are required, however. These plans still carry the approval of the responsible line authority and accordingly have the status of technical orders. Hence the action of the manufacturing line organization must conform to them. They therefore set up certain constraints and regulations that guide the organization subsequently. This work involving the secondary origination and release of plans information, in a form that is usable for execution, has been called routine planning. It represents the practical extension of creative planning through control into the field of execution. Its purpose is to facilitate control and execution through the release of information on the requirements for effective, economical performance.[1]

The Coördination of Technical Staff Planning

An important duty of routine planning is the coördination of the provision, by technical staff services, of information about business plans. The detailed planning, on which rests the subsequent managerial and operative work, may be done in a number of separate staff groups. There should be some point on each level where this information is brought together. It must then be put in the form and shape required for use by subordinate line and staff groups. The logical point is the primary control group on the particular level. This group does not coördinate the mental work of plans development. Staff coördination of thought between line and technical staff groups is a function of administrative planning on a higher echelon. Neither does the primary control group coördinate action on plans development in a technical staff division. This is the responsibility of a secondary coördinative staff operative or executive who is attached to the division. The primary control group merely coördinates interdivisional or departmental progress in plans development. It does this through its routine planning

[1] Routine planning implements Alford's Law of Planning: "The mental labor of production is reduced to a minimum by planning, before the work is started, what work shall be done, how the work shall be done, where the work shall be done, and when the work shall be done."—*The Laws of Management*, p. 134.

function. Its objective in so doing is assurance that the information required for organizing, controlling, and executing the mission subsequently will be available when and where it is needed.

Reference was made above to coördinative staff functions and staff groups. The discussion was in terms of a large business organization. The extent to which any staff functions are differentiated, whether coördinative or technical, depends on the size of the organization and the volume of business to be handled. The executive in the small company may find it necessary to make provision for limited technical staff service. He may be able to afford little staff assistance in control. The line and staff activities of the organization must nevertheless be coördinated. It may be necessary for him to coördinate them personally, with a minimum of clerical assistance. Furthermore, all eight functions must be performed in some degree, or the company's work will suffer from poor control. Examination of their performance in the large concern gives a desirable insight into their requirements in the small concern, even though the same work in the latter is relatively simple.

The Principal Phases of Routine Planning

The function of routine planning can be broken down into certain elementary functions. Some recognition of them is helpful in analyzing the routine planning problem. Some provision for their performance may be necessary when the control group is organized. They should be taken into account in planning a control procedure. These elementary functions are:

1. The coördination of progress in plans completion.
2. The assembly of the necessary information for control and execution.
3. The recasting of this information, when necessary, in the form and shape required for its effective use by subordinate line and staff groups.
4. The origination of the information and instructions required for the control and execution of programs and projects, when and as they are needed.
5. The maintenance of routine planning information in accurate, up-to-date form.

The emphasis placed on these functions, and the manner of their performance, vary with the level on which the control function is being performed. The greatest emphasis at the level of major administrative management is likely to be on the coördination of progress in planning and the assembly of information. Top management is concerned largely with administrative planning. The greatest emphasis at the level of minor operative management is likely to be on the origination and maintenance of routine planning information. Departmental or supervisory management is concerned largely with the control of operative execution, particularly in line departments. Intradepartmental control is concerned with the coördination of planning by the units, branches, and sections that compose the department. It is usually a minor function that is performed periodically for technical staff groups on higher levels, when planning and control are decentralized. No staff control functions are performed at the departmental level when control is completely centralized.

Management is highly decentralized in the organization shown in Fig. 26. Each plant evidently designs the products that are assigned to it for manufacture by the central manufacturing planning group. There would be little need for a plant product design department were this not the case. The development of production plans begins with designing the product to meet the specifications of the assigned mission in terms of quantity, quality, time, and cost. Before the plan is finally completed, all the technical staff executives shown are involved. There should be some group that coördinates progress in the development of such plans by the various technical staff groups, and maintains liaison with central manufacturing control. This must be a coördinative staff group such as central plant control, through its routine planning function. Otherwise, the plant manager must coördinate overall planning personally. This would not be practicable in a plant of this size. The control group may be a small department, since the plant appears to be large. There are often differences of opinion among the six technical staff executives on the proper solution of joint problems. It is the function of the technical staff executive for central plant planning to bring about a meeting of minds between them, when their differences cannot be resolved by cross-contacts. General informa-

tion on manufacturing plans should be given central plant control by central manufacturing control. It should be the duty of plant control to report the receipt of this information to central plant planning. It should supply the information to the technical staff departments concerned in the form and detail required for their planning purposes. The proper form and detail should be determined by the standard planning procedure for the company and plant. The control group should report the status of planning periodically to the plant manager and his central planning executive. The status for each planning project is determined by the percentage of completion relative to the deadline dates for the completion of each of its major phases. As the detailed plans are completed by the various technical staff departments, they should be released by the central planning executive, with the concurrence of the line executives affected, to central plant control. The problem from here on is primarily one of organizing for execution and control.

The executive for central plant planning acts as a technical assistant to the plant manager. He should have a broad but thorough technical background, and a good personality, that will enable him to exercise a leadership of ideas in the field of staff planning in the plant. Such an executive can relieve his line superior of many time-consuming conferences. He can make policy decisions for his superior, within the limits of established policy. He can keep his superior informed of the quality and condition of plans. He can see that all the major policy problems having to do with planning are brought promptly to the superior's attention. There is no such technical executive in many plants. The principal executive of the organization acts as his own technical executive for central planning. This may be a false economy.

The plans information, as it comes from the various technical staff departments, may or may not be in a form suitable for most effective use by subordinate line and staff departments. Planning procedure requires, when possible, that this information be provided on a form that will facilitate its assembly with other planning information and its subsequent use. This form should also facilitate the transcription of the information for later release. The determination of what constitutes an effective and economical form

PLAN OF WORK

ORDER No: 560

PART NAME: Part X PART No: 1260

MATERIAL REQUIREMENTS: Casting - Pattern #121 MAT'L. SPEC: 1080 STD. LOT: 100

UNIT MODEL REQUIREMENTS: Model A-3 pcs.; Model E-9 pcs.

Op. No.	Operation Name	Dept.	Labor Class	Mach. Class	Tools and Attachments	Time/C in Hrs. SU	Time/C in Hrs. MT	M	O	Progress Start	Progress Fin.
	Move raw stock										2/11
10	Plane	12	28	PL3	Std. At mch.	1.5	10.8			2/12	2/13
20	Mill	8	14	ML12	Fixture #1820 Spl. Forming mill-728	0.5	4.5			2/14	2/14
30	Drill	20	10	DL5	Jig #380 Std. ½" drill	0.2	3.3			2/15	2/15
40	Inspect	17	6	Bench	Std.	–	1.0			2/16	2/16
	Move to stores										

FIG. 54. Example of Form for Routine Planning Information.

may entail a joint decision by the office manager and the departments that use it, as well as the technical departments that originate the information. An example of a blank for collecting production information in a convenient form for subsequent use is shown in Fig. 54. It was developed for use with job-order control of production under conditions of intermittent manufacture. A form for use with flow control of production under conditions of continuous manufacturing would be similar in general appearance but different in detail. The frequency with which this information must be reproduced for use in executing specific programs or projects depends on the nature of the business. It may be necessary to reproduce and release it only when changes in detailed plans are made, if the operations of the business are continuous under highly standardized conditions. The Principle of Continuous Control is likely to hold in such case. It may be necessary, on the other hand, to release

such information whenever an operative project is undertaken, if the operations of the business are discontinuous and/or conditions cannot be highly standardized.

The Maintenance of Planning Information

The maintenance of routine planning information in accurate, up-to-date form is an important problem. All changes in plans affecting the operations of the organization should be cleared through the routine planning unit of the central control group. The unit will not have an opportunity to correct its planning records unless this is done. Inaccurate and obsolete records make it certain that sooner or later the control group will issue incorrect operating information to subordinate line and staff groups. The result may be a very serious loss. It is likely that the control group will be blamed for it, although responsibility probably rests on a higher line executive. The problem is handled in many industrial organizations by means of a standard office procedure for engineering change orders. It clears various planning and control records and initiates action to bring them up to date.

Losses due to incorrect operating information are more probable when the organization has no executive for central planning. Each technical staff group may issue its technical instructions directly to the operating departments, sending a copy to the control group. The principal line executive does not have the time to act effectively as his own technical assistant. He relies frequently on self-coördination between his line and staff subordinates. He investigates their complaints when they believe that the performance of their functions is being interfered with because of poor service. He works on the principle that everything must be all right if no one "squawks." It is an optimistic viewpoint.

Routine Planning and Clerical Economy

Much of the "paper work" in any business originates with the routine planning function of control. It constitutes overhead expense. Hence it should be reduced to a minimum. A number of measures can be taken to accomplish this. They will be discussed later in connection with a brief examination of business procedure. It is sufficient here to note the more important of them: (1) elimina-

tion of procedural steps and informational requirements for which the need is questionable, (2) integration of a number of clerical functions in a single clerical instrument or form, (3) arrangement of the information on the form in a location and order that will facilitate transcription and use, (4) the use of an economical method of duplicating the information such as the Ozalid or Ditto processes, (5) the use of mechanical tabulating equipment such as IBM, and (6) standardization of operations.

Decentralization may reduce the clerical expense of staff control. It eliminates to some extent the necessity for records and reports as a substitute for personal direction and supervision. Standardization of operations tends to reduce the frequency with which information must be released and the amount that is required for control and execution.

The Scheduling Function and Time Coördination

Scheduling is the function of determining when or at what rate a project or program should be completed. Its objective is a basis for the time coördination of action. This basis should permit the most economical and effective accomplishment of objectives, insofar as coördination is concerned.

Coördination of action is the function of relating the activities that enter into the accomplishment of a program or project to the time objective of the undertaking. This must be done with respect to the correct time and order of performance. The purpose is the maximum cumulation of values in the desired end result with a minimum of expense, insofar as these effects depend on the factors of time and order of performance. Program and procedural planning determines the correct order of performance. It also determines the quantitative time requirements for each phase or step in the undertaking. Scheduling is concerned largely with converting these quantitative time requirements into chronological time objectives.

An undertaking may be composed of a number of major projects. These should be related in a program with respect to time and order of performance. A primary major project in a business organization may be any work of providing customers with certain specific goods or services in certain quantities of specified qualities at a certain cost, with deliveries and certain associated services at a

certain place, and at a certain time. Scheduling therefore involves determination of the correct basis of time coördination between projects as well as within projects.

It is evident that scheduling sets up constraints and regulations of subsequent operative activities with respect to time and order of performance. It is an important function of control. Effectiveness requires the satisfactory accomplishment of the business objective with respect to time as well as to quantity and quality. Good scheduling is a requirement for business success, because time is a limiting factor in opportunity.

Factors in Scheduling

The specific detailed factors in scheduling vary with each business and industry. They must usually be discovered by analysis of the control problem in each concern. There are, however, certain basic factors that affect the work of scheduling any business undertaking anywhere. These factors are:

1. Final time objectives that are definite and reasonably stable for the life of the undertaking.
2. Definite procedures for each kind of project in the program for the undertaking.
3. Factual information concerning the quantitative time requirements for the completion of each step in the accomplishment of each project.
4. The time relationships in performance that should exist between the various projects in the program.
5. The amount of work to be done in terms of the number of each kind of project to be completed.
6. The degree of assurance that the various physical and human factors necessary for the execution of each project will be available in the right kind, extent, and degree, when and where they are needed.
7. The degree of compliance with approved schedules.

The values that constitute the objectives of an undertaking must be accomplished with respect to the required quantity, quality, time, and expense. The determination of objectives, including criteria for their proper accomplishment, is a function of creative

planning. Time in itself is a value. The undertaking may be broken down into a number of major projects. These in turn may be broken down into a number of minor projects. The programing of major projects by major organizational divisions by chronological time periods is a function of scheduling for administrative control. Operative scheduling depends on administrative scheduling. Any significant change in the final time objective of a general undertaking or any of its major projects will change the basis of time coördination. Hence it may require a revision of schedules.

The order of performance of functions is determined by business procedure. The latter is presumably the most economical and effective method of accomplishing a certain objective that is practicable in the present state of the particular business art. The time required for the completion of each phase of a program depends on the time required for the completion of each step of each project. This depends, in turn, on the amount of work in each step, the available facilities for its performance, and the ability of the operative and executive personnel. Procedural and time requirements are determined by means of some technique of functional analysis, as noted previously. Quantitative time requirements usually are determined by time and duty study or motion and time study. There is generally a dependent relationship in performance between the various major and minor projects in an undertaking. The control group cannot be expected to do a satisfactory job of scheduling until it has been supplied with such information by various technical staff groups.

The number of each kind of project to be completed is obviously a factor in scheduling. In Fig. 54, it is 100 pieces of Part X. The quantity probably represents a reasonable anticipation of use, an economical amount with respect to production and storage costs, and other considerations. The time required for the completion of each step in a project does not always vary directly with the number of projects to be completed. The setup time for each operation (SU) is the time required to adjust and make-ready the machine for the operation. It is a constant, whether the run is 50 or 150 pieces on an order. The machining time (MT) for each operation, in terms of hours per 100 pieces, will vary with the number of pieces on the order. It will be 1.5 times as much if it is decided to run 150 pieces rather than the standard quantity. Any deviation from the standard

amount of work to be done will affect time requirements, and therefore scheduling.

The execution of any project, whether major or minor, depends on the availability of the required physical and human factors in production, when and where needed. A schedule is meaningless if these factors cannot be made available when and where they are needed in the kind, extent, and degree required for proper performance. Fig. 54 shows the principal factors that are required for the production of Part X. The specification of the labor factor in operation No. 10, planing, is given by the job specification for a planer operator, Class 28. The specifications of the physical factors that are required are indicated by symbols for materials, machines, and tools. The plan of work for Part X indicates that the concern is probably manufacturing standard products under conditions of intermittent manufacturing. A job-order control of production is usually necessary. It may be necessary to schedule the starting and finishing dates for each operation on an order for a standard quantity of this part. The schedule will be broken if the order arrives in Department 8 for Operation 20 while the special forming mill is still being made in the tool room. Responsibility for assuring the availability of the required performance factors rests on the preparation function. Scheduling depends on preparation.[2] They are related but different phases of control.

It should be unnecessary to comment on the requirement for compliance with approved schedules. Failure to comply with them destroys the basis of time coördination. Corrective action, on the other hand, is a line function, as we have seen. Time is of the essence in handling any emergency effectively. A line executive should have the authority to take promptly, within his jurisdiction, such action as may be necessary to remove an interference with the execution of a primary project. It is his responsibility to get in touch with the appropriate technical staff group, if he does not know the answer to the problem or is unable for any reason to apply it. He is

[2] W. H. Leffingwell pointed out: "To perform the work of scheduling correctly, the person engaged upon it must also have a knowledge of the clerical hours available, in order that work that cannot be done in the scheduled time will not be attempted, and this involves not only a knowledge of the total number of clerks present, but of the number capable of performing each kind of clerical work scheduled."—*Office Management*, p. 224.

also responsible for immediately notifying the control group about the interference and any changes in plans or schedules that will be necessary. It sometimes happens that operative executives become so preoccupied with the removal of interferences that they forget their obligation of self-coördination with the control group for their area of activities. Time limitations are not usually a satisfactory excuse. Most modern business organizations are well equipped with high-speed intercommunications devices. This lack of self-coördination may result in the subsequent breakdown of staff coördination, even though a good job of removing the interference may have been done.

Preliminary and Final Scheduling

A distinction can be made between preliminary scheduling and final scheduling. The preliminary schedule is the initial schedule for a program or project. It is based on the normal procedural and temporal relationships in execution. They may be determined by research and analyses of previous experiences with such programs or projects. They are practical to the extent that they are based on practical experience. These relationships may be expressed, either graphically or statistically, in the form of a "master schedule." A simple example is shown in Fig. 9 on page 85. It shows the basic relationships in the manufacture of a quantity of a product, Model X. The length of the bar after each part symbol indicates the amount of manufacturing time required for its completion. Part 5, for example, requires 32 days for its fabrication. It should go into production approximately 37 days before the completed order is shipped or stored, because 5 days are required for final assembly with other parts and subassemblies. Part 2 requires only 23 days, but it must be started approximately 38 days before the completion of an order for 25 units of Model X. It must be assembled with Parts 1 and 3 in a subassembly, before joining Part 5 for final assembly. It would be simple to locate the required operations for each part on its bar at a point proportionate to the manufacturing time for the operation. This has been done for Part 5. The scale of time in manufacturing days can be converted to calendar days when the final completion date for an order for 25 units is known. A schedule for the completion of each operation on Part 5 can then

be made. We have converted quantitative time into chronological time to determine when each step in the procedure for making a certain quantity of Part 5 should be completed. The quantitative time allowance for each step in the project must include a normal allowance for progress between steps, waiting time, and other minor delays, as well as the standard allowance of make-ready and performance time for the specified amount of work. The amount of this allowance for "dead" or "nonproductive" time is easily determined from the performance records for previous projects. The plan of work in Fig. 54 shows only setup and machining time per 100 pieces. The allowance for dead time is probably common for all orders that have approximately the same transportation and floor storage requirements. The method of scheduling would be different if either Part 5 or Part X were being manufactured under conditions of continuous manufacturing. It would then be necessary to determine and apply time rates of production. The basic principles would be the same. Some form of master schedule would still be required.[3]

The schedule for Part X may be unrealistic, even though it is derived from a master schedule that represents practical experience in applying the Principle of Simultation.[4] The actual condition of and relations between the performance factors in accomplishing this minor project may differ from the average or normal conditions and relations at a specific time. This may increase or decrease the required amount of "lead time" for this and other minor projects to which it is related in some major project.[5] The probability of such differences can be determined only by an advance check of these factors. This is a phase of the preparation function. The final

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[3] See L. P. Alford and J. R. Bangs, *Production Handbook*, Ronald Press, pp. 118, 130, 132, 135, 178, 179, for more detailed examples of master schedules in manufacturing.

[4] The Principle of Simultation says: With increasing simultaneous performance of the phases of a project or projects, the overall time for the completion of the undertaking tends to decrease relatively, approaching the time of the longest phase as a limit.

[5] The term "lead time" refers usually to the amount of quantitative time by which the start or completion of a minor project, or some phase of it, must anticipate or "lead" the final completion of the major project of which it is a part. The start of Part 5, in Fig. 8, must lead the completion of the order for Model X by 37 days.

schedule for a project is merely the preliminary schedule, modified to account for probable deviations of the actual conditions of performance factors from standard. Sometimes there are no deviations. The preliminary and final schedules are identical in such case. Sometimes preparation cannot give assurance that a potential major interference with execution can be removed before performance on some phase of a project is scheduled to start. It may be necessary, then, to reschedule the project entirely and take this condition into account.

Administrative and Operative Scheduling

It was noted above that operative scheduling depends on administrative scheduling. Operative scheduling is essentially project scheduling. Administrative scheduling is essentially program scheduling. It establishes a basis for time coördination between organizational groups and components. It does this by establishing deadlines for the initiation and completion of action on assigned missions. These missions are usually undertakings that must be completed by the responsible groups within designated time periods. The order of these time periods establishes the order of execution of assigned missions. The detailed scheduling of major or minor projects in these missions must conform to whatever administrative schedules have been established by higher authority. Information concerning such schedules must be dispatched from a minor administrative echelon to a major operative echelon, as suggested by Fig. 50. The problem of administrative control, including scheduling, will be summarized later.

Scheduling and Standardization

Scheduling involves the use of performance standards, directly or indirectly, in the determination of quantitative time requirements. Performance standards depend on the underlying classes of basic business standards. These are service standards, standards of function and policy, physical standards, and personnel standards. They have already been discussed. They may enter directly into the determination of a master schedule. An operative or administrative schedule becomes in itself a performance standard. It is an instrument in the subsequent evaluation of progress.

The Preparation Function

Preparation is the function of assuring that the specific factors which are required for the completion of some step of a project or some phase of a program will be available and present when they are needed, where they are needed, and in the kind, extent, and degree required for effective, economical performance. It is a function of control. Compliance with the necessary constraints and regulations governing execution should not be required until the availability of the necessary performance factors has been assured. Preparation is, furthermore, a phase of preliminary control. It must precede the execution of the particular project step or program phase to which it relates. It is concerned with the coördination of certain facilitative staff services. These are services that are responsible for the actual provision of performance factors in accordance with the line organization's need for them. Other reasons why preparation is a phase of control will become apparent shortly.

Preparation, Supply, and the Function of Organizing

The function of organizing was defined previously as the work of creating or providing the factors, conditions, and relationships underlying the execution of a plan.[6] It has its managerial and operative phases, like any other business function. The managerial function of organizing is the function of executive leadership in the work of creating or providing these underlying requirements. It is an organic function of management.

Organizing follows creative planning. The basic general conditions necessary for the achievement of a designated objective are specified, directly or indirectly, by the plan. Organizing must precede execution and its preliminary control. The reasonableness of any order or directive depends on the extent to which the underlying conditions for effective, economical execution are present before action is to begin.

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[6] Henri Fayol defined the function of organizing as follows: "To organize an undertaking is to provide it with everything useful for its running; with materials, plant, capital and staff."—*Industrial and General Administration*, p. 42. (The Storrs translation, published by Pitman in 1949, says: "To organize a business is to provide it with everything useful to its functioning; raw materials, tools, capital, personnel."—*General and Industrial Management*, p. 53.)

Organizing also precedes the performance of the preparation function. Organizing has to do with providing the performance factors, conditions, and relationships underlying the successful execution of the plan. These requisites are basic and therefore general. Preparation assures the presence of certain requisites before action starts on a particular phase of a program for the execution of the plan, or on a particular step in the execution of a project in the program. It is primarily a coördinating and checking function. It does not physically provide anything. It is concerned with coördinating the provision of specific requisites for the execution of particular projects.[7] The distinctions between organizing and preparation are not always clear to all executives and students of management. One reason is that the functions of organizing and preparation become more closely associated as we approach the level of major administrative management. Administrative control is concerned largely with the coördination of projects having to do with planning and organizing the activities of the organization, as a whole, over an extended period of time. It is concerned with the coördination of current programs, but not directly with current operative projects. The preparation function in operative control, on the other hand, has to do with coördinating the provision of

[7] The evolution of thinking with respect to this distinction between organizing and preparation is not clear-cut. Fayol recognized the function of organizing, as indicated by the preceding footnote. A. Hamilton Church said that the equipment function is "that organic function that provides conditions for production."—*The Science and Practice of Management*, p. 64. This could refer to either general or specific conditions. According to John E. Otterson, preparation prepares the job for the workman, assembles plans, materials, and tools, provides power and light, removes interferences—in short, establishes the conditions under which he must work and makes these as nearly standard as possible (from a manuscript on management at the Boston Navy Yard in 1912 that was privately published and distributed). The preparation function at the Winchester Repeating Arms Company in 1917 was quite similar to our definition of it. Hugo Diemer, in 1925, also gave a descriptive definition of the preparation function in production control. It related the function directly to the work of preparing for the execution of a production project. Oliver Sheldon said in 1930, however, that the preparation function has to do with "the activities necessarily preceding manufacture. It has to do with the provision of the necessary plant, tools and machines."—*The Philosophy of Management*, pp. 55, 57. Balderston and his co-authors included in the dispatching function some activities that the present author would include in preparation. See *The Management of an Enterprise*, p. 336 of the 1935 ed. and p. 270 of the 1949 ed.

definite quantities of certain performance factors that are required for particular operative projects at a certain time. The peparation function in administrative control is not as obvious.

A distinction should also be made between the functions of organizing and supply. The work of providing the general performance factors that underlie the successful execution of all projects in all the programs in a plan is obviously a phase of organizing. The work of providing the specific factors that are needed at a given time for the execution of a particular project or a phase of a particular program is a phase of the supply function. The coördination of the actual provision of these factors with the needs of coördinate and subordinate groups which are responsible for such execution is a phase of the preparation function. The work of organizing a manufacturing concern for the production of a new model of product, for example, includes the provision of initial inventories, the provision of initial tooling, the initial provision of good general working conditions, the provision of the initial manpower, the activation of the required organizational changes, the training of personnel in new assignments and duties, and similar activities. The purchasing department participates in this work of organizing by procuring the initial inventories of purchased materials, equipment, and supplies. The personnel department participates by procuring the initial manpower from internal or external sources, and in other ways. Other staff departments perform other functions, under line direction, that facilitate the work of organizing. Some of these same departments perform supply services subsequently, when the work of organizing has been completed and the work of operating has begun. The work of the purchasing department in buying later whatever materials and supplies are needed for the maintenance or expansion of inventories is a materials supply function. The work of the personnel division in providing trained replacements for employees who leave the organization after it goes into production, or providing additional manpower to handle a seasonal expansion, or in carrying on similar activities, is a personnel supply function. The supply functions of a staff organization are facilitative. A staff group usually has other facilitative functions, in addition to any supply duties with which it is charged.

The Organic Nature of Preparation

The principal objective of preparation is maximum practicable assurance that there will be no serious interferences with the execution of plans as the result of failure to supply the required performance factors when and where they are needed. Some performance of this function is necessary whether the activity to be controlled is done by an individual or a group. Analyses by competent students of management have indicated the universal necessity for its performance in the control of manufacturing operations. They have recognized the necessity for a prior provision of performance factors, despite some confusion between organizing and preparation. It was noted previously that executives cannot insist on compliance with necessary constraints and regulations governing action in the absence of an adequate provision of these factors. The necessity for some performance of the preparation function is not confined, furthermore, to economic institutions.[8] Preparation must be regarded, therefore, as an organic function of control. The manner and extent of its performance may vary greatly, however, with the kind of undertaking and the conditions under which it must be accomplished.

Preparation and Preliminary Control

Preparation was classified above as a function of preliminary control. It is shown in Fig. 50, and elsewhere, as following routine planning and scheduling, but preceding dispatching. The scope of preparation is broad. It covers the provision of any factors, either human or physical, whose availability at the right time and place cannot be assured, in the kind, extent, and degree needed, without a definite check and coördination. The necessity develops, of course, from the fact that there would be serious interference with the ac-

[8] This necessity is clearly recognized in military organization, for example. It is a dictum of the United States Army that "careful preparations contribute materially to the success of a march."—General Service Schools, U.S.A., *Command, Staff and Tactics*, p. 106. In speaking of the British Army, L. Urwick said that general staff duties include, among others, "the anticipation of the difficulties likely to be encountered on matériel required."—*Organization as a Technical Problem*, p. 21.

complishment of the mission if these factors were not available at the time of execution.

The kind, extent, and degree in which these factors are needed are indicated frequently in the plan itself. Where they are needed should also be stated. Otherwise, the source where this information can be obtained should be indicated. The plan and the various subplans that are developed under it are released for execution by routine planning. Scheduling determines when or at what rate the various operative functions in the accomplishment of the undertaking should be performed. It indicates when these factors will be needed or at what rate they should be supplied during a certain time period. It is evident, therefore, that the control functions of routine planning and scheduling must be performed in some degree before preparation can be undertaken intelligently. We said above that an order or directive should not be issued unless there is reasonable assurance that it can be executed. Preparation should precede dispatching for this reason.

The Principle of Continuous Control may affect this as well as other control functions. It may be possible to perform the preparation function once and cover the execution of a series of projects over an extended period of time. The clerical work that is required to complete adequate preparation is reduced in amount and cost, but not in importance. Interference with production can still be quite costly. Performance of the preparation function should still be supervised by a coördinative staff head who has executive ability.

Coördination of Technical Staff Services of Facilitation

It was noted earlier that routine planning has a staff responsibility for coördinating technical staff planning services with the requirements of the line and other staff groups for such services. Preparation has a staff responsibility for coördinating technical staff facilitative services with the requirements of the line and other staff groups for them. The function of preparation has to do largely with coördinating the actual provision of the performance factors that are required for the execution of an undertaking. It breaks down into two general phases:

1. Coördination of the provision of general performance factors needed for the work of executing an organizing project.

2. Coördination of the provision of specific performance factors needed for the work of executing an operating project.

The basic functions of staff departments have to do with staff assistance in planning or controlling primary operative performance. The departments usually participate with the line organization in the work of organizing. Most of them perform, in addition, certain facilitative functions that are associated with their principal duties. Facilitation may be defined as the function of making an action easier or less difficult to do. Staff facilitation in business organization has to do, directly or indirectly, with making it easier or less difficult for the line organization to perform the company's primary functions, the creation and distribution of salable goods or services. This definition can be interpreted to include all staff services.[9] It is limited here to include only the activities that have to do with relieving the line or other staff organizations of work that is not immediately a part of their basic functions. It is facilitative, since it is work that these groups would have to do for themselves if it were not done for them by a staff group. The basic functions of a product design department in a manufacturing plant, for example, have to do with product planning. It is concerned with determining what physical functions should be performed by the product, and in what manner, to permit the customer to obtain the particular satisfactions he desires. It determines what the characteristic attributes of each component part and assembly should be to enable the product to perform its physical functions properly. It does other work that falls in the general classification of creative planning. In addition, it does some work that obviously does not. The design department probably operates blueprint machines and other duplicating devices in a distinct section. It furnishes blueprints and copies of specifications to other departments, both line and staff, on authorized requisitions. Such work is facilitative, as

[9] Oliver Sheldon, for example, defined facilitation to include "the activities contributory to production." Its purpose, in his opinion, was "to take over those necessary activities which are not inherent in the immediate manufacture of the goods, so that the concentration of effort upon such manufacture may be unhampered by considerations of an alien character."—*The Philosophy of Management*, p. 55. (The need for facilitation is of course not confined to manufacturing industry.)

we have defined the term. The internal coördination of the work of planning and associated facilitation is the responsibility of the staff department or division that does it. It may be done largely for the responsible staff executive by a secondary control group, if the particular staff organization is large enough to warrant it. The interdivisional coördination of planning and associated facilitation is a responsibility of routine planning in a primary coördinative staff group. Preparation is concerned with coördinating subsequently the actual provision of the performance factors that are needed for organizing and with the supply of these or other factors when execution of the plan begins. It is therefore concerned chiefly with the interdivisional coördination of staff facilitative services of procurement and supply. The more important of these services in a manufacturing plant are rendered by the personnel, purchasing, transportation, stores, and tool-making departments.

Neither routine planning nor preparation has any direct responsibility and authority for the control of activities in any staff organization. They do have staff control responsibilities and authority, insofar as the interdivisional coördination of technical staff facilitative services with line requirements is concerned. Hence they may find it necessary to perform, in a simple manner, the five staff control functions to accomplish interdivisional coördination.

Provision of the various performance factors in the execution of a project is originally the duty of the line organization that has primary responsibility for the project. The time and effort required for their provision are a subtraction from the effectiveness of primary line performance. The continued existence of the organization depends on the creation of primary values with maximum economy and effectiveness. The development of the preparation function of staff control tends to be a natural evolution with organizational growth. The development can take place as a result of either trial and error or rational analysis based on sound managerial principles. The difference in terms of expense and effectiveness may be considerable.

The Principal Subfunctions of Preparation

The performance of the preparation function, following the receipt of plans and schedules, tends to break down into certain subfunctions. Their general nature and order of performance tend to

be typical, because they are based on the staff phases of control. The order of their performance is a consideration in the design of control procedure. The principal subfunctions are:

1. Determination of the probable availability of each performance factor, when and where needed, as specified by plans and provisional schedules.
2. Notification of the scheduling function as to when these factors will be available, in the event that they cannot be provided as scheduled.
3. Determination of when or at what rate these factors should be provided, as required by the final project schedule or program.
4. Origination and release of instructions and orders for the provision of the factors that are not permanently available or at present in adequate supply. There is no need to order adequate artificial lighting. It may be presumed that an adequate lighting installation is in place and operable. There is no need to order purchased materials for a production order when there is an adequate supply on hand.
5. Follow-up of progress in supplying the factors for which specific provision must be made.
6. Initiation of corrective action, when and as interferences with the scheduled provision of performance factors develop.

These subfunctions can be performed poorly, even though they are obvious. The reason may be that they involve chiefly routine clerical operations for most projects under normal business conditions. Their importance became painfully apparent in connection with "subcontracting" during World War II. Serious interferences with important programs arose because it was extremely difficult to perform the functions of preparation and procurement properly. Large staffs and much money were required, in many instances, to do even as well as was done.

Preparation and the Time Objective

Some performance of the control function may be necessary at any level where coördination of activities, either mental or manual, is necessary. Administrative control is group control. It is concerned with group action in accomplishing the long-term objectives of the organization. It deals with the execution of current general

programs, but more with planning and organizing for future action. Preparation in administrative control tends, in consequence, to be associated more with the function of organizing. It is of course concerned with the administrative supply problems associated with current operations. The pressure of time is not as great as at the lowest level of the organization. The preparation function in operative control may have a short lead time on the operation that is to be supplied. The importance of the preparation function is increased when the chronological time required for the completion of the project leaves little time for any performance of the function of corrective action. Potential interferences with execution must be discovered and eliminated before action begins. Otherwise, the mission may be potentially a failure before it starts. This does not mean, of course, that preparation is important only under emergency conditions in which time is of the essence. It is usually important in the control of any activity on any organizational level at any time.[10]

The Dispatching Function

Dispatching is the function of constraining and regulating action through control of the release of authority to act. The term and the concept were taken by Emerson from the field of railroad management. He said that "the despatcher issues orders to the conductor and to the signal men, thus controlling the train from both ends."[11]

The objective of dispatching is effective time coördination of the

[10] Thomas R. Jones has stated this idea as a Principle of Preparation: "There should be no business move, whatsoever its nature, without thorough and timely preparation, such preparation to be as exhaustive as permitted by the importance of the move."—*Theories and Types of Organization*, p. 28.

[11] Harrington Emerson, *Twelve Principles of Efficiency*, p. 245. Some management students have diverged from Emerson's original idea. Spriegel and Lansburgh say: "Dispatching involves the meeting of schedules by proper utilization of machines, work places, materials and workers, as designated by routing."—*Industrial Management*, p. 466. According to Balderston, Brecht, Karabasz, and Riddle, the term dispatching "designates the detail job of actually putting the plans into effect, that is, handing out the various orders and tickets that have been prepared in advance, and otherwise attending to the work of getting to the workman when he needs them, the materials, tools, instructions sheets, and shop drawings."—*The Management of an Enterprise*, p. 272. These definitions do not distinguish between the preparation and dispatching functions, as noted previously. They have to do with an operative control of production in manufacturing industry. Dispatching is a function of control in any industry at any level.

action by the chain of command to which the control group is attached. Dispatching is not concerned with coördinating technical staff action with the needs of this chain of command for staff service. This is the responsibility of routine planning or preparation, depending on the nature of the required service.

Dispatching accomplishes its objective by withholding the authority to act until the subordinate individual or group that is responsible for execution cannot violate seriously the planned order of action or its time schedule. This release of authority must take place sufficiently in advance of the scheduled date for commencing action on the particular project step or program phase. What is sufficient depends on how much time is required by the offices of subordinate executives to complete their own work of preliminary control. Coördination that is too close may cause delays. Coördination that is too loose also may cause delays. The accomplishment of a mission would depend, in the latter case, on self-coördination, plus such personal executive coördination as can be given, if everyone who had anything to do with the undertaking were given *carte blanche* authority. This may be satisfactory in a marketing organization in which close time coördination between the selling activities of individuals and groups is not important. It may be most unsatisfactory in a manufacturing organization in which this coördination is important. Local interests tend to take precedence over organizational interests, except as line direction and supervision can prevent it. Under conditions of intermittent manufacturing, for example, shop department heads may run the orders that will best build up their production record. These may or may not be the orders that will best serve the current shipping schedule. Parts may be shipped to stores, while an assembly order is held up by a shortage of other parts that are made in the same department.

We saw earlier that any staff group may be required to render facilitative services, provided that they bear some functional similarity to the principal functions of the group. Dispatching is an example. It renders facilitative services to direction, in addition to its principal function of controlling the release of authority. These services have to do with the release of technical instructions and information. The latter should be distinguished from operating orders. Such orders initiate action by releasing authority to act when

properly signed by or for a responsible line executive.[12] These releases of instructions and information are necessary, under some conditions of control, for the performance of preliminary control functions on lower levels. Separation of the routine informational services from the function of dispatching may make it possible to increase the closeness of control without the hazard of interference with execution. Technical information and instructions carry with them no authority to act. They can be released as far in advance of the scheduled date for the action to which they relate as is practicable. Subordinate groups can complete routine planning, scheduling, and preparation at their convenience. They cannot initiate action, however, until they receive an order that authorizes it. Dispatching can therefore be delayed until shortly before the action is scheduled to start. This principle is used in the order-of-work method of dispatching under conditions of job-order control and intermittent manufacturing.[13]

Dispatching and Decentralization

Dispatching is a command function.[14] It involves controlled release of authority to act. Authority is the right of decision and/or

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[12] E. H. Schell says: "The order is the directive impulse which makes coordinative action possible. It should proceed down the proper paths of authority in an orderly fashion."—*Technique of Executive Control*, 2nd ed., p. 34; see also 7th ed., p. 59. Writers confuse technical orders which release technical instructions and information with operating orders which release the authority for action. Dexter S. Kimball, for example, said: "Under orders may be classified all instructions and directions."—*Industrial Economics*, pp. 220–221.

[13] It is believed that the order-of-work method was devised by H. L. Gantt. An example of an installation made under Gantt's direction will be found in Ralph C. Davis, *Principles of Industrial Organization and Management*.

[14] Henri Fayol said: "To command means to make the staff do their work. . . . Authority is the right to command and the power to make oneself obeyed."—*Industrial and General Administration*, pp. 9, 20. This reflects the point of view of a general industrial and governmental executive. The military viewpoint is reflected by the following statement: Commanding is "the activation of the plan developed by planning and for which the requisite conditions for execution have been established by the function of organizing. . . . The issuance of orders and instructions in consonance with organizational decisions is part of the function of commanding."—Col. J. B. Beishline, *Military Management for National Defense*, Prentice-Hall, p. 199. According to L. Urwick: "Command is the function of administration which is difficult for the chief to delegate. But the operative instruments of Command are orders and instructions."—*Organization as a Technical Problem*, p. 13.

command. Decentralization requires a permanent delegation of authority and responsibility for designated kinds and types of actions to subordinate executives and operatives. The delegation must be in conformity with the principle of homogeneous assignment. The amount of responsibility and authority that is delegated must be sufficient to enable the responsible executive to exercise leadership with respect to the particular activities. This leadership is exercised chiefly with respect to groups and individuals in lower echelons who are under his command. These subordinates, in turn, may and often should delegate a large portion of their responsibility and authority to their subordinates. This is necessary, under some conditions, to secure the advantages of decentralization that were discussed previously. Regardless of the degree, decentralization is basically an organizational phenomenon. Delegations for purposes of decentralization are not usually made to accomplish a specific project, or a phase of a program, that is scheduled to be accomplished in a short period of time. They are made to broaden the basis of action by subordinate groups over a long period of time. They are subject to change, of course, when unexpected developments make it desirable.

The problem of delegation, then, is one of administrative management. The development of directives establishing the nature and extent of the delegation is a problem of administrative planning. The directives may be worked out by technical staff groups on the administrative and major operative levels that are responsible for organizational planning. These directives become technical orders when they are approved by higher line authority. This will probably be the executive vice-president or president of the company, in the case of top management organization, because of the importance of the problem. The release of this authority is a control function. It should be made, therefore, through a coördinative staff group on the organizational level where it originates. Dispatching is the control function that should carry out the mechanics of delegation.

Dispatching and the Closeness of Control

The manner in which the dispatching function is performed is conditioned by the closeness of control that is most economical and

effective. A number of considerations govern the degree that is most desirable. The following are the most important in most control situations:

1. The degree of centralized control that is desirable.
2. The degree of standardization that is practicable.
3. The lead time that is imposed on dispatching by external factors.
4. The extent to which the release of technical orders can be differentiated from the release of operating orders.
5. The speed, capacity, and accuracy of the communications devices that are available for dispatching purposes.
6. The time span between the completion of preparation and the time objective of the activity for which it is made.
7. The degree of physical contiguity between organizational groups performing successive complementary functions in the completion of an undertaking.

The closeness of control of an activity depends on the closeness of the time of dispatching to the time when action should commence. Centralized control usually requires that the time of release of authority to act shall be close to the time for the initiation of action. The advantages of centralized control of operations have to do with minimum inventories, maximum turnover of working capital, shorter customer promise dates in the case of manufacturing establishments, higher production and distribution of customer goods and services per square foot of operating floor space, more continuous use of the human and physical factors in primary operations, and others. These advantages have an important bearing on the economy and effectiveness of business operations. They depend on the close coördination of business functions, both primary and secondary. The basic factors in coördination are time and the correct order of performance, as we have seen. It is for these reasons that centralized control usually requires close dispatching. There are many offsetting advantages of decentralized control. The degree of centralized control that produces optimum economy and effectiveness is usually the result of some compromise.

Most of the considerations affecting the closeness of control have to do with those affecting the optimum degree of decentralization.

Close dispatching is possible and desirable when the principal factors and forces in an operating situation can be highly standardized and these standards can be maintained. There is little likelihood of intervening interferences and emergencies. However, the lead time for dispatching, as well as preparation, may be affected by factors beyond the control of the organization. Steel mills find it necessary during periods of prosperity to increase the time required for the delivery of orders. Purchasing agents necessarily increase the lead time for purchase orders and delivery schedules. Inventories tend to increase. The procurement policy changes to accommodate the need for, 30-, 60-, 90-, or 120-day coverage. It is evident that the lead times for primary planning, scheduling, and preparation are increased. The closeness of secondary, and possibly primary, dispatching is reduced by an external factor. The characteristics and capacities of communications devices are a factor in centralized control. The central control point must promptly receive complete information concerning what action is taking place where and when, and what results are being accomplished. It must be able to send orders and instructions directly and quickly to the points where actual results are deviating from planned performance. Close dispatching is required. It obviously depends on a good communications system. It was noted earlier that close dispatching becomes more practicable as its facilitative functions of releasing technical orders are differentiated from its basic function of releasing operating orders. It was also noted that close dispatching becomes more necessary as the time span between preparation and the time objective of the particular activity shortens. This is associated with the degree of physical contiguity between organizational groups that participate in the execution of an undertaking. Dispatching in administrative control need not be close when the company is engaged in multiplant operations with wide geographical distribution. Both administrative and operative controls should be highly decentralized under these conditions. A continuous flow of a large volume of information by teletypewriter between corporate and divisional headquarters does not necessarily indicate centralized control.

The closeness of control affects greatly the manner in which orders and information are handled. It affects the performance of

other control functions. The required closeness of dispatching is an important factor, therefore, in the design of the control procedure.

Phases of Dispatching

The staff work of dispatching is important, but it is susceptible to a high degree of routinization. This is particularly true in the case of projects that are repetitive, for which conditions and methods can be highly standardized. It is one reason why much of the work of dispatching can be assigned to a coördinative staff group. The basic subfunctions of dispatching are, in consequence, few and relatively simple. They are:

1. The receipt and filing of information concerning plans, schedules, and orders against scheduled release dates.
2. The authentication of orders and their release at the proper time.
3. The receipt of returns showing the progress of execution.

It is usually desirable to keep together operating orders, technical orders, and other papers giving information on the execution of the undertaking until preparation has been completed. Inability to complete preparation for a certain step or phase of the undertaking may make it necessary to reschedule it. A change in the basis of timing changes the basis of dispatching. Therefore, the receipt of control papers by dispatching should indicate that preparation has been completed satisfactorily. Some control procedures, in fact, require the person responsible for preparation to endorse the operating order to this effect. The control papers must be filed against the dates when they should be released to the organizational components that are responsible for the execution of each project step. The date for the release of the set of papers for a given step or phase of the undertaking should lead the starting date for the phase by a sufficient period. Otherwise, proper performance of managerial and operative functions on lower echelons may not be possible.

Fig. 54 may be used to illustrate what is meant by lead time in dispatching. A simple but crude method of releasing authority and information would be to dispatch the production papers with a lead time of two operations. A raw-material requisition may be sent to stores sufficiently in advance of the starting date for Opera-

tion 10 to permit it to be filled and delivered on time. The production papers for Operation 10 may be forwarded to Department 12 at the same time. The production papers for Operation 20 may be forwarded to Department 8 when the materials are delivered; for Operation 30 when notice of the completion of Operation 10 is received. This procedure could be used by a small organization which has job-order control of intermittent production. The Principle of Continuous Control begins to affect dispatching when we come to large organizations engaged in continuous operations under standardized conditions. A single release of authority and information can cover operating requirements for a considerable period of time. It becomes more and more possible, with increasing organization size, to differentiate the release of technical orders and information from that of operating orders. Furthermore, the lead time is greater in dispatching for administrative control than it is for operative control. The plant is working further into the future, and the degree of decentralization tends to be greater. What constitutes a correct lead time for dispatching varies with each kind and size of business, the conditions under which it operates, and the level on which control is exercised. There is, nevertheless, a correct lead time.

One purpose of staff control is to relieve line executives of the detailed paper work that is involved in control. This includes the work of approving and signing various orders and other directives. The responsible executive can delegate to his coördinative subordinate in charge of his control department the right to sign for him, or otherwise authenticate, various kinds of orders under specified conditions.[15] The coördinative staff executive can delegate this right, with further restrictions, to his staff subordinates. The logical individual is the person who is responsible for the performance of the dispatching function. He may be a minor staff operative, but he should have intelligence and good judgment. There are frequently exceptions to the conditions in which he may sign for the line executive. He should be able to recognize them and should refer them to his staff superior, the control chief. The latter has no line authority outside the control department. He is merely acting for his

[15] These conditions were discussed more thoroughly earlier in connection with coördinative staff organization structure.

line chief. It has been said that the authority to issue an order involves the responsibility of seeing that the order is carried out. The dispatcher does not release his own order, however. He relieves the line superior of the work of releasing the latter's authority. Comparison checks the status of the undertaking. It reports to the line superior significant deviations from planned performance. Corrective action is a line function of control, except for routine adjustments of current execution. In the case of important deviations it should be performed under the personal supervision of the line superior. The responsibility for seeing that an order is carried out rests in the line.

There is, of course, danger of the bureaucratic "layering" that was mentioned previously. Mediocrity frequently finds security in authorized procedure. It sometimes insists on following it without deviation for this reason. Minor line executives are sometimes jealous of their authority. They may insist that all orders to and reports from their organizations pass through their office, thus increasing the time required for transmission. No action should be taken that tends to break down unity of command and single accountability, or otherwise vitiates the position of the line as the backbone of the organization. Nothing is gained, on the other hand, if the line authorities between the point of action and the control echelon have nothing to contribute. The simultaneous release of orders and information and their direct transmission, rather than a serialized release, adequately protects the position of the intermediate line authorities in the case of routine dispatching. It makes possible closer control by reducing the lead time required for dispatching. The intermediate executives should have adequate opportunity to make objections. This should hold up the action until a meeting of minds can be achieved, unless an emergency exists. The problem of layering tends to decrease, of course, with increasing managerial decentralization.

The Organizational Significance of Dispatching

Dispatching is one of the important linking functions between organizational echelons, as shown in Fig. 50. It releases the authority that initiates action on lower levels. It may receive the returns showing the results accomplished. It may note the completion of

specific project steps or program phases as the basis for further dispatching. It then forwards the information to the comparison function for progress control purposes. No use is made of the information, however, under some types of automatic dispatching. The third subfunction of dispatching obviously becomes inoperative. There is a close functional and temporal relationship between dispatching and comparison. They are sometimes combined for this reason, when there is not sufficient work to keep separate individuals or units busy.

CHAPTER 19

CONCURRENT CONTROL OF OPERATIONS

Significance of Concurrent Control

The preceding chapter dealt with the functions of preliminary control. These functions—routine planning, scheduling, preparation, and dispatching—were concerned largely with setting up, in advance of action, certain constraints and regulations designed to assure the proper execution of a plan. They were performed for each step of a project or phase of a program that required control, or for the undertaking as a whole. The kind, extent, and degree of control depended on the nature of the undertaking and its requirements for proper performance. The present chapter deals with the functions of concurrent control. These are, in general, the control functions that apply constraints and regulations while execution is in progress. They are the only functions that can cope with contingencies which cannot be anticipated. They have a peculiar significance for this reason. Like the functions of preliminary control, the kind, extent, and degree of their performance vary with the conditions and requirements of the particular undertaking. They too are organic, in the sense that they must be performed somewhere somehow by someone at some time, if there is to be effective control of activities. This applies to administrative as well as operative control of business activities.

Direction

Direction is the function of interpretation and instruction concerning the requirements for the execution of a plan, or some phase

of it.[1] Its primary purpose is the constraint and regulation of action by interpretation, explanation, and instruction concerning the project and its requirements. Direction supplements, at whatever level it is performed, any information and instructions received through channels from higher authority. These channels may be the chain of command or some designated staff channel of communication. A responsible executive must usually perform the function of direction, in either case, with respect to the requirements for the effective, economical execution of orders and instructions from higher authority in the area of operations under his command. This is true whether the executive is president of the company, a subordinate of the board of directors, or a department head who is a subordinate of a divisional operative executive.

The Organic Nature of Direction

It was implied above that direction is an organic function of control. This may require additional discussion. Planning, organizing, and the preliminary phases of control always involve some degree of futurity. This degree increases with the level on which the control function is performed. Instructions from higher authority, therefore, can never be fully complete or exactly accurate. This is true, even though they are based on sound plans. Some details of execution cannot be determined until the time and place of execution draw nearer, because of limited foresight. Furthermore, different individuals frequently place different interpretations on the same instructions. Hence the necessity for some interpretation and supplementation of instructions from higher authority tends to be universal. This is one reason why plans drawn up on higher levels are usually broad and general, rather than detailed and specific. They must have the flexibility that makes effective direction possible on lower

[1] Webster Robinson recognized the importance of direction in the constraint and regulation of action. He did not regard it as a part of control. He defined control in a manner that restricted it largely to the function of comparison. Furthermore, his function of direction included planning as well as instruction. He said: "Direction is the factor which governs the conduct of the whole organization. It is the source of all decisions, the origin of all judgments. It is the force which combats the inertia of the organization and insures its constant progress toward the desired goal. . . . It includes all those factors which determine the type of action that the organization is to take."—*Fundamentals of Business Organization*, pp. 107–108.

levels. Direction assures the orientation of action toward desired objectives by insuring the effective use of facilities and personnel while action is taking place, or immediately before. It does this by making possible adequate understanding of orders and instructions from higher authority. The need for this contribution is not confined to business organizations.[2] It is found in any organization, whether military, political, religious, or of any other basic form. It may therefore be regarded as organic.

Performance Characteristics of Direction

The performance of direction may be personal or formal. It may be written or oral, or both. The communication of additional details is frequently necessary at the point of performance. This may be done to assure a more exact adjustment of conditions and methods to the requirements for effective, economical execution at the time of performance. Direction is often performed personally by the responsible executive, because of the importance of the function in relation to time objectives. It frequently involves the exercise of face-to-face leadership by the executive with respect to his immediate subordinates. The personal characteristics of direction are more important for this reason. Its formal aspects are usually routine and minor. In most instances they are performed in connection with dispatching. This may take place when oral instructions are confirmed in writing and issued through some staff agency. The performance of direction is both personal and formal in this case.

Technical Orders and the Function of Direction

A technical order is a release of authority that puts a plan or some phase of it into effect. It does not authorize the activation of the plan. That is the function of an operating order. Such orders may be administrative or operative. The latter are derived originally from the former. A copy of a plan, when approved by or for the responsible line executive, may become a technical order. Many examples, such as approved organization manuals, standard practice

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[2] Mooney and Reiley say: "Napoleon never gave an order to a subordinate without explaining its purpose, and making sure that this purpose was understood."—*Onward Industry*, p. 297. Napoleon apparently distinguished between the function of dispatching and the function of direction.

instructions, product and process specifications, and others, are found in business concerns. Operating orders usually are separate documents. They activate the execution of programs or of projects included in programs. These programs and projects are set up under the plan, and are part of it. This differentiation of technical and operating orders is generally necessary to facilitate the work of organizing for execution. It is necessary also to facilitate the timing of execution and the development of closer control.

The release of technical orders affects the coördination of action. The plans that are put into effect supply the basis for action. A function of routine planning is the coördination of technical staff planning with the needs of the line and other staff groups for information concerning plans. Dispatching is the function of controlling the release of authority. Technical orders do not authorize action. It is not necessary, therefore, that they be released through the control group on the level where the plans originate. Some concerns do not do this. Such release is desirable, however, and by the individual or unit that is responsible for dispatching.

Direction on lower echelons obviously cannot occur until the plans have been originated and released. It may take place initially by conference between the responsible line executive, his technical staff subordinates who assisted in developing the plan, and his line subordinates who must accept responsibility for the execution of the plan or a particular phase of it. The initial direction in activating the major operative phases of a manufacturing plan and program may take place, in the example shown in Fig. 26, in a conference between the general manager and his various plant managers. Certain headquarters technical staff executives may be requested to attend in order to supply any detailed explanations the plant managers may ask for. The vice-president in charge of manufacturing may also sit in. The importance of the plan is enhanced if initial direction is performed personally by the responsible line executive. Conversely, the plan tends to "lose face" if it is performed for him by a minor functionary. It is presumed that the plant managers and their staffs were coördinated during the development of the plan and had an opportunity to participate, insofar as the detailed planning of their operations was concerned. The work of organizing, following the conference, will require further interpre-

tation and explanation. It is likely that it will be done for the administrative line executives by representatives of the headquarters staff groups involved. They will contact their corresponding numbers at the plant level, and may attend conferences between a plant manager and his staff at which he performs personally the function of direction, as needed. This statement assumes a satisfactory development of staff parallelism.

Direction is associated chiefly with action having to do with organizing and executing the plan. It may play a part in planning, since a project for the development of a plan also must be controlled. It tends to take place concurrently with or immediately following the release of operating orders. It becomes associated more and more with execution as we approach the point of operative performance. It involves individual face-to-face conferences between supervisory executives and operatives at this point. It may take place occasionally while performance is progressing on some step of a project or some phase of a program, when supervision shows it to be necessary. Direction, in the example in Fig. 26, progresses downward as we proceed to the execution of detailed plans and projects. Further conferences between the general manager and the plant managers for directive purposes are likely to be concerned with the detailed development of future operative plans.

The Line Organization and Direction

It is evident that the function of direction plays an important part in the exercise of executive leadership. The executive does not relieve himself of his responsibility and authority by delegating it. It is imperative, therefore, that the responsible executive assure himself that his instructions will be adequately understood by subordinate executives. The transmission of orders and instructions is likely to be garbled if subordinates do not have a clear-cut, accurate understanding of them.[3] Friction, delays, and other difficulties tend to arise. Direction establishes the prestige of the plan. It offers an opportunity for the face-to-face leadership of subordinates. It tends

[3] Webster Robinson said, concerning instructions, that "their full value will not be realized unless the instructions reach the operator in an exact and intelligible form. To be effective, direction must travel from its source to its objective without change of modification."—*Fundamentals of Business Organization*, p. 125.

to reinforce unity of command.[4] It is basically a line function of control for this reason. This does not prevent the responsible executive from making use of the facilitative services of either coördinative or technical staff in connection with the performance of direction. Effective use of staff is the mark of a competent executive, regardless of the management function that is being performed.

The Problem of Overdirection

There are various conditions and problems of direction. Many of them are too detailed for discussion here. One, the problem of "bossing," should be mentioned. It involves "overdirection."[5] A "bossy" person is one who gives unnecessary directions, or explanations and instructions in greater detail than is necessary. Overdirection is a waste of time for the superior and the subordinate. It interferes with execution. It irritates the subordinate when it is construed as a reflection on his intelligence. Most subordinates welcome direction, because it aids them in doing their jobs. Overdirection, on the other hand, tends to be a morale depressant.

Overdirecton should be distinguished from "redirection." The latter term refers to the necessity for a repetition of directions when supervision shows that they were not understood. It may refer to the necessity of modifying original directions, within the framework of the applicable orders and instructions, when changes in the conditions of execution require it. Some explanation of the reasons for the change should be given, to avoid loss of respect for the judgment of the executive.

The need for direction tends to decrease as the standardization of methods and conditions increases. This requires considerable volume and continuity of demand. It implies reasonable stability of primary service objectives. The Principle of Continuous Control is applicable to direction, as well as to other control functions, under these conditions.

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[4] Alfred P. Sloan of General Motors is quoted as saying: "Under no circumstances should instructions be given by any, regardless of that authority's status in the Corporation, to that part except through its duly appointed chief executive."—James D. Mooney and Alan C. Reiley, *Onward Industry*, p. 509.

[5] Henry S. Dennison has used the term "continuous direction" for approximately the same thing. See *Organization Engineering*, p. 48.

Direction and the Technique of Order Giving

The function of direction frequently involves some interpretation of the orders and instructions from higher authority by the responsible executive and his staff. It involves a decision as to the nature and amount of the direction that is required. Some explanation of the significance of the instructions in the local situation, and the specific requirements for their application, must be given during the conference with subordinates, or in advance of it. It may be transmitted in writing through the control group or orally during the conference, or both. Oral orders modifying those previously issued may be given during a conference. This may cause confusion and trouble, of course, if the oral order is not subsequently coördinated properly, in writing, by the control group.

It is evident that direction, as well as dispatching, is closely associated with order giving. It is difficult to distinguish between personal verbal dispatching and direction by a line superior. The fundamentals underlying the technique of order giving have an important bearing on the performance of direction for this reason. The following are some of the more important considerations:

1. The necessity for orders and instructions should be related to the Law of the Situation.
2. They should be clear, concise, accurate, and consistent.
3. They should include sufficient information to permit correct action. They should not be unnecessarily detailed.
4. It is desirable to issue the fewest number of orders and instructions that will adequately cover the situation.
5. The tone of orders and instructions should be appropriate to the situation.
6. Orders and instructions should follow the established chains of command, when issued personally and verbally.
7. It may be necessary to have important verbal orders and instructions repeated by the recipient.
8. They should be confirmed in writing, if time permits.

Compliance with orders and instructions does not necessarily result in effective, economical execution. Interested intelligent execution. requires understanding and acceptance of the necessity

for the order. This necessity rests on the Law of the Situation. The information given should be adequate for effective, economical execution, but should not result in overdirection. It should be free from ambiguities or conflicts of ideas, because they constitute potential interferences with execution. Orders should not be so detailed as to create an inflexible situation. The tone of orders and instructions is important, whether verbal or written. The subordinate is not a servant. The language and tone should respect the individuality of the recipient. Unity of command and unity of direction are important organizational principles. However, the requirement that orders and instructions should follow the established chains of command does not require "layering," as we have seen. They should move down a chain of command step by step, if they are sufficiently important to be issued verbally and personally by the line superior. The leadership position of the line subordinate may be rendered untenable if the superior issues such instructions to the subordinate's employees over his head. Routine orders and instructions, on the other hand, may be issued simultaneously to subordinate echelons under some conditions. The necessity for repetition of important verbal orders and instructions by the recipient rests on the need for interested intelligent execution. At least it indicates an accurate knowledge of what is wanted. Confirmation in writing is a wise precaution. It also protects the personal interests of both the superior and the subordinate. These rules are merely a codification of good common sense. Failure to observe them tends to raise questions in the minds of subordinates concerning the competence or integrity of the superior. The skill and intelligence with which executives issue orders and instructions condition the attitudes of their subordinates. The technique of order giving is therefore a morale factor.

Supervision

Supervision is the function of assuring that action is taking place currently in accordance with plans and instructions. It has to do with overseeing the work of others to make sure that it is performed correctly.[6] The objective of supervision is evaluation of the action

[6] This is typical of many definitions of supervision at the level of minor operative management. Webster Robinson's definition is similar but broader:

on work that is actively and currently in progress of completion. This work is necessarily some phase of a project or program. There can be no supervision of a completed step or phase. The purpose of supervision is to determine whether the individual who is responsible for the action understands the information and directions that were given previously, and whether he is following them satisfactorily. This purpose is constructive. The supervising executive seeks to learn where further advice and instruction are needed by the subordinate. Supervision leads, in such case, to "redirection." It may lead directly to corrective action, when the cause of unsatisfactory performance is an interference that is beyond the ability and authority of the subordinate to handle. The purpose of supervision is not primarily to find a basis for disciplinary action, either positive or negative.

Supervision may accomplish its objectives by means of conferences or by observation. It is a necessary function of control on any echelon where control is needed. A large part of the minor operative executive's time is spent in supervision. He is exercising face-to-face leadership at or very close to the point of operative performance. This is why he is frequently called a supervisory executive. He may be a group leader, gang boss, unit chief, assistant buyer, or some other minor managerial employee. The term supervisory management usually indicates various levels of departmental management. His right to supervise is a part of his authority. It is derived from his responsibility for the performance of operative management functions. It is received by delegation from higher authority in his chain of command, through his immediate superior.

The supervisor accomplishes his purposes largely by personal observation of operative performance as it progresses. He supplements it by conferences with the individual whose work is not progressing as it should. The function of supervision is important also in ad-

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"Supervision is the factor which analyzes and interprets direction; which sees that policies, executive orders, standard practices and written instructions are actually followed in operation."—*Fundamentals of Business Organization*, p. 137. Alvin Brown defines supervision as "the power to exact performance of a deputy's obligation . . . that phase of authority which is devoted to obtaining the performance of responsibilities of deputies."—*The Organization of Industry*, pp. 63, 361.

ministrative control. The administrative executive must evaluate the action of his subordinates on work that is currently and actively in progress. His is an evaluation of group action, however, rather than project action. He relies largely on group and individual conferences with his subordinates. His supervisory contacts also may be personal or formal. The latter may involve use of any of the communications devices that were mentioned previously. He may supplement his supervisory contacts with personal observations during inspection trips. Such trips are not likely to be the principal method of supervision because of the nature of administrative management, and the cost of executive inspection trips in both time and money.

Supervision differs from comparison in certain important respects. It can evaluate action on a step in a project while it is in progress.[7] Comparison cannot. It must rely on reports of results of completed steps in accomplishing individual projects and programs. Comparison between actual and predetermined results can help in controlling the performance of subsequent steps. It can do nothing for the step whose completion is reported. Supervision differs further in that its performance relies largely on face-to-face contacts and personal observation, rather than on clerical instruments. Supervision is concerned largely with a qualitative, on-the-spot evaluation of action as it is progressing. Comparison is concerned largely with a quantitative, statistical evaluation of action that has been completed.

Supervision tends to remain essentially a line function, despite increasing staff differentiation with organizational growth. Prompt executive action is required to adjust performance, as it takes place, to the requirements of effective, economical accomplishment. Adjustment can only be made as supervision sees the need and initiates further direction or corrective action. The importance of such direct leadership action in a dynamic situation tends to make good supervision a personal control responsibility. It rests on the executive who has line responsibility for the particular operations. This

[7] Alvin Brown says: "Supervision must gauge administration by the use of tests; it is a demand upon the critical faculty of appraisal."—*Ibid.*, p. 64. (His use of the terms "supervision" and "administration" is much broader than ours. The former would include "comparison" as we have defined it.)

holds true for all service levels. The lines of supervision within an organization are the lines of executive authority, responsibility, and accountability for this reason. They form the framework of organization structure.[8]

It is extremely difficult, for the above reasons, to delegate primary line responsibilities for supervision to staff executives. Certain minor phases of administrative supervision can be delegated to staff, as we shall see. An attempt to delegate supervisory responsibilities to staff at the level of first-line supervision tends to break the back of the line organization. It usually involves serious violations of the principles of unity of command, unity of direction, and single accountability, because of its close association with dispatching and direction.

The Contributions of Good Supervision

The general contribution of supervision is closer adjustment of the factors and forces in current execution than would be possible without it. It does not take the place of individual initiative, self-coördination, and voluntary coöperation. It assures merely that they will take place in conformity with established objectives, plans, policies, and procedures. It does this together with direction. Supervision itself sees that any adjustments of planned action to fit peculiar or changing local conditions are proper in this respect.

Good supervision supplies an additional incentive to good work. At least most people do more work of better quality when they know that their activities are being evaluated by their superior. This is particularly true when they know that advancement is based on merit. Supervision develops confidence in the competence of the individual's superior. It contributes, with direction, to the feeling of security that grows out of competence. It checks the occasional violations of instruction due to obstinacy or insubordination. It acts as a morale stimulant in these and other ways.

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[8] Webster Robinson noted the following: "Personal supervision is exercised almost automatically over all the men in the concern. . . . Each individual in the organization who possesses any authority and responsibility personally supervises the work of those under him."—*Fundamentals of Business Organization*, pp. 138–139.

Good supervision contributes flexibility to the particular action in progress, without danger of loss of control. It assures, in conjunction with other control functions, that the performance of a particular step or phase of the undertaking is coördinated properly with other phases. It does this partly through observation and partly by assuring that all subordinates understand the same instructions in the same way. It initiates redirection when there is a tendency for established thought and work habits to cause unconscious violations of instructions.

Such contributions are vital to good control on any level. There is a universal necessity for them in connection with the control of every kind of activity. Supervision has been regarded as an organic function of control for this reason.

Supervisory Difficulties

Supervisory training programs are found in large and small business organizations. The small company may find it necessary to use outside training agencies. The large concern can afford its own staff agency for supervisory and other training. The general recognition of the need for supervisory training by progressive concerns indicates that there are some common supervisory difficulties to be overcome before the advantages of good supervisory management can be obtained. Analyses and discussions of these difficulties are part of the course contents of such training programs. There are too many difficulties to permit a complete statement and discussion of them here. A few examples should be sufficient to make clear their general nature.

Most supervisory difficulties are personal, with either the supervisor or the supervised, as would be expected. Supervision is primarily a mental activity that involves face-to-face leadership. There may, for example, be "oversupervision" just as there may be "overdirection." Unnecessary supervision may be resented as a reflection on the individual's integrity, intelligence, and ability. It is much easier, however, to point out the undesirability of oversupervision than to present a formula for determining where necessary supervision ends and unnecessary supervision begins. The difficulty is that there is no formula. Each case must be handled individually on the

basis of its circumstances and requirements.[9] Supervisory training courses generally use a principles-case-problem approach in conjunction with the conference method of training, for this reason.

Employee Attitudes and Supervision

Some of the most troublesome difficulties may result from negative attitudes toward supervision, growing out of misconceptions concerning it. Some people resent any attempt to evaluate their performance, either informally through supervision or formally through comparison. They seem to feel that they have a "right" to decide for themselves what pace, quantity, or quality of work is "reasonable" with respect to their assignments. This feeling may develop from the fallacious belief that they acquire some sort of property right in their job as a result of length of service and seniority. Supervision, under such a concept, tends to be resented as being unethical in some vague way. A newspaper story illustrating this point was current at the time the British nationalized their coal mines. One miner was asked what he thought of nationalization. He guessed that it was all right, but he noticed that those "damned bosses" were still there. This man had apparently expected supervision to be reduced or eliminated as a sort of unfair labor practice. It is a requisite of personal freedom that the individual shall have a property right in his personal services. A satisfactory meeting of minds between superior and subordinate, concerning reasonable criteria of satisfactory service, is a requirement for good morale and organizational effectiveness. It is also a requisite of personal freedom that the individual shall not acquire a property right in his job as a result of length of service with the company. The latter concept tends to break down the right of private property.

The ultimate determinant of function is the public interest. It must be served with due regard for the personal interests of owners and employees in a democratic society that is based on the right of private property. Satisfactory economic service is an original obligation of owners. It is a condition of the right of private property in

[9] Alvin Brown states the controlling principle as follows: "Supervision is limited to the scope of the delegated responsibility."—*The Organization of Industry*, p. 66.

the capital that has been invested in the business. The responsibility and authority of business ownership are delegated to employees, both executive and operative. The administrative executives of the company must determine and anticipate the needs and desires of the consuming public. They act for the owners in making financial advances to labor, including themselves, for the creation and distribution of values for the satisfaction of customer wants. The delegated right of executives to manage the operations of the business organization includes the right to supervise.

This concept of supervision does not conflict with the universal desire for a reasonable degree of economic security, as we have seen. The best evidence, possibly, is the condition of the individual employee, either operative or executive, under advanced forms of socialism. He gives up progressively his property rights in his goods and services as he moves toward higher degrees of state capitalism, in exchange for security that he never gets. He becomes one of the "means of production" that are controlled by the governmental bureaucracy. This control is exercised theoretically in the interests of the socialist society. The individual ends up as an "instrument of the state."

The negative attitude of many employees toward supervision is largely the fault of management. It has failed to make clear, in simple, easily understood terms, the significance and contributions of good supervision. This attitude may also be an effect of other associated causes, such as a poor quality of supervision. It may be an effect of outside indoctrination with the concept that the interests of owners and managerial employees are "inevitably" opposed to those of operative employees. There have been intelligent operatives who refused promotion to a supervisory position. The reason in one instance known to this writer was the employee's fear of losing the respect and friendship of his associates. This operative was an employee of a corporation with a national reputation for good management. Such difficulties may be an effect of some combination of these and other causes. They are serious regardless of the reasons for them.

The attitude of the subordinate toward supervision may result also from his realization of his inadequacies. A fair standard of performance is one that the average individual can meet day in

and day out without detriment to his well-being, provided that he has been selected and trained properly for the work. He must have the basic mental and physical attributes for satisfactory performance. He must be provided with proper facilities for the accomplishment of the assignment. He must be given adequate training. He should have competent supervision. There are other conditions that must be met before a performance standard can be considered "fair" to the public, as well as to owners and employees. They differ, of course, for executive and operative assignments. There will always be some misfits in any organization. They fear supervision because they may be weighed and found wanting. This attitude may be coupled with a very human desire to get more and more for doing less and less. This desire may exist apart from any feeling that one is not getting a "fair share" of the fruits of technological development.

There is a legitimate basis for resentment of "oversupervision." There is such a thing as operative responsibility and authority. Operative responsibility does not involve direction and supervision of the work of others. Operative authority is a person's right to make such decisions concerning the discharge of his job responsibilities as are proper within the limits of delegation and his abilities. Oversupervision tends to lead back to overdirection. It is resented as an invasion of one's authority, since the unnecessary decisions come within the limits of one's delegated responsibility, and presumably one's competence. The amount of supervision required is, however, a function of the intelligence, background, training, and experience of the supervised. There are in addition many supervisory difficulties that result from failure to provide the conditions underlying good supervision.

Conditions of Effective Supervision

The conditions of effective supervision are, in general, the conditions of good face-to-face leadership. Some of the more important include (1) executive ability and personality, (2) executive prestige and position, (3) effective units of executive and operative supervision, (4) adequate staff services in support of good supervision, (5) competent subordinate employees, and (6) good morale. Increasing attention has been given to these conditions because of the

importance of good supervision, at all levels, in organizational effectiveness. Particular attention has been given to the supervisory problem at the lowest levels of operative management, both line and staff. Managerial and operative service meet at the first level of line and staff supervisory management. Good face-to-face leadership at this level has a powerful influence on the morale of the operative organization. It is a direct, major determinant of the economy and effectiveness with which operative projects are executed.

There is a tendency in some concerns to pick major operative and minor administrative executives on the basis of their knowledge and personality. Minor operative executives are frequently selected on the basis of their know-how. It is sometimes assumed that anyone can pick up the art of handling men. The leadership failures at the operative levels have largely exploded this idea. Large corporations draw up specifications for supervisory executive jobs. These specifications set up the objectives, duties, and conditions of the supervisory job, as well as the executive qualifications in terms of intelligence, knowledge, know-how, and personality. These specifications are backed up by good methods of selecting and training supervisors. There is a tendency, particularly in the case of the heads of the operative departments, to make the supervisory job bigger. In some concerns there are fewer department heads in charge of larger departments. They have more responsibility and authority as a result of greater decentralization. They are given wider opportunity to participate in making managerial decisions when greater decentralization is not possible. The position is deliberately clothed in more prestige, since this is a factor in the respect and confidence of the subordinate. The intent of these measures is to make possible the payment of higher salaries that will attract and hold a higher caliber of managerial ability in the ranks of supervisory executives.

Good supervision takes time. No executive in any echelon can be expected to do a good supervisory job when he cannot keep in close personal contact with the work of his immediate subordinates. The greater the number of subordinates who report to him directly, the less is the time that he can give to each individual. Good supervision can be given to only a limited number of subordinates at any given time. Its performance has to be personalized to a considerable

degree. This consideration is an important determinant of the most effective size of units of executive and operative supervision. Such units of supervision are important factors in the delegation of responsibility and authority, as we have seen. Too many units that are too small tends to increase the quality and cost of supervision. The converse of the proposition also tends to be true. The optimum size can usually be increased by good staff work.

There is a function that may be called staff supervision. It is the work of evaluating qualitatively the activities of subordinate organizations, insofar as they fall within the field of interest of the particular staff executive. It may have to do with a general evaluation of the integrated activities of the subordinate organizations over a period of time. It has to do with administrative supervision in such case. It may have to do with a specific evaluation of activities entering into the execution of a major project. The field trips of headquarters staff executives and operatives often involve staff supervision. There is an on-the-spot observation of local activities. It leads inevitably to judgments concerning their quality, as the staff specialist sees it. Contacts with local operations should be made by the headquarters specialist through the corresponding staff executive in the local organization, in accordance with the principles of decentralization and staff parallelism. The staff executive, at any level, should usually not have line authority. Staff supervision is therefore no substitute for line supervision by the immediate superior. It supplements it. It merely supplies additional pairs of eyes for the responsible line executive. A distinction should be made between staff supervision and staff inspection. The latter term usually refers to a function of technical comparison. It facilitates performance of the comparison function in control.

The quality of subordinates is obviously a factor in the quality of supervision. High turnover in an organization and an influx of low-grade or untrained personnel can break down the effectiveness of supervision. This is true particularly when such change is the result of rapid organization growth. Wartime expansion frequently furnishes dramatic examples.

One of the most important conditions is organizational morale. The attitude of subordinates toward direction and supervision is an effect of morale. A negative attitude toward these functions

makes it difficult to perform them well. It may be a result of the quality of supervision. Good morale is partly an effect of good supervision. The physical factors and facilities required for effective performance also condition the quality of supervision. Inadequate or inappropriate physical facilities or conditions often require more time for direction. More difficult and more expedient measures must be taken to accomplish objectives in terms of quantity and quality. They are taken usually at a greater cost of time and expense. More interferences with execution intervene. Less time can be spent on supervision when more time must be spent on direction in specific cases.

Training, Direction, and Supervision

The principal functions of operative training are preparation, explanation, demonstration, performance under direct supervision, performance under intermittent supervision, and independent performance that is subject to comparison.[10] Preparation has to do with building up the background for and interest in the particular operation. Explanation tells the operator what must be done to perform the particular operation properly, and how and why it must be done. It goes beyond the limitations of an instruction card. Demonstration shows him how to apply the best method for performing the operation and to make effective use of the facilities provided. Explanation and demonstration are usually repeated simultaneously until the operative has acquired satisfactory understanding. He is then permitted to perform the operation under the direct supervision of the instructor. A mistake by the operative may throw the training process back to an earlier stage. The instructor is satisfied eventually that the operative can be trusted to perform the operation without direct continuous supervision. He comes back occasionally to make sure that forgetfulness or previous work patterns are not causing the operative to develop poor work habits. They may make it difficult for him to achieve regularly fair performance standards that he should reach easily. The operative finally is subject only to such advice and assistance as he may request

[10] The wartime J.I.T. (Job Instructor Training) courses boiled down these phases to four. The intent was to develop a satisfactory level of supervisory training ability in the shortest possible time.

or as is shown to be necessary by the comparison function of operative control. The problem has to do largely with the development of manual facility. On higher echelons it has to do largely with the development of mental facility. The educational process also can be broken down into certain general phases. Staff assistance can be used in connection with basic and advanced training and education. The final phase in developing the individual for his job has to be done, however, by his immediate superior. It is the result largely of on-the-job direction and supervision, at whatever level it is performed.

The development of the individual or group to handle a general work assignment is a phase of organizing. It extends from the organizing function, through the control functions of direction and supervision, into the "doing" or "making" function, which is execution. The objective is, or should be, more than the development of the ability to carry out assigned managerial or operative duties properly. It includes the development of the mental basis for coordination and coöperation between individuals and groups. Unity of action requires some unity of thought, and therefore a common basis of effective thinking.[11] It does not require thought control and regimented thinking. The latter are incompatible with the requirements for success in a competitive economy based on the right of private property. Education and training for economy and effectiveness in accomplishing the objectives of any organization anywhere must include a necessary minimum of indoctrination. The executive at every level in the organization should be prepared to explain why the employees do what they do, with respect not only to the particular problem but to all the conditions and relationships that affect it. Usually he does this in connection with his leadership functions of direction and supervision.

Direction, Supervision, and the Technique of Handling Men

There is a technique of handling men. Its importance in face-to-face leadership was recognized by Taylor and other pioneers in the

[11] L. Urwick says: "One of the surest methods of securing this uniformity of doctrine is identity of training."—*The Elements of Administration*, p. 69. He cites military principle and procedure in support of his contention.

field of management.[12] It includes the technique of order giving, which was discussed previously. It also includes the technique of disciplinary action which will be discussed in connection with the function of corrective action. It includes other aspects of the leadership relations between the supervisor and the supervised. The objective of such a technique is a better relationship between executives and subordinates that will improve morale, get wider acceptance of executive direction and supervision, and consequently lead to better discipline. Various statements of the fundamentals underlying the successful handling of men have been made.[13] All of them involve a practical application of the principles of morale development and maintenance.

A primary consideration is the determination of definite, reasonable service objectives for each individual and group in the organization. The subordinate is entitled to a clear, complete explanation of the objectives, policies, and methods that have been specified for the accomplishment of an assigned mission. The superior has an obligation to assure himself that the assigned mission is within the powers of a person who is properly qualified for the work, that the person is properly qualified, and that the conditions for the accomplishment of the mission are available or will be at the proper time. The superior should create and maintain reasonable competition between subordinates, together with suitable incentives, for the superior accomplishment of objectives. He should delegate the maximum amount of responsibility and authority that is practicable. The maximum practicable opportunity for the exercise of initiative should be provided. The Principle of Participation should be applied wherever possible. Direct orders should not be given when it is possible to get results through suggestion. Orders should be given in no greater detail than is necessary. Other considerations in the technique of order giving should be observed.

The attitude of the superior toward his subordinates is obviously a factor that conditions their attitude toward him. It conditions their acceptance of his leadership. His subordinates are personalities

[12] See F. W. Taylor, *Shop Management*, p. 192.

[13] See E. H. Schell, *Technique of Executive Control*, and various texts that deal with foremanship and supervisory management.

as well as performance factors. He should know his key subordinates personally. He should see that they receive public recognition for superior accomplishment and any other intangible values that are important in the situation and appropriate to it. This should be in addition to tangible rewards for a superior achievement of objectives. He should put a premium on a correct attitude toward the organization's objectives and leadership. This may be done properly by reserving support, approval, and advancement for those who coöperate. Conversely, he should eliminate chronic troublemakers from his organization by eliminating the underlying causes of general discontent and gaining the support of his organization by superior leadership. The troublemaker must be eliminated either by winning him over to support the leader or by severing his connection with the organization. Otherwise, morale may gradually break down. The superior should be firm, just, and impartial in disciplinary matters. He should follow other rules of good disciplinary action that will be noted shortly.

These and other rules underlie the technique of handling men. Observance of them is necessary to assure that leadership contacts with subordinates will result in greater interest in the job, willing compliance with directives, voluntary coöperation, and other morale effects. Limited staff assistance in the application of these rules is possible. They must be applied largely by the supervisor in the course of face-to-face contacts with his subordinates. They are important, therefore, in the performance of the executive control functions of direction and supervision. Their importance will be realized when the dynamic nature of these functions is recalled. They are the only control functions that can constrain and regulate action on a specific step in a project while it is in progress.

The Function of Comparison

Comparison may be defined as the function of determining the degree of agreement between actual and predetermined performance for completed projects and programs, or phases thereof.[14] The

[14] A. Hamilton Church said: "The organic function of comparison, therefore, is that which concerns itself with the setting-up and comparison of standards."—*The Science and Practice of Management*, p. 81. (The determination of performance standards is not considered today to be part of the comparison function.)

Oliver Sheldon defined comparison as "the function concerned with the observa-

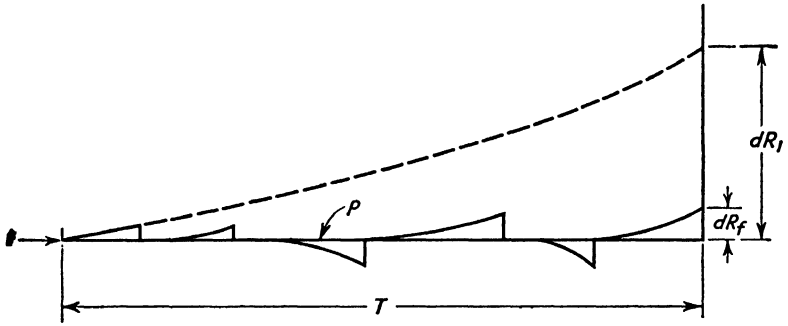
primary mission of comparison is to determine where significant deviations from planned performance are taking place, and to report them promptly to the responsible line authority. The problem of coördinating group activity in the accomplishment of joint objectives is complex. Interferences with performance arise that could not be foreseen. The frequency with which they appear depends on the pace of the action, the accuracy of planning that is possible, the degree to which complete preparations for the action can be made, the quality of leadership, and other factors that were noted before. These interferences cause the action to deviate from its planned course. It will continue to deviate, obviously, unless steps are taken by someone to eliminate the interference and return the action to its planned course. The magnitude of the deviation will continue to increase, unless this is done. The magnitude may be so great at the completion of action that the mission is a failure. This is shown in Fig. 55 by the magnitude dR_1. It is necessary, therefore, that the comparison function be performed somehow by someone. Significant deviations should be located and reported promptly to the responsible line authority. The latter is responsible for determining what corrective action is required, and for initiating it.

Dutton has pointed out that "comparison is always in terms of previous experience."[15] This experience may be gained on the job by the process of trial and error. It may be gained by scientific research under controlled conditions. It may be gained by a combination of both. The results of experience must be classified and codified in any case. One purpose is the development of standards of various kinds. The significant type of criteria in performing the comparison function is the performance standard. Such standards were defined previously as criteria of the results that should be obtained by the performance of designated functions as directed. There can be no satisfactory performance of the comparison function without them. There can be no satisfactory control of an action without adequate performance of comparison. Satisfactory

tion and recording of the activities of all other functions, and the comparison of such records with definite standards."—*The Philosophy of Management*, p. 60.

Alvin Brown's function of "seeing" is similar to comparison. He states that "seeing" notes and returns unresolved aspects of a problem to creative planning. See his *The Organization of Industry*, p. 210.

[15] H. P. Dutton, *Principles of Organization*, p. 43.



Legend:

dR_I – Final magnitude of the first deviation, if the action is uncontrolled

dR_f – Magnitude of the final deviation, if the action is controlled

I – Initiation of action

P – Line of planned action

T – Scheduled time for the action

Note: Since the time objective has apparently been met, the deviation of actual from predetermined results must have been measured in terms of either quantity, quality, or expense.

FIG. 55. Deviation Tendencies in Planned Performance.

accomplishment of a joint objective is most unlikely without adequate control.

Comparison is related to and usually follows supervision in connection with the completion of some step of a project or some phase of a program. Supervision evaluates action informally in the course of completion. Comparison evaluates action formally after completion. A graphic presentation of this relationship was given in Fig. 50. Comparison bases its evaluations on the returns from individuals and groups showing what results have been obtained where, when, and by whom. Its approach, therefore, is largely statistical. It is for this reason a control function that can be differentiated from line control and assigned to staff. All management functions are necessarily merged in the "one-man" organization. The functions of supervision and comparison are integrated accordingly. Their differentiation is one of the problems of organizational growth and development.

The Principal Phases of Comparison

The comparison function breaks down into certain subfunctions. They can usually be recognized clearly in a control procedure. An understanding of them is helpful in the analysis of a control problem and in the design of a control procedure and its application. These subfunctions or phases are:

1. The receipt of returns.
2. The accumulation of information concerning results.
3. The periodic evaluation of completed action to date.
4. The reporting of the status of accomplishment to higher line authority.

Comparison and the Provision of Returns

The term "returns" may refer to any information that is reported for the purpose of showing the status of accomplishment. This information must be adequate to permit an evaluation of the action that has been completed to date. This means, in general, that the information must answer, with respect to the completed action, the same questions that were asked when the action was planned. It must indicate what action has been taken where and when, by whom and with what results. The latter must be expressed usually in terms of quantity, quality, and expense, relative to time. The appearance of significant interferences with the action also should be reported promptly, when and as they occur. The work of comparison is reduced and speeded up if the information is returned in a form that facilitates the comparison of results with performance standards.[16] It may be necessary occasionally to know, in connection with comparison, how the reported results were obtained and why certain steps were taken in a certain manner. These questions are more likely to arise in connection with corrective action, however.

Such information must be returned to the control center by the office of the responsible subordinate, using any suitable means,

[16] L. Urwick states the Principle of Comparison as follows: "All figures and reports used for purposes of control should be in terms of standards of performance, and where necessary, past performance."—*The Elements of Administration*, p. 107.

either formal or informal. Oral returns, like orders, should be repeated by the recipient. Otherwise, there may be errors due to differences in understanding and interpretation. There is a greater tendency to rely on verbal reports under conditions of centralized control. The closer control places a premium on time. Verbal reports should be confirmed in writing if time permits. This assumes that the cost of the errors that can be avoided through formal confirmation is at least equal to the cost of the formal reporting and filing. There is a tendency to rely more on formal returns as control is decentralized. Any clerical instruments are suitable that will convey accurately and adequately the information that is needed for comparison.

Communications facilities are as important in reporting returns as they are in dispatching orders and routine information. Urwick stated what he called the Principle of Utility: "Figures and reports used for purposes of control vary directly in value with (a) the appropriateness of the period covered to the end in vew, and (b) the time separating the end of the period covered from their use."[17] The value of any comparisons between actual and predetermined performance tends to vary directly with the completeness, accuracy, and timeliness with which control information is reported. It depends, therefore, on the speed, capacity, and accuracy of the communications facilities that are available. These may vary, as we have seen, from an interdepartmental mailing system to modern high-speed intercommunications systems.

A distinction should be made between returns for operative and administrative control purposes. Operative returns show the results obtained in the execution of an operative project, or one of its steps. Administrative returns show the results obtained by organizational groups in executing the programs for which they are responsible. These programs include the various projects that have been assigned to these groups for execution. Administrative returns are the executive reports from responsible subordinates. They are summaries of the operative returns made to the office of each subordinate executive. They show the results accomplished by each group under his command, and for his organization as a whole, in com-

[17] *Ibid.*, p. 108.

pleting assigned projects. Both operative and administrative returns may be either primary or secondary. It depends on whether the activity under control is line or staff. The general relationship between such returns was indicated in Fig. 50.

Comparison and the Accumulation of Results

The next stage of comparison involves the accumulation, classification, and recording of the reported information on results. The purpose of classification is to bring out significant differences. The information concerning results must be arranged for control purposes in a manner that will bring out the relations between actual and planned performance. Sufficient results must accumulate to give assurance that any differences between actual and planned performance are significant. There is in addition the matter of economy. Continuous comparison is expensive. It is not worth while, usually, except in case of an emergency. The period of time over which results are accumulated before use in evaluating performance is a matter of judgment. It tends to be shorter under conditions of centralized control. The central control point accepts control responsibilities that would be the duty of control centers on lower levels under decentralization.

The basis for classifying and recording performance information is determined by the requirements for the periodic evaluation of the action. The various control records should show the use and status of the significant factors, forces, and effects in the accomplishment of the particular mission. Otherwise, there is no basis for a comparison between actual and planned performance that will show significant differences. This information, in a manufacturing plant, has to do with the use and current availability of materials, man power, tooling, machine capacity, and other factors in production. It has to do with results in terms of quantities of scheduled products that have been manufactured and stored or shipped, the amount and percentage of scrap and waste, and the status of work in process in terms of time and completed operations. It includes other information showing the results that have been accomplished up to a given time and stage in the completion of assigned projects and programs. It is possible, in simple control situations, to combine the functions of a statistical record with those of a progress com-

parison device. It is usually necessary, however, to support the required comparison devices with various statistical records. The information needed for comparison purposes is drawn periodically from these records, processed if necessary, and posted to the particular device.

Accounting is a staff function that assists in the financial control of operations, both administrative and operative. The accomplishment of results requires the conversion of capital into the required physical and human performance factors. A comparison of actual and planned use of capital in the conduct of operations is obviously a basic requirement of good managerial control. The finance function, with the assistance of financial control, is responsible for comparisons showing the relations of capital expenditures and expenses to time. The control groups associated with the other organic functions of a business are concerned with comparisons showing the relation of the quantity and quality of results to time. It is obvious that financial control and the operating controls of other line organizations require for control purposes information concerning the same basic factors. Financial control expresses its comparisons in monetary terms. Operating controls express their comparisons in nonmonetary terms. The basic information is often received first by control units on the general level of operative management. It is processed and forwarded to higher echelons through its chain of command. These units should be required to record the information on original instruments, or reports for higher authority, in a form that will facilitate the work of accounting. Otherwise, accounting must duplicate the normal channels of communication and information. It may do so to get the information it needs in the form that is required. Regardless of the reason, this is not good business.

The Evaluation of Completed Action

The evaluation of completed action usually follows the completion of execution. It involves a periodic determination of the nature, degree, place, and significance of any deviation of actual from planned performance. It rests on a comparison of actual results with performance standards. As a rule, it is not practicable to determine and supply such standards below the lowest controllable phase of

an undertaking. This is an operation or step in the completion of a minor operative project. This is another reason why staff comparison cannot take the place of line supervision in control.

There are many considerations that affect the performance of the comparison function. One of them is the manner of organization for control. The normal channels of communication are those that follow the established chains of command. They may be line or staff. Dual controls are not desirable in any organization. Financial and operating controls should come together at the top of each major and general organizational division. The development of top administrative control units was mentioned previously. It is possible, if this trend continues, that the comptroller's functions of staff financial control will be facilitative with respect to top staff administrative control. Such control should give the chief executive a complete picture of the accomplishment of objectives in terms of quantity, quality, and expense relative to time. This should be done whether the organization is an autonomous corporate division or a corporation as an entity.

Church forecast this requirement.[18] He failed, however, to distinguish between comparisons that are made by technical staff groups and those that are made by coördinative staff groups. The former evaluate the use of certain factors in performance at the point of operative execution. They also make a technical evaluation of the quality of the results that are being accomplished. These are functions of staff inspection. Copies of their reports are sent to the appropriate control group. These reports are used there to evaluate progress, adjust the basis of coördination, or report the need for corrective action to the responsible line authority. Copies of their reports are sent to parallel technical staff groups on higher echelons. There they may become part of the basis for further creative planning in the specialized field. Summaries of these reports may go to top administrative planning. There they may become part of the basis for the coördination of the thinking of various technical staff groups in the organization. This is one reason why responsibility

[18] "For comparison deals with the record of quantities, whether such quantities are expressed in time, money, degrees, levels or other notations. It therefore includes testing, inspecting and cost accounting."—A. Hamilton Church, *The Science and Practice of Management*, p. 32.

for technical staff comparisons should be assigned to the staff group which has the requisite professional background, training, and experience. The immediate purpose may be the facilitation of control. The ultimate purpose is the facilitation of creative planning. The primary mission of a coördinative staff group, on the other hand, is assistance in control. This requires a broad background, rather than one that is highly specialized.

The method of evaluation, as noted above, is based on a comparison of the actual accomplishment of assigned objectives with the planned accomplishment of these objectives. Planned performance is based on accepted standards of performance in terms of quantity, quality, and expense, relative to time. The latter, time, is usually a basic determinant of accomplishment. Results are compared by projects and organizational elements. Project comparison is necessary for operative control. Organizational comparison of accomplishment is necessary for administrative control. A dynamic business situation usually requires a periodic reëxamination of objectives, because it is not possible to determine them, with exact accuracy, very far in advance of their accomplishment. Periodic comparisons, therefore, cannot evaluate the firm's position in the accomplishment of objectives with exact accuracy. The evaluation of trend and degree of accomplishment becomes more accurate as we approach the point of operative execution. The time span between results and the final objective of a project is relatively short. Planned and actual results can be expressed in concrete rather than qualitative terms. Operative comparisons are usually more accurate than administrative comparisons for this reason. The thing that saves a company in administrative control frequently is the self-correcting characteristic of overlapping forecasts of objectives covering relatively long time spans.[19]

Various types of comparison devices may be used. The details of their construction and operation are beyond the scope of this book. They are determined largely by the control requirements of the

[19] L. Urwick says: "The important point is that the Administrator should have a mark and force himself to examine and to explain all the reasons for deviations from that mark. Whether the mark itself is in fact an accurate estimate of what the actual accomplishment should be is a secondary consideration, provided it is not too modest an estimate. Examination of the reasons for deviations will quickly suggest necessary modifications."—*The Elements of Administration*, p. 108.

particular type of business activity. The type of comparison device that would be effective in a plant using a job-order control of intermittent manufacturing, for example, would not be effective in a plant using a flow control of continuous manufacturing. The devices used may be tabular or visual in either case. A tabular device is any statistical form that compares numbers directly. They may be raw or statistically treated. They may be expressed in ratios, cumulative totals, or other statistical forms that will facilitate comparison. Visual devices may be graphic or mechanical. They are usually supported by statistical records. A graphic device charts the figures in a manner that will visualize the significant relationships on which comparison depends. The plan of work shown in Fig. 54 has been modified to serve as a simple comparison device. It is semigraphic. The manufacturing assembly diagram shown in Fig. 9 could be used as a graphic device if the operation and department numbers were shown on the bar for each part. The progress of each part order could be shown by converting the scale to chronological time, based on the required completion date for the final assembly. The order and department numbers could be crossed off as completed. One of the most flexible graphic devices is the Gantt chart.[20] A mechanical device visualizes the performance data by posting them to a control board of some kind. Such a board is merely a mechanical chart. It is possible for more people to view it simultaneously. It may be possible to post data on it more quickly than on a chart. It may be easier, therefore, to maintain an up-to-the-minute picture of the status of execution when such a board is used. But it is usually more expensive to operate.

A number of considerations may enter into the selection of a comparison device. They have to do with (1) the volume and continuity of operations, (2) convenience, (3) adaptability, (4) flexibility, (5) expense, (6) space requirements, (7) visual characteristics. High-volume continuous operations usually require highly standardized methods and conditions. The frequency and seriousness of interferences with primary operative performance should be at a minimum. Comparative tabulations of reported results are usually adequate for control purposes, and less expensive. High-volume

[20] Wallace Clark, *The Gantt Chart*, Ronald Press.

discontinuous operations under conditions that cannot be highly standardized may require the use of control boards. It may be necessary to use a highly visual device for comparisons when a new method or important organizational changes are being introduced. More things can go wrong in less time than should be possible a year later when everyone is familiar with the new procedure or the new organization has shaken down. Possibly the more complicated expensive device can then be discarded in favor of a simpler form of comparison. Gantt charts are convenient and flexible. They can be adapted to the needs of most comparison problems. They are portable. They can be reproduced and distributed quickly and easily. They have earned a permanent place in American management practice when simple tabular comparisons are inadequate. The big chart rooms are usually located in divisional and corporate headquarters. They are expensive because of space requirements and the cost of maintaining elaborate charts. They are generally placed in a location that is contiguous to the office of the chief executive. They are convenient for him and for the general executives whose offices are near his. The chart room may serve as the conference room for these top executives. The expense is negligible, however, compared with the value of the executives' time. Furthermore, these charts are used in connection with top administrative control. They deal with general situations that do not change as rapidly as specific situations at the operative level of the organization. It is not necessary to change the charts hourly or daily in most cases. There are other considerations in the selection of comparison devices. They must be left for discussions of specific control problems in specific industries.

Reporting the Status of Accomplishment

Reporting is the phase of comparison that originates and transmits reports of results accomplished to the responsible line and staff executives. It is the linking function between comparison and corrective action. Its purpose is to supply information in a form that will enable the responsible executive to determine quickly whether or not corrective action is necessary. It should show where action is required. It should indicate the general nature of the action that is needed. The report may be in any form that will meet

these requirements. It should not, however, require the executive to go through a mass of unrelated facts and figures to get the essential information. He should not have to spend time in studying situations that do not require study.

The basis of policy is found in the Exception Principle: Only the significant deviations of actual from planned performance should be brought to the attention of the responsible executive, in order that his time and abilities may be conserved. The first business statement of this principle may be credited to Taylor.[21] He believed that "both the especially good and the especially bad exceptions" should be reported to the responsible executive, "thus giving him in a few minutes a full view of progress which is being made, or the reverse." Either type of deviation may provide food for thought and study. The tendency in reporting is frequently to report the bad exceptions. The terms "good" and "bad" are ambiguous. It is the duty of the responsible line executive to define them, and to set norms that will guide the staff control executive. What is a "back order" in a manufacturing plant? It probably depends on the conditions in the industry and the company, as well as on the ideas of the plant manager. A policy decision of this kind does not relieve the chief of a coördinative staff group of his need for high intelligence. There are always situations that are not covered clearly by policy, standards, and procedures. There are situations that should be handled for the line chief through cross-contacts. There are some that he should handle personally. There is no formulistic substitute for executive judgment, either line or staff.

Deviations from planned performance tend to represent emergency situations more and more as we approach the point of primary operative performance. An important purpose of corrective action is the elimination of interferences with execution. Time is a limiting factor in the effective handling of emergencies. Communications facilities are an important factor in the comparison function also. The compilation of historical records is a proper func-

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[21] Frederick W. Taylor, *Shop Management*, pp. 126–127.

L. P. Alford also stated a Law of Exceptions. See *The Laws of Management*, p. 74, and *Principles of Industrial Management for Engineers*, p. 115.

Mooney and Reiley cited the original statement in the Bible, quoting Exodus 18:25, 26.

tion for the facilitation of future planning. It is a minor objective, however, insofar as the control of current action is concerned. Hence timeliness is an important consideration in reporting results.

An important purpose of reporting is, of course, to facilitate the establishment of accountability for results. It may lead to disciplinary action, either positive or negative. This is also a phase of corrective action. Comparison in operative control indicates the time, general nature, and location of any interferences with the planned execution of a project. It therefore indicates who was in charge of the particular action when the deviation occurred. Comparison in administrative control shows what results each department or division has been accomplishing as a whole over a period of time. The person in charge of each organizational group is known. Whether the report of the control executive results in censure, no comment, or commendation depends on whether the exceptions shown are "good" or "bad." Dennison makes comparison the principal process for determining and maintaining accountability.[22] Supervision is equally important. Its results are usually reflected in merit ratings. The latter are taken into account in assessing accountability.

It is evident that reports showing the results of comparisons do not of themselves improve the quantity and quality of results or lower the costs of producing them. The reports are worth while to the extent that the savings from better corrective action at least pay for the cost of compiling and reporting results. It is difficult to determine objectively and accurately the costs of and savings resulting from control reports. It is usually a matter of executive judgment. It is probably better to err in the direction of adequate facts concerning a business.

The magnitude, complexity, and expense of comparisons tend to increase with increasing centralization of control. This is one reason why it tends to break down with organization growth.

The Function of Corrective Action

The function of corrective action is the function of correcting deviations from planned performance. It does this by adjusting the nature of the action or by removing interferences with the accomplishment of the mission. Its performance is usually a personal re-

[22] Henry S. Dennison, *Organization Engineering*, p. 155.

sponsibility of the line executive to whom the coördinative staff executive reports. The correction of deviations that do not exceed the limit of exceptions at this level is the responsibility of his line subordinate. This does not prevent the responsible executive from making effective use of staff in the removal of interferences. It requires merely that he take cognizance of the need for corrective action, that he give it his personal direction. The exception is not sufficiently important to be reported to him if it does not require his personal attention. The primary purpose of corrective action is the restoration of effective, coördinated action, both line and staff, before any serious interference with the achievement of planned objectives takes place. Its operative phases deal with emergency situations. They should be handled at the lowest practicable level in the organization and by an executive who has line responsibility for the action. This is the lowest level at which a line executive has the authority and competence to handle the interference correctly and promptly. The general work assignment of the subordinate line executive should carry with it sufficient delegation of responsibility and authority to permit the correction of deviations whose effects do not extend beyond the limits of his jurisdiction.

Principal Phases of Corrective Action

The function of corrective action also breaks down into certain definite phases. They tend to be characteristic of the function wherever it is performed. They more important are:

1. The operative phases
   a. Prompt investigation of the causes of the deviation.
   b. Decision concerning the required corrective action.
   c. Prompt direction for correcting the situation in accordance with the decision.
   d. Close supervision of corrective action to insure that it is taking place in accordance with instructions and is effective.
2. The administrative phases
   a. Further investigation of recurring difficulties to determine the basic factors, either human or physical, that are responsible.

b. Disciplinary action, either positive or negative, as the situation requires.
c. Creative planning to prevent a recurrence of the situation.
d. Reorganization of the situation and the introduction of the planned measures.

An emergency situation tends to compound rapidly when it is allowed to continue without proper attention. The situation may deteriorate quickly. Losses may mount correspondingly. It may become impossible to accomplish the objectives of the mission as a result. In consequence, time tends to be a limiting factor in the handling of emergencies. It is usually necessary that the facts concerning the nature and causes of the deviation be gathered quickly for this reason. The routine fact-collecting system for comparison purposes generally does not supply sufficient information for the immediate correction of the situation. The additional facts may be collected for the line executive by staff assistants. It may be desirable to clear the way for this by personal requests for coöperation from the line superior to the line subordinates involved.

The making of a decision concerning the proper corrective action involves planning. It is not creative planning usually, as we have defined the term. It involves the prompt determination of an expedient course of action that will cope with the emergency. Creative planning for a permanent solution follows later in the administrative phases of corrective action. Planning in the operative phase may require fast thinking by an alert, experienced brain. It is routine planning, nevertheless. It depends largely on practical experience for a quick answer to the problem of removing the particular interference in the present situation. A satisfactory solution that can be applied in time to prevent a serious deterioration of the situation is better than an excellent decision that is made too late.[23] Such a

[23] A. Hamilton Church formulated a good statement of the principle: "It is not so important what you do as that you do something and do it quickly. Make a decision and then calmly carry it out. Do not change to another plan that may look better an instant later. Vacillation destroys all confidence in a leader. Take a simple plan, a bold one, and then unquestioningly bend every energy to its accomplishment."—*The Science and Practice of Management*, p. 34.

Henry S. Dennison said that "in cases of emergency, planning and execution are virtually simultaneous."—*Organization Engineering*, p. 129.

decision requires the broad practical experience of the operative line executive. He is familiar with the type of difficulties that usually arise in connection with the particular operations under his command. He knows the solutions that have worked in the past. He is familiar with the requirements of local operations, and has similar know-how. There are always emergencies that may develop, beyond those that can be anticipated and avoided by good planning and preparation. Ability to foresee them reduces the time requirements and increases the effectiveness with which they may be handled.[24]

Dispatching and direction are not likely to be differentiated in the operative phase of corrective action. The decision concerning proper action, the orders initiating it, and any explanations of the requirements for their execution may be developed and given simultaneously by the line executive in conference with the line and staff subordinates who are affected. The orders are transmitted orally. Their execution must be followed closely, because they deal with unusual conditions that are causing deviations from planned performance. The responsible line executive can use his coördinative staff for confirming verbal orders and instructions and following the progress of corrective action. He can use his technical staff for technical supervision of the action. The nature and importance of the action are such, however, that he must give it his personal supervision. The manner in which emergencies are handled is one of the tests of line executive competence.

The records of a coördinative staff group should show the interferences with execution that tend to recur. These interferences must be reported promptly to the group. Otherwise an effective performance of the comparison function of control is unlikely. These records should classify the interferences by kind, frequency, duration, location, cost, and other factors that show their nature and significance. The operative phases of corrective action have to do with the removal of a specific interference. The administrative phases have

[24] An analogous situation exists in military organization. Lincoln Andrews said: "We teach the advance guard commander as he marches to be thinking constantly what he will do if the enemy appears in any of the various situations he meets, and thus keep his mind prepared to make his decisions quickly. . . . It is the unexpected thing catching a man off his guard which causes his uncertainty."—*Man-Power*, p. 129. Military techniques have changed, but the principle has not.

to do with the prevention of its recurrence. This is particularly true when the interference is expensive and of a type that recurs too frequently. This phase is organizational in nature. It is not concerned directly with a current project. It takes place usually after the interference with the project has been eliminated. Its purpose is improvement of the operating economy and effectiveness of the organization over an extended period of time. It does this by improving the methods and conditions affecting the execution of any project or program of a particular kind at any time. Examination of interference records of the control group may show that the same class and kind of interference occurs frequently in other departments of the same division. This lifts the responsibility for arriving at a permanent solution above the departmental level. The same thing is true if further investigation shows that the scope of occurrence is interdivisional. The administrative phase of corrective action is organizational, nevertheless, regardless of the echelon on which it is performed.

The line executive is able to delegate responsibility and authority to a greater degree for performance of the administrative phases than for the operative phases. The emergency has passed, or has been contained satisfactorily. Time is no longer of the essence. The devising of a permanent solution may require a more extensive, thorough investigation of the problem. It may lead to setting up a research project. It is very likely to require creative planning, if it is a frequent and expensive cause of trouble. The difficulty may therefore be assigned to the technical staff organization at the appropriate level, in whose field the problem falls.

The work of planning is followed necessarily by organizing. It may be necessary to install new methods and equipment, change underlying conditions, retrain personnel, take disciplinary action, and engage in other activities of a similar nature. They have to do with the creation of conditions underlying effective, economical execution generally within an area. Theoretically, they should have been supplied before execution began. It is not possible, unfortunately, to foresee and anticipate everything. Creative planning, organizing, preparation, and supply can never be perfect. There are usually some factors in the business situation that are beyond the executive's control. The intervention of government agencies, the

interference of labor organizations, sudden changes in customer demands, shifts in the general economic and political situation that could not be foreseen are just a few of the more obvious factors. It is for these reasons that corrective action, both operative and administrative, is an organic phase of control. It would take a millennium to eliminate the need for it.

Disciplinary Action and Control

Good discipline was defined, during the discussion of morale, as a condition of voluntary conformity with policies, rules, and regulations. The latter are necessary for coördinated and coöperative action in the accomplishment of group objectives. Good discipline is a morale effect. It is related to willing acceptance of executive decisions, voluntary coöperation, organizational pride, and other morale effects.

Disciplinary action is a managerial process for conditioning individual and group behavior. Its objectives are the inhibition of improper behavior, the integration of personal and organizational interests, and the assurance of correct action in the future. It accomplishes these objectives through the application of penalties and rewards. Disciplinary action has to do, therefore, with the addition or subtraction of certain values in the situation of a particular individual or group. The individual should be rewarded by receiving more than the normal amount of whatever values he desires for himself when he can be credited with accomplishments that are above normal. The magnitude of the reward is determined usually by comparing the results achieved over a period of time with performance standards showing a satisfactory accomplishment of individual or group service objectives. The additional values that the individual or group may enjoy are for contributions over and above the normal line of duty. These values may be tangible, as in the case of cash awards for expense-saving suggestions or incentive earnings for meeting production standards. They may be intangible, as in the case of public recognition and commendation for outstanding service. An example of the latter in a manufacturing organization is shown in Fig. 12. The use of rewards is part of the positive phase of disciplinary action.

The negative phase includes the use of penalties. The imposition

of penalties seeks to condition behavior by depriving the individual of certain situational values he desires. The basis of the decision to impose a penalty is again a comparison of actual and standard performance, together with subsequent investigations of the causes of failure. The decision is made when the facts show that the failure to accomplish the assigned objectives is due to a culpable failure to conform to policies, instructions, and orders. The values removed or withheld may be tangible, as in the case of loss of earnings. The capital penalty in business is complete and permanent separation from the job and the organization. The values may be intangible, as in the case of censure by the responsible executive or the posting of comparative performance records. The cause of negative disciplinary action may be any negative behavior on the part of an organization member. Common causes are deliberate infractions of policy, failure to carry out orders and instructions with reasonable promptness and fidelity, improper attitudes toward superiors and associates, insubordination, and others of a like nature.

It is evident that disciplinary action may be a morale depressant or stimulant, depending on how well it is performed. It was noted previously that the individual has a property right in his services in a democracy that is based on the right of private property. The contract of employment, whether express or implied, governs basically the exchange of values between employer and employee. The executive's right of disciplinary action depends, therefore, on the acceptance of policies and directives by subordinates as necessary and reasonable. Otherwise, it involves unilateral modification of the values that the employee has a right to expect under his contract of employment. Refusal to abide by policies and directives whose acceptance is a condition of employment may be cause for dismissal from the organization. Disciplinary action is a necessary leadership function. It follows that the basic rules and regulations governing the organization should be published and made available to its members. This should be done in accordance with the principles of policy-making that were mentioned earlier. These rules should be incorporated in any written contracts of employment, either individual or group, by specific reference. This means that they have been accepted by employee representatives in the case of group contracts. There should be an orderly procedure for appealing exec-

utive decisions involving negative disciplinary action. This is common practice in progressive business concerns today. On the other hand, an agreement between employer and employee representatives that prevented necessary and reasonable disciplinary action would not be in the public interest.

Disciplinary action is regarded here as a phase of the function of administrative control rather than of organizing. It is exerted by or through the immediate superior of the individual or group. It arises usually out of a specific success or failure that may or may not have been experienced previously by the responsible individual. Its purpose is the constraint and regulation of individual and group action by conditioning behavior. It is generally not taken with respect to the completion of a current project. It is taken to assure correct action in handling future undertakings of a like nature. It is not even personal, although the reward or penalty may be given to an individual. It is taken more to condition the behavior of the group with which the individual is associated. The constraint and regulation of action are organizational rather than operational. Morale development and maintenance are also an organizational problem. Disciplinary action is clearly a function of administrative management, at whatever level it is performed. It falls more in the field of controlling rather than organizing activities.[25]

The problems of disciplinary action have been given much attention by many writers, because of their importance. For this reason the more common principles are merely listed below:

1. Disciplinary action should not be taken unless a real necessity for it can be shown.

2. Negative disciplinary action must be just, but sufficiently severe to meet the requirements of the situation. Inadequate disciplinary action weakens the force of the particular policy, regulation, or directive. Strong morale cannot be built on weak disciplinary action.

3. Decisions governing penalties or rewards should be based on facts. The latter should be available to the individuals or groups affected.

[25] Henri Fayol would probably have agreed with this viewpoint. His Principle of Rewards and Penalties says: "In order that Control may be effective, it must operate within a reasonable time and be followed up by rewards or penalties."—*Industrial and General Administration*, p. 77.

4. The intent of the individual should be considered in determining the nature and degree of disciplinary action that are proper.

5. The reasons for disciplinary action should be made clear. The statement of the reasons for negative action should be accompanied by an explanation of how it may be avoided in the future. The conditioning of behavior is not just a matter of rewards and penalties.

6. A subordinate should not be required to criticize his superior. His remarks should be confined to statements of fact, rather than opinion, where the latter is concerned.

7. Disciplinary measures, both positive and negative, should be applied by the immediate superior of the individual affected. Otherwise, the executive's leadership position may be broken down.

8. Negative action should be taken privately whenever possible. The individual resents "loss of face" with his associates, even though he may admit the justice of the censure or penalty. There may be an exception in the case of a major breach of discipline that warrants complete and final separation from the organization. A subordinate executive should never be disciplined in the presence of his own subordinates. He may suffer a loss of prestige and of the confidence of his subordinates that will destroy his leadership effectiveness.

9. The responsible executive should resume a normal attitude toward the offending individual after negative disciplinary action has been taken and the individual has paid the penalty assessed. An attitude that suggests that the subordinate is permanently in the "doghouse" has the effect of an additional penalty above that imposed. It tends to arouse a feeling of unfairness in him.

10. Consistency in disciplinary action is necessary for consistent action in the accomplishment of objectives. An executive who is severe at one time and lenient at another in handling an infraction of rules and regulation certainly is not consistent in policy application. The same thing is true when he is generous in rewarding superior service at one time and niggardly at another. He is likely to be accused of favoritism and unfairness. Group morale may suffer accordingly.

11. Negative disciplinary action should usually not be applied to large groups of subordinates representing a large minority of the organization. A large, dissident minority suggests that the situation

is due to an error of executive leadership rather than of operative performance. An attempt to take disciplinary action under these conditions may result in insubordination that leads to mutiny. A dissident leadership whose objectives are subversive should be eliminated promptly. The immediate issue may have little relation to the underlying causes of the situation in such a case.

Top Administrative Control

All organic management functions must be performed at all major levels of the organization. Emphasis tends to shift more and more toward creative planning as we approach the top. The work of creative planning, and subsequently organizing, must be controlled. A plan supplies a basis of action for the accomplishment of business objectives. The time objective of the action may not be achieved if one or more technical staff groups are late in completing their planning assignments.

The imposition of control on creative planning is not inconsistent with the concept of organic management functions. It still remains true that these functions tend to be performed in the general order of creative planning, organizing, and controlling the work of primary execution. It was noted earlier that there is a function of planning for planning. It has to do with developing the general method of approach to the solution of problems in the field for which the particular technical organization has staff responsibility. There is obviously a function of organizing for planning. Any technical staff group must be supplied with the personnel facilities and conditions that are prerequisite for proper performance of its assigned functions. The execution of projects must be controlled, whether they are line or staff. Project control is well established in many engineering and research organizations. The development of top administrative control of planning is relatively new in industry, however. It appears to be limited to a few large concerns. Nevertheless, it is a logical development.

The general relation of control to product planning and production has been indicated in Fig. 56. It will be seen that the development and execution of major product plans in a manufacturing plant involve all line and staff divisions at the administrative level of the organization. They eventually involve many staff agencies

within each staff division. The general order in which the functions of product planning and execution must be performed is indicated. Their performance overlaps, because considerable simultation is possible. These functions are concerned primarily with mental rather than manual work. It is correspondingly difficult to set time standards of performance. Completion deadlines must be set up, nevertheless, for each phase of the program for each technical organization. This was suggested in Fig. 8. Failure to meet planning deadlines may delay subsequent organizing for execution. This, in turn, may delay the production and delivery of the new product to wholesalers and retailers. The sales division may have worked up customer desires for the product in the meantime. Failure to supply the new product when scheduled may have the effect of presenting potential new business to competitors. The development of plans must be coördinated also with respect to cost and price objectives. Administrative control of product planning and production is necessary for many reasons.

It is true similarly that the work of organizing for primary execution has to be planned, organized, controlled, and executed. It is also the case that these functions are performed largely by staff agencies in coördination with the line organizations which are served. It is likewise necessary to integrate the secondary controls of individual staff agencies by means of higher administrative controls.

The general nature of top management organization structure was shown in Fig. 34. It is the responsibility of administrative staff planning to correlate interdivisional thought in the development of plans. It is the responsibility of administrative staff control to coördinate interdivisional action in the completion of programs, whether they have to do with planning, organizing, or controlling primary execution. Progress control of projects in a technical staff organization is a staff responsibility of its control group. It is a problem in staff operative control.

The characteristics and requirements of administrative control were discussed previously. The general relationship between operative and administrative control was illustrated in Fig. 50. It indicates that both tend to break down into the eight organic subfunctions shown. This is true whether administrative control is applied to programs for developing plans, organizing for the execution of

A. *The Provisional Determination of Objectives*, which involves:

1. Analysis and study of available information concerning demand, competition, patent problems, finances, and general economic conditions.
2. A provisional determination of service objectives and product characteristics with respect to quantity, quality, time, and cost.

B. *Research*, if feasible within time limitations, to secure additional information for better solutions by means of:

1. Marketing research.
2. Industrial research.

C. *Product Design*, which develops the detailed plans for a product that will enable the customer to obtain certain desired satisfactions. It involves:

1. Preliminary design of the product.
2. Experimental production of prototypes.
3. Experimental testing.
4. Revision of preliminary designs.
5. Release of product design information.

D. *Process Design*, which develops the detailed plans for making the product. It involves:

1. The design of primary operative procedures.
2. The design of the physical factors and conditions that are required for the performance of primary operative functions.
3. The release of process information.

E. *Pilot Plant Production*, which:

1. Tests product and process plans under simulated production conditions.
2. Reports potential deviations of actual from planned product and process performance. It facilitates the final revision of product and process plans, insofar as physical factors and functions are concerned. It eliminates much of the costly revision by trial and error due to time-consuming failures in production.
3. It may also include coöperation with the sales division in testing customer acceptance.

F. *Planning for Staff Facilitation*, which develops the detailed plans for providing the physical and human factors in execution. It involves the technical staff functions of personnel and supply.

G. *Administrative Planning*, which develops general plans. It includes the provisional determination of objectives. It involves, in addition:

1. Organizational planning.
2. The design of administrative procedures.

H. *Organizing*, which involves the creation of the basic conditions underlying effective, economical execution.

I. *Execution*, which consists of primary production, distribution, and financial operations, together with such supporting services of staff facilitation as may be required.

FIG. 56. The Relation of Control to Product Planning and Production.

plans, or the actual execution of these plans. The nature and extent of the development of each control subfunction may vary greatly between types of activities and programs, however. The following analysis indicates the general nature of their functional content in administrative control:

1. *Routine planning:* The authentication and publication of official statements of objectives, plans, policies, and programs. (Staff.)

2. *Scheduling:* The determination of deadlines for each phase of each program. (Staff.)

3. *Preparation:* The work of assuring that necessary financing will be completed, and that physical resources and personnel will be provided before a given phase of a program is scheduled to start. It has to do with assuring an adequate flow of resources and man power to meet the requirements of the subordinate line and staff organizations over a period of time. It is not concerned directly with the specific requirements of individual projects. (Staff.)

4. *Dispatching:* The origination and release of orders activating a program, or some phase of it. (Staff.)

5. *Direction:* Conference between the administrative executive and his line and staff subordinates. It may include last-minute interpretations and explanations of general plans before or during the execution of a particular phase. It may lead to discussion of subsequent phases of a program that are about to be initiated. (Line.)

6. *Supervision:* Review of the current status of the phase in process of execution with line and staff subordinates. This may be done individually or in conference, or both. It may be supported by field inspection trips. (Line.)

7. *Comparison:* The receipt of administrative reports from subordinate line and staff divisions which evaluate the results of completed phases by organizational groups. It includes the application of the Exception Principle in a consolidated, general administrative report for top management. (Staff.)

8. *Corrective action:* Conference between the principal administrative executive and his principal line and staff subordinates. It concerns the modification of general plans, policies, and programs that may be necessary to correct failures to accomplish group objectives. It includes the activation of any administrative decisions that are reached. (Line.)

The performance of administrative control functions may be modified also by organization size. The functions of administrative planning and control may be integrated in the person of an executive assistant in a small organization. They can and must be simplified. The organization is less complex. They are integrated in the line organization in very small concerns, to the extent that they are performed at all. It is true, of course, that the small business that has an owner-manager and a handful of operatives requires no distinct differentiation of administrative management. There is only one group. Operative management is all that is needed immediately. Nevertheless, lack of understanding of the nature and significance of administrative management can seriously hamper the growth of the small business.

CHAPTER 20

BUSINESS PROCEDURE

The Nature of Business Procedure

A procedure is a relationship of complementary functions that is set up as a basis for the execution of a project. A business procedure may be set up for the accomplishment of a managerial or an operative project. It must be planned with regard for the requirements for successfully accomplishing the final objectives of the project. It must consider, in this connection, the requirements for and effects of human and physical factors in performance. The term "system" usually refers to a standardized procedure.[1]

The objectives of a project are the intermediate and final values that are created by the successful accomplishment of the undertaking. They must be compatible with the accomplishment of the organizational objectives to which they contribute. The objectives of procedural development are secondary values. They are contributed by the procedure itself to the accomplishment of these intermediate and final objectives. They may include such values as:

1. Orderliness in the execution of business undertakings.
2. Consequent uniformity of results.

[1] There is a greater degree of unanimity of opinion concerning the nature of procedure than there is concerning many other management problems. L. E. Bryant, for example, says: "By method is meant the manner of proceeding in the performance of work."—*Scientific Management in American Industry*, p. 217. W. B. Cornell says: "In business, planned methods of procedure are called system."—*Organization and Management in Industry and Business*, p. 47. According to Mooney and Reiley, "A system may be defined as the technique of procedure."—*Onward Industry*, p. 14. Oliver Sheldon gives the following definition: "A system is a standard way of doing things; it is a term applicable to any form of consistent and deliberate activity."—*The Philosophy of Management*, p. 103.

3. Facilitation of specialization.
4. A more effective and economical utilization of personnel.
5. Conservation of executive ability, time, and health.
6. Facilitation of executive and self-coördination.
7. Economy and effectiveness in the performance of managerial and operative functions.

Complementary functions were defined previously as those that must be performed concurrently or sequentially in a definite order to accomplish successfully the final objectives of a project. There is usually an order in which values must be built up to get the desired end results. The end value is a cumulation of intermediate values. The functions that must be performed to produce these values complement one another. They are grouped in steps or operations representing distinct stages in the accomplishment of the final objective. These stages are distinct usually because of distinct differences in the intermediate values they produce. These value differences produce distinct functional differences between steps. They are reflected in distinct differences in the requirements for physical factors in performance such as machinery, tools, desks, lighting facilities, and other items of implementation. They are reflected also in distinct differences in the requirements for human factors in performance. The people who perform these steps must have different kinds and degrees of background, training, experience, personality, and intelligence. The physical and organizational location of the various steps in a procedure may be greatly affected by the location and availability of the physical and human factors in their performance. This effect tends to diminish, however, with increasing volume and standardization of work.

An organization structure is a relationship between groups of similar functions. It is set up to facilitate coöperation and the exercise of executive leadership. Functions obviously are similar when they have similar objectives. Their performance tends to create similar problems. The people who perform them must therefore have similar backgrounds, training, experience, personality, and intelligence. The functions in successive steps of a procedure may not be similar. They are performed, however, by people who are members of units, branches, sections, departments, or higher organizational

components. The organization structure and procedure are related but different functional concepts. Procedure tends to cut across the lines of responsibility and authority that are set up by organization structure.

The Requirements and Attributes of Business Procedure

Business procedure facilitates the performance of both operative and managerial functions. It facilitates the cumulation of values into the final objective of the project. It facilitates the delegation of responsibility and authority for specific work assignments. It relieves the responsible executive of much of the detail of direction, when the procedure is committed to writing. It specifies the physical resources, man power, and time requirements for the proper performance of functions in each step. There is likely to be a loss of effectiveness in control unless the quantitative time requirements are specified for each step of the procedure. It may be satisfactory to indicate the time standards that should be used by subordinate staff control groups in determining chronological time requirements. The physical facilities and resources must be specified, because they condition both method and time. The man-power requirements, both operative and executive, are determined by time requirements and the general classification of work for each step. Most concerns today have job specifications for each general work assignment in the organization. They occasionally include the top administrative executive positions. Procedure supplies a basis for self-coördination, staff coördination, and personal coördination by the responsible executive. It does this by specifying quantitative time and the order of performance of functions in the accomplishment of a project. A well-formulated written statement of a procedure also supplies a basis for training and self-development in the execution of project steps. It is obviously a form of business plan that provides a basis for organizing, controlling, and executing specific business undertakings.

A standard procedure for handling a particular type of business project becomes a technical order when properly approved by or for the responsible line authority. A procedure can be distinguished from a program. The latter usually states only the projects that are to be accomplished by an organization within a given time period,

and the order of their execution. The work of developing a program is an administrative project, however.

The objectives and characteristics of business procedure set up certain requirements that tend to be universal. Consideration should be given to them, in designing procedure. These requirements may be summarized as follows:

1. The structure of relationships between functions must be based on their complementary characteristics. These functions, and the order of their performance, must lead to the accomplishment of the final objectives of the project.

2. A standard procedure should represent, as far as practicable, the best method of executing the project. What is best depends on the present state of the industrial arts and sciences that are applicable. It should make possible the maximum practicable economy and effectiveness in accomplishing the final objective.

3. The procedure should facilitate the placing of responsibility and the determination of accountability.

4. The attributes of good business procedure should complement the attributes of good organization structure.

5. All procedures, whether line or staff, have their managerial and operative phases. They should be linked together properly by the control procedure.

A standard procedure should be the result of adequate research and planning. This is necessary if it is to approximate the one best method in the present state of the particular industrial art and science.[2] The necessity for thorough analysis and study obviously increases with the importance of the particular class and kind of procedural problem. An investigation of a procedure frequently begins with the initial step and follows through to the final step. The analysis of the resulting facts may proceed in the reverse order. The required end result governs the intermediate objectives and functions of each step. The intermediate values are needed, or they are not. There is no problem of improving a step if they are not needed. It can be eliminated completely. The order in which the intermediate values are created either permits or does not permit

[2] Oliver Sheldon has said: "The three basic principles of impersonal management may be described as analysis, experiment and measurement. These three in combination give rise to a working method."—*Ibid.*, pp. 225–226.

them to build up into the maximum practicable accomplishment of the final objective. It may be necessary to change the sequence of steps in the latter case. The functions performed in each step either create these intermediate values in the most economical manner, or they do not. An appropriate form of functional analysis may show how the economy and effectiveness of the mental, manual, or mechanical elements of the step can be improved. This usually means the elimination of excess or duplicate effort, the simplification of methods, the improvement of implementation, and other measures that will be discussed later. Each step in an operative procedure should lend itself to making specific work assignments for individuals. These assignments should fall logically within the individual's general work assignment. If they do so, they will fall logically within the organization's framework of delegated responsibility and authority. The delegation of responsibility, both executive and operative, is facilitated in such a case. Such facts make it possible to specify the functions in each step, the human and physical performance factors that they require, the standards of performance that are applicable, the relations with concurrent or successive steps, and any other facts that should be known for the effective, economical accomplishment of the assignment. No specifications should be more restrictive than is required for the satisfactory achievement of the final objective. Needless restriction means unnecessary inflexibility.

All procedures, whether line or staff, have their managerial and operative phases. Primary operative procedures are those for executing projects whose final objectives are primary service values. These are, in general, values that are salable to the customer. Most managerial functions are concerned, directly or indirectly, with maintaining and improving the economy and effectiveness with which primary operative functions are performed. Even those that are concerned solely with satisfying the personal objectives of owners or employees, or collateral social objectives, may make an indirect contribution to the accomplishment of primary service objectives. Staff assists line leadership in the performance of its managerial functions. It creates secondary values. These values contribute to the achievement of primary or collateral objectives. Their creation also has its managerial and operative phases. Designers and draftsmen, for example, are professional operatives. They are not respon-

sible for directing and supervising the work of others. They perform operative functions of creative planning. They report to a squad leader or some other supervisory executive who has leadership responsibilities. The work of their squad must be coördinated with that of other design squads. The entire design organization is headed by a principal engineering executive who has staff responsibility for product design. He reports to a line administrative executive. The work of the engineering division must be coördinated with the needs of the manufacturing line organization for product plans and specifications. The coördination of action requires the imposition of a control procedure on procedures for managerial and operative performance, whether line or staff. A coördinative staff group supplies operative individuals and groups with needed information concerning the nature and requirements of the assignment, accomplishes for the line superior the delegation of the necessary responsibility and authority, and gives assurance that the conditions required for accomplishment will be present when action is scheduled to start. It gives the responsible executive the necessary information concerning the progress of the action. This executive can also evaluate and modify the action through direction, supervision, and corrective action. Control procedure is the linking mechanism between managerial and operative performance, both line and staff. Both control and operative procedures must therefore make specific provision for the initiation and termination of action on an operative project and its key steps. Coördination may break down otherwise, because of lack of authority or information.

Structural Attributes of Good Procedure

It was said previously that a good organization has certain structural attributes. It was also noted that organization structure and procedure are the functional warp and woof of business organization. It is evident that organization structure and procedure must have complementary attributes. The principal attributes are flexibility, stability, balance, and capacity for growth.

Flexibility in a procedure is the quality that enables it to accommodate itself to temporary changes in operating conditions without serious loss of economy or effectiveness. It is promoted by holding the number of restrictive specifications to the necessary minimum.

The need for flexibility arises chiefly from seasonal and cyclical fluctuations in business volume, customer demands for special or additional goods or services, and unexpected interferences with the normal execution of the project for which the procedure is designed. Adjustment to temporary change without serious loss of economy or effectiveness implies the ability to handle the maximum number of exceptions to standard performance with the minimum number of exceptions to standard procedure. It implies the ability to combine or suspend the performance of certain steps in the procedure as the organization contracts with a declining volume of work. Conversely, it implies the ability to split existing steps to form new ones as the volume of work expands temporarily. There must be a reasonable probability, of course, that the change in volume or conditions will continue for a sufficient time to make the adjustment worth while. Thus there are a number of requirements that must be met in designing procedure that has flexibility.

Provisions for the integration or differentiation of procedural functions must fit in with related adjustments of organization structure. This is necessary at any time to facilitate changes in previous delegations of responsibility and authority. It is necessary during periods of expansion to maintain economy and the best use of the organization's human resources. The new steps should require minimum knowledge and skill. They should fit into new job assignments that can be handled by people with little ability. There are usually more of these people available, and they are less expensive. The skilled and professional phases of procedures must be performed by the permanent personnel. Cross-contacts also promote flexibility in the handling of assignments. Application of the principle of Compulsory Staff Advice facilitates adjusting the method of handling a project to overcome interferences. Its application can be set up to take effect when the action and its results deviate significantly from prescribed policies, methods, and performance standards. A significant change in the conditions underlying execution must be reflected in an adjustment of the performance standard. Budgetary control procedure takes this requirement into account with its "flexible budget."

Procedural flexibility depends also on human flexibility. Any prescribed adjustment in a procedural step must be made by the in-

dividual who performs it or by his superior. It may be made in some instances with staff assistance. Its success depends in any event on the understanding and ability of the person who performs it. Concerns engaged chiefly in job-order production to customer specifications are likely to have highly intermittent conditions of manufacturing. They cannot specify primary operative procedures in great detail. They are likely to use a higher percentage of skilled mechanics in their direct labor group than a concern that is engaged in the continuous manufacture of a standard product under highly standardized manufacturing conditions. A cost procedure may be designed to expand or contract the amount of cost data that is collected as the need for it varies. The information is supplied, however, by clerks and minor executives on lower echelons. The actual degree of flexibility is a function of their understanding and interest. Procedural flexibility depends also on the flexibility of physical performance factors. For this reason, the primary equipment used in the job-order concern may be general-purpose machinery.

An examination of the forms and other clerical instruments used in a clerical procedure may show that many spaces are filled in with the prescribed information and many others are empty. It may develop that the procedure is getting some information that is not needed, but not some that is needed. The objectives of the clerical project or the conditions underlying its execution may have changed, but the instrument has not. Assuming that the changes are necessary, economy and effectiveness may have suffered because of an inflexible instrument.

Managerial decentralization tends to promote both organizational and procedural flexibility. Time is also a factor. The possibility of procedural flexibility decreases as we approach the final objective of the project for this reason. There are, of course, other considerations in the problem.

Procedural Stability

Stability in a procedure is the quality that enables it to resist change, except in response to the necessary changes that are dictated by the Law of the Situation. It assures that fundamental changes in the procedure will be made only in response to fundamental

changes in the situation governing the execution of the project. One requirement for stability is stable objectives. Operative procedures are less stable than managerial procedures. The objectives of a primary operative procedure are customer values; of secondary operative procedures, collateral or secondary values. The first are more stable when they have to do with creating and distributing values to meet an inelastic demand; less stable when they have to do with an elastic demand. Primary operative procedures connect line operative activities. Secondary operative procedures connect staff operations with one another and with the line which they serve. They change necessarily with changes in primary procedures. Their stability depends largely on the stability of the latter.

Top administrative procedures, both line and staff, are concerned more with ultimate organizational objectives and less with immediate operational objectives. The former are highly stable, as we have seen. Managerial procedures tend generally to be more stable than operative procedures. The basic requirements for executive leadership tend to be constant, whether they have to do with the creative planning, organizing, or controlling of business activities. This is increasingly true as we approach the head of the organization. Managerial procedures are imposed on operative procedures, however, for the reason that they facilitate leadership. Any major changes in procedures for operative execution may require changes in the related procedures for operative management. This is particularly true in the case of operative control.

Operative procedures for special projects are inherently unstable. Their life tends to be limited by the life of the project. Operative procedures tend to be unstable in periods of rapid change or economic crisis. The instability of such procedures under wartime conditions is an example. Stability, both organizational and procedural, is inevitably limited by executive foresight. It is improved by the accuracy and completeness of the information concerning the specific characteristics and requirements of the particular business objectives that are involved.

Organizational stability depends also on the use of fundamental operative and managerial principles in designing procedure. A rule-of-thumb approach tends to produce a procedure that is effective and economical only so long as the *status quo* can be maintained.

Any material change in the situation may then require a material change in the procedure, despite the fact that the situation may not have changed fundamentally. The nature and requirements of project objectives determine the applicable principles underlying their accomplishment. Objectives and principles determine largely the functions that must be performed in accomplishing the final objectives, and their requirements. They govern the order in which these functions must be performed. A basic analysis tends to produce a general method of approach to project objectives that is fundamental. It does not require basic changes except in response to fundamental changes in objectives and the requirements of the situation. Indoctrination with the fundamental significance of this approach and training in the application of the procedure make it less necessary to specify in detail how to perform each step. All this, however, takes time, money, and staff. Usually all of these factors are limited. Only the managerial and operative procedures that are dominant can be studied and developed thoroughly. These are usually the primary line and staff procedures.

Procedural Growth

Capacity for growth is the attribute that enables a procedure to accommodate itself to the permanent growth of the organization and the expansion of its structure. It should accomplish this without serious loss of economy and effectiveness. The same considerations that underlie organizational growth and expansion govern the growth and expansion of a particular procedure.

The existence of a problem of organizational growth has been generally recognized. The literature of management does not indicate the same recognition of procedural growth. Business procedure, as a problem in itself, has received most attention in the fields of accounting, office management, and industrial engineering. These fields have been concerned largely with the analysis and development of systems and methods for handling current managerial and operative problems. There must be a basic problem of procedural growth, of course, if organization structure and procedure are the functional warp and woof of business fabric. We are astonished sometimes, when we read business history, to find that the methods of earlier generations of businessmen were basically similar to many of ours.

We forget that there were organic business and managerial functions in those days, even though they were never heard of. These functions condition the basic characteristics of organizational and procedural structure, even when the latter are developed by trial and error. The chief difference between past and present methods may be improved conditions, better implementation, and greater mechanization.

Capacity for growth has to do largely with ability to expand and differentiate permanently the basic functions in each step of the procedure. This must be done when and as required by planned changes in organization structure to accommodate forecast organization growth. Procedural planning for growth and expansion depends, therefore, on organizational planning. Similarly, it is affected by the characteristics and requirements of the ultimate objectives of the particular type and class of undertaking, rather than by the immediate end result of any specific project in this class that is in process. It is affected by such considerations as the secular trends of the business and the type of project, the changing relations between line and staff organization with growth, the need for increasing decentralization with greater organization size, the long-range implications of current product and process research with respect to personnel requirements for projected new assignments, and other broad aspects of the problem. Neither organizational nor procedural planning for growth is concerned with detailed requirements.

Procedural Balance

Procedural balance is the ability to operate continuously with the maximum practicable economy and effectiveness. There is, of course, no such thing as perfect balance, except in theory. Procedural balance implies a balanced relationship in the development of functions in each step of the procedure. It requires that each procedural step be given the optimum amount of man power and physical facilities of the right kind and quality. It requires a degree of excellence in administrative and operative planning that is not likely to be achieved except by accident. Perfect balance would soon be destroyed by the changing conditions encountered in executing the undertaking. There is, however, an approximation of it that is practicable in each case.

The development of each of these structural attributes is affected directly by the development of the others. It is affected by the quality of management generally.

The Classification of Business Procedure

The design and operation of procedure are facilitated by a classification that brings out the distinguishing differences between the various types of procedures. Procedural development is a problem in functionalization. A sound classification of business procedure should rest, therefore, on the basic classification of business functions. The following classification has been set up with this in mind:

Typical industry procedures: The principal procedures in basic industries such as transportation, distribution, manufacturing, and banking, usually have certain distinguishing characteristics. They are determined by the nature and requirements of the economic service they render.

Organic business procedures: These are associated with the organic divisions of a business organization in an industry. For example, there are sales procedures, production procedures, and financial procedures in a manufacturing business.

Managerial procedures: Managerial procedures coördinate and facilitate the performance of organic management functions, or certain phases of them. There are procedures for planning, organizing, or controlling certain classes of activities or types of projects. These procedures are operated by staff for the benefit of line management, either directly or indirectly. They facilitate the discharge of the line executives' responsibilities for correct decisions and commands.

Operative procedures: Operative procedures correlate the performance of the "making" or "doing" functions. Their performance under executive leadership results directly and immediately in the creation of primary or secondary utilities.

Managerial Procedures

Managerial procedures coördinate the performance of management functions by specifying the concurrent or sequential order of their performance. They facilitate the economical, effective performance of executive duties by specifying the physical and human fac-

tors that condition their performance. They may or may not indicate the manner of using these factors, depending on the degree of indoctrination of the executive personnel with sound managerial objectives, principles, and general methods of approach. The procedure should indicate where each major step is to be performed and who is accountable for it. It may not be necessary to specify the nature and limits of responsibility and authority for the particular step, if they have been covered adequately elsewhere in job specifications or organizational directives. Other general requirements of sound business procedure must be met. The specific requirements depend on the nature of the particular managerial problem. Their determination is greatly affected by the characteristics and requirements of the operative activities to which they relate. Managerial procedures are necessarily superimposed on operative procedures. They are an important part of the implementation of leadership functions.

Both managerial and operative procedures can exist in either a formal or an informal state. The latter is characteristic of small business organizations. They must have both managerial and operative procedures, and both exist in the small concern. They are originated and transmitted informally and verbally by line executives, since there may be little development of staff. They exist chiefly in the minds of executive and operative subordinates. It becomes increasingly necessary to commit these procedures to writing as the organization grows, the staff develops, and the situation becomes more complicated. Written standard procedures record what is believed at the moment to be the best method of handling recurring or continuing problems and situations. They are usually developed and operated by the staff for the line, with its concurrence. This does not happen, of course, until the particular staff has evolved and been adequately developed. The line executive is relieved of none of his responsibility and authority by this development. He is still accountable for the results accomplished by his organization.

It is necessary, therefore, to distinguish between primary and secondary managerial procedures. The reasons are basically the same as those that made it necessary to distinguish between primary and secondary chains of command. A primary managerial procedure is one that coördinates and facilitates the work of primary line

executives. It assists these executives in planning, organizing, and controlling the work of primary operative employees and primary equipment. A primary managerial procedure is operated for the line, in whole or in part, by a primary staff organization. The latter may be either coördinative or technical. It is attached to a primary chain of command at whatever level it is needed, but is not part of it. It supplies the line with certain values that it needs to do its job. They make possible the achievement of primary and collateral service objectives. These are not values that the customer wants in the form in which they are provided. They are therefore secondary values. They are chiefly information, advice, facilitation, and relief from the necessity for personally performing the more routine phases of management functions.

Secondary managerial procedures are those that assist the staff executive in performing his managerial duties in the specialized staff field that is under his command. A staff executive may have only advisory rights of decision with respect to the line organization he serves, and no rights of command. He has rights of both decision and command with respect to the subordinate line and staff personnel of his own organization. Some staff organizations in large concerns may number their personnel in the hundreds or thousands. They have long since gone beyond the point where the responsible executive can manage their work personally. There is a limit beyond which he can delegate responsibility and authority to his principal subordinates. Secondary staff executives begin to appear when this point is passed. It is again true, however, that these secondary executives cannot supply specialized managerial knowledge effectively and relieve the staff head of the more routine phases of his managerial work unless there is a formal procedure for its performance. These secondary procedures may link staff with staff, either within or between staff groups. They do not link staff with line. That is the job of primary staff procedures. An employment procedure, for example, is primary. It is operated by the personnel division. The procedure links certain staff personnel activities with line or other staff activities that create a need for a supply of qualified personnel. The director of a large personnel division may have a control center that assists him in controlling the activities of his division. It may consist only of an executive assistant and a limited

number of clerical employees. This center may receive and record labor requisitions, requests for transfers, and other orders and returns that enter into or affect the employment process. It may also receive periodic reports directly from the employment, medical, and other departments in his organization that participate in this process. The control center assists in the operative control of employment activities and renders administrative reports on the status of employment and employment programs to the director. The internal procedures for the operative and administrative control of staff employment and other personnel activities are secondary managerial procedures. The director must perform personally, and perhaps poorly, his administrative management duties if he has no secondary staff assistance. The same thing can be said for the heads of other staff divisions. The lack of good secondary procedures in some large staff divisions accounts for the poor quality of internal management. This is interesting, since staff is primarily a device to assist executive leadership in performing its managerial functions.

Technical Staff Procedures

Technical staff procedures are of two general kinds: planning procedures and procedures for rendering a service of technical facilitation. The former coördinates the mental and manual work involved in accomplishing a planning project. It specifies the conditions and requirements for the successful accomplishment of the objective of the project, a plan. The method of approach to the motion and time study of a manual operation is an example of a professional operative procedure for technical staff planning. The time-study analyst has only recommendatory rights of decision with respect to the operative whose work he is studying. He has no rights of command. He is usually authorized only to observe the operation, collect and analyze facts concerning it, and recommend a plan for a better operative performance. The plan must accomplish the secondary objectives of economy and effectiveness with respect to the service objective of the individual in the performance of the operation. It should be subject to line approval before it is put into effect. It should be subject also to being protested by the operative employee or his representative. The performance standard that is

based on the plan may or may not be regarded by the employee as fair. It modifies the condition of the sale of his services. The time-study analyst has well-developed professional techniques for accomplishing his staff planning objectives. He is, nevertheless, a technical staff operative.

An operative technical staff procedure must be tied into a larger technical procedure for staff management. The plan of work shown in Fig. 54 is probably supported by detailed data, drawings, and specifications. The time standards of performance that are shown may have been worked out by the time-study analyst mentioned above. He may be a member of the time-study department of the process planning division in a manufacturing establishment.[3] The other information shown may have been worked up by other technical staff operatives in other staff departments in other staff divisions. These staff operatives report to staff supervisory executives, as we have seen. The latter report, through their staff department head, to the chief of their staff division. It is evident that there must be some procedures that will assure the proper performance of the operative work of planning, the cumulation of this work into a plan for the economical, effective execution of the undertaking, the coordination of thought when the experts fail to agree, and the coordination of action by staff operatives, units, and higher staff components in completing the plan. Operative staff planning procedures, therefore, must be tied into staff operative management procedures. The latter are concerned with coördinating the execution of specific operative planning projects. The end result of each project should be a detailed plan for some phase of the undertaking. Procedures for staff planning must, of course, be tied into general administrative procedures.

The design of staff management procedures for planning must include technical progress reports, provisions for committee action, applications of the Principle of Compulsory Staff Advice, and other devices to assure coördination of thought by coördinate or higher technical staff components. This is the job of technical coördina-

[3] A process planning organization may actually be called a process design division, or it may be called a manufacturing methods division, an industrial engineering department, or something similar.

tion. There is such a thing as a "plan for planning," as noted previously. It is a general fundamental method of approach to the solution of a class or type of problems. It should be based on the principal phases of the scientific method. The effectiveness of technical coördination depends in part on the intelligent application of a "plan for planning" to the development of a specific plan.

Failure to control the progress of staff planning projects may mean failure to supply adequate plans information when and where it is needed. Such a failure can be disastrous. This control must be interdepartmental within the division, as well as intradepartmental. Procedures for the control of staff planning must provide for coordination with plans development by other staff divisions, and eventually with the primary line organization. Operational coördination is the coördination of action. It is an important phase of the control function. The chief of a large staff division cannot personally coördinate the complex action in his organization because of physical and time limitations. He must have staff assistance in discharging his control responsibilities. He should differentiate distinctly at least the basic staff control functions from his other responsibilities for staff management, and assign them to a staff assistant. This may begin the development of a secondary coördinative staff group. This type of staff in a large engineering division, for example, may employ many people because of the extensive record-keeping and other control services that are required. The control procedures in such divisions break down into the eight organic control functions, as in the case of primary control procedures. Technical staff management in a large technical division has its operative and administrative phases, as in the case of primary line management. Its control procedures must include provision for staff assistance in both operative and administrative control of staff planning activities. This means that procedures for primary staff planning must be tied in with secondary staff control procedures. This requires definite provision in the primary planning procedure for the initiation and ending of action on each operative planning project, or major phase of it, as shown in Fig. 50. There must, of course, be proper liaison between secondary and primary control groups.

Technical staff procedures for rendering some service of technical facilitation coördinate the mental and manual work, other than that concerned directly with planning, that makes the work of the groups served easier to do. It is usually a technical inspection service or a service of supply that is rendered after the plan has been activated. It facilitates the execution of the plan by the responsible line organization. It is justifiable to the extent that there is enough of this work to warrant a specialized organization, and its contribution to the accomplishment of primary objectives is sufficient to justify the cost of operating it. It is not desirable to have a staff organization do for the line what the line can do as economically and effectively for itself, provided that there is no resulting interference with the line's accomplishment of its primary mission. The facilitative services of the industrial staff functions of personnel or supply are examples of obvious necessity. Staff operative procedures for technical facilitation are structures of complementary functions for creating the required secondary service values. They must be tied in with secondary control procedures in the same manner as staff planning procedures. There is less necessity for technical coordination, because the procedure is not concerned directly with planning.

The general organizational and procedural principles that were discussed previously apply basically to the design of technical procedure. There are others that have to do with the use of procedural instruments; they will be noted shortly.

The above discussion has been based on large-scale technical staff organization. It has been intended to place technical staff procedure under the microscope of large-scale development to bring out its significant detail. The individual may be operating a small business, however. He has no large staff divisions. He may, in fact, have little staff. It should be remembered that theoretically all business functions, both line and staff, have their genesis in the one-man concern. Organizational and procedural relationships in the small business must be simple. In a one-man concern, the owner-manager-operator is the man. The fundamental principles of good management operate here, nevertheless. Each small businessman usually wants to grow into a bigger businessman. Growth is usually necessary in a dynamic competitive society. It is dangerous to stand still. An

understanding of the anatomy of business is helpful in stimulating the growth of its organs.

Coördinative Staff Procedure

A coördinative staff procedure is a control procedure. It is designed to facilitate the constraint and regulation of the organization's activities by executive leadership. It is a structure of complementary control functions, together with the human and physical factors that condition their performance. These functions may be performed concurrently for related projects or sequentially for a particular project, as required. Their performance moves toward the final objectives of the control procedure in any event. These are the end values of good control that were noted earlier.

A control procedure may assist operative management. It is concerned in such case with project control for specific undertakings. It may assist administrative management. It is concerned in such case with program control for specific organizational groups. It may facilitate primary line control. It coördinates action within the line organization in this case. It must also coördinate various technical staff services with the needs of the line for them. It may facilitate secondary line control. It coördinates action within a staff organization in such case. It must also maintain liaison with primary and other secondary control groups. In other words, primary and secondary control procedures must be linked together.

The general requirements of a control procedure were mentioned previously in connection with the discussion of control, the structure of coördinative staff organization, and managerial procedure. It was shown that the order of performance of the steps in a control procedure should conform generally to the normal order of performance of the organic functions of control. The principles that determine the correct complementary relations between these functions are the principles of good control.

There are five control functions that can best be assigned to staff. These are routine planning, scheduling, preparation, dispatching, and comparison. There are three that are essentially line functions of control. These are direction, supervision, and corrective action. A control procedure should be operated by a coördinative staff group. The procedure should provide for the adequate performance

of all eight control functions. The function of dispatching should provide adequate control of the initiation of action on the project that is being coördinated. The function of comparison should provide for the procurement and processing of the necessary information concerning completion of the project. These functions link the control procedure with the operational procedure for the execution of the project. Routine planning and preparation link the control procedure with technical staff procedures for creative planning and supply. Scheduling sets up criteria of progress, relative to time, for the use of line and staff groups that are concerned with the execution of the project. The operational procedure must show the time standards for the completion of the project and each of its phases. Otherwise the control procedure must show where and how the time requirements for satisfactory execution may be determined. The general principles of business procedure apply also to the design of the control procedure.

Procedures for Organizing

There are, of course, procedures for organizing. They are well developed and committed to writing in some large organizations that have recurring problems of organizing. They involve action in creating the antecedent conditions that underlie economical effective execution. The work may be done for the line organization by the staff agencies. It may be done by an outside organization, working with one of the staff agencies, as in the case of new construction for plant expansion. The agency that is responsible for planning a certain phase of the operation is usually responsible, in either case, for organizing for the execution of that phase of the overall plan. The agency is obviously a technical staff organization. The particular group within the organization that is responsible for the work of organizing may not be the one that drew the plans, however. A plant layout section in a process planning division does not set up the layout that it has planned. This is more likely to be done by millwrights, carpenters, steamfitters, and other mechanics in the maintenance department. This department may be a member of the process planning organization. Similarly, a tool design department does not make the tools that it designs.

The reason for this differentiation is evident. The organic func-

tions of management tend to be complementary rather than similar. The background, training, experience, personality, and intelligence required may be different for creative planning than for organizing. We do not find separate agencies for organizing, however, except in very large organizations. The average concern cannot afford and does not need them. The technical staff organization that drew the plans for certain phases of the operation should know the basic conditions underlying their execution. It can coöperate with the line and other staff groups in setting them up. The importance of the organizing function is so great that the chief executive at each level may wish to have the work of organizing coördinated by an administrative control group under his personal supervision.

The design of a procedure for organizing must take such considerations into account. It is basically a procedure for technical staff facilitation, nevertheless. The preceding comments on such procedures apply generally.

Operative Procedure

An operative procedure is a structure of complementary operative functions. It is set up to facilitate the execution of an operative project. Operative functions are "making" or "doing" functions in the sense that their performance results immediately and directly in the creation of values. The performance of managerial functions results directly but not immediately in the creation of values. Managerial decisions are executed through operative employees. Supervisory management decisions may be executed almost immediately. Administrative management decisions usually cannot be executed until some time in the future.

Operative projects may be primary or secondary. The former result directly and immediately in the creation or distribution of salable values. They are line projects. The latter result in collateral or secondary values. They are staff projects. Operative procedures may be classified accordingly. This classification has significance for the following reasons: Each organization is responsible for using the most economical and effective methods in accomplishing its assignments. The line organization is responsible, therefore, for the development and use of the best primary operative procedures. It must discharge this responsibility personally in small organizations.

Staff organizations for the design of primary processes or methods evolve in large organizations. Line executives lack the time and possibly the professional qualifications for this work. They still have the ultimate responsibility for the quality of their methods. They are expected to make effective use of staff to extend their capacity and amplify their powers. Hence a staff agency should be required to get line concurrences and approvals before making changes in primary procedures.

A similar situation exists with respect to staff operative procedures. Each staff organization is responsible for developing and using the best methods in its professional field. Many secondary operative functions are clerical, but not all of them are. The office manager is usually expected to be an expert on the design of clerical procedures. They should at least be referred to him for advice. Other comments on secondary operative procedures were made in discussing managerial methods.

The functions performed in any operative procedure should be analyzed with reference to the principles governing manual work and work relations. These principles have to do with the effective utilization of physical forces and facilities. They include the principles of motion study. They may be personnel and organizational principles. They may be any other principles governing the effective and economical utilization of time, money, personnel, and physical resources in accomplishing the particular operative project.

Procedural Instruments

Procedural instruments may be any physical implementation that is used directly in the execution of some step in the accomplishment of a project. Procedural relationships between functions condition the characteristics and requirements of procedural instruments. The latter either perform certain complementary functions in a procedure or facilitate their performance. Their characteristics and requirements are determined fundamentally by the performance requirements of the functions that they serve. The latter are determined fundamentally by the requirements of the final objective of the project.

Procedural instruments may be classified on the basis of these considerations as follows:

1. Mechanical implements
   a. Specific.
   b. General.
2. Clerical instruments
   a. Orders.
   b. Instructions.
   c. Returns and reports.
   d. Records.

Mechanical implements may be any tools, mechanisms, or physical factors of environment that perform or directly facilitate the performance of functions in the execution of a project. These implements are thought of usually as physical performance factors in primary procedures. The most important examples are obvious, because they condition the creation or distribution of primary values. They include, in a manufacturing plant, such items as machine tools, the tooling for such equipment, and auxiliary equipment such as machine attachments, hoists, conveyors, hand tools, and other directly productive items of mechanical implementation. This definition also includes the mechanical implementation of secondary procedures. A great variety of secondary implementation is available on the market. It includes mechanical accounting machines, duplicating equipment, calculating devices, communications equipment, filing equipment, and many other items.[4]

A distinction should also be made between specific and general implementation. The machine tools, tooling, and attachments mentioned above are obviously specific, direct, and local in their action on project accomplishment. There are, in addition, items of implementation that serve all the projects that are in process of execution in a general work area. The general lighting system for the area, materials-handling equipment that is not assigned to a specific work station, air lines within the area are examples. Their condition and use may directly affect the performance of a certain operation on a particular project that is in process in the area. For this reason, the analysis of a procedure may begin with a study of

[4] See Coleman Maze (ed.), *Office Management*, chap. 15, for a discussion of office furniture and equipment. Any good text on office management will have a discussion and classification of office machinery and equipment.

general working conditions in the area, rather than the performance of the steps in the procedure. An improvement in general conditions underlies and affects local conditions. It may greatly affect the economy and effectiveness with which the steps in the procedure are performed. General conditions must meet standards of best current practice, therefore, before local conditions and methods can be improved and standardized successfully. General mechanical implementation has been included in the classification of procedural instruments because it underlies and conditions their application. It does not come strictly within the definition of such instruments, however. The provision and maintenance of general implementation are primarily a problem of organizing rather than operating.

Clerical instruments are obviously procedural instruments. They implement the performance of secondary operative functions. They perform functions that are related to but quite different from those of secondary mechanical implementation. Clerical instruments collect, classify, convey, or record information. An IBM machine, for example, may process certain business data. This information was collected from original sources, probably, on IBM cards. These data are punched into the cards, which are then fed into the machines. The results of processing the data are then recorded on an appropriate form by the machine. The form conveys the processed data to clerks or executives for use in subsequent steps in the particular clerical procedure. Both the machine and the form are secondary procedural instruments. The former is obviously an item of mechanical implementation, whereas the latter is a clerical instrument.

Procedural instruments are significant because of their contributions to effective performance. Primary instruments are usually mechanical. They represent one of the contributions of capital to high per capita production in an industrial economy. Staff responsibility for their selection or design rests on the staff agency that is responsible for planning primary operative methods. The provision of specific mechanical or other physical implementation for a particular project may be the responsibility of a technical staff agency concerned with supply. Assurance of their proper provision may be the responsibility of a coördinative staff agency. Secondary procedural instruments may be either mechanical or clerical. Staff responsibility for their selection and design may rest on the office man-

ager's organization, with the concurrence of the using agency. These instruments ultimately facilitate the performance of managerial functions. The principal clerical instruments will be given further consideration for this reason.

Orders and Instructions

An order may be any delegation of responsibility and authority for the performance of a function. It may be oral or written. Either form may enter into control. Written orders may be any convenient devices for facilitating and effectuating delegations of responsibility and authority.

The general conditions and requirements for the design and use of written orders have been covered adequately in most texts dealing with industrial or office management. It should be necessary only to summarize the principal considerations. An order, for example, should state clearly the objective of the mission. It should specify clearly the criteria for the successful achievement of the objective in terms of the quantity, quality, and cost of results with relation to time. Good orders define the nature and extent of the responsibility and authority that have been delegated. Such definition is necessary for the maintenance of accountability. Written orders are important instruments in control procedure for this reason. They may be orders for purposes of operative or administrative control. Operative orders enter chiefly into project control for specific undertakings. Administrative orders enter chiefly into program control of group activities for general undertakings. Orders may also be technical or operational. Technical orders authorize the use of specified methods and criteria under specified conditions. They are related directly to technical instructions. They are frequently combined with them. Technical orders cannot authorize action on a particular project or program. This is the function of an operational order.

A written or verbal order should indicate the reason or necessity for it, unless this is obvious. This means that it should be based on the Law of the Situation. It should be related to the requirements for good performance and control in the execution of sound plans. Such orders tend to build morale rather than break it down. Verbal orders are required frequently during emergency situations when

time is of the essence. Verbal orders may also be issued in connection with the performance of the functions of direction and supervision. All important verbal orders should be confirmed by written orders, as soon as practicable, to avoid the possibility of serious loss of coördination. Copies of orders should be given to all who should be coördinated, but "layering" should be avoided. These and other considerations in order giving were discussed in connection with the control function. Account of them should be taken in designing and using order forms. There are also certain rules that should be observed in designing forms for any purpose anywhere. They will not be discussed, except for a brief comment later, because they involve detail that is beyond the scope of this discussion. It comes properly in the field of office management.

Instructions may be any information concerning the conditions and methods for the accomplishment of the mission. Direction is the function of instruction. It is a phase of control. It may be performed orally or in writing. Written instructions facilitate the performance of direction. They are the result, directly or indirectly, of planning. Some of this planning may be done on the spot by the line executives in connection with corrective action. Some of it may require specialized knowledge, training, and experience of a professional nature. Such plans may be developed by a qualified technical staff organization, if the company is big enough to afford one. The information that is released to the line organization to facilitate the execution of the undertaking may be in the form of blueprints, technical data, specifications, standard practice instructions, or other devices. They may be classified generally as technical instructions. These instructions are frequently divorced from operational orders to facilitate the function of direction. The functions of orders and instructions should not be confused, however. Instructions specify the manner and conditions of performance in executing projects and programs. Written instructions are distinct procedural instruments, even though they complement and may be combined with written orders under some conditions.

Oral instructions, like oral orders, may be necessary under emergency conditions. Some dangers are associated with the use of such instructions. They are less likely to be thought out thoroughly. They are more likely, in consequence, to be incomplete. There is

greater danger of misunderstanding or misinterpretation, as a result. It may not be possible to carry out instructions as specified. This tends to break down accountability and to cause loss of respect for executive leadership. There may be a progressive loss of accuracy with consecutive oral transmissions of instructions. There may be unintentional distortion or omission of information. The danger of this increases, of course, with the amount and complexity of the instructions. An oral transmission of instructions obviously involves face-to-face leadership. Any failure by an executive to accept full responsibility for the results of his instructions may cause loss of morale. This may lead to serious deterioration of his leadership position. Important oral instructions, like oral orders, should be confirmed in writing.

Standard Practice Instructions

A standard practice instruction is called a standard operating procedure, standard office practice, or a similar name in some concerns. It may be defined as a written record of what is regarded, at the moment, as the best method of executing a certain kind of project.[5] A procedural manual is a compilation of standard practice instructions.[6]

There are many sound business objectives that justify the development of such instructions, even in relatively small concerns. A permanent record of the practice in handling a particular type of project is necessary for consistent progress in improving methods. The training load of supervisory executives is decreased with the reduction in the need for oral direction. There is a minimum loss due to forgetfulness or inaccurate recall of instructions, misinterpretations, distortion in transmission, and other difficulties resulting from verbal orders. There should also be greater uniformity in the quantity and quality of results produced by different persons

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[5] Webster Robinson said: "A standard practice is a directive factor which guides operation."—*Fundamentals of Business Organization*, p. 117.

[6] Some authorities and organizations do not distinguish between classes of standard instructions. John H. MacDonald, for example, discussed "the office manual" in the 1937 edition of his book, *Office Management*. The tendency in large concerns in recent years is to distinguish between policy manuals, organizational manuals, and procedural manuals. See Coleman Maze (ed.), *Office Management*, p. 748.

working on the same type of project at different times. Costs should be reduced by the uniform, consistent use of the best methods. A standard practice instruction should supply a more effective base for coöperation, self-coördination and initiative. It does not stultify initiative, since it specifies general methods and conditions underlying a class or kind of project. It cannot rigidly specify the methods for a specific project that is currently under execution. Interferences with execution may develop that could not be anticipated in the specification of method. The standardization of practice can therefore improve or depress morale, depending on how well it is done and how thoroughly it is understood by the rank and file. A standard practice instruction sometimes carries the signature of the technical staff executive who recommends it, and the concurring signatures of the coördinate line and staff executives who must operate it, and of the responsible line executive who must approve it. The instruction then becomes a technical order. There is greater assurance, as a result, that action will take place as planned. Deliberate, unauthorized deviations from a properly approved standard practice instruction, without sufficient cause, constitute deliberate repudiation of the authority of the responsible line executive. They are not included in the term "safe working practices" because they constitute insubordination.

There are certain general conditions and requirements that must be met if these advantages are to be secured. They have their basis in the conditions and requirements for sound planning that were discussed previously. Standard practice instructions should, for example, be clear and concise, but accurate. They should be couched in language that can be understood by their user. The source of any additional information that is required for effective economical execution should be indicated. This source is normally the particular individual or technical group that was responsible for the development of the procedure in the first place. The use of standard practice instructions should not be permitted to freeze progress in developing better methods. They should promote procedural stability. On the other hand, they must have the quality of timeliness insofar as they are required to represent the best current practice. It should be possible, therefore, to change a standard instruction quickly and cheaply, whenever a significant improvement in method

is made. The obsolete instructions should be recalled and the revised instructions issued at once to all concerned. Obsolete instructions in the hands of the operating organization are a source of confusion rather than assistance. One occasionally sees printed and bound copies of organizational, policy, or procedural manuals. A mimeographed, multigraphed, or hectographed manual in loose-leaf form may be less expensive and more practical.

The form of the standard practice instruction is a matter of convenience and opinion. It varies accordingly between concerns. Consequently, the form shown in Fig. 57 is an example only of the one used by one well-known concern. Any form that facilitates ready reference and use will be satisfactory. Standard practice instructions should be classified and numbered serially in accordance with the type of project that is covered and the organization that has the principal responsibility for its accomplishment. They should be self-indexing, if possible, to designate the individual or group that is responsible for each step. Organizational, policy, and procedural manuals become a body of statutory law for the organization when properly classified and indexed.

It does not follow, because standard practice instructions are important, that all practices should be covered by them. It depends on whether the practice has to do with an important recurring problem. Otherwise, the cost of developing, recording, and maintaining a standard practice may be more than any values that can result from standardization.[7] The development of such instructions is a staff project in itself. It should be controlled accordingly. Such instructions, when developed, should be issued by the technical staff group that is responsible for their technical maintenance, through the appropriate coördinative staff group. The latter should be responsible for recalling obsolete instructions.

Communications

Instructions must of course be communicated, which brings up again the subject of communications techniques. The latter may be

[7] L. Urwick defines "red tape" as "regulations which do not issue from the necessities of the job, but from some individual's passion for procedure for its own sake."—*The Elements of Administration*, p. 95. Such people are often accused, in American business slang, of running a "paper mill."

STANDARD PROCEDURE INSTRUCTIONS

NO. 0 61001

SUBJECT ORGANIZATION

TITLE CONTROL OF ORGANIZATION STRUCTURE AND SUPERVISORY APPOINTMENTS

ISSUED 8/31/48	EFFECTIVE 8/31/48	SUPERSEDES 4/3/45

This Instruction sets forth the manner in which the organization structure and the appointment of supervisory personnel within the RCA Victor Division are to be controlled.

"Transmittal Sheet," basic form 11E68

"Organization Notice," basic form 17E33

A. PRESENTATION OF ORGANIZATION STRUCTURE

1. The complete organization structure of RCA Victor shall be presented in the form of "Organization Manuals." These manuals shall depict, in chart form, the subdivisions of RCA Victor and shall define the duties and responsibilities of the head of each subdivision. There shall be two kinds of "Organization Manuals," as follows:

   a. The "RCA Victor Division Organization Manual

      This manual shall be issued by the Organization Planning and Procedure Division, Personnel Department, and shall cover all levels of supervision in the General Office, Home Offices, and subsidiaries, down to and including the "Group" level, and all levels of supervision in the Plants down to and including the "Section" level. Distribution of this manual shall be limited in accordance with predetermined master mailing lists.

   b. The Product Department Organization Manuals

      The Organization and Procedure Section of each Product Department shall issue an "Organization Manual" for use within its Department. These manuals shall cover all levels of supervision in the Home Office and the Plants of the respective Department and shall be distributed in accordance with internal procedure.

FIG. 57. A Page from a Procedural Manual. (Courtesy, Radio Corporation of America, RCA Victor Division.)

any methods and the accompanying implementation for transmitting and receiving oral or written orders, instructions, returns, and reports. The number and variety of communications devices on the market attest to their importance in business procedure. The general significance of such implementation was noted previously. The specific considerations governing the selection of such implementation depend on the requirements of the particular communications problem. The general considerations include the following: (1) the speed of transmission that is necessary, (2) the capacity required for the volume of communications to be handled, (3) the accuracy and fidelity of transmission or receipt, (4) the range of operation of the equipment, (5) the need for secrecy or the reverse, (6) flexibility and mobility in the use of the equipment, (7) the size and complexity of the using organizations, and of course (8) the expense of operating the equipment. Adequate discussion of them will be found in most office management texts.

It should be remembered that communications problems increase rapidly in magnitude and importance with organizational growth.[8] There is some evidence that this increase is in geometric progression as the volume of primary service increases in arithmetic progression. The communications factor can, in any event, be a limiting factor in organization growth and a determinant of optimum organization size. The necessity for permanent, fixed, inflexible, and expensive installations of communications equipment should be examined carefully. The conditions and requirements for satisfactory communications necessarily change with growth in business volume and organizational size. A heavy investment in such installations may tend to invert the normal relationships between physical facilities and the functions whose performance they facilitate. It should also be remembered that good communications are necessary for a centralized control of operations. There is the obvious danger that good communications facilities may promote a centralization of control beyond that which is necessary and desirable. This is not a warning against the use of modern high-speed, high-

[8] W. H. Leffingwell stated that in his opinion the communications problem becomes pressing and requires some attention as the number of clerks approaches 100, and becomes increasingly important with continued organization growth. See *Textbook of Office Management*, pp. 356–357.

capacity communications systems, but rather against some of the executives who use them.

Business Reports

A business report is any statement of fact or opinion concerning any business factors, conditions, or activities that is rendered by a subordinate to a superior. The ultimate objective of an instruction is usually facilitation of operative performance. The ultimate objective of a report is usually facilitation of managerial performance. The immediate objective of a report is information that will enable a clerk or executive to do his job. Reports may be classified accordingly as:

1. *Reports for purposes of creative planning and organizing*
   a. Research reports.
2. *Reports for control purposes*
   a. Operative reports or returns.
   b. Executive reports for:
      (1) Operative control purposes.
      (2) Administrative control purposes.

The nature and functions of these reports have already been discussed. The reports may be oral or written. They should be transmitted through a responsible executive who can be held accountable for their completeness and accuracy. It is his business whether or not he delegates the work of checking them to subordinates.

Reports may be periodic or special. Routine reports for control purposes are usually periodic. Research reports are likely to be special. Special reports for control purposes also may be requested in connection with corrective action. A special report may, of course, be any staff report that results from the need for a thorough, extensive analysis of a special problem. There is danger that special reports may become periodic reports, unless there is good administrative control of all reports. Some concerns audit annually the number, kind, and frequency of routine repetitive reports. Those that cannot be justified by the values they contribute are discontinued. The remainder are simplified, and their periodicity is reduced if possible. The reduction in the clerical payroll should cor-

respond to the reduction of the work of processing the reports. Otherwise, there may be little contribution to the reduction of overhead expense. It is often difficult to evaluate a report, however. Special reports are likely to deal with intangibles, with future action, or with projects whose end results cannot be evaluated accurately. Even periodic reports may be difficult to evaluate. They usually relate to current operative and administrative controls. Any managerial work is largely mental. It should be obvious that the cost of a report should not be greater than the value of the information it provides. But it may not be easy to determine whether the losses in terms of decreased results or increased costs of correcting errors are equal to the cost of producing the report. The number and quality of protests at the proposed discontinuance of a report may indicate its value. Finally it involves qualitative judgment by the responsible executive, even with the best facts that he can get.

The value of a report is increased by good form design. The information in it should be so set up that it will conserve the time of the individual using it. Operative returns should be designed to facilitate the economical, effective performance of clerical functions such as communicating, copying, duplicating, computing, sorting, classifying, posting, indexing, filing, and comparing. The design of an operative report should therefore take into account the principles of motion economy and work simplification, as well as the principles of good form design. Executive reports for control purposes should present summaries of accomplished results in a form that compares them directly with appropriate performance standards. The exception principle should be applied to these comparisons to conserve the executive's time. Periodic operative control reports should show the status of operative projects in terms of quantity, quality, and expense, relative to location of the action and time. Periodic administrative control reports should show the status of programs in the same terms, by organizational groups and programs for an appropriate time period. The results accomplished by these groups should be summarized, compared with appropriate group performance standards, and subjected to the application of the exception principle. The cost of executive time in analyzing results may be reduced by a graphic presentation of the facts. The cost of errors in judgment may be reduced by designing the record or

report in a form that makes possible a quick, easy internal audit of the information provided. Other applications of the principles of good report and form design may be made to increase the value of the report.

Business Records

The recording function in business operations is the clerical work of receiving, accumulating, classifying, and preserving business information in a suitable form. What is suitable is determined by what is required for the effective, economical use of the information by the particular business functions that require it. The principal subfunctions of recording are sorting, classifying, posting, indexing, and filing. The objectives of recording are secondary business values. They are necessary for good management. They include satisfactions of the need for the orderly, continuous accumulation of information for planning and organizing purposes; an adequate body of facts concerning previous operations on which to base current operating decisions; protection of the organization against loss of knowledge and experience with the loss of key personnel; protection against loss due to reliance on personal memory and experience; the facilitation of control functions; and other benefits that result from the accumulation, classification, and preservation of business information. Forecasting requires an extension of the experiences of the past through the present situation into the future. Planning involves futurity, and therefore some degree of forecasting Research techniques in the physical sciences can supply much of the information required for planning. But much of it must be obtained from business records. They are necessary for the performance of planning and subsequent management functions.

A business record is merely a procedural instrument that facilitates the performance of the recording function. The latter serves the purposes of other business functions. Business records can be classified, therefore, according to these purposes. We speak of sales records, production records, and financial records. The reference is obviously to the organic business function that is served. We speak also of engineering records, personnel records, production control records, purchasing records, accounting records, and others. The reference here is to an organic management function whose

performance is assisted by a staff group. There are records that are kept and used chiefly by skilled or professional operative employees. There is no nomenclature to cover them. They are merely a further breakdown of managerial records. We speak also of book-type files, loose-leaf records, card files, visible-index records, key-sort records, and files of original instruments. This classification depends on the mechanical characteristics of the filing device. We may also classify records, according to time, as temporary or permanent, current or historical.

The number and variety of records in business organizations indicate their necessity and importance. They indicate also a cause of overhead. There is no possibility of eliminating records completely. There is the possibility of reducing their number and variety and of operating more efficiently those that must be retained. This requires a study of the records that are specified by standard procedures to determine whether the need for them is commensurate with their operating cost. It may involve a study of the record form to insure that it performs its function economically and effectively. Perhaps some of the recorded information can be eliminated if it is used infrequently. It might be cheaper to get it by special investigation. A decision may be required as to whether the information should be filed or recorded permanently or temporarily, or not at all. Some mail-order houses return customer correspondence when the order is filled. Other steps can be taken. It is unlikely that a file or record clerk will take them, however. His job is merely to file or record what comes into his basket. Failure to plan, organize, and control the recording function may therefore result in more jobs for more clerks and more overhead than is necessary.

Procedural Investigation, Analysis, Design, and Installation

Procedural analysis and design has for its objective the development and use of the one best method. It involves technical staff activities in the fields of creative planning and organizing. They should be carried on, as we have seen, under the general direction and supervision of line administrative management.

The work of investigating, analyzing, and designing business procedure falls in the field of creative planning. Excellence in the design of primary goods and services may be largely nullified by

poor design of the processes by which they are created and distributed. This is true whether the processes are managerial or operative, manual or mechanical.

The objective of an investigation of an existing procedure is information about the economy and effectiveness with which it operates. This information may concern recurring interferences with a class or type of project. It may have to do with a follow-up of a suggestion made orally by a subordinate, recommended in a previous staff report, or received from an operative employee through the suggestion system. It may be a check of the statements of subordinate executives concerning the results that are being accomplished, and the procedural conditions that affect them, when these statements are not backed adequately by facts. The investigation may be merely a routine audit of the operation of the system. It requires, in any event, a complete record of all the significant factors, forces, and effects that condition the performance of each step in the procedure. The subsequent analysis involves an application of the Principle of Limiting Factors. This record may therefore include information concerning the objective of the step, the nature and requirements of the functions that must be performed, the implementation and operating conditions that are needed, the time requirements involved, the characteristics and abilities that are required in the personnel, and any other performance factors that are significant. This information may be obtained by conference with subordinate executives and operatives. It may be secured by observation of current operations. It may be abstracted from previous reports and records. Analysis of the information may lead to further investigation using the laboratory techniques of the physical sciences or the statistical techniques of the social sciences. The means of obtaining the information fall within the classification of staff investigational methods given previously. The starting point for the particular method is usually the point where action is initiated on the first step of the procedure. A preliminary investigation may begin with a top executive, however. One learns at the top of the organization how the procedure should work, and possibly how someone really believes that it does. One learns at the bottom of the organization how it actually works.

The starting point for the analysis of a procedure may be the

point where the investigation ends—the final step of the procedure. The end values that constitute its final objectives are the justification for its existence. They are needed or not needed. The quantity and qualtity of the end results are satisfactory in the light of acceptable performance standards, or they are not. The lead time between the first and final steps in the procedure is too long or too short. The unit costs of the project are in line with cost standards, or they are not. The answers to such questions may have been known before the investigation began. The facts developed by the investigation may enable us to trace the deviation of actual from planned performance back to the step where it first appears. We cannot begin to study causes until we have located the seat of the difficulty. It may not be possible to determine the location of the difficulty from existing records, in advance of the investigation. The facts developed by the investigation may make it possible, when the nature and place of the difficulty have been determined, to specify the requirements for the performance of the step and of those that follow it. These facts may prove to be inadequate, and lead to further investigation. An adequate solution will insure the cumulation of intermediate values into a satisfactory accomplishment of the final objective.

The principles of effective thinking and sound planning underlie the investigation, analysis, and design of business procedure. They are basically the principles underlying the scientific method of attack. The specific design principles are the principles of business procedure that have already been discussed. Their successful application requires adequate criteria. The latter may fall within any of the major classes of service, policy and function, physical conditions, personnel, and performance standards.

The work of analysis and design may be facilitated by the use of procedural flow charts. Such charts are any device for summarizing graphically the principal facts and functional relationships in a particular procedure for purposes of analysis. They provide an overall picture of the procedure that emphasizes some important factor in its operation. They tend to prevent the picture from becoming fogged by detail. Such a chart must be supported, however, by the detailed data resulting from the investigation. There are

various types of flow charts. The "steps-in-squares" chart lists the operation or step number, and gives some pertinent data concerning it such as department, the distance moved and time required between each step, together with a brief statement of its nature.[9] It is sometimes used in conjunction with a "geographical" type of chart.[10] The latter outlines the floor space of each participating department, shows its general relation to other departmental and building areas, locates approximately the steps performed in each department, and connects them by flow lines. It is frequently used for studying primary operative procedures in manufacturing plants where distances affect lead time and materials-handling problems. It shows up excess movement of work and points of congestion. The "form flow" chart does a similar job for secondary procedures by showing the movement of orders, instructions, and reports between organizations.[11] Each form is listed on the chart at the left-hand end of a horizontal band. Organizational groups are listed across the top. The movement of the form between departments is plotted within the band. This chart shows up "backtracking." Most clerical procedures are basically managerial. The most significant factors may be the nature and amount of information required for managerial decisions on the location of responsibility for procedural steps. The "informational flow" type of chart shows the various procedural instruments used.[12] The origination and flow of information between forms are shown by connecting lines. Each line carries the number of the step in which the information originated. The "organizational flow" chart emphasizes the location of responsibility for action on each step. The action squares are connected by lines. Symbols on these lines may indicate the clerical instruments that move between departments. A simple example is shown in Fig. 58. No flow chart of any kind can solve any problem by itself. It can merely visualize the problem and assist the analyst in questioning the utility of each step, functional element, instrument, or

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[9] See *ibid.*, p. 54.

[10] See Ralph M. Barnes, *Motion and Time Study*, Wiley, 1937, p. 48.

[11] See Coleman Maze (ed.), *Office Management*, p. 545. Also W. R. Spriegel and Richard Lansburgh, *Industrial Management*, p. 63.

[12] See Richard F. Neuschel, *Streamlining Business Procedures*, p. 312.

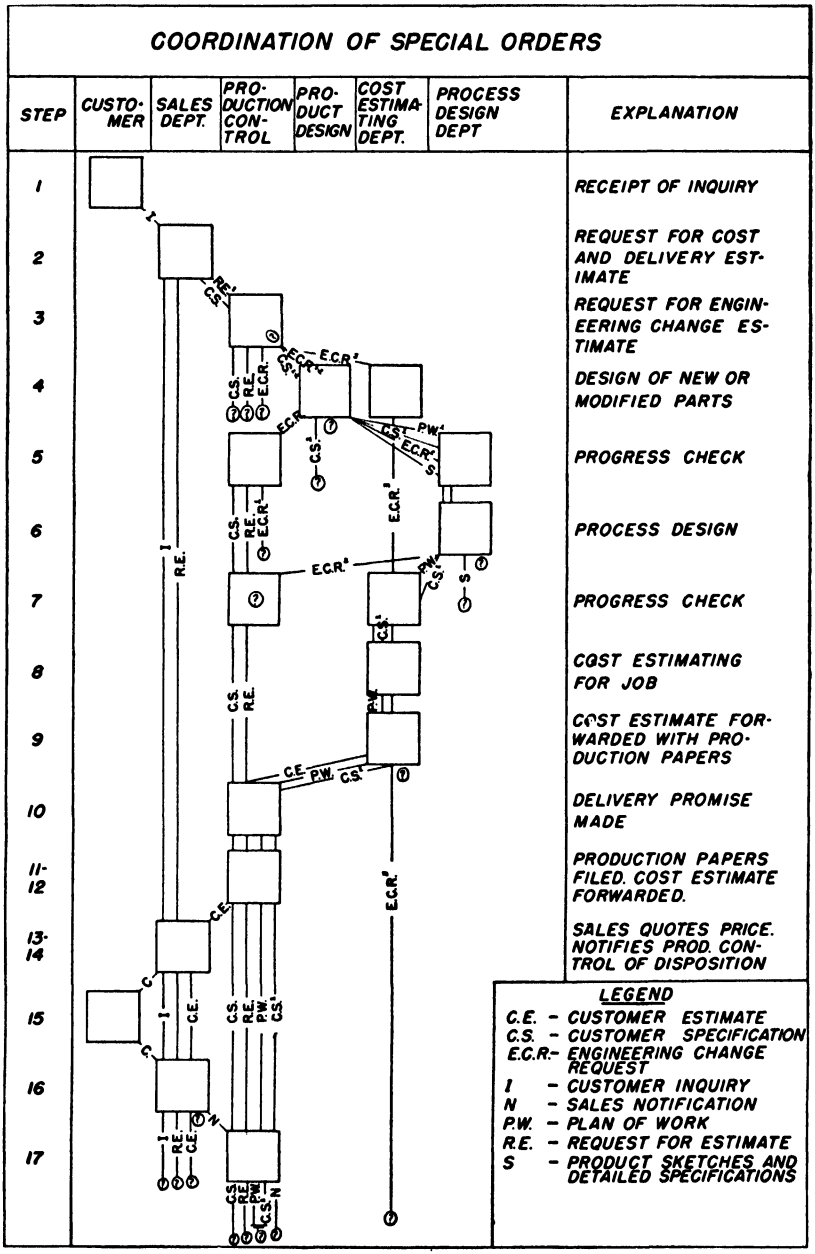

FIG. 58. A Procedural Flow Chart.

condition used in the procedure. Like any device, it is no better than the person who uses it.

The installation of the procedure, after line approval, is a phase of organizing. It usually involves a selling job. The Principle of Participation applies to installation as well as design. The technical staff group that designed the procedure probably will have the job of installing it. The installation technicians must possess tact and diplomacy, as well as patience, ingenuity, and a professional understanding of the problem. They need the on-the-job know-how, frequently, of operating personnel. Approval by the superior does not necessarily carry with it enthusiastic acceptance by his subordinates. Staff can exercise only a leadership of ideas.

The ultimate responsibility for procedural design and development must fall on a line executive. Any executive should be responsible for the methods that he uses. Every staff executive reports to a higher line executive. The same complexity that makes necessary the development of staff with organizational growth makes necessary the delegation to it of staff responsibility and authority for the development and maintenance of procedures in its field.The design of an important operative procedure is a major operative staff project in itself. It must be controlled accordingly. The design of a procedure for processing purchase requisitions, for example, should be the responsibility of the purchasing agent. He should get the advice of the office manager on the mechanics of procedure. Procedure cuts across organizational lines, however. All organizational interests must be served adequately by the procedure. Some coördination of thinking between the line and staff groups affected may be necessary. There are various ways of coördinating mental work. A common device in connection with procedural difficulties is a committee. Its chairman may be the staff executive who has the principal staff responsibility for the problem. Any considerable change in a major operative procedure will appreciably affect departmental responsibilities. Anything that modifies group responsibilities and action is a problem in administrative management. The change may require, therefore, the concurrence of the staff executive in charge of top administrative planning. He may be able to approve for the organization's top line administrator under certain conditions. This staff executive for administrative planning has no

design responsibilities for operative procedure. He coördinates thinking when it affects the operation of administrative procedures. He may give advice concerning the design of operative procedure when it is requested. He has personal staff responsibility only for the design and development of administrative procedure for the echelon on which he serves.

CHAPTER 21

SUMMARY AND CONCLUSIONS CONCERNING MANAGEMENT

Management is the function of executive leadership. Its organic subfunctions are the creative planning, organizing, and controlling of the organizational activities for which the executive is responsible. They have to do with the accomplishment of the group and project objectives of the organization.

Creative planning provides the answers to such questions as what should be done, how and where it should be done, who should do it, what physical and human resources are necessary for the accomplishment of the particular mission, and other questions of a similar nature. Its purpose is to determine an effective, economical basis for the accomplishment of designated objectives.

Organizing sets up the common, basic conditions that underlie effective, economical execution by a particular group over a period of time. They must be created before work starts on the kinds of activities for which they are a prerequisite. These general conditions are specified in the plan, or derived from it.

Controlling constrains and regulates action in accordance with the requirements of the plan. Business standards are criteria that enable us to measure, proportion, and maintain business factors, forces, and effects in proper condition and relation to one another. They are necessary for the satisfactory performance of all management functions. Effective, economical execution requires these conditions and relationships to be adequately standardized.

There must be and is a body of related knowledge that concerns the solution of management problems. The pioneers in the field

recognized this fact clearly at the turn of the century. They saw the need for a science of management. The term science seems to perturb some people unnecessarily. It may refer to any classified body of fundamental facts, principles, and techniques that explains certain basic phenomena. It supplies a basis for the solution of problems associated with these phenomena.

Scientific management attempts to apply the logic of effective thinking to the solution of business problems. It depends on and leads to a further development of a philosophy of management. The latter is any system of thought that explains basic business problems. It is based on logical relationships between business factors, forces, effects, and principles. It must supply the basis for an intelligent approach to the solution of these problems. The principal problems have to do with business objectives, standards of business conduct, executive leadership, business policy, business functions, personnel, physical performance factors, organization structure, business procedure, and organization morale.

The consuming public does not exist to serve the owners and employees of business organizations. Business exists to serve the public. The sanctions that enable the owners of business establishments to engage in private enterprise rest on the individual's right of private property in his capital. This right is the basis of free enterprise. The sanctions that enable either executive or operative employees to engage in individual or collective bargaining are based on the individual's right of private property in his services. This right is the basis of free labor. The right of private property is delegated by the body politic through its elected representatives. It can be modified if it is abused by either labor or capital. It has been so abused in the past. Such modifications move in the direction of state capitalism and socialism, even though they may be necessary.

There are certain obligations that are a condition of the granting of the right of private property for the performance of economic functions. They have to do basically with the obligation to provide the public with the goods and services it requires in the quantities and qualities it desires, when and where it wants them and at a competitive price. They require the maintenance of free competition and free markets for both capital and labor, subject to such a minimum of government regulation as may be necessary in the

public interest. They require the maintenance of the customer's right of freedom of choice in the market to the maximum degree that is practicable.

An objective is any value or values that are needed or desired by an individual or group, provided that the person or group is willing to make some sacrifice or effort to obtain them. An economic value is any satisfaction of a need or a desire for which an individual or group is willing to exchange other values. These values may or may not be tangible. The primary objective of the business organization is necessarily its service objectives. They are customer satisfactions, in terms of business' basic obligation to supply goods and services as required. The desire or need of owners for a profit and of employees for a wage are collateral objectives. They are earned to the extent that the public is well served. The business organization also has certain secondary objectives. They have to do with economy and effectiveness in the performance of business functions. They are set up by the obligation to serve the public at a competitive price.

The general relations between business objectives may be summarized as follows: The primary objective of the business organization is an economic service. A profit is a personal objective of owners. Wages, salaries, bonuses, and related benefits are the personal objectives of executive and operative employees. Any personal objectives are necessarily collateral business objectives. There are many subclasses of these objectives. The accomplishment of any objectives must conform to accepted standards of business conduct.

Values must be created by work. Business objectives condition accordingly the work of the organization. They are the starting points of business thought and action. The determination and analysis of objectives involve forecasting. Many techniques for estimating and specifying the objective have been developed. Their importance suggests that further development of them may be expected.

An organization basically is any group of individuals who are coöperating to a common end under the guidance of leadership. A particular organization may be good, bad, or indifferent from the standpoint of objectives, policies, or any other criterion. A leader is anyone who accepts responsibility for the accomplishment

of group objectives. He must usually discharge this responsibility to the satisfaction of the group. Otherwise, there may be a loss of morale and organizational effectiveness that may cost him his position. He is expected to motivate, coördinate, and direct the organization, or some element of it, in the achievement of its objectives.

Satisfactory accomplishment implies an effective, economical performance of both managerial and operative functions. The requirements and conditions of such accomplishment change as our society develops and our economy changes accordingly. There have been and are various kinds, grades, and conditions of executive leadership in business organizations. A great business leader who was successful in one era might not be successful in the next. The conditions of executive leadership under a war economy are different from those in peacetime. The founder of a business often lacks the executive ability to lead it successfully from its pioneer stage through the stage of exploitation to the stage of relative stabilization. Leadership that is successful during a period of inflation may be unable to lead the organization successfully through a period of depression. Positive leadership is usually more effective than negative leadership in the long run. There are times, however, when negative leadership is necessary for the successful handling of disciplinary cases or emergency situations. The leadership responsibilities of the administrative executive are related to but different from those of the operative executive. It is evident that any formula for continuing executive success must be open to question. There are principles of effective executive leadership. They are the principles of good management.

Administrative management is chiefly group management. Operative management is chiefly project management. The former is concerned largely with long-time projections of the activities of organizational groups. Operative management is concerned largely with short-time action in the execution of specific projects. Usually they must be accomplished with reference to time objectives in the immediate future. Other fundamental distinctions between administrative and operative management have been noted throughout this book. They account partly for the fact that many capable operative executives are unable to rise to top business leadership.

The big financial rewards are found in the echelon of top admin

istrative management. They supply much of the incentives that induce bright, ambitious young men to strive for advancement in an organization. There is no easy road to success, however. These rewards are usually paid for inspiration rather than for perspiration. There is a high rate of obsolescence among executives who are too "practical" to keep abreast of the developing science of management.

Policy is a basic factor in business organization. A business policy is essentially a principle or group of related principles, and their consequent rules of action. They condition and govern the successful achievement of certain business objectives toward which they are directed. A principle is an expression of the relationships between cause and effect in a particular problem. It is a statement of these relationships that is accepted as a significant truth. A good statement of sound policy supplies, therefore, a cogent relationship between business objectives and ideals on the one hand, and organizational functions, physical factors, and personnel on the other. Sound policy is obviously a requisite for sound planning. A statement of policy, express or implied, is often found in the statement of a plan. Nevertheless, a policy is not a plan.

The policy-making function breaks down into certain definite phases. They are policy formulation, promulgation, education, acceptance, application, interpretation, and control. They are part of any executive job in some degree. Much of the top executive's time is spent on problems of general administrative policy. Such policies enter into long-range planning and the subsequent work of organizing. Rules, on the other hand, are restrictive. They enter into control. Even a minor operative executive occasionally makes rules for the guidance of operatives under his supervision. If not, he must interpret rules that have been made by his superior. These rules must be made within the framework of the broader policies that are originated on higher levels.

The intelligence with which policies are made and applied can stimulate or depress the morale of the organization. Unity of action depends on unity of thought. Effective accomplishment depends on unity of action. A common body of principle is an important factor in the development of unity of thought. There appears, in consequence, to be a growing tendency to commit important policies to

writing in the form of policy manuals and rule books. There is also a tendency to link top management's policy-making responsibilities more closely with the lower echelons of the business organization in which they are applied. Executives on operative levels are included in the work of policy formulation to a greater degree, through application of the Principle of Participation. Policy control in large organizations tends to be decentralized.

Business functions are the work of accomplishing the various objectives of the business organization. The nature and amount of this work depend on the characteristics and requirements of these objectives. Business is an economic institution. Its objectives are primarily economic. The mission of the business organization is to supply the portion of the public which it serves with certain goods and services. Structural and procedural planning for an organization rests necessarily on some theory of functionalization. Any such theory in business organization must rest on the concept of economic utility. Such utility may be defined as the ability of an economic good or service to supply the customer with the satisfactions of his needs or desires for which he spends his money. He may transfer his patronage to a competitor if he does not get these satisfactions in satisfactory amounts. The customer still has the right of freedom of choice in the market place. The attributes of the product or service that give it the required utilities are its quality attributes. They are so recognized in industry by marketing experts, engineering executives, and quality managers.

The organic functions of a business establishment are, therefore, the creation of economic utilities, the distribution of these utilities, and the provision of the capital that is necessary for the performance of the first two functions. They are the functions of production, distribution, and finance in a manufacturing establishment. They are different in other basic types of economic institutions, except for the common function of finance.

All chains of command within a business organization stem originally from one of its organic functions. They develop, by the processes of functional differentiation, with increasing business volume and consequent organizational growth. The devolution of a line organization leads directly downward to a division of operative work and specialization in the creation of primary service values.

Finance is an exception to this statement. The reasons were discussed previously. A staff organization evolves from a line organization. It makes possible a division of managerial work and specialization in the creation of collateral or secondary service values. It may be appended to a line organization at any level where such managerial service is needed. It cannot be part of the line organization, however. Both line and staff functions have their executive and operative phases. There are no distinctions between them in this respect. There are various distinguishing characteristics, of course. One simple test of a staff function is this: Does its devolution lead directly to specialization in the creation or distribution of salable values? If it does not, it is probably staff.

Functions must be grouped on a logical basis as they are differentiated from one another. This basis should permit the development of good coöperation, coördination, and leadership. There are various principles of functionalization that underlie structural and procedural planning. They have these objectives in view. Some functions are similar to one another. They have similar objectives, factors, and difficulties. They require for their performance personnel having similar background, training, experience, personality, and other attributes. We may group functions in accordance with their similarities. We may relate these groups by lines of responsibility and authority. The result is some form of organization structure. Some functions are complementary to one another. They produce values that are a prerequisite for other values that must be produced subsequently in accomplishing the mission. These functions may be grouped in steps in its accomplishment. They may be related to one another on the basis of their complementary nature, but with due regard for organizational lines. The result is some form of business procedure. All business functions have complementary and similar characteristics with respect to other related functions.

The complexity of functionalization necessarily increases as the volume of business grows. There is some evidence that this complexity tends to increase in geometric progression. Much of it is a result of staff organization growth. Staff contributes necessary collateral and secondary values. Otherwise the staff personnel would not be retained on the payroll. It is overhead expense, nevertheless.

This suggests that there is an optimum size for a business establishment. Yet a rising standard of living requires increasing aggregations of capital and labor in some industries. "Bigness" in business organizations is not bad *per se*. If it were, the difficulty could not be cured by bigger state trusts that are run by governmental functionaries. The answer in business organization is usually some form and degree of economic integration and decentralization. It is not necessarily dissolution.

The problems of business functionalization are not simple. The design of organization structure and procedure has become, in consequence, an increasingly important part of the work of administrative planning in large organizations. Some good techniques for functional investigation and analysis have been developed. Some sound principles of functionalization have been established. Nevertheless, the subject can benefit from more research.

Effective performance, in any organized activity, requires a delegation of responsibility and authority. This is true for both executive and operative performance. Responsibility is an individual rather than a group phenomenon. It is the obligation that an individual acquires in any organization when he accepts an assignment of certain objectives, functions, and duties. An executive responsibility is an obligation to perform leadership functions under certain conditions. It necessarily involves the direction and supervision of others. An operative responsibility is an obligation to perform, to the best of one's ability, certain assigned duties, under executive direction, in the accomplishment of a particular project. An operative responsibility does not involve direction and supervision of the work of others. Authority is the term for the rights that are necessary for the satisfactory discharge of one's organizational obligations. Executive authority includes, therefore, the rights of decision and command with respect to the organizational activities of one's subordinates. Operative authority includes such rights of decision as are necessary for the proper performance of assigned operative duties.

Accountability is a condition of membership in an organization. It requires that each member must render a report of his discharge of responsibilities, and be judged fairly on the basis of his record of accomplishment. Such judgments rest on qualitative and quantita-

tive evaluations of individual and group performance. These evaluations result chiefly from the performance of the control functions of supervision and comparison. They determine the extent to which the individual has accomplished the assigned objectives. The operative employee is accountable for the accomplishment of operative objectives that have been assigned to him. The executive employee is accountable for the results accomplished by the individuals and groups who are working under his direction. The principal phases of the problem are: (1) analysis of objectives, (2) functional analysis with respect to the requirements for the accomplishment of these objectives, (3) functional grouping and the division of responsibility as a basis for structural and procedural design, (4) determination of the authority required for each allocation of functions and responsibility, (5) the delegation of responsibility and authority, (6) the establishment of control, and (7) the development of accountability. Many problems are involved. The economy and effectiveness with which the organization accomplishes its mission depend on how well they are solved.

The division, allocation, and delegation of responsibility rest on whatever groupings of functions have been made. They may be line or staff. The ultimate unit function, in any case, is a single, simple act of operative performance, either mental or physical. It must have definite points of starting and stopping. This concept enters directly into the techniques of motion and time study. The motion principles associated with it enter directly into the design of operative procedures. They do not enter directly into the design of organization structure, however. The ultimate unit of operative responsibility is the obligation of an operative employee to perform assigned duties within his job classification. It is based on the general work assignment that is set up in his job specification. The ultimate unit of executive responsibility is the unit of operative supervision. It is the number of units of operative responsibility that is suitable for direction and the exercise of face-to-face leadership by a first-level supervisory executive. Experience indicates that the size of this supervisory unit tends to range from ten to thirty operatives. The reasons have to do with the economy and effectiveness of supervisory leadership. There is also an effective, economical unit of executive supervision. Experience indicates that its size tends to

range from three to eight or nine subordinate executives. The relations in organization structure between these units of operative and executive supervision have an important influence on the success of the organization.

The value of the contribution that an individual is required to make increases with the service level on which he works. There is some good evidence that it tends to increase in geometric progression. A given job is and should be worth more in a big concern than in a small one. The importance of the individual in organizational success tends to vary inversely with organization size, nevertheless. The "indispensable men" are more likely to be found in small concerns than in large ones. The division and allocation of responsibility may be made in the former with respect to the individual ability and know-how of the present executive personnel. The supply of leadership material may be quite limited in the small organization. In the big concern, it may be made largely with respect to the requirements of functions for proper performance. Any modifications of sound organizational relationships to suit the inadequacies of present personnel are likely to be temporary. The large organization tends to have greater stability and permanence for these and other reasons.

A delegate is a person who is appointed to represent and act for another. Any subordinate, whether executive or operative, is in a sense a delegate of the superior executive to whom he reports directly. The process of delegation is one whereby certain of the executives functions, responsibilities, and authorities are released and committed to designated subordinate positions. Responsibility and authority are attributes of the job. Delegation enables an executive to extend his abilities beyond the limits of his personal powers. It makes possible a division of labor and the development of specialization, whether executive or operative. It may stimulate or depress organizational morale, depending on how well it is done. It has other effects on the organization. It is, accordingly, an important managerial problem. There are various principles of delegation. An understanding of them is an important part of an executive's know-how.

Decentralization takes place when a higher central source of responsibility and authority assigns certain functions to subordinate

individuals and groups. These functions may be managerial or operative, line or staff. Their decentralization is accomplished through delegation. Any assignment of functions to subordinates should be accompanied by adequate delegation of responsibility and authority. Otherwise the individual cannot justly be held accountable for results. There are various advantages and disadvantages of decentralization. There are various principles and conditions that govern the extent to which it is practicable. This extent tends to vary directly with the size of the organization. There are some obvious limitations, however. Delegation cannot result in the abdication of one's responsibilities and authorities. There is no direct relation between processes of delegation and the democratic process. The latter is a political concept. The business organization is an economic institution, under a condition of free enterprise and the right of private property.

Organization structure is the structure of relationships between groups of similar functions, physical factors, and personnel. These relationships have to do largely with responsibility, authority, and accountability. They affect organizational morale. It is possible, therefore, to have a good organization structure, a beautiful organization chart, and a poor organization. An effective, economical accomplishment of assigned objectives is not characteristic of poor organizations.

There are only two basic forms of organization structure: line and staff. All other forms are variants of them. The "line" is the primary form. It is the backbone of the organization. A primary hierarchy of functions leads directly from an organic business function to a division of primary operative labor. It is an effect of functional differentiation. It results directly in specialization in the creation and distribution of salable values. A primary chain of command is the hierarchy of responsibility, authority, and accountability that is related directly to the primary functional hierarchy. A primary line organization is the present hierarchy of individuals, both managerial and operative, who perform line functions. The necessary responsibility and authority for such performance should be delegated to their job assignments. All staff groups exist to serve the line organizations, or other staff groups, for this reason. The tendency in most business concerns has been to resist the transfer of line authority to

staff groups. Such transfer tends to break down the line organization. It leads to the defeat of the enterprise in the battle of competition, as it approaches a condition of complete functionalization.

The growth and devolution of the line organization begins, theoretically, with the owner-manager. Some concerns have actually started from this point. It results increasingly in the grouping of primary operative functions on one or more of the following bases: (1) product, commodity, or service, (2) process or method, (3) equipment or other dominant physical factors, and (4) the physical dispersion of business activities on a geographical basis.

These functions must be grouped in units of operative and executive supervision. The relationships that should exist between these units are primary determinants of line organization form. The basic relationships between them can be expressed mathematically. Such relationships assist in the provisional determination of the number of major service levels or echelons that are needed by an organization. They help in determining general criteria of the number of line executives required by the organization at various levels. They underlie the solution of other organizational problems. An application of these relationships results in some interesting conclusions. Very few major echelons are required to command a very large organization. The percentage of line executives to primary operatives should increase very little with organization growth. Top executive payroll is and should be insignificant, relative to the total payroll of the organization and the contributions of effective top leadership. Other significant conclusions may be drawn. It should of course be remembered that there is no mathematical substitute for executive judgment. A concern does not manage by formulas.

The structural form of the small organization is predominantly line. The characteristics of line organization make its use particularly advantageous in the small business. Its advantages may be lost with organizational growth. This will take place unless the line is supplemented increasingly with staff organization. Management must be decentralized increasingly without loss of control of the organization's activities. Lack of organizational know-how may limit the growth of the small business as much as the competition of big business, and possibly more.

Staff organization structure is an evolution from a primary func-

tional hierarchy. It is made necessary chiefly by increases in the load of managerial work and increasing requirements for specialized background, training, experience, and ability. Hence it has to do with a division and specialization of managerial labor. It takes place necessarily above the level of operative performance. A staff organization, accordingly, assists the line and other staff organizations in the performance of some phase of an organic managerial function. It usually performs some facilitative services in addition. The nature, extent, and degree of staff performance are determined and limited by delegation.

The basic classification of staff functions must rest, therefore, on the classification of organic managerial functions. These functions are the creative planning, organizing, and controlling of the activities of organizational members in the accomplishment of a common objective. Technical staff functions assist the organization in planning. They may assist it by performing certain specialized functions that are purely facilitative. They may do both. They require a certain specialized background, training, and experience for their performance. They may or may not be professional, however. Coordinative staff functions assist the organization in control. They too may perform certain facilitative functions. Successful performance of staff control functions usually requires breadth of background, training, and experience, rather than intensity. There are no staff groups that specialize solely in organizing. It is unlikely that there will be. The reasons have been covered in the foregoing chapters.

All managerial functions, whether line or staff, have their operative phases. This is evident, since all functional devolution leads to operative specialization, either primary or secondary. Staff objectives are principally secondary. Staff organizations supply values that the line organization must have for the accomplishment of primary objectives. The latter are certain utilities in goods or services. They enable the customer to enjoy the values for which he pays his money. It is evident that staff objectives and functions are necessarily secondary in incidence of service to the public. They are not necessarily secondary in the importance and value of their contributions, however.

Organizational growth, whether line or staff, tends to follow a

typical structural pattern. It is helpful in analyzing structural problems, if it does not result in a formulistic approach to organizational planning. Any general pattern must be modified and adjusted to fit the realities of the particular situation. We saw, during the discussion of organization structure, that the assigned mission of a staff group, and the conditions under which it must be accomplished, govern the detailed form that this pattern tends to take. It is evident that the devolution of a technical staff function must lead to professional or other operative specialization in planning, when the principal objective of the staff group is certain types of plans. The engineering department is a classic example. The devolution of a technical staff function must lead to professional or other operative specialization in facilitation, when the principal objective of the staff group is facilitative assistance. The devolution of a coördinative staff function must lead to operative specialization in control. Such specialization must be based on the organic staff phases of control. Any supporting planning services or associated services of facilitation for any staff organization must be placed in a secondary technical staff position. Research is usually a secondary technical staff function in business organization, regardless of how vitally important it may be and how great its development is in the particular concern. Any supporting control services also must be placed in a secondary coördinative staff position. Such a position means that the particular function is attached directly to a secondary chain of command in a staff relationship.

Any staff organization is overhead. There is nothing scientific about an elaborate, complicated, and expensive staff organization that is not needed. It is not good business on the other hand to refuse to spend money for staff organization that is needed.

The development and growth of staff organization results from the growth in the demand for the company's services. It is both a cause and an effect of business success. The development of staff services has to do largely with the development and expansion of the basic staff duties. These duties are (1) investigation, including research, (2) analysis of facts and information, (3) interpretation, including services of information, (4) recommendation, including the formulation of plans, (5) coördination, including assistance in control, and (6) facilitation, including assistance in organizing and

executing plans. Such development often requires continuing staff evolution with business growth. The principal stages of staff evolution are (1) line integration, (2) distinct staff differentiation, (3) complete staff differentiation, (4) staff integration, (5) staff elevation, (6) staff decentralization, and (7) complete staff separation. It is not necessary that all staff development begin with the first stage. It is not necessary either that the development of all staff functions be carried through to the final stage. It is helpful in diagnosing present staff difficulties to be able to recognize the stage of development of the particular staff organization. One must of course know the basic requirements for staff economy and effectiveness that are associated with this stage. It is helpful in organizational planning for staff growth to know the subsequent stages and their requirements. Such knowledge should be part of the professional background of the modern executive. In too many cases, it is not.

There has been increasing interest, in recent years, in top administrative management. The importance of top leadership in rapidly changing situations is apparent. The desirability of relieving top executives of some of the burden of administrative management has been realized. Some interesting developments in the field of top administrative staff organization have taken place as a result.

A staff organization that assists the chief executive in administrative planning is concerned with interdivisional coördination of thought. It is concerned, therefore, with problems of top administrative organization structure, procedure, general policies and objectives, and the general condition of organizational morale. It has close relations necessarily with financial planning. It does not do the work of any major technical staff division. Such divisions are still responsible for the development of plans and policies for activities within their fields of specialization. A vice-president in charge of personnel and industrial relations, for example, is still responsible for developing and recommending personnel plans and policies. A staff executive for administrative planning merely achieves a meeting of minds between the immediate line and staff subordinates of the chief executive. Any resulting plans are subject to the latter's approval.

A staff organization that assists the chief executive in administrative control is concerned largely with interdivisional coördination.

Much of the work at this level has to do with long-range planning. Accordingly, it is concerned with progress in the accomplishment of planning projects. It is concerned subsequently with the progress of the major divisions of the business in organizing for the execution of plans. It must evaluate divisional performance in the accomplishment of assigned objectives. Administrative control deals with the constraint and regulation of group action in the completion of administrative projects. These projects may extend over considerable time periods—a month, a quarter, a year, or longer. It is not concerned directly with the current execution of operative projects and their schedules. General administrative control performs its functions at the top administrative level of the organization.

There are a great many structural problems, such as the difficulties associated with functional emergence; the location of dissimilar staff functions; the duties, responsibilities, and authority of headquarters staff executives; the development of staff parallelism; the use and limitations of committees; and many others. They greatly affect the development of top administrative organization. Much more information concerning their characteristics and requirements would be helpful. The literature of business management deals largely with the discussion of technical and coördinative staff problems at the various levels of operative management. It is only in comparatively recent years that we have been getting some worth-while contributions from executives with practical experience in top administrative management. It is probable that the next great advance in managerial science will take place in this area.

The United States is committed to the policy that the standard of living of its people must increase continuously. An ultimate objective is the maximum average living standard that is practicable at any point in time. Progress has been uneven, with many temporary setbacks, for a number of reasons. They have to do with the errors of omission and commission of our economic and political leadership, the weaknesses of an industrial democracy that must be based on the right of private property, and many other factors that are well known. The result has been, nevertheless, a strong, upward growth trend in a dynamic, industrial economy. These objectives and policies place certain responsibilities on business for the maintenance of a corresponding growth in the number and size of the

business establishments that serve our people. Such business growth inevitably creates many major organizational problems within the business establishment. These responsibilities require executives to understand the attributes of business organization that are required for growth. They are, in general, the attributes of good organization anywhere. The principal ones are (1) effective executive leadership, (2) sound business objectives and policies, (3) sound functional relationships as determined by objectives, (4) adequate physical implementation that will make possible an economical, effective accomplishment of objectives, (5) a complement of abilities, both executive and operative, to handle present business problems economically and effectively, (6) organizational stability, (7) organizational flexibility, (8) organizational capacity for growth, (9) organizational balance, and (10) good organizational morale.

The first five of these attributes were discussed earlier in this chapter. The remaining five require further comment. Organizational stability is the quality that enables an organization to adjust itself promptly to personnel losses without serious losses of economy or effectiveness. Organizational flexibility is the quality that enables it to adjust itself to temporary changes in business volume and conditions without serious losses of economy or effectiveness. Many concerns have done a good job of developing these organizational attributes. Most concerns appear to have done a poor job of developing capacity for growth. The exceptions are found usually among large, successful corporations. This attribute may be defined as the ability of an organization to adjust its personnel and structure to permanent changes in business volume, without serious losses of economy or effectiveness. It is concerned usually with the permanent expansion and development of the organization. This is likely to be a continuing problem, as long as our economy is expanding. Growth is a requirement, in some industries, for the maintenance of competitive effectiveness. Many concerns do not conform to the requirements of this definition, because they handle growth problems on the basis of short-range planning, trial and error, and expediency. Their weaknesses show up quickly when they are forced to expand to a large size quickly during a war emergency.

Some of the greatest failures of executive leadership have been in the field of morale. It has appeared, at times, as though anyone

could take away from the executive the leadership of his employees by the simple expedient of offering something for nothing. It is possible that this has been another effect of too many business mechanics and too few professional executives who are capable of exercising economic statesmanship.

Morale is a mental condition of individuals and organizations. It determines their attitudes. As a result, it conditions the degree of acceptance of executive leadership by organization members. It governs the quality of their coöperation in the accomplishment of organizational objectives. Good organizational morale is a condition in which individuals and groups voluntarily make a reasonable subordination of their personal objectives to the service objectives of their organization. An industrial society can be overthrown by the destruction of the morale of its industrial organizations. There is an organizational Principle of the Primacy of the Service Objective. It says that an organization may fail when any important individuals or groups in it succeed in placing their personal interests ahead of its interests for any considerable period of time.

The morale-building process is, accordingly, a process of integrating interests. It is any process that develops and maintains identities and interdependencies between the organization's service objectives and the personal objectives of its members. The interests of individuals are most acute with respect to the values they desire for themselves and for those immediately dependent on them. The process has to do, therefore, with creating the conditions that will assure an adequate satisfaction of personal objectives. It must do this in a manner that is compatible with competitive effectiveness.

Confidence in the integrity and ability of executive leadership is an important condition for the successful operation of the morale-building process. There must exist some belief that the present subordination of personal interests to organizational interests will result in worth-while future benefits for the individual or group. The desired benefits may be tangible or intangible, or both. Surveys of employee interests have indicated, for example, that wages, hours, and working conditions are not always the principal considerations of operatives. This may happen when employees in a particular organization generally regard the benefits associated with such con-

siderations to be fair and adequate. Such surveys suggest that a feeling of worth-whileness, a feeling of belonging to an organization in which one can take pride, a feeling of security, or some other intangible value may be the thing that is desired.

The morale problem, like any other, must be broken down into its principal elements before a general method of approach to its solution can be devised. The following are the principal functions in the morale-building process: (1) analyses of individual and group interests and objectives and of their relation to organizational service objectives, (2) establishment of common concepts and yardsticks of value, (3) provision of values that are desired by individuals and groups in the organization in adequate and proper amounts, (4) prompt, equitable adjustments of conflicts between personal and organizational interests as they develop, (5) morale maintenance, including continuous identification of organizational and personal objectives.

No problems can be solved without adequate facts that are reasonably accurate. Various techniques for getting morale facts have been devised. They involve some form of intermittent or continuous morale surveys. The former are usually a statistical approach, based on the use of questionnaires. The latter are usually a qualitative approach, based on the use of trained observers. The most effective observers should be line supervisors, provided that they have been trained to do the job and have the ability. The most effective method for getting morale facts is likely to involve a combination of statistical and qualitative techniques.

A distinction between morale factors and morale effects should be made in applying any survey method. The attitudes of individuals and groups toward the organization and its leaders are obviously effects of their state of mind. They directly affect the economy and effectiveness with which the organization accomplishes its mission. Some of the more important effects of good morale are willing cooperation, loyalty to the organization and its leadership, good discipline, and organizational initiative. There are others. A morale index is a relative measure of the attitudes that indicate morale effects.

A morale factor is anything within or outside the organization that affects the personal interests of its members in relation to its

own. We saw above that these interests include more than money. A morale stimulant is any factor that tends to produce favorable attitudes toward the organization and its leadership. A morale depressant is a factor that tends to produce unfavorable attitudes. It is possible for a particular morale factor to be a stimulant and a depressant at different times and under different circumstances. Some of the more common factors in good morale are worth-while organizational and personal objectives, good leadership based on a sound philosophy of management, homogeneity of group characteristics and interests, decentralization, indoctrination, satisfactory physical work environment, and many others. They should be determined and specified clearly, concisely, and in as much detail as is practicable.

The scale of values that individuals and groups in an organization apply to their interests is obviously an important factor in morale development and maintenance. It is an effect of their philosophy. It affects morale directly, insofar as it bears on the activities of the organization and its leadership. An outside agency has an opportunity to substitute a scale that suits its purposes when the organization's members have no philosophy of their own.

A philosophy is a body of doctrine. The latter term refers to any formal statement, either express or implied, of objectives, ideals, principles, points of view, and general modes of procedure. A doctrine is laid down for the guidance of others, either with or without the authority to compel its acceptance. It can relate to physical or psychical phenomena, or both. The purpose of a managerial philosophy is to make clear the significance of business concepts. It underlies the mission of rendering an economic service for producers and consumers. Proper indoctrination of its members is a leadership responsibility in any type of organization. Business organization is no exception. Complete indoctrination in a business organization is not proper, of course. It is practically impossible, so long as we retain the rights underlying freedom of press, freedom of speech, and freedom of assembly. It is not in the long-term interests of business executives in a competitive society. The process in the business organization is one of self-indoctrination. It is a process of education. Some of the fundamentals of indoctrination have been discussed briefly in earlier chapters. They should be understood. Top leader-

ship in large business organizations is beginning to accept its educational responsibilities for industrial morale development.

Poor morale cannot be blamed successfully on professional labor leaders. Organizational morale is a responsibility of the organization's leadership. This is not an argument against collective bargaining. Free enterprise, collective bargaining, and individual liberty rest squarely on the right of private property. The destruction of any one of them tends to destroy the right of private property. The destruction of the right of private property tends to destroy them all.

Voluntary coöperation, an intelligent exercise of initiative, self-coördination, and similar values are effects of good morale. They reduce the degree and extent of control that is necessary. Good morale cannot be a substitute for good control, however, even in small organizations. Self-control breaks down quickly with increasing organization size. Increasing executive control must be developed with organizational growth. Otherwise, paradoxically, an organization may fail in accomplishing its mission as a result of its success

It was noted earlier that the organic functions of management are the creative planning, organizing, and controlling of the activities of the organization's members in the execution of their assigned tasks. They are the functions of executive leadership. The function of control is the work of constraining and regulating such actions in accordance with plans for the accomplishment of specified objectives. The economy and effectiveness of execution and control depend directly on creative planning and organizing. The ultimate objectives of control are, of course, the ultimate service objectives of business. They are, therefore, better customer values. Control coördinates and correlates action in accordance with a plan for the accomplishment of such objectives. The immediate objectives of control are derived from the objectives of the particular plan. They are, in general, (1) assurance of correct performance as specified by the plan, (2) a well-coördinated condition of action, and (3) a minimum of losses due to interferences with the proper execution of the plan.

The two grand divisions of the work of executive leadership are administrative management and operative management. Each di-

vision has its line and staff phases. They may be completely differentiated and highly developed in large organizations. Staff functions may exist only potentially in the very small organization. A distinction must be made accordingly between operative control and administrative control. Operative control is chiefly project control. Administrative control is chiefly group control. It is the function of constraining and regulating group action in the completion of assigned programs. The latter summarize the results that are anticipated from the completion of assigned projects during a designated period of time. The cumulation of values resulting from the completion of these projects during this period provides a measure of the degree of accomplishment of organizational objectives. The latter were set up when the program was planned. The facts that are necessary for the operation of a system of administrative control come, then, from the reports originated by the system of operative control on the lower echelons.

Control on any echelon tends to break down into eight basic subfunctions. They are the organic phases of control. They are (1) routine planning, (2) scheduling, (3) preparation, (4) dispatching, (5) direction, (6) supervision, (7) comparison, and (8) corrective action. The objectives, policies, and performance of these phases have been discussed adequately in the chapters on control. It should be recalled, however, that the eight control functions tend to be performed in the order indicated. This temporal order is not mandatory, of course. However, it provides a useful basis for the analysis of control procedure. The line phases of control are direction, supervision, and corrective action. They cannot be differentiated from the line organization and assigned to staff groups, except to a very limited degree with respect to their most routine aspects. The reasons are found in their direct relations to line leadership responsibilities. The remaining five control functions may be assigned to staff control groups in a very high degree.

The extent to which control is exercised by subordinates is governed by the extent to which control responsibilities have been delegated and decentralized. Supervisory executives are responsible only for the line phases of control when the staff phases are highly centralized. They have certain responsibilities for morale maintenance that are inherent in the relation of face-to-face leadership.

They have no control responsibilities if they have no obligations and rights with respect to direction, supervision, and corrective action. Their leadership position is undermined. They are not likely to discharge their morale responsibilities satisfactorily in such case. A centralized staff control sets up a completely functionalized relationship. It tends to concentrate responsibility and authority in the hands of higher line executives.

Differing degrees of centralized control may exist within one organization for the same function. The administrative control of production is highly decentralized down to the plant level in large concerns engaged in continuous manufacturing. It is highly centralized within the plant, down to and including plant stores and the production lines. The reasons are found in the principles of decentralization that have been discussed.

Just as morale conditions the quality of control, so control conditions the quality of morale. Disciplinary action, for example, is a phase of corrective action. Good discipline is an effect of good morale. It is a condition of voluntary conformity with policies, rules, and regulations. The latter are necessary for coördinated and cooperative action in the accomplishment of group objectives. Good discipline is related to other morale effects such as willing acceptance of executive decisions, voluntary coöperation, and organizational pride. Disciplinary action is a managerial process for conditioning individual and group behavior. Its objectives are the inhibition of improper behavior, the integration of personal and organizational interests, and the assurance of correct action in the future. It accomplishes these objectives by means of penalties or rewards. Disciplinary action has to do, therefore, with the addition or substraction of certain values in the situation of an individual or a small group. It may be taken with respect to a person, but it should not be personal. The intent is usually to condition the quality of future action by the group of which the individual is a part.

Control may have other important effects. Their implications may go far beyond the limits of the particular undertaking that is being controlled. An understanding of the basic principles and significances of control is an important part of the background of the professional executive.

Business procedure is a basic factor in the performance of organizational functions. It is a relationship of complementary functions that is set up as a basis for the execution of a project. The latter may be managerial or operative. It may be line or staff. It must be planned, in any event, with regard for the requirements for the successful accomplishment of project objectives. It must consider the requirements for human and physical factors in performance, and the limitations of their use that must be observed. The specified procedure is an important part of a project plan, since it supplies a basis of action. The installation of standard procedures is often an important part of the work of organizing.

A procedure specifies, among other things, the order in which the various steps in the accomplishment of the project must be performed. It states the quantitative time requirements for the performance of each step, or indicates where such information may be obtained. A procedure necessarily cuts across organizational lines, because of the complementary nature of its functions. Coördination of action is a control responsibility. It has to do largely with the time and order in which the steps or phases of an undertaking are performed. Business procedure is therefore a basic factor in control.

The economy and effectiveness with which project and organizational objectives are accomplished depend greatly on the quality of procedural planning. The executive head of each group is responsible for developing and using the best methods for the accomplishment of his objectives. A mark of a good executive is ability to make effective use of staff, whether his own or others'. No one usually cares, within reason, how he develops the best methods, provided that he uses them. This concept brings up some interesting problems in line and staff relationships as the organization grows. They must be solved, if the organization is to enjoy continued success.

The objectives of procedural development are secondary values. The principal values are (1) orderliness in the execution of business undertakings, (2) consequent uniformity of results, (3) facilitation of specialization, (4) a more effective and economical utilization of personnel, (5) conservation of executive ability, time, and health, (6) facilitation of executive and self-coördination, and (7) economy and effectiveness in the performance of managerial and operative functions. Responsibility for developing a particular type of busi-

ness procedure is often delegated to the staff group in whose special field the problem falls. It would be impractical for top line executives, for example, to concern themselves personally with the details of planning a top administrative procedure. This is too important, on the other hand, to be delegated to people with limited ability and then forgotten. The result of such action may be ineffectiveness, high cost, and red tape. A top staff executive for administrative planning can be given staff responsibility for coördinating thought concerning structural planning, procedural planning, and other problems of administrative planning. The scope of his responsibility must be limited to the top administrative echelons. He should be available for consultation when executives on lower echelons are unable to achieve a meeting of minds on their procedural problems. This may be an intelligent compromise. There is some evidence of a trend in this direction.

A profit is a legitimate reward of capital for the successful acceptance of business risk in rendering an economic service. It is necessary for the formation of private capital and the continuation of the free enterprise system. It is necessary for the maintenance of the right of private property, and in consequence the freedom of the individual. Ability to operate a business at a profit should not be the sole criterion of managerial excellence, however. A profit may be a legitimate objective of businessmen. It should not be the primary objective of a business organization. The objective of the latter is an economic service. There are collateral business objectives. Business operations vitally affect the public interest. The sum total of all goods and services produced and distributed by all business enterprises everywhere, great and small, approximates the total national income. It represents the material benefits that support a high standard of living in an industrial economy.

Management is a principal form of economic leadership. Accordingly, the executive in private business has a great public responsibility. This has been recognized increasingly by organized business. One effect has been the development of more professional executives. Their numbers are still too few, however. Their development has been limited by the evolution of a sound philosophy of management. This evolution has been taking place, of course. Such a philosophy will be needed badly if it becomes necessary to expand

our industrial organizations quickly for war purposes. It will be needed for the preservation of our democratic institutions when the subsequent contraction of business activities takes place. It will be necessary for a further, sound development of our economy. It is hoped that this book has made a contribution to the further evolution of a sound philosophy of American management.

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AUTHOR INDEX

Air University, U.S.A.F., 154, 562
Alford, L. P., 38, 41, 153, 667, 729
Andrews, Lincoln, 733
Appley, Lawrence A., 306

Babcock, George, 513
Balderston, C. C., 154, 646, 681, 688
Barnard, Chester I., 129
Barnes, Ralph M., 402, 781
Barth, Carl, 5
Beishline, J. B., 690
Bradshaw, F. F., 558, 571
Brecht, R. P., 154, 646, 681, 688
Brown, Alvin, 158, 213, 299, 366, 370, 706, 707, 710, 719
Brown, Donaldson, 173, 181, 495
Bryant, Ira E. 41, 744
Burgess, R. W., 160, 377
Burtt, E. A., 117, 589
Burtt, H. E., 562

Church, A. Hamilton, 23, 43, 205, 218, 252, 635, 641, 681, 718, 725, 732
Churchill, Winston, 289, 307, 546
Clark, Wallace, 5, 727
Copeland, Melvin T., 485
Copley, F. B., 5, 34
Cornell, W. B., 90, 129, 157, 475, 535, 744

Dale, Ernest, 414
Davis, James H., 235
Dennison, Henry S., 90, 204, 227, 241, 279, 281, 309, 319, 529, [illegible]3, 584, 618, 703, 730, 732
Diemer, Hugo, 681
Dutton, H. P., 23, 28, 282, 299, 319, 475, 503, 645, 719

Eaton, George M., 76
Emerson, Harrington, 5, 152, 241, 366, 640, 688

Farley, James A., 147
Farquhar, Henry H., 261, 462
Faurote, F. L., 52, 117, 155
Fayol, Henri, 4, 154, 155, 157, 206, 227, 230, 270, 276, 281, 283, 288, 304, 312, 348, 371, 389, 397, 432, 480, 491, 546, 554, 570, 634, 636, 680, 690, 737
Filipetti, George, 368
Fish, Lounsbury, 153, 164, 186, 190, 370, 413, 485, 656
Follett, M. P., 128
Ford, Henry, Sr., 52, 117, 155
Fordham, T. B., 206, 275
Frech, T. W., 120, 299, 481, 491, 522, 610
Fri, James L., 275
Fryer, Douglas H., 543, 544
Fryer, E. H., 571

Gantt, H. L., 5, 104, 690
Gulick, Luther, 393, 426

Hall, L. G., 413, 423
Hartman, George W., 589, 598
Heermance, E. L., 117, 125
Hemphill, John K., 128
Henry, E. R., 571
Hine, C. D., 445
Hirschman, R. R., 625
Hocking, W. E., 595
Holden, Paul, 164, 173, 186, 190, 370, 413, 485
Hopwood, J. O., 353
Houser, J. David, 573

Jeffries, Zay, 120, 299, 481, 491, 522, 610
Jones, E. D., 41, 270, 288, 536, 565
Jones, Thomas R., 153, 203, 220, 259, 280, 288, 300, 331, 343, 390, 490, 688
Joslyn, C. S., 136

Karabasz, V. S., 154, 646, 681, 688
Kimball, Dexter S., 153, 452, 690
Knoeppel, C. E., 206
Krugman, H. E., 558, 571

Lansburgh, Richard, 145, 475, 558
Leffingwell, W. H., 635, 676, 774, 781
Livingston, R. T., 650
Lytle, C. W., 353

MacDonald, John H., 770
Martindell, Jackson, 78, 485
Maze, Coleman, 770, 781
Mazur, Paul M., 164, 331
McCormick, Charles P., 472
McKinsey, J. O., 32, 43, 183, 636
Merrick, Dwight, 5
Mill, John Stuart, 64
Miller, A. H., 240
Mooney, J. D., 1, 95, 115, 128, 153, 184, 204, 207, 213, 218, 227, 240, 246, 274, 297, 305, 370, 391, 392, 426, 435, 445, 449, 453, 454, 460, 547, 563, 636, 700, 729, 744
Munson, Edward L., 120, 319, 542, 543, 558, 590

Nelson, Otto L., 428
Neuschel, Richard F., 781
Northcott, C. H., 52, 190, 206, 294, 512, 522

Otterson, John E., 681
Overstreet, H. A., 130, 132

Person, H. S., 41, 135, 151, 160
Peterson, Elmore, 456
Plowman, E. G., 456

Reiley, A. C., 1, 95, 115, 128, 153, 184, 204, 207, 213, 218, 227, 240, 246, 274, 297, 305, 370, 391, 392, 426, 435, 445, 449, 453, 454, 460, 547, 563, 636, 700, 729, 744
Rentschler, F. B., 46
Riddle, R. J., 154, 646, 681, 688
Robb, Russell, 539
Robinson, E. A. S., 530
Robinson, Webster, 35, 117, 157, 160, 197, 204, 392, 465, 498, 536, 543, 643, 644, 699, 702, 705, 708, 770
Roethlisberger, F. J., 550, 572, 590

Schell, E. H., 394, 612, 690, 717
Schnackel, H. G., 59
Sheffield, A. D., 613
Sheldon, Oliver, 153, 190, 206, 218, 220, 239, 294, 330, 393, 426, 466, 484, 489, 491, 512, 522, 530, 644, 681, 685, 718, 744, 747
Sloan, Alfred P., 120, 241, 443, 703
Smith, Edgar W., 207, 306, 398, 441, 515
Smith, Eliott Dunlap, 454
Spates, Thomas, 557
Spencer, Herbert, 520
Spriegel, W. R., 475
Stogdill, Ralph, M., 136

Taeusch, C. F., 104, 122
Taussig, F. W., 136
Taylor, Frederick W., 4, 5, 153, 239, 330, 464, 717, 729
Tead, Ordway, 53, 128, 543
Thompson, Sanford, 5
Thorp, Willard, 524
Tingley, E. H., 206, 275

Urwick, L., 44, 190, 206, 294, 318, 393, 426, 430, 466, 489, 512, 522, 535, 554, 683, 690, 716, 721, 722, 726, 772
U.S. Army, General Service Schools, 50, 78, 270, 276, 283, 328, 340, 370, 376, 394, 398, 429, 430, 516, 531, 683
U.S. Chamber of Commerce, 81

Vermilye, W. M., 618
Viteles, Morris, 53, 499

Walker, George M., 417
Walker, P. F., 330
Wallas, Graham, 59
White, Percival, 369
Williams, John H., 530
Wolf, George W., 98
Woods, F. A., 134

Yoakum, C. S., 147

SUBJECT INDEX

Accountability, 320, 792
Administrative management, defined, 65, 160, 788
  control and, 696
  planning and, 65
  top leadership and, 414
Appeasement, business planning and, 73
Authority, accountability and, 320
  classification of, 289
  defined, 143, 281
  delegation and, 293
  democratic process and, 283
  division of, 291
  executive relations and, 316
  kinds of, 281
  placement of, 291
  position and, 318
  power and, distinguished, 287
  prestige and, 318
  rank and, 318
  responsibility and, 288

Balance, organizational, 535
  procedural, 754
Board of directors, 162, 484
Bureaucracy, 450
Business, small, 340, 521, 743, 796

Capital, function of, 15
  morale and, 602
Chain of command, primary, defined, 337
  secondary, recognition of, 337
Charts, organization, 539
Collective bargaining, labor relations and, 614
  right of private property and, 17, 606
Command, defined, 282
  right of, 282
Commanding, function of, defined, 690 n.
Committee organization, advantages of, 480
  board of directors and, 484
  classification of, 470
  defined, 469
  disadvantages of, 482
  functions of, 470
  structure of, 474
  technique of, 477
Communications, cross-functionalization and, 226
  decentralization and, 307
  morale and, 583
  staff organization and, 449
  supervisor and, 605
  techniques for, 772
Comparison function, accumulation of reported results and, 723
  control and, 650
  defined, 718
  devices for, 726
  exception principles in, 729
  executive reports and, 728
  evaluation of results by, 724
  operative reports and, 721
  principal phases of, 721
  supervision and, 720
Conduct, standards of, 11
Control, administrative, and operative, 661; defined, 633
  administrative planning and, 83
  business volume and, 664
  centralized staff and, 461, 660
  close, considerations in, 692
  comparison function of, 718
  concurrent, 698
  corrective action and, 730
  decentralization, delegation and, 652
  decentralized staff, 658

Control—(*Continued*)
direction function of, 649, 699
disciplinary action and, 735
dispatching function of, 649, 688
evolution of, 638
functions of, 630, 647
line and staff phases of, 407
objectives of, 630
operative, defined, 633
operative planning and, 84
organic nature of, 628
organization structure and, 631
overdirection, redirection, and, 703
performance standards and, 34
plans as basis for, 82
preliminary, 663
preparation function of, 648, 680
procedure and, 631
routine planning function of, 647, 665
scheduling function of, 673
staff organization and, 405
standards and, 25
supervision and, 650, 705
technical staff facilitation and, 684
technical staff plans and, 667, 671
top administrative, 739, 742
Control function, management and, 156
Controlling, defined, 23, 785
Coöperation, morale and, 552
Coördination, control and time, 673
defined, 19, 405, 634
dispatching function and, 689
executive and self-, distinguished, 405
Coördinative staff functions, defined, 385
Coördinative staff organization, *see* Staff organization, coördinative
Corrective action, control and, 651
defined, 730
principal phases of, 731
Costs, paper work and, 672
salary and wage, relative, 357
Cyclical business changes, organizational flexibility and, 510

Decentralization, advantages and disadvantages of, 303
control and, 652
Decentralization—(*Continued*)
defined, 301
delegation and, 302
dispatching and, 690
indoctrination and, 591
morale and, 563
principles of, 306
responsibility and, 246
staff, 383
Decision, decentralized, principle of, 307
right of, 282
Delegation, control and, 652
decentralization and, 301
indoctrination and, 591
limitation of right of, 298
Mooney and Reiley's concepts and, 296
morale and, 563
principles of, 280, 300
process of, 295; defined, 293
requirements of, 294
Democratic process, authority and, 283
Devolution, functional, line organization and, 263
nature of, 216
Differentiation, functional, 158, 213
Direction, control and the function of, 649
defined, 698
order giving, technique of, and, 704
organic nature of, 699
performance characteristics of, 700
technical orders and, 700
Disciplinary action, defined, 735
objectives of, 735
principles of, 737
Discipline, good, defined, 735
morale and, 554
Dispatching, control and the function of, 649
decentralization and, 690
defined, 688
organizational significance of, 696
phases of, 694
Division of labor, functionalization and, 330

Echelons, organizational, *see* Service levels, major

Education, and training, executive, 497
indoctrination and, 588
morale development and, 600
Emergencies, decentralization and, 310
Ethical standards in business, field of, defined, 117
functions of, 121
historical development of, 122
management's responsibility for, 124
practical value of, 118
public relations and, 126
Evolution, functional, 216
Executive leadership, *see* Leadership, executive
Executive relations, authority and, 316
Executive selection, organizational stability and, 494
Executive supervision, optimum unit of, 272
Executives, administrative, 160, 163
characteristics and abilities of, 146
classification of, 166
defined, 12, 129
man-power requirements for, 355
obsolescence of, 504
selection and development of, 150, 497
staff, defined, 371; secondary, 437
Exploitation defined, 559

Facilities, physical, organizational flexibility and, 510
Facilitation defined, 685
Factors, principal management problems and, 7
Flexibility, organizational, 151, 508
Followership, duties and responsibilities of, 152
Forecasting, business, importance of, 79
organizational flexibility and, 510
planning and, 47
Free action, areas of, 255
Free enterprise system and business objectives, 91
Functional analysis, methods of, 234
Functional definition, 204
Functional differentiation, staff development and, 376
Functional growth, law of, 231
Functional hierarchy, primary, 337
Functionalism, Mooney and Reiley's concept of, 213 n.
Functionalization, cross-, 226
defined, 204
marginal theory of, 232
organizational growth and, 528
purpose of, 330
staff, costs of, 372; stages in, 376
Functions, analysis of, 233
complementary, 224, 745
defined, 14, 31, 202, 790
differentiation of, 213
evolution and devolution of, 216
executive leadership, 127
facilitative, technical, 401
integration of, 213
managerial, 244
operative, 15, 157, 244; primary, grouping of, 343
organic business, 205
organic management, 14, 153
significance of, 202
similar, 220
split, 253
staff, basic, 389; investigatory, 394; types of, 385
ultimate unit, 267

General Staff, military, 428
Governmental regulation, right of private property and, 9
Graicunas' theorem, 276
Grievances, employee, morale and, 608
Growth, organizational, capacity for, 519
decentralization and, 308, 314
executive leadership and, 137
functional emergence and, 375, 436
functionalized relationships and, 458
individual and, 261
line executive, man power for, 355
procedural, 753
responsibility and, 245
staff evolution and, 373

Headquarters staff functions, 444

Ideals, business objectives and, 116
Incentives, morale and, 564
nonfinancial, 568

Indoctrination, decentralization and, 313
defined, 588
degree of, 591
education and, 588
morale and, 556
purpose of, 590
Industrial Revolution, management and, 2
Instructions, defined, 769
staff, release of, 432
standard practice, 770
Instruments, procedural, 765
Integration, functional, 213
Interests and morale, homogeneity of, 562
integration of, 547
personal, overidentification of, 603
Interview methods and morale investigation, 571
Investigation, technical staff, methods of, 396

Job analysis, 234
Job evaluation, minor service levels and, 353

Knowledge, technical, 439
Koppers' Control Section, 417

Labor relations, private property rights and, 606
Law of functional growth, staff organization and, 356, 373
Lead time, defined, 678 n.
Leadership, executive, authority and, 143
defined, 12, 128, 129
economic situations and, 137
education and training for, 497
importance of, 127
indoctrination and, 596
influence of, basis of, 140
kinds of, 137
line organization and, 325
management, function of, 153
morale and, 552, 560
negative vs. positive, 143
operative employees and, 151
organizational growth and, 531
planning and, 45
Leadership—(*Continued*)
responsibility of, 37
society and, 7, 170
staff, 435
supervisory, 145
Leadership evolution, theories of, 130
Limiting factors, theory of, 394
Line and staff relationships, 435, 456, 488
Line organization, and direction, 702
and planning, 425
defined, 337
executive leadership and, 141, 325
problem of, 323
structure, *see* Organization structure, line
Logic, business planning and, 51, 56
Loyalty, morale and, 554

Management, administrative, board of directors and, 162; defined, 65; nature of, 160
defined, 6, 20, 152, 153, 785
good, criteria of, 167, 168
organic functions of, 14
operative, defined, 66, 165
principles of, *see* Principles of management
"sharing," concept of, and, 17
Management functions, executive leadership and, 142
objectives, and business, 94
organic, defined, 154
staff evolution and organic, 384
Management terminology, 339
Managerial functions, 158
Manuals, organization, 539
policy, 195
procedural, 773
Measurement, 21
Military organization, general staff and, 428
Morale-building process, function of, 549
Morale, organizational, collective bargaining and, 614
decentralization and, 311
defined, 19, 543, 802
degrees of, 578
disciplinary action and, 736
education for, 600

Morale—(*Continued*)
effects of, 551
evaluation of, 581
exploitation and, 559
factors affecting, 557
focal points, principle of, and, 618
grievances and, 608
incentives and, 564
indoctrination and, 578
interest in work and, 555
interests, and homogeneity of, 562; and identification of organizational and personal, 617; and integration of, 583
limited choice, principle of, and, 625
maintenance of, 626
management's philosophy and, 561
measurement of, 579
nature and importance of, 542
objectives and, 544
organizational flexibility and, 510
participation, principle of, and, 624
personnel, and technique for handling, 563
process of building, 547, 549
sacrifice, principle of, and, 623
sound business ethics and, 120
symbolism and, 561
time factor in, 580
unity of understanding and, 590
working conditions and, 569
Morale estimates, qualitative, 576
Motion-and-time study, 236

Objectives, business, analysis of, 116
characteristics of, 106
classification of, 95, 97
collateral, 10, 102
defined, 90, 787
elastic and inelastic, 111
ethics and, 116
external and internal, 114
functional grouping and, 342
immediate, 109
limited and unlimited, 109
management functions and, 94
morale and, 544, 558
nature of, 10, 809
policies and, 180
principles of, 114
private property rights and, 91
Objectives—(*Continued*)
procedure and, 101
service, primacy of, 545; primary, 10, 96, 97; secondary, 11, 105
staff, 371
tangible and intangible, 112
ultimate, 106
Operation, elementary, defined, 268
Operative functions, defined, 158
grouping, primary, 264; secondary, 266
Operative management, and administrative management, 162
defined, 66, 165, 788
Operative supervision, optimum unit of, 269
Opportunity, morale and, 654
Order giving, technique of, 704
Orders, control and technical, 700
defined, 768
staff, release of, 432
Organization, decentralization and complexity of, 314
defined, 18, 143, 327, 787
size of, flexibility and, 516; growth and optimum, 529
Organization form, structure and, 329
Organization structure, business procedure and, 745, 750
defined, 18, 328, 795
factors determining, 330
flexibility and, 508
form of, 386
growth capacity and, 522
line, advantages of, 364; characteristics of, 363; development of, 333; disadvantages of, 365; executive, man-power requirements of, 354, 356; importance of, 323, 368; organic business functions and, 195, 335; primary operative functions, grouping of, 264, 343
organizational balance, and, 535
organizational elements and, 338
purpose of, 331
stability and, 506
staff, committee type of, 468; coördinative, 405; costs of, 372; defined, 370; empire building and, 450; evolution of, 376; functional emergence and, 375, 436; functional-

Organization structure—(*Continued*)
ized, 456, 468; growth and complexity of, 356; objectives of, 371; organic management functions and, 384; parallelism in, 439; secondary operative functions, grouping of, 266; staff rotation and, 451; technical, 393, 399; test of, 337, 388; types of, 385
supervisory units and, 279
terminology of, 339
Organizational attributes, 488
Organizational elements, basic, 267
Organizing, defined, 23, 155
executive leadership and, 149
function of, 238
preparation and supply functions and, 680
procedures for, 763
process of, 323
standards and, 23

Participation, principle of, 200
Personnel, decentralization and, 311
organizational flexibility and, 510
organizational growth and, 26;
organizational planning and, 420
responsibility, division of, and, 251
technique of handling, 563, 716
Personnel factor in organization, 15
Philosophy of management, defined, 6, 804
development of, 809
morale and, 651
Physical performance factors, functions and, 33
nature of, 15
Planning, administrative, 65, 81
classification of data and, 69
compromise and, 72
creative, defined, 22, 43, 785; and management, 155
hypotheses in, 65
initiative and, 78
limiting factors, principle of, and, 61
operative, 66, 81
organizational, 423, 510, 540
plans for, 76
procedural, 423
project control for, 760
reflective thinking and, 51, 56
Planning—(*Continued*)
research and, 61
routine, 647
staff functions of, 397
standards and, 22
technical staff coördination and, 667
time factor and, 79
Plans, changes in, 85
characteristics of, 46
comprehensiveness in, 49
control function and, 665
defined, 43, 44, 82
flexibility in, 48
requirements of, 44
stability in, 49
testing of, 67
Policy, characteristics and requirements of, 179
classification of, 188
complementary, 186
comprehensiveness in, 185
control of, 198
defined, 13, 173, 789
elements of, 173
flexibility in, 183
functions of, 175
importance of, 200
objectives and, 180
plans and, 44
simplicity in, 181
stability in, 182
standards and, 32
supplementary, 186
top administrative, 174
Policy making, organization for, 199
phases of, 190
Position, authority and, 318
Power and authority, distinguished, 287
Preparation function, and control, 648
organizing and supply functions and, 680
subfunctions of, 686
technical staff coördination and, 684
time objective and, 687
Prestige, authority and, 318, 320
Principle defined, 173
Principles of management, comparison, 721
complementary functions, 226
decentralization, 306

Principles of management—(*Continued*)
deductive reasoning, 67
delegation, 300
differentiation, functional, 215
disciplinary action, 737, 738
emergence, functional, 375, 436
equity, 569
exception, 729
forecasts, overlapping, 79
functional growth, law of, 231
homogeneity, functional, 248
incentive value, uniform, 357
individual importance, 261
indoctrination, 593
initiative, 78
integrity of the line, 432
interests, common, 618; homogeneity of, 562; integration of, 547
leadership, 168
limiting factors, 61, 394
multiple hypotheses, 65
objectives, 90, 114
participation, 200, 624
responsibility, and authority, coincidence of, 288; complex, 280
sacrifice, 623
service objectives, primacy of, 545
similarity, functional, 223
simultation, 678 n.
single accountability, 322
situation, law of, 151
staff advice, compulsory, 453
staff economy, limitation of, 451
staff independence, 454
staff parallelism, 439
technical knowledge, specialized, 439
unity, of action, 590; of command, 432; of direction, 432
Private property, right of, business ethics and, 120
collective bargaining and, 17
defined, 91
democratic process and, 285
freedom, individual, and, 8, 91
governmental regulation and, 9
labor relations and, 606
profit and, 809
responsibility and, 786
society and, 8
Procedural step defined, 268
Procedure, attributes of, 746
classification of, 755
complementary functions and, 224
coördinative staff, 761
defined, 18, 744
design and installation of, 778
effective, requirements for, 747
good, structural attributes of, 750
managerial, 756
objectives of, 744
operative, 764
organizational flexibility and, 510
organizing and, 763
technical staff, 758
Process analysis, 236
Project control for planning, 760
Projects, defined, 268, 342
objectives of, 744
operative, primary, 19; primary and secondary, 746
Promotion and transfer, 501
Public relations, business ethics and, 126

Rank, authority and, 318
major service levels and, 348
Records, business, 777
Reports, business, 721, 775
Research, objectives, analysis of, 116
planning and, 61
supervision of, 271
Responsibility, accountability and, 320
authority and, 288
division of, 245, 247; and Graicunas' theorem, 276; and organization structure, 248; and organizational elements, 266; overlaps in, 252; personnel factor in, 257; requirements for, 250
managerial, 244
nature and importance of, 243
operative, 244
organizing function and, 238
right of private property and, 786
split functions and, 253
staff control, centralized, and, 463
ultimate unit of, 269
Routine planning, control and, 665
phases of, 668

Scalar process, Mooney and Reiley's concept of, 218 n.
Scheduling, administrative and operative, 679
  defined, 648
  factors in, 674
  preliminary and final, 677
  standardization and, 679
  time factor in, 673
Scientific management, beginnings of, 4
  defined, 6, 60
  nature of, 5
  reflective thinking and, 59
  steps in, 60
Second-in-command, 361
Service levels, major, basic relationship governing, 347; defined, 347; growth of, 351; organization size and, 358
  minor, 353
Simultation, principle of, 678 n.
Situation, law of, 151
Society, business objectives and, 90
  economic leadership and, 7
  management and, 7
Span of attention, supervision and, 275
Specialization, functionalization and, 330
  primary operative, 261
Stability, organizational, 490
  procedural, 751
Staff economy, limitation of, 451
Staff effectiveness, maintenance of, 452
Staff executives, classification of, 430
  defined, 371
Staff facilitation, technical, coördination of, 684
Staff functions, secondary, 437; technical, defined, 385
Staff investigation, methods of, 394
Staff organization, control and, 656
  coördinative, control function and, 405, 695, 762; structural, form of, 409
  defined, 797
  duties of, 389
  executive leadership and, 141
  layering and, 449, 696
  orders and instructions, release of, 432
Staff organization—(*Continued*)
  process and effect in, 393
  technical, 393; coördination of facilitative services of, 684; facilitative, 402; planning functions of, 397; structural, form of, 399
  top management, control and coördinative, 739; defined, 799; development of, 413; headquarters, functions of, 444; Koppers' Control Section and, 417; organizational planning function of, 423; policy functions of, 417, 423; procedural planning function of, 423; program planning and control functions of, 419; Standard Oil Co. of California, 422; structural form of, 416
Staff relationships, coördinative and technical, 411
Stamina, organizational, and morale, 555
Standardization, defined, 21
  decentralization and, 309
  economic progress and, 121
  scheduling and, 679
Standards, business, classification of, 28
  comparison function and, 719
  defined, 21
  development of, 37
  economic service, 29
  ethical, 117
  functional, 31
  "Gresham's law" of, 41
  introduction of, 36
  maintenance and control of, 40
  managerial, 22
  performance, 34
  personnel, 34
  physical, 32
  requirements of, 24
  tolerance and, 27
  types of, 26
Statistical methods in morale investigation, 571
Strikes, industrial, and morale, 579
Supervision, comparison function and, 707
  control and, 650
  defined, 705
  difficulties of, 709

Supervision—(*Continued*)
effective, conditions of, 712
employee attitudes and, 710
employee grievances and, 609
executive, unit of, 272
good, contributions of, 708
operative, unit of, 269, 270
personnel, technique of handling, 716
training function of, 715
Supervisory executive, communications and, 605
defined, 145
morale responsibilities of, 518, 580
Supervisory units and organization structure, 279
Symbolism, morale and, 562

Taylor's shop organization, 457
Time-and-duty study, 235
Time factor, planning and, 45, 47, 79
Tolerance, concept of, 27, 112
Top management, control responsibilities of, 739
staff organization for, 413, 416
Training, direction, and supervision, 715

Union-management relations, 617
Utility, economic, defined, 99 n.
organic business functions and, 209

Values, economic, business objectives and, 91
defined, 90
moral concepts and, 117
tangible and intangible, 112

Wage and salary administration, minor service levels and, 353
Weber's law of discrimination, 357
Work assignment, general, defined, 268
operative, defined, 268
Working conditions, morale and, 569