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**MANAGING  
MANPOWER IN THE INDUSTRIAL  
ENVIRONMENT**



# MANAGING MANPOWER IN THE INDUSTRIAL ENVIRONMENT

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and  
Dorian Shamin

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DEDICATED TO  
the patience of four wives,  
especially Jeanne



# Preface

The manager is a manpower manager. His ability to handle people and their problems directly influences the success of his superiors, peers, and subordinates. The evidence indicates that the management of manpower is a very important management function, more and more executives realize that manpower problems cannot be bypassed by line officials. Furthermore, manpower specialists know that their effectiveness depends upon the support of line managers as well as their own particular competence. This text recognizes these points, and wherever possible the joint line-and-staff responsibility for manpower management is specifically indicated.

Traditionally, texts dealing with personnel present the discipline through a series of definitions of function or technique, or they discuss the procedures followed by given firms. It is our belief that more is gained by including procedural recommendations within a traditional framework. This text therefore includes suggestions for analyzing manpower issues and for evaluating the success of function.

The belief is that procedural recommendations benefit both students and practitioners: for the student, the recommendations serve to put concept into a more concrete setting, for the practitioner, they may suggest an untried approach, possibly useful in his particular environment. The operational views expressed are neither final nor panacean. All such views, however, have been treated and proven successful in their respective environments.

Part I of the text treats with certain necessary historical and philosophical background materials. Part II devotes considerable attention to the basic management considerations of organization, communication, and control. These considerations are, we believe, fundamental to all management activity, particularly to the management of

men. Men work within and by means of organization. Men cannot be managed without, or manage without communication. Unless control is exercised, human enterprise cannot long succeed, except by chance.

Beginning with Part III, the reader is introduced to the functions of manpower management. Throughout this part and the remaining portions of the text, frequent reference is made to the initial chapters. Furthermore, the interdependent nature of manpower activities is emphasized.

The authors are indebted to their students and clients for their help in testing certain concepts, to their associates for their constructive criticism, to Mr. Arthur Fehlber of the Hamilton Standard Division of United Aircraft Corporation for his advice and untiring cooperation, and especially to Dr. Roger Bellows for his valuable assistance and editorial contributions. In addition, we are indebted to Professor Sir Ronald Fisher, F. F. S., Cambridge, and to Messrs. Oliver & Boyd Ltd., Edinburgh, for permission to reprint Table No. III from their book *Statistical Methods for Research Workers*.

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*Machines exercise no judgment or skill except what man, by God's grace, is permitted to assign or build into the machine! Money spends not itself either wisely or un- wisely, nor are materials converted to products without man*

## PART I

# Introduction

Look in upon a meeting of the board of directors or upon a meeting of the operating managers of a business organization; listen to the problems and plans: all involve people. People — how they act and react — create the problems and solve the problems. People make the plans and carry them out. The business organization is people, and its management involves people.

The stockholder elects a board of directors to exercise the policy-making function of his company. He and his fellow stockholders assign to the board the responsibility for guiding the firm along the competitive path in an effort to obtain a return on their invested capital. To do so, the board requires the help of people. Is it any wonder that the claim is made that the *business of management is people?*

### **PEOPLE — A MANAGER'S WORK**

A quick glance at the issues faced by a given manager in a typical morning of business may emphasize this point.

1. From the time he arises to the time he arrives at his desk, the manager has to be civil, if not downright charming, to a number of people.

2. On his desk is a note to call the head of a company which buys 20 per cent of his output. He calls. The other party is distraught. When he has calmed down, it turns out that an order promised for yesterday has not yet arrived. The manager begins a long series of checks (all of which involve people) and discovers that a "human error" existed. He calls back and "eats crow" to keep the customer.

3. He receives a memo regarding a grievance from an employee of ten years' seniority. He contacts more people to ascertain the facts. He meets with the union representative to discuss the issue.

4. He receives a letter from an irate stockholder who wants to know why the company should be spending money on a parking lot instead of increasing the dividend.

5. He receives a letter from a former employee requesting help in the form of a loan.

6. He receives a letter from a school teacher asking him to allow a group of students the "run of the place" while they try to collect data concerning a remote management technique or tool.

7. He picks up the controller's report and finds that profits are down and productivity (naturally this refers to people) is down.

8. He finds a forgotten memo concerning a 25-year employee about to retire and must make hasty preparations for a "warm and appreciative" send-off.

9. His vice-president of manufacturing comes in with the "I told you so" attitude and reports that the industrial engineer they hired two months ago has submitted his resignation.

10. His vice-president of industrial relations (manpower management or personnel administration — whatever name you wish) calls to say that accident insurance rates are going up because of the increase in the frequency and severity of accidents. He remarks that a top management meeting should be held to determine a new policy regarding safety management.

11. The treasurer calls to warn him that the board will probably be "after his hide" because of the profit decrease. While on the phone, he also warns that no plans for expenditure of non-productive items should be made until the transactions for new equipment have been completed. The manager then must call the head of research and tell him to hold off on any further capital expenditures; and he must notify all operating officials to hold off on their new office equipment (the roll-top desk, will stay another year, and with them, the discontent of several dozen office workers).

12. He dictates a memo to the superintendent of the night shift, calling his attention to the decreased productivity and the impact of increased scrap rates during the night operations.

Talk, write, talk! Talk to people about people; write memoranda about people and things to get people to do, or not to do certain things: as Table 1 indicates, the manager spends his time in communication, and naturally, in communication with people.

## **MANPOWER MANAGEMENT — A DEFINITION**

Some years ago Dale Yoder made the point that: "*Manpower management* is the inclusive function of planning, coordinating, and

TABLE 1

How Managers Spend Their Time in the Plant

	Top Plant Management*		Operating Managers**	
	Per cent of time	Hours per month	Per cent of time	Hours per month
<b>Talking (Oral Communication)</b>				
Consultation . . . . .	10.5	14.2	3.3	4.8
Deciding on course of action . . . . .	9.4	12.6	6.3	8.5
Discussion . . . . .	5.2	8.3	4.0	5.3
Interviewing visitors . . . . .	3.0	4.0	3.5	4.7
Telephone:				
Alone . . . . .			7.1	9.6
Others waiting . . . . .	8.8	11.8	1.1	1.5
Dictating:				
To secretary . . . . .			0.3	0.4
To dictating machine . . . . .	3.7	5.0	1.6	2.2
Meetings				
Regularly scheduled . . . . .	1.4	1.9	4.0	5.4
Special . . . . .	8.0	10.8	5.0	8.1
Luncheon discussions . . . . .	14.3	19.4	11.0	15.0
Visiting other offices . . . . .	14.7	20.0	36.1	48.9
<b>TOTAL TALKING . . . . .</b>	<b>80.0</b>	<b>108.0</b>	<b>84.6</b>	<b>114.4</b>
<b>Writing</b>				
Letters . . . . .	1.4	1.9	1.8	2.4
Notes . . . . .	2.7	3.7	2.0	2.6
<b>Reading:</b>				
Published material . . . . .			2.6	3.5
Correspondence . . . . .	13.2	17.7	5.8	7.8
Form data . . . . .			0.8	1.1
<b>Miscellaneous</b>				
Clerical work . . . . .	0.7	1.0	1.2	1.6
Thinking . . . . .	2.0	2.7	1.2	1.6
<b>Total . . . . .</b>	<b>100.0</b>	<b>135.0</b>	<b>100.0</b>	<b>135.0</b>

\*General Manager, Plant Manager, Director of Industrial and Public Relations, etc  
 \*\*Managers of Operations, Quality Control, Industrial Engineering, etc

By permission from "Tips to Help You Save Time," *Factory Management and Maintenance*, by C L Brisley, 1958, McGraw-Hill Book Company, Inc., N. Y., p. 60

directing human resources in economic activities."<sup>1</sup> The term "inclusive" is well chosen for *this management of people* refers to people as individuals *and* members of a group, it refers to the management of manpower *wherever* a superior-subordinate relationship exists. It refers to the management of the manpower division within an organization. The term pertains to every concept, factor, or technique connected with the economic utilization of the most important of all resources, human resources.

<sup>1</sup>Dale Yoder, *Personnel Management and Industrial Relations* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 3rd ed., 1948), p. 6. In his 4th edition, Professor Yoder expands his definition and effectively removes any doubt as to the inclusive nature of this prime management function; cf., pp. 4-12 (4th ed., 1956), *passim*.

**OPERATIONAL ACTIVITIES.** The operational activities associated with the manpower management function arise from the need to utilize manpower in an economic fashion. These activities include the factors of: *staffing*, that is the location and selection of employees, *development*, the training and promotion or transfer of employees; *conservation*, the work associated with "holding" a workforce together; and *compensation*, the matter of seeing to it that employees receive an equitable monetary return for the effort they invest.

**COMMON MISCONCEPTIONS.** There still exist some individuals who honestly believe that "manpower management" is the business of a specially-designated manager referred to as the Personnel Director, the Director of Industrial Relations, the Vice-President of Industrial Relations, or by whatever title you choose. It is true that the manager so designated does have responsibility for manpower management. It is *not* true, as the definition and operational activities indicate, that he holds the *sole* responsibility for this function.

Some individuals believe that the manpower management function is the management of the so-called "personnel department" and its staff. This also is true. As we have seen, however, it is not the whole truth. The function exists to some degree and in some way wherever the superior-subordinate relationship exists.

Another common misconception is that manpower management and industrial relations are synonymous. Actually the industrial-relations activity (labor relations, or labor-management relations) is *one*, but only one, phase of the over-all manpower management function. In Chapter 8, and again in Chapters 20 and 21, this point will be emphasized.

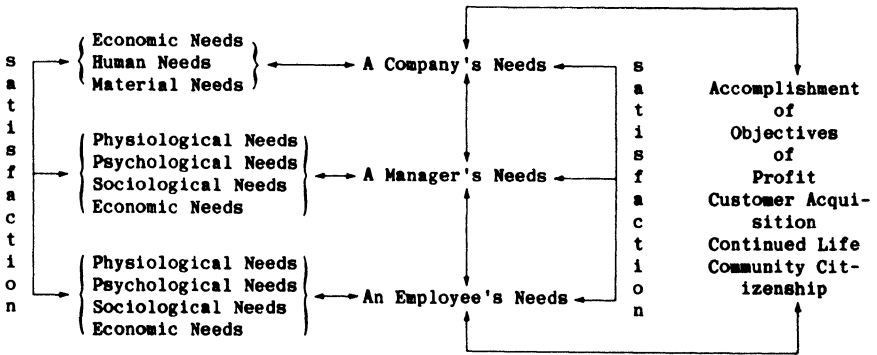
Still another misconception holds that "personnel administration" is one thing — the managing of the employment office — and that the managing of manpower is, in reality, a foreman's function synonymous with the term "leadership." There is little doubt concerning the fact that every foreman is responsible for effectively "leading" his subordinates, and little doubt that if a so-called "personnel department" exists, it must be managed effectively. To limit the manpower management function so drastically, however, would require that one ignore reality.

## **MANAGEMENT-EMPLOYEE RELATIONSHIP**

The definition of manpower management indicates that *every manager is, or should be considered as, a manpower manager*. A manager has this responsibility because he must utilize human resources effectively. This sounds quite simple and straightforward. It is not, however! In fact, the manpower management function is perhaps the most complex function man can undertake.

Complexity arises with the management-employee relationship. The moment a superior appears on the one hand, and a subordinate

on the other, a maze of problems develops. Every man has certain "needs" which must somehow be met. The meeting of these needs is in itself a complicated matter. When more than one individual becomes involved in the same environment, and charged with the production of a given good or service, the effort of each to meet the "charge" while at the same time seeking to satisfy his "needs," causes an increase in the complexity of the situation. Figures 1 and 1A show this complexity. Manpower management becomes involved, for it is through this management activity that one seeks to balance the components of, and the "needs" of, a business organization. In other words, manpower management becomes involved with the attempts to satisfy the "needs" of management on the one hand, and the "needs" of the employees on the other.

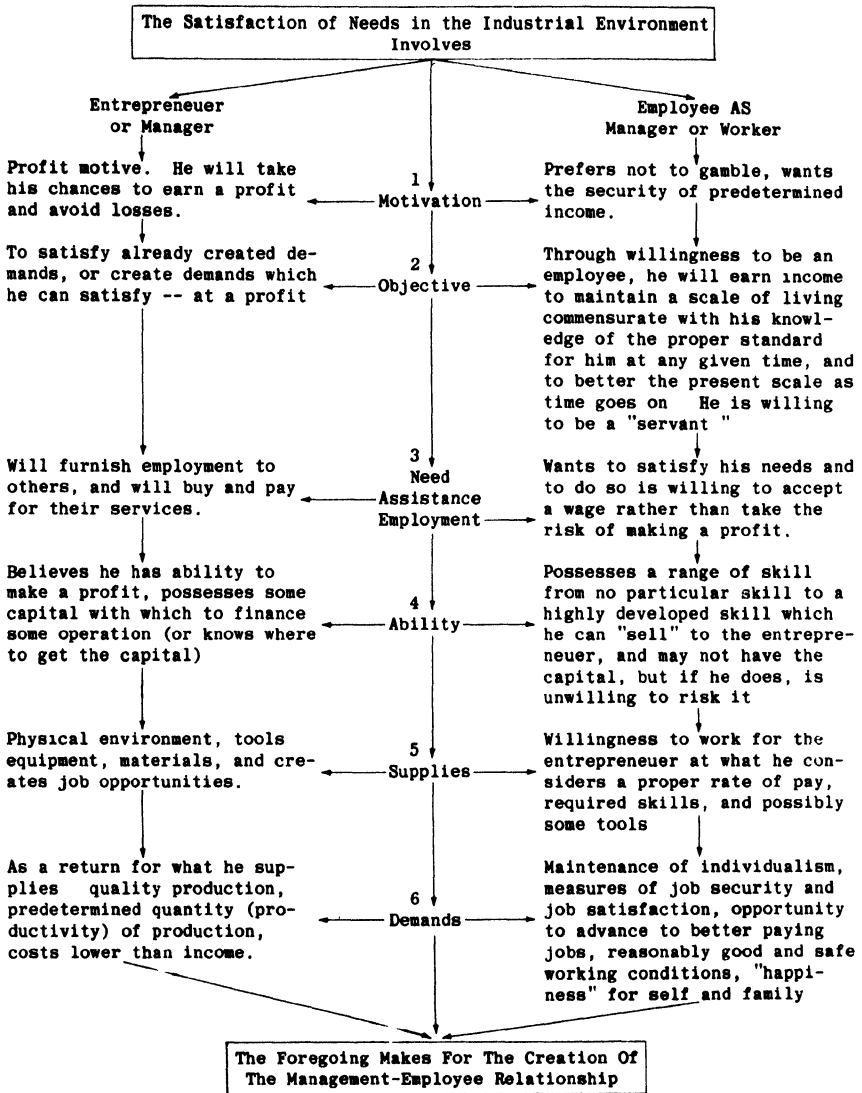


The Considerations Involved

1. Satisfaction of "needs" requires human application.
2. Satisfaction of the needs that a person cannot supply for himself, or a company by itself, may be supplied by another.
3. That "other" may seek to satisfy a "need" for a person or a company at a fee. This "other" person assumes the role of an entrepreneur and/or manager.
4. The entrepreneur is "hemmed in" by certain fences such as: existing rules of conduct, customs, and mores and taboos, the climate of government, and past decisions of many kinds and origins.
5. In his endeavor to supply products and services, the chances are that the entrepreneur and the manager will need helpers who will become his (their) employees.
6. One notes that need satisfaction contributes to accomplishment of objectives, and that the system is *mutually inclusive* and *regenerative*.

THE COMPLEX "NEED" PATTERN OF A COMPANY

Figure 1



1. At each of the six areas shown above differences of opinion between enterpreneur (management) and the employed can arise. These differences can be resolved temporarily for a limited period of time by "word" or "contract."

**A PATTERN OF RELATIONSHIPS IN NEED SATISFACTION**

*Figure 1A*

*Figure 1A (Continued)*

2. In addition to the entrepreneur and employee there are other parties at interest in this relationship – suppliers of all kinds, the community, consumers, the government and stockholders.

3 The entrepreneur of yesteryear had a dual responsibility – he was owner and manager of the business as well. The entrepreneur's place of yesterday, in many instances, is today exercised by representatives of stockholders who hire managers to do the work of the former manager-owner.

4. These managers hired by stockholders are “employees” but work in the interest of the owner(s). Even so, these managers, in many respects, have the same motivation, objectives, need for employment, attitude toward ability, supplies, and demands listed above under employees

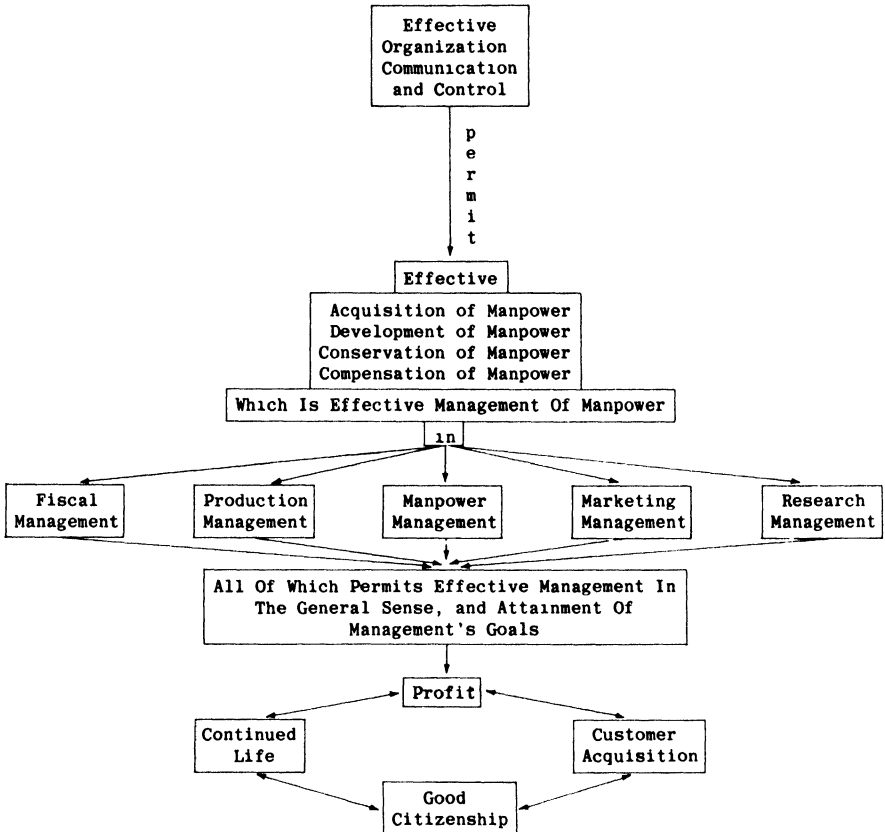
**THE KNOWLEDGE REQUIRED**

The manager is constantly involved with people. At the same time, he is involved with organization, for without organization people tend to act like the politician who runs from his house, jumps upon his bike, and rides off in four directions at once.

People in organization require communication! They must talk and write to each other or they cannot long remain organized, nor can they produce or sell, finance or expend. And people in organization must exercise control! They must set goals, or stand in confusion. They must plan, or walk in blindness. They must check performance, or know not what they do. They must correct their errors, or go down in defeat. Managers are the people who *must* do these things. To do, however, one first must know the ins-and-outs of the doing! The manager of people (or anything) thus requires knowledge of organization, communication, and control.

Managing manpower is, in a sense, a very special management job. Even though every manager is, and should be, a manpower manager, and even though the included functions have a relationship (in principle at least) to all other management functions, these have certain distinct characteristics and involve certain distinct problems. These problems and characteristics relate to the hiring, training, and compensating of people, and to the “holding” together of a workforce. Figure 2 depicts the relationship existing here. That is, it pictures the connection between the basic areas of knowledge required by those who manage people, and the specific management functions necessarily associated with *manpower management*.

**THE TIME FACTOR.** Managers, including those specifically designated as manpower managers or personnel administrators, exercise their responsibilities within a certain time-span. They work today,



## MANPOWER MANAGEMENT — A THEORETICAL DESIGN

*Figure 2*

but they do so for tomorrow. What they do today depends in part upon what was done yesterday, and what they know or feel must be done tomorrow. In other words, managers work in the time dimensions — the past, the present, and the future.

This time "set" suggests that effective work today and tomorrow will depend largely upon what we have learned in, and from, the past. It therefore appears that managers require at least some understanding of what has gone on in the past concerning the field of manpower management.

### THE POINTS OF VIEW

Certain points of view are common to all the Parts and Chapters of the text.

1. Manpower management is the business of every manager. It is the *prime* management function. It stands *at the head* of the list of terms allegedly descriptive of the "personnel" activity. The view is supported by the realization that: (a) Personnel Administration typically is used by employers to describe or refer to the handling of employees as individuals, or to the general "employment" function, (b) Labor Relations is a term generally associated with the narrow "collective bargaining" and "contract negotiation" phase of the manpower management function, and, (c) Industrial Relations is a term frequently utilized with reference to both in-plant and out-plant relations with organized labor, and is also applied to the broad area of in-plant and out-plant problems associated with acquiring employees, the mobility of workers, and the distribution of labor; furthermore, (d) Industrial Relations tends to limit reference to the manufacturing establishment, we know, however, that the management of manpower is a function having principles or considerations common to every organized undertaking. The *point of view* held is that: every manager, or embryo manager, should develop an appreciation for the concepts, techniques, and tools related to the manpower management functions, hence the emphasis in the text is upon the "inclusive" term rather than upon one of the more restricted terms.

2. Life, in general, is a fairly rough affair. Whether one interests himself with survival in combat, or survival in business, the mere problem of survival is a difficult matter. There is no room for "happytology" or other "head-patting" techniques designed to make people "happy" in the hard-bitten world of competition.<sup>2</sup> The goal of the manager is profit (though in some situations the term may be shifted to "surplus," or some word not generally associated with money — hospitals and schools usually do not use the word profit). The attainment of the goal demands that he focus attention upon the *people* with whom he works in an effort to obtain his profit. Attention, however, focuses upon performance, upon accomplishment. The *point of view* is that economic operation of the business and economic performance of employees (from top to bottom) are the important aims; if the manager is to succeed in reaching his target he must consider the "needs" of those involved, but this consideration is not the "end," it is the *means* to the end.

3. The goals of management begin with profit, but include *customer acquisition, continuance of life, and "good citizenship"* (the community interest consideration). The economic performance of enter-

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<sup>2</sup>Science is not sure what "happiness" is. Note: although there is no room for "happytology" in management, the importance of employee wants and feelings, of "morale" and the like can be neither denied nor ignored, as indicated throughout the first eight chapters and in Chapter 19.

prise and people does not mean that "profit at any cost" is a correct, or even desirable, goal. Thus, the *point of view* is that one seeks to *optimize* rather than maximize profit, and the manager seeks to optimize his relations with people, not "get the most out of them for the least cost." Exercise of this point of view indicates that when a manager seeks employees, he seeks those who are totally competent (physically, mentally, and psychosocially) in terms of the situation and the job requirements; that when the manager develops people, he does so for *their* good and for the good of the organization; that when he compensates people, he does so with *their* needs in mind as well as the needs of the company and in turn the community; and that when he seeks to conserve a workforce, he does so to perpetuate his business, to minimize his operating cost, to optimize his profit, and optimize his relationships with the community in general.

4. The importance of union-management cooperation cannot be denied. Of greater significance, however, is the attainment, and the maintenance, of a general atmosphere of cooperation. The effectiveness of an enterprise is largely dependent upon such an atmosphere. As indicated throughout Part V, management should be genuinely interested in the acquisition and maintenance of a spirit of "free" rather than forced cooperation with its work force. Management is constantly and actively interested in the maintenance of men's rights. This *point of view permeates* the text. Together with it is another.

Cooperation is not a one-sided affair. Those who seek or demand cooperation *must deserve it*; those who would deny men their rights do not deserve cooperation. This *point of view* also appears throughout the text.

5. There are those who would have us believe that conflict between labor and management is a perfectly natural thing. It is true that conflict has existed, and still does exist, between labor and management. In many cases, however, the flame of conflict is fed by men of ill-principle, is fed as a matter of self-interest. "Good" management practice demands that managers take an active part in efforts to eliminate or minimize conflict between labor and management. Good management demands a "clean house" of its own, and seeks to assist honest and competent labor leaders to maintain one of *their* own. This also is a point of view.

## SUMMARY

Manpower management is the prime concern of every manager. It is an "inclusive" responsibility and function. Its primacy stems from the fact that *people* are the business of management. The management of people *is not* an isolated responsibility of a specific organizational unit. It is the responsibility of every manager.

## Background In Brief

The industrial world has become highly complex. Haphazard, hit-or-miss methods have no place in this environment no matter whether one speaks of manpower or fiscal management, training or research. Management continuously is seeking improved orderliness and methods for handling its special problems.

The manager works within time dimensions. The failures and successes of the past become the opportunities of the present. How the manager handles these existing opportunities determines in large measure the problems he must face in the future. He looks into the past in an effort to understand the present, and in the hope of improving today's actions so that tomorrow's will be the easier.

The field of manpower management is no different in this respect from any of the other management disciplines. Let us look, therefore, at the past in the hope that it will shed some light upon the present.

### THE IMPORTANCE OF MANPOWER MANAGEMENT

During the past two decades the field of manpower management has taken on the importance of a "top-drawer" activity. It is recognized in the colleges and universities, the military and government, and in every alert industrial organization. Appley has said: "Management is the development of people and not the direction of things. . . . Management is personnel administration."<sup>1</sup> It has also been said that ". . . managing manpower is the main activity of all managers."<sup>2</sup>

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<sup>1</sup>Lawrence A. Appley, "Management the Simple Way," *Personnel*, Vol. 19, No. 4, June, 1943, pp. 595-603.

<sup>2</sup>By permission from *Handbook of Personnel Management and Labor Relations*, by Dale Yoder, H. G. Heneman, Jr., John G. Tumbull, and C. Harold Stone, (1958). McGraw-Hill Book Company, Inc., N.Y.

Managers have always been concerned with the need for the various levels of skills people require to accomplish work. In the past, however, the importance attached to manpower was often secondary. Typically, managers focused their attention upon raw materials, costs of rent, capital requirements, markets, inventions, and the like; but manpower management received little real attention. It appeared to enjoy only a "back-seat" position before the turn of the century. This secondary importance can be accounted for by the following factors.

1. There existed only a limited scientific basis for understanding and dealing with man, his actions, reactions, and needs. Only a limited basis for personnel thinking therefore existed.

2. Only a relatively small number of employees were concentrated under any one employer during the 1800's and before. As a group, therefore, employees had only a weak voice in any one company and their complaints and needs often went unheard, or were completely ignored.

3. The average community did not support concerns engaged in similar enterprises, thus, seldom did all employees in any one town have similar employment problems and any real solidarity of interest. Further, the inadequacy of communications hindered the exchange of views between workers in separate communities. These factors also tended to limit the strength of labor's voice and the need for management interest in that voice.

4. Although the employer-employee relationship often existed on a more-or-less face-to-face basis and resulted in a quasi-family type association, most employers failed to consider the employee much beyond the point of getting the most production for the least cost. The need for personnel work thus tended to be depreciated or ignored.

5. Competitive and traditional reasons emphasized management's need to concentrate upon technology. Man's part in that technology was considered as a purely economic factor, or taken for granted.

6. Immigration and national expansion also seem to play a vital role, in determining the back-seat position of manpower in the pre-corporation days. Employees of low skill could be quickly replaced. The vast immigration to this country made this possible, and even facilitated replacement of many people of higher skill. Discontented workers could migrate with relative ease if they chose to. The wide physical frontiers and the government's free land policies made such action possible.

The employers' ability to replace employees, and the employees' ability to move on when discontented, tended to minimize the effectiveness of labor's voice. At the same time it tended to emphasize, for management, the importance of concentrating upon technological problems instead of manpower. Unheard, manpower's problems went untended!

Admittedly the foregoing presents only a sketchy view. One may conclude, however, that in the days before the turn of this century the management of manpower was pretty much a hit-or-miss proposition, viewed for the most part as merely a hiring and firing activity.<sup>3</sup>

Today this position has changed. Manpower management in large and medium sized industrial firms has become a top level activity. Even in a great many small firms the functions typical of the discipline have the attention of top level people. Over the years the techniques involved in hiring and firing and the concepts and methods related to training and compensation, and to labor relations, have become highly advanced. Table 2 which appears on an ensuing page presents certain events significant in the history of manpower management, and indicates the shift from a hiring and firing activity to one of broad applications.

*THE PROBLEM.* Although it is true that manpower management has come a long way during the twentieth century and that most forward thinking organizations recognize its primary importance, some managers and some groups still treat the function as a second cousin. There are still those who cut manpower activity at the first sign of a decline in the economic position of the firm, and who minimize the importance of human considerations as compared with financial and material factors.

Some people argue the importance of manpower work. Drucker's charge that nothing new has been developed for or by the field for 20 years may partially explain the reason for this condition.<sup>4</sup> More likely, however, the situation results from some combination of the following facts.

. . . It is difficult to measure the monetary return from expenditures on personnel work.

. . . It is difficult to define and apply certain manpower techniques.

. . . Scientific approaches to manpower management have grown slowly.

. . . Foreman and executive training in manpower work is often very inadequate.

. . . The field of manpower management is one of the most difficult in which to obtain professional training. The field is interdisciplinary, and to achieve a truly professional background one must spend years in complex study.

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<sup>3</sup>J.W. Dietz, "This Thing Called Personnel Relations," (American Management Association, New York, 1940), Personnel Series, Vol. 45, p. 3, Robert I. Rees, *Personnel Management* (Alexander Hamilton Institute, N Y., 1938), p. 134.

<sup>4</sup>Peter F. Drucker, *The Practice of Management* (Harper & Bros., Publishers, N.Y., 1954), Chapter 21, *passim*.

. . . The traditions of the past have clung to many of today's concepts (and still are taught in some schools and companies).

. . . The manpower philosophy found in the average firm is often inadequate.

Regardless of these difficulties, manpower management has progressed. Even though great inadequacy still exists, the manpower discipline has gained recognition consistently.

TABLE 2

Selected Events Significant in the History of Manpower Management to 1960

Date or Time Period	Selected Event	Remarks
1958-1916 B.C.	A minimum wage.	Introduced by the Babylonians.
1644	Division of labor.	Introduced by the Chinese.
400	Recognition of labor turnover problem.	The Chinese.
500-100	Incentive wages.	The Chaldeans.
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1682 A.D.	Application of job specifications.	W.A. Young, "Works Organization in the Seventeenth Century," <u>Transactions of the Newcomen Society</u> , IV, pp. 73-101.
1710	Introduction of pension plan, introduction of industrial medicine.	<u>Ibid</u> , pp. 91-92.
1790-1860	Organizational departmentalization.	As American business grew, it tended to departmentalize.
1792	Beginnings of local craft unionism	Philadelphia shoemakers.
1886-1903	Formulation of scientific management and beginnings of modern selection concept.	F.W. Taylor. He recognized the need for and suggested the concept of selection.
1890	Sherman Anti-Trust Act.	Applied to both management and labor.
1897	American Federation of Labor becomes leading union.	
1895-1898	Differential piece rate incentive wage system.	F.W. Taylor devised, applied, and clarified.
1900	Hiring offices and welfare secretaries appear.	The "welfare secretary" appears as the predecessor of the personnel administrator.

Table 2 (Continued)

Date or Time Period	Selected Event	Remarks
1900	United Mine Workers get 10% increase.	Mitchell makes first breakthrough for group
1902	Company labor department.	Plimpton Press.
1908	Manpower selection tests.	Walter Dill Scott.
1910	Employment department	National Cash Register Co.
1912	Modern type personnel departments appear. Employment Managers Association Vocational Guidance Bureau	Ordway Tead sets the time. Boston. Boston.
1913	Labor turnover re-identified as a serious cost problem	First computational study in U.S. attributed to Magnus Alexander in 1913 See his "Hiring and Firing," <u>Annals American Academy of Political and Social Science</u> , Vol. 65, May 1919.
1914	The Clayton Act	
1915	Company labor departments become prevalent. First training program for employment managers	Amos Tuck School, Dartmouth.
1915	Bayonne strike.	Standard Oil of N.J. Solution resulted in one of the finest manpower programs of the country.
1916	United Mine Workers recognized as bargaining agent.	First large scale recognition.
1916-1917	Departmentalization of personnel work becomes prevalent.	
1917	Employment service departments	Direct outgrowth of welfare secretaries.
1917-1919	Procedures to stimulate employment manager training.	Federal Government -- War Industries Board.
1918	Grievance handling recognized as a personnel function.	
1920	Personnel administration accepted as involving all activities related to management of labor.	

Table 2 (Continued)

Date or Time Period	Selected Event	Remarks
1921	Reduction of employment or personnel activities.	Oversupply of labor develops and continues for several years.
1921-1929	Paternalism in decline.	
1923	Definition of the "staff" nature of personnel (or manpower management) work.	
1932	Norris-LaGuardia Act.	Anti-injunction law begins the pattern wherein organized labor achieves full protection and recognition under the law.
1933	Sec 7(a), NIRA.	
1935	Wagner Act.	
1937	Wagner Act declared constitutional.	
1934-1937	Bitter strikes nation-wide	Effort to enforce and secure union recognition. Sit-down strike introduced.
1936	Walsh-Healy Act.	Government set minimum wages on federal contracts
1938	Wage-Hour Act.	Set minimum wages and maximum hours in interstate commerce companies.
1939	Survivors benefits added to Social Security Act of 1935	
1942-1945	World War II.	Labor-management cooperation.
1947	Taft-Hartley Act.	To correct the inequities of the Wagner Act
1945-1950	Increased public interest in labor-management relations and the general area of manpower management.	
1950-1960	Stepped-up interest in "human relations" and other specific aspects of manpower management	Although academic activity intense, industry still moves ahead slowly.
1950	Increased benefits and coverage under social security.	Extensions took place in 1952 and 1954 also.
1955	Merging of the AF of L and the CIO into the AFL-CIO approved by conventions of both groups	
1959	Landrum-Griffin Act.	To protect the individual union member and eliminate certain labor practices.

*EVOLUTION.* Available evidence indicates the presence of four stages of development in the manpower field.

. . . The period prior to 1912. for the most part interest and activity focused upon hiring and firing. The concentration was upon efficiency, but gradually change appeared.

. . The period from 1912 through 1929: often spoken of as the paternalistic era, interest centered upon pseudo-employee morale and methods directed toward holding the labor supply and retarding union development.

. . The period of transition — the decade of the thirties — in which redirection of manpower methods took place.

. . . The refining period. a period seemingly extending through World War II to the present time, a period wherein the inadequacy of the "economic man" concept has been recognized and the importance of obtaining labor-management cooperation has become a byword.

In the following sections of the chapter these stages of development are examined briefly. Certain cause or background factors pertinent to change, their effects, and ensuing changes in manpower practice are discussed.

#### PERIOD PRIOR TO 1912

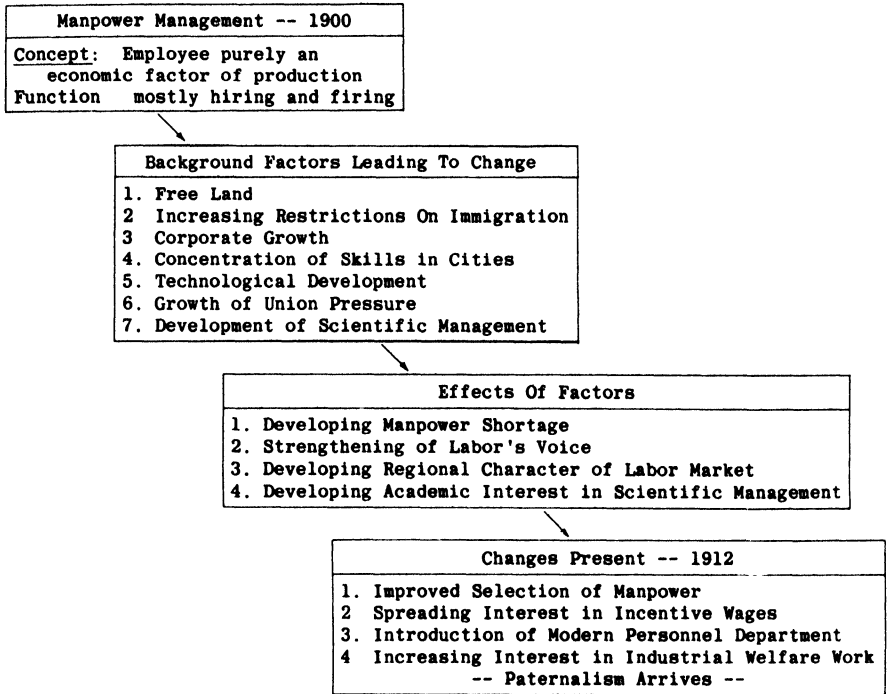
As a general rule, management considered the employee as a purely economic factor of production. Individual efficiency, getting the most work for the least cost, hiring and firing when necessary — these were the prime manpower responsibilities. Around the turn of the century, however, certain factors arose which tended to alter this approach. Figure 3 indicates the pattern of change taking place.

*LABOR'S VOICE.*<sup>5</sup> Corporate enterprise tended to concentrate itself more-or-less in specific areas or regions as it grew. The character of the labor market followed suit and labor skills regionalized. As a result the common interest, background, and needs of labor intensified in given communities. Such intensification contributed to the growth of labor solidarity.

This regionalization also tended to weaken labor's ability to migrate, for it meant that a man could not be sure his particular skill would be required in a new community. Furthermore, depletion of free government land (following the turn of the century) reduced attractiveness of migration as a way out of an unsavory environment. These points, plus the need for more people to help meet the demand for increased production, meant that labor, regionalized and centralized, grew in numbers and that its voice increased in strength.

As a consequence management found itself faced not only with a growing labor shortage, but with a workforce growing strong enough

<sup>5</sup>Phillip Taft, *Economics and Problems of Labor* (Stackpole Sons, Harrisburg, Penn., 1942), pp. 34-35, 682-683, 450-453, Chapters 17-24.



## PHASE I — CHANGING PATTERN OF MANPOWER MANAGEMENT — A GENERALITY

*Figure 3*

to voice its convictions and seek ways of asserting its demands. Management thus gradually became interested in holding its workforce intact and in developing methods for dealing with the demands of that force.

**REGIONALIZATION OF LABOR.** As already mentioned, this effect goes farther back for its causal base than the others mentioned, and has its own very natural coincidence. In Colonial times, as industry developed it did so largely on an "area" basis. For example, New England became famous for its textiles and shoes. Whatever the reasons for this may have been, the original pattern tended to expand rather than contract as our nation expanded. Also we note that the Gardner, Massachusetts, area may have been the original furniture producing region, but instead of dropping out of the picture with westward movement, it became a second region for this skill (both management and

labor) — second to Grand Rapids. This multiplicity of region extended through almost all of the industrial fields, even before the era of the large corporation.

Technological growth, the demand for more production, corporate growth, and centralization — these factors emphasized the already existing tendency for labor skill to become regionalized. The separate significance of this was two-fold. *First*, and running back into the nation's early days, it laid a concrete and practical foundation reason for the growth of both the A F of L. and the C. I. O. concepts of labor organization. *Second*, it meant that *training* became a real, though often unrecognized need, even in the pre-World War I period. (We do not mean to discount the importance of apprentice programs as applied in the early days of this country. Certainly printers, and to a limited degree even textile manufacturers recognized and applied the concept.) "Thinking" management and interested academicians began to realize that a regionalized labor market, particularly in an infant or adolescent industrial system, is a narrow skill market.

#### SCIENTIFIC MANAGEMENT AND ACADEMIC INTEREST

The combination of these just mentioned prime effects became a form of pressure which developed into an enlightened academic interest in the problems of production, and certainly they appear as motivational factors behind the work of Frederick W. Taylor.

Taylor, considered the father of Scientific Management, formulated his ideas in the 1880's while employed by the Midvale Steel Company. He maintained that the method of wage payment prevalent in industry at the time was essentially wrong. Believing that greater production could be achieved if wages were paid in accordance with the skill and energy expended by an employee, Taylor held that the worker should be given only those tasks for which he was physically and intellectually equipped, and pressed the companion idea that management positively must provide the employee with the best possible tools and direction<sup>6</sup>. By the turn of the century these views had achieved considerable attention.

Their significance was emphasized in both academic and industrial management circles by the tightening of immigration laws and the changes in skill requirements which came as technology improved. Actually the significance lay in the fact that Taylor's views specified the study of men as adjuncts to equipment and sought to create a transformation of man from inefficiency, in the mechanical sense, to efficiency. Such a viewpoint and conceptual system appeared to answer both the shortage of manpower and the training problems. Because Taylor viewed man as a simple machine, however, much additional

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<sup>6</sup>Taft, *op. cit.*, pp. 682-683.

work had to be performed (and is still needed) – all of which served to pique the interest of many academicians.

Taylor's work resulted in considerable precision in the measurement of human production effort and triggered the long-smoldering concept of hiring the right man for the right job. We thus may consider the principles of so-called Scientific Management as the basing point of modern manpower management.

### THE PATERNALISTIC PERIOD

So far as manpower management is concerned the change between the Civil War and World War I was relatively small. True, the ideas and techniques existing during World War I had their inception in that period, but general adoption by industry just did not occur. Hiring and firing were still the main, and often the sole, responsibilities of the so-called personnel man in 1912 and 1915. As indicated in Table 2, however, welfarism (paternalism), departmentalization, interest in employment practices and the like were developing. All of this was changing, however, and six factors seem to have been important as the background.

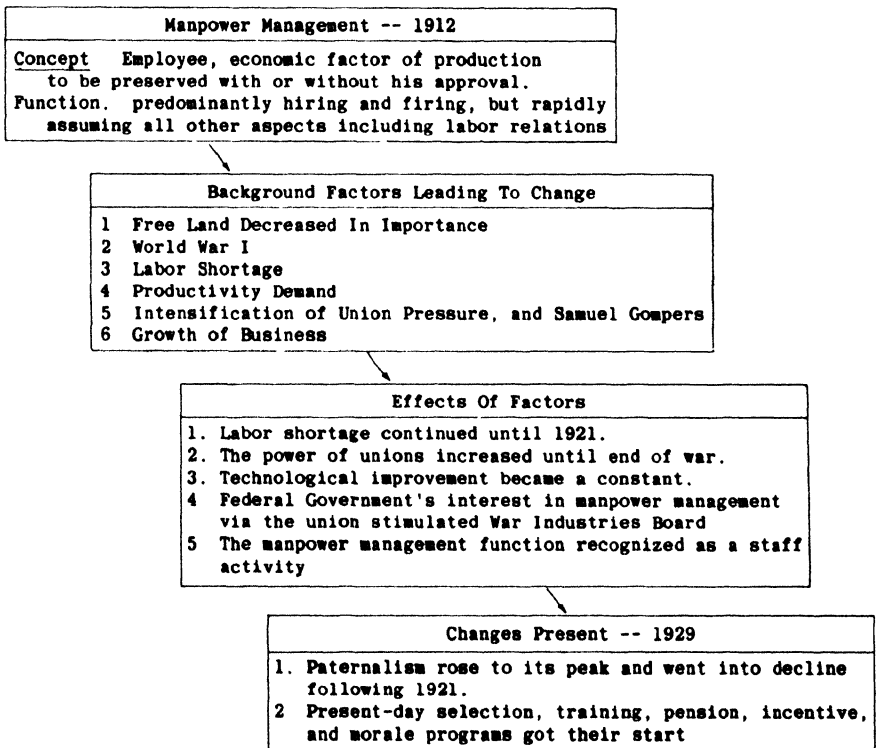
- . . . Depletion of free land and curtailment of immigration.
- . . . World War I and its production and manpower demands
- . . . Labor shortage until 1921
- . . . Productivity demand.
- . . . Union pressure.
- . . . The growth of business

*FREE LAND AND IMMIGRATION.* As indicated in Figure 4, free land decreased almost to a point of non-existence. Thus the average worker found it more advantageous to stay put than to seek a new environment. Mobility was on the wane by the advent of World War I.

Also in effect at the outset of World War I was a curtailed immigration. Deprived of a pair of factors which previously facilitated the expedient practice of hiring and firing as the occasion demanded, management now found it necessary to use available manpower more efficiently. In other words, each industrial area gradually developed a relatively immobile and a slowly-growing labor pool.

*WORLD WAR I.* At once, manpower and production became items of short supply. Faced on the one hand by a severe demand for product (a greater demand, in many cases, than capacity), and on the other hand by a forced shortage of men, management had to take quick action. One step led to expansion of capacity and technological innovation. Another led to the development of manpower practices designed to improve selection and hold employees on the job.

**LABOR SHORTAGE.** In the first place, both management and the academic world became interested in the problem of labor turnover. Again, Taylor's views came into play. Industrial engineers and manpower people turned to a broader interpretation of Taylor's approach which included attention to: (1) physical conditions, human relations, and job satisfaction, (2) interest in the relationship between productivity and human welfare, and (3) the broad idea of considering the success of enterprise in terms of *both* the human and material energies involved.<sup>7</sup>



THE PATERNALISTIC PERIOD

PHASE II -- CHANGING PATTERN OF MANPOWER MANAGEMENT --  
A GENERALITY

Figure 4

<sup>7</sup>H. S. Person, "Scientific Management," *Proceedings of International Association for the Study and Improvement of Human Relations and Conditions in Industry*, Vol. 1., p. 17, June 1928, and Reeves, *op. cit.*, p. 136.

In the second place, this shortage provided labor with one more facilitating factor, one more trump card in its game to achieve major status in our economy. Short supply and the reduction of immigration allowed it to raise a strident voice with little fear of retaliation or of serious challenge.

*UNION PRESSURE.* As industry in general became more aware of the intensity of labor's pressure, management's susceptibility to plans designed to placate or combat labor also increased. This, in turn, tended to increase the acceptability of manpower ideas and lent reason to those manpower managers who were pushing to have their function recognized as something more than a hiring and firing function.

Typical of the times, the United Mine Workers under the leadership of Mitchell progressed from a 10 per cent wage increase won in 1900 to final and formal recognition as bargaining agent in 1916.<sup>8</sup> Another example was the Bayonne Strike (1915-1916). It offers further proof of labor's significant pressure, but unlike the mine situation, this labor problem produced a model for future labor-management relations. Beginning in bloody violence, this strike resulted in the widely-known manpower policies and procedures of The Standard Oil Company of New Jersey.<sup>9</sup>

*PRODUCTIVITY DEMAND.* Higher productivity, an urgent requirement resulting from wartime demands and manpower shortage, continued and even grew following the war. The complex of an increasing population and an increasing international responsibility accounts for this to a large degree.

At quite an early date it became obvious that something more than engineering improvement would be needed to meet this demand. A way to increase human efficiency and to hold good workers in a company also had to be found. This further emphasized the need for, and the importance of, Scientific Management. As might be expected, it also lent additional importance to the ideas of manpower people, for it became clear that the problems of human efficiency could best be dealt with by those having a special knowledge in this area.

*INTERNATIONAL MATURITY* Passage from adolescence to maturity, always fraught with problems, certainly complicated the situation for management. As we moved from a second-rate international power toward the position of world leadership, new responsibilities developed.

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<sup>8</sup>Taft, *op. cit.*, pp 450-453.

<sup>9</sup>Stuart Chase, *A Generation of Industrial Peace* (The Standard Oil Company of New Jersey, 1946).

Management found itself producing for a world market as well as a national market<sup>10</sup> In like fashion, it faced competition from abroad. All this accounts, to some degree, for a portion of the stimulus leading to our effective application of mass production. In turn, it led to further recognition of the importance of manpower management in the economic picture.

As mass production was applied to facilitate the meeting of the production and productivity demand, it became increasingly obvious that workers had things other than wages on their minds. To hold these workers in a given industrial situation, management found it necessary to go beyond the motivational factor of wages. Not to be interested in this meant a real chance that competition, either in this country or overseas, would pick up the market for the goods they would then have failed to produce.

**BUSINESS ITSELF.** Business grew, its technology changed, and its effect upon regional and national economy broadened through this period (1912-1930, approximately). As this took place, centralization and regionalization of labor skill intensified as did the voice of labor.

In addition demands for more production increased, but the supply of labor failed to increase in proportion. The demand for greater productivity continued to increase consequently, and farsighted men, even before the thirties, began to realize that the situation would continue for many years to come. The need to find ways of reducing labor turnover and increasing individual efficiency thus was further emphasized.

Furthermore, changing technology, in the face of labor shortage and regionalization of skill, and in the company of continually expanding product demand, signified the need for improved methods for training and retaining employees. All of these effects had a causal relationship with the expanding power of unions. This in turn served to intensify the already-existing strife between labor and management and paved the way for the events of the thirties.

**EFFECT** In general, the most pronounced effect of these several factors was threefold. *First*, the shortage of labor continued, *second*, the power of unions increased to the point where they were fast becoming a major economic factor, *third*, technological improvements, plus the rise of totally new processes began to appear as a functional constant to industrial progress.

**MANPOWER CHANGES.** Acting in a casual sense, this threefold effect led to the development and rather uncritical acceptance of "pater-

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<sup>10</sup>Thomas C Schelling, *International Economics* (Allyn and Bacon, Inc., Boston, 1958), pp. xiii indicates that some 3 to 4 per cent of our production is for foreign market. This same picture seems to have held true back in the twenties. Although the percentages may seem insignificant, the real quantities are, and have been, sufficiently large to warrant considerable of management's attention. Today, for example, they appear at \$18.4 billion according to *Newsweek*, May 16, 1960, p. 89

nalism" as the "correct" manpower approach. Although based upon certain reasonably scientific and reliable approaches,<sup>11</sup> this type of manpower management was largely manipulative in concept and often handled by persons of limited professional stature.

Testing, participation (in name) programs, training programs, pensions and stock sharing, incentives, company stores and housing — all these features appeared to some degree in the average "paternalistic" personnel program, particularly in the decade of the twenties.<sup>12</sup> Not so different in the saying from what we find today, they were vastly different in concept and application in most cases.

Under Taylor, personnel originally was treated on a purely economic basis. Under "paternalism" the approach broadened to a consideration of employee morale as well. As the twenties developed, it became quite fashionable to consider working conditions.

Technically, the folly behind this "paternalism" lay in three areas. *First*, value was taken largely for granted and critical analysis (either before or after installation) was usually lacking. *Second*, most applications, based as they were upon ivory-tower thinking instead of analysis, fell short of their avowed goals of reduction of turnover and absenteeism, or union pressure, and they failed to improve morale and productivity. *Third*, in all too many cases the real motive behind such personnel policies was a desire to erase the hold that unions attained during World War I.

We now realize that "paternalism" undermines employee self-respect, establishes unattainable expectation on the part of employees (and even coerces to a degree), and fails to achieve greater productivity. Although this negative pattern is real, *good did come* out of the experience.

*First*, the programs of the twenties pioneered, to a limited degree and often in uncritical and invalid manner, the idea that manpower problems have both a personal (individual) and a group basis.<sup>13</sup>

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<sup>11</sup>Employee testing (intelligence and trade) got its real start in 1917 when scarcity of manpower led to creation of the Committee on the Classification of Personnel. The first extensive work on fatigue, accidents, industrial health, and absenteeism and turnover was sponsored by the British Government in 1915.

<sup>12</sup>Designed to assure an adequate supply of "satisfied" employees, these policies and practices were termed "paternalism" J. W. Dietz, "Organizing the Personnel Function of Management," *Proceedings of the Seventh International Management Congress*, Washington, D. C., 1938, Session I, p 3ff.

<sup>13</sup>Although numbers of personnel problems are group problems, consideration of the employee in organization, in informal groups, and in the environment of one single companion leads quite reasonably to the proposition that many such problems are at least a combination of individual problems; and begin as individual problems, and, in the final analysis the individual employee is in and to himself a problem to be dealt with by those in management positions. And, as such, he is both contributor to and affected by; and as affected by, so contributes back to the group problem. Thus, the manager must be skilled in dealing with the individual and group as well.

*Second*, a decade and a half of gestation provided a base of experience invaluable to the investigators interested in management and manpower. In addition, Taylor's "machine model" of man — upon which so much of this personnel thinking was based — stirred roots of disbelief and facilitated real interdisciplinary interest in manpower and its place in the hierarchy of industrial organization and practice. *Third*, the real development of manpower selection and placement technology appears in this era (resulting from wartime necessity). Regardless of its frequent blind and harmful application, this early testing provided a real base for future work. The same may be said of employee health and safety measures.

In summary, it appears that all was not wasted. Even though the first efforts to make manpower management something more than a hiring and firing responsibility turned out to be manipulative, and designed in too many instances as a means of combating unions, they formed the basis for future development in the field.

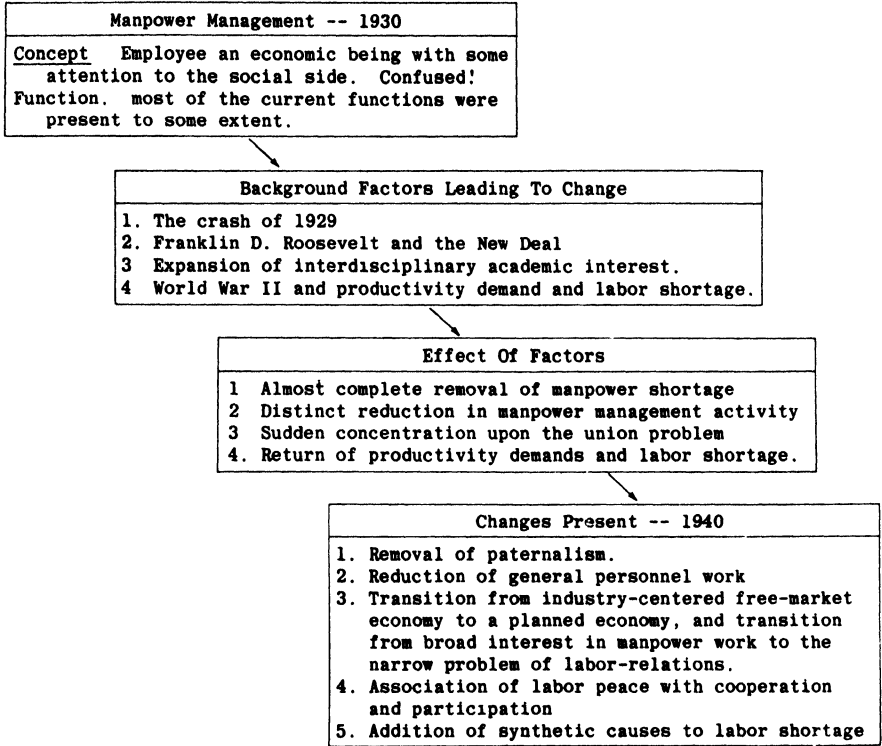
### THE PERIOD OF TRANSITION

The crash in 1929 marked the start of another period of development in the manpower field. Extending from approximately 1929-1930 to the beginning of World War II, several factors identify this era as indicated by Figure 5. *First*, the crash of 1929 reversed or reduced previous production pressures and manpower shortages. *Second*, government policies developed into a typically interventionist bias. *Third*, academic interest continued to expand as an interdisciplinary factor. *Fourth*, as World War II approached, the former productivity pressures and labor shortages returned.

Though we had weathered a serious agricultural depression in the early twenties, the complex interactions of national and international economics became so unbalanced that the stock market collapse in 1929 had an almost instantaneous effect upon many industrial units. Though we moved through the torturous path of the cycle from boom into depression, as far as manpower was concerned the effect came, so to speak, overnight

**CRASH AND DEPRESSION.** Not long after the crash many concerns discarded their paternalistic programs. Of necessity, business leaders began to view the paternalistic programs as pure luxury. Though often condemned irrationally, the simple fact was that, unable to market a product, many businesses were unable to meet interest charges, let alone pay for philanthropic programs.

In many circles this rather sudden removal of the "fatherly" hand created a deep resentment. Unions which previously bucked these programs (on the ground that management used them as an excuse to arbitrarily maltreat workers and abuse its authority, and because they



### THE PERIOD OF TRANSITION

#### PHASE III — CHANGING PATTERN OF MANPOWER MANAGEMENT — A GENERALITY

*Figure 5*

had no voice in their establishment) now found it expedient to condemn their dissolution — such a move placed them in a righteous light!

In addition, individual employees appear to have resented loss of the “fringe” benefits common to paternalism almost as much as they resented or feared loss of their jobs. Many academicians and government personalities viewed this abandonment as the action of men of bad faith.<sup>14</sup>

Elimination of paternalism was not the only factor to mark the initial stages of this period. Actual reduction of product demand took place and, coincident with this, the manpower shortage diminished.

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<sup>14</sup>Clinton S. Golden and Harold J. Ruttenberg, *The Dynamics of Industrial Democracy* (Harper Bros., New York, 1945), p. 5ff.

**INTERVENTIONISM.** Unions lost considerable prestige and power during the twenties as a result of management's application of paternalism. All through that period they sought to combat this management success on the one hand, and, on the other, to achieve immunity from the law as had their British brothers under The Trade Disputes Act of 1906. During this period unions sought the full sympathy of government.<sup>15</sup>

Following the true form of the interventionist, certain of the hierarchy of the New Deal recognized the rich prize offered by union leaders and played for the "class" vote.<sup>16</sup> In return for the support of organized labor, and through such measures as the Norris-LaGuardia Act, Section 7(a) of the National Industrial Recovery Act, and the Wagner Act, this immunity appears to have been provided effectively. With it came the full sympathy, prestige, and power so avidly sought.

At the same time, unions and government applied pressure for the reinstatement of many previously "objectionable" fringe benefits typical of paternalism. Now, however, these features were developed at the bargaining table as union demands, and were installed with union participation, or they were given impetus and respectability by law (price setting and control, minimum wage laws, and social security).

**INTERDISCIPLINARY INTEREST.** Beginning early in the century and gaining in strength during the twenties, academic interest was a primary factor in the manpower field during the decade of the thirties. As the work of Whiting Williams, Elton Mayo and his group, and others like Robert Hoppock, R. B. Hersey, J. B. Houser, and Thorndike,<sup>17</sup> became relatively common diet, this interdisciplinary interest expanded and gradually the foundations of practical system were laid. Psychological testing, planned promotion, job evaluation, and effective statistical applications were added to the already-developed industrial engineering concepts.

**PRODUCTIVITY DEMAND AND LABOR SHORTAGE.** The impetus of war lay behind these factors. As Hitler began actively to challenge the major powers, our international trade increased. By 1940

<sup>15</sup>K. Braun, *The Right To Organize and Its Limits* (The Brookings Institute, Washington, D. C., 1950), pp. 38-39.

<sup>16</sup>Sylvester Petro, *The Labor Policy of the Free Society* (Ronald Press Company, New York, 1957), pp. 60 and 184, 184-186, and Chapters 12 through 18 *passim*.

<sup>17</sup>Elton Mayo, *The Human Problems of an Industrial Civilization* (Harvard University Press, Division of Research, Boston, 1933); R. B. Hersey, *Personnel Journal*, "Psychology of Workers," 1936, Vol. 14: 291-296; Robert Hoppock, *Job Satisfaction* (Harper & Bros., New York, 1935); J. D. Houser, *What People Want From Business* (McGraw-Hill Book Company, Inc., New York, 1938); Whiting Williams, *Mainsprings of Men* (Charles Scribner's Sons, New York, 1925).

we had begun our own military build up. With this increasing demand for industrial goods there came a new surge of production improvements.

The demand for more production, the changing technology, and by 1941 the drafting of manpower combined to create a new era of manpower shortage. Added to these natural factors are the synthetic features of the "make work" policies of the unions.

As product demand increased, industry found itself confronted by a workforce having little interest in improving productivity. Furthermore, the interventionist rulings of the administration provided no relief. This had the same relative effect as an actual removal of manpower from the production line would have had: it caused a widespread and vigorous renewal of management interest in productivity.

Probably because there were some notable examples when management did not have to give in to unions and where the companies prospered, and because of other examples in which peace and quiet reigned in the presence of unions, academicians and practitioners began to associate such peace with "cooperation" and participation, and the realization that men really did have things other than money on their minds.<sup>18</sup> This led to increased study of techniques designed to discover the levels of, and the means to improve, a worker's job satisfaction. The transition thus rests upon the shift to a more objective research approach.

Previously labor shortage had been marked as a purely natural phenomena, but now it was complicated by a synthetic factor which would not respond to standard, traditional controls. In the past such shortages tended to result from expanded demand and expanded physical frontiers. Now, although these same factors exist to some degree, they are complicated by a labor force which believes in "make work" policies and a government which fosters such beliefs.

Though change did take place, one thing seems to have remained unchanged: the general management attitude toward the manpower management concept. Apparently that attitude still focused upon material efficiency. Instead of seeking *real* cooperation, management's position regarding both union and government was defensive. Elton Mayo seemed to summarize the situation when he stated: "Our methods are all pointed at efficiency, none at the maintenance of cooperation."<sup>19</sup>

### THE REFINING PERIOD

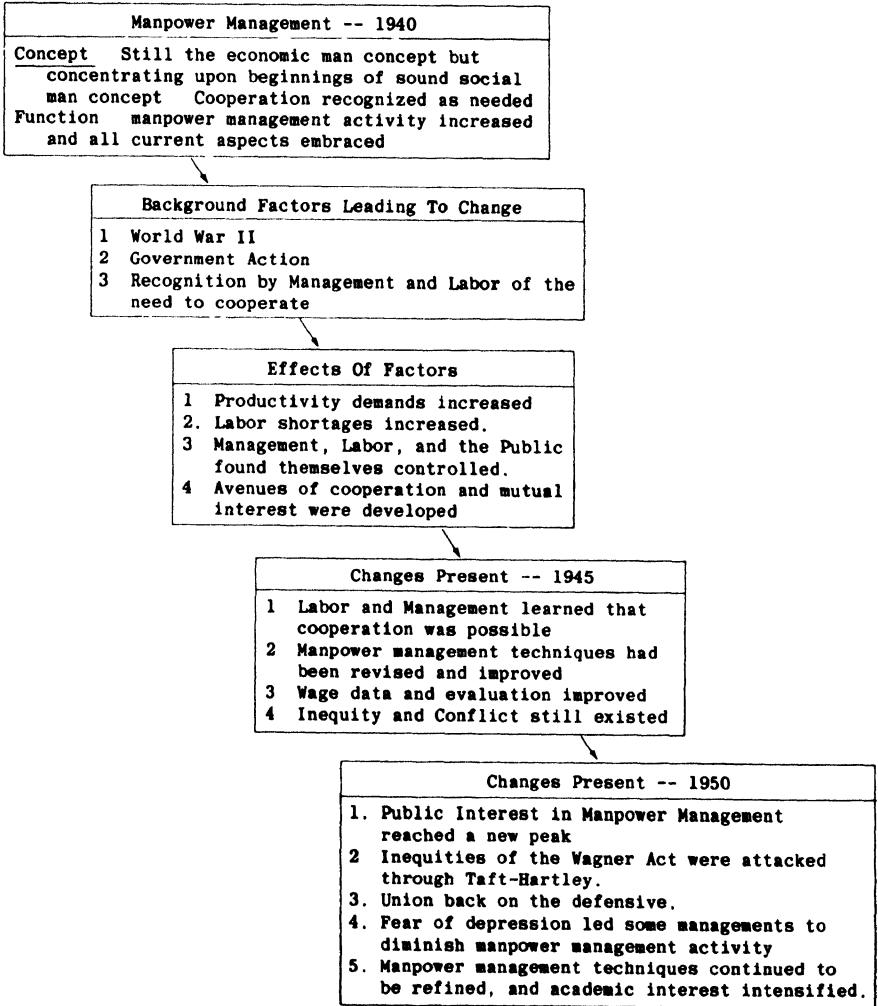
On the surface this period seems to embrace two distinct eras, but a run of common interest and effort courses through it, providing a

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<sup>18</sup>A few notable examples are: The Standard Oil Co. of New Jersey; The McCormick Co. of Baltimore, Filene's of Boston; and Phelps Dodge's Habirshaw Plant.

<sup>19</sup>F. J. Roethlisberger, *Management and Morale* (Harvard University Press, Cambridge, Mass., 1947), pp. xix.

certain stability as well as a hallmark. *Cooperation*: vital, and avidly pursued during World War II; its importance held even after cessation of hostilities, though, admittedly, on the surface it did decline. The characteristics of this period appear in Figure 6.



THE REFINING PERIOD  
 PHASE IV — CHANGING PATTERN OF MANPOWER MANAGEMENT —  
 A GENERALITY

Figure 6

During the period 1940 to 1942 thinking men in the industrial and the academic worlds had come to realize that Taylor's "machine model" of the worker lacked reality. At the same time they saw that the manpower technology developed during the two previous decades contained many fundamentally sound methods and ideas. They therefore set out (even before the administration took action) to discover the basis for cooperation on the one hand, and, on the other, they sought to innovate or improve upon existing technology. Employment testing, interviewing, job analysis and evaluation, job security devices, pension systems, and motion and time study all came under scrutiny. The idea of man as a social as well as an economic being achieved continuously increasing emphasis.

Before these freely-generated efforts really got off the ground, however, World War II struck. Government stepped in, and cooperation and refinement of manpower technology became a matter of necessity and an obligation by edict.

*WORLD WAR II* From the point of view of manpower management, the salient aspects of this period are four. *First*, the demands of the war made an increase in production and productivity necessary. It also meant that some eleven million people, many of whom had to be removed from the normal labor pool, had to be put under arms. Total war demanded expansion of that pool by some twelve and one-half millions, including the addition of women and, in some cases, previously unemployable persons. The necessity for expanding the labor force meant an extreme training effort was necessary, and some 25 per cent of the labor pool was actually trained and retrained during the war period.

*Second*, to control this labor pool and provide some guarantee that production and combat necessity would be integrated, a War Manpower Commission was established by executive order. A minimum work week of 48 hours was imposed in 1943. The labor pool was mobilized, allocated to industry and area, and the Commission attempted to increase its efficiency (output). Further, it classified the labor market regarding shortages and surpluses, developed manning tables, located and eliminated (or attempted to) hoarded labor, and created the now famous Training Within Industry (TWI) program. The Commission's business was conducted via local "employment stabilization plans," regional units established in each major labor-market area. The Commission also advised the armed forces, the government, and industry and labor. Most significant in this connection is the fact that the Commission itself was advised at the national level by a national management-labor committee, and at the local level the regional directors were advised by local management-labor committees. The "armed camps" were thus forced under "one flag."

*Third*, a War Production Board with a labor production division was created. This division advised the Board on materials control and contract allocation; the object was to resolve problems, particularly at the local level, and to protect the interest of labor *and* the individual worker. Labor-management committees were created and appeared in some five thousand plants. They dealt with absenteeism, tardiness, efficiency, grievances, housing and transportation, maintenance of tools, equipment, and morale. The division also published the Labor-Management News, but, as in the previous case, the really impressive contribution rests with the joint committee of labor and management.

*Fourth*, a Tripartite National War Labor Board was developed and charged with the responsibility of deciding labor disputes otherwise unresolvable between the parties. A second charge developed: to control wage changes. It was composed of a national and 12 regional boards. The board fostered the establishment of positive grievance procedure as a matter of contract. It allowed "closed shop" only where the practice already existed, and held in other instances to a 15-day escape period under maintenance of membership agreement, and allowed continuation and extension of check-off. For wage stabilization it depended initially upon cost-of-living allowances ("little steel" or "maladjustment") designed to remove inter- and intra-plant inequities. The significant thing was that for the first time a really intensive and extensive compilation of wage data was developed.

For the most part, establishment of these commissions brought on a threefold change. *First*, labor and management learned they could get along when they had to. A practical base of application or experience thus was laid for future investigation regarding cooperation and participation. *Second*, many of the manpower techniques were significantly revised and improved — and by joint action. *Third*, we developed a wealth of highly important wage data, the machinery for its regular collection and evaluation, and (most important) a distinct recognition of the significance of such data.

*POST-WAR PERIOD TO 1950.* The steps taken before the war and before government action during the war, as well as the wartime activities, resulted in another change: a vastly increased public interest in the complexities of manpower management, particularly with respect to labor-management relations. In addition, the majority of practitioners and academicians now recognized the real importance of the field, for the war had taught that manpower could not be properly placed, trained, or shifted from job to job without giving attention to the cause and effect basis of behavior.

It is not strange, then, to find the technology of manpower management undergoing continuous improvement even though the exigencies

of war no longer existed. This was not, however, the only course of events!

In some companies refinements had been adopted merely because of government edict and wartime necessity — not because of a sincere belief in their significance to all-round “good” management. In such companies the end of the war and the *predicted* depression served as the perfect excuse to “dump” the “costly” personnel ideas. In turn, this meant that the unions involved were forced to fight to prevent a recurrence of past history. These factors tended to reduce the effectiveness of the wartime refinements and to increase the difficulty of continuing improvement.

As a further complication to the post-war period, we note that many of the inequities charged against management in the thirties were being charged against unions in 1945 and 1946. The result of this was to stimulate the idea of containment or, in some cases, destruction of union power. Personnel policies and practices reflected this idea, and enough public and political support developed to enable passage of the Taft-Hartley Act in 1947.

Although developed to restore a semblance of balance and equity to the labor-management picture (equity for the individual worker as well as for management) and although actually written this way, the hierarchy of the major unions set up an angry roar. They quickly set out to recover their status, including immunity. Management, therefore, found itself dealing with an angry union, just as unions had dealt with an angry management back in 1935. Naturally this put a crimp into efforts to improve cooperation, and in many cases wiped out the advances previously made. Beneath the surface, and despite the strife, however, researchers and men of good will continued to seek personnel methods that would foster cooperation and efficiency. More and more companies adopted the manpower views being advanced by these men and women.<sup>20</sup>

*In summary*, the casual factors — war, its high production demand, shortage of manpower, and need for greater productivity — all led to intensive efforts to develop *real* cooperation between labor and management. The government commissions created to this end succeeded, temporarily at least. The lasting success, however, rests in the fact that public interest in the employment situation was finally achieved. The forward strides made in the areas of cooperation and efficiency were halted in 1947, however, when the union’s power was challenged by passage of the Taft-Hartley Act. The remainder of the decade contained little but strife and confusion in all too many concerns. The effort to refine manpower technology did continue, however, in schools and individual companies.

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<sup>20</sup>Stuart Chase, *Roads to Agreement* (Harper & Bros., New York, 1951).

**SUMMARY**

Prior to 1900 it is reasonably certain that the real extent of manpower management was limited to hiring and firing, and based upon a mechanistic concept of man. The first two decades of this twentieth century evolved a different picture. Manpower techniques were developed, techniques designed to improve the ability to select employees properly and methods designed to establish a more equitable wage picture. Efforts to hold the workforce together also were initiated. Although during the next decade-and-a-half conflict between labor and management remained intense, the situation has shown improvement since the 1940's. Furthermore, throughout the past three decades the techniques and tools of manpower management have been subjected to continuing refinement. One discovers that regard for the employee as a "social" being, and recognition of the need for cooperation between labor and management as a group and employees and managers as individuals, has taken root. We have progressed to the point where we now know that the mechanistic concept of man as an employee is totally inadequate.

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## An Emerging Manpower Philosophy

A management seeking to follow an intelligent course of action must work from accepted principles, and establish or accept a philosophy to guide action.<sup>1</sup> Developing from principles and operating through principles, a philosophy provides the ethical setting from which policies originate.<sup>2</sup> Policies, in turn, allow the manager to establish the desired action.

Our purpose in this chapter is to point out the various concepts which have evolved and the nature of the conflict to be overcome by properly applied manpower management. A way of thinking is suggested which may serve as an ethical set necessary to proper manpower management.

### THE VALUE OF THE PAST

The often-expressed remark "there's nothing new under the sun" is as true in the art of managing men at the workplace as in any other field of endeavor. New techniques have been developed over the years, but their origin usually can be found in the past. History teaches us much about what has worked in bygone days. As long as we bear in mind the conditions existing in the past, and the nature of the place and the circumstances of the times, history also can teach us what has not worked in days gone by. One notes that human reactions today are not too dissimilar from those of our ancestors — they did what they

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<sup>1</sup>L. P. Alford and H. Russell Beatty, *Principles of Industrial Management* (The Ronald Press Company, New York, 1951), pp. 25-31, *passim*. H. L. Gantt, "Training Workmen in Habits of Industry and Cooperation," *Transactions of the American Society of Mechanical Engineers*, XXX, No. 1221, p. 1037.

<sup>2</sup>Robert Saltonstall, *Human Relations In Administration* (McGraw-Hill Book Company, Inc., New York, 1959), p. 91, *passim*.

could under a given set of circumstances. The lessons we learn from history will depend, of course, upon what we choose to study and how we undertake that study.

Managers cannot disregard history. As Santayana pointed out, a nation which forgets its history will have to relive it. The same is true of a company. The management of the past was not totally incompetent, if incompetent at all. The ideas and decisions made by yesterday's managers may be considered erroneous today, but *in* those ideas and decisions we find a basis for today's views and decisions. The manager who takes the time to consider the "human events laboratory" of the past may well find a guide to current action. For example, in the first century A. D., Tacitus, in describing the German army, observed that ". . . their generals control them by example rather than command, . . ."<sup>3</sup>

Such a pronouncement is as up-to-date in principle as any could be. One notes that the supervisor constantly is admonished to set an example; so too is the parent. The manpower specialist, or any good manager, knows the importance of instilling confidence in his subordinates and he recognizes the value of setting an example.

The point made by Tacitus relates to behavior. One notes that in part the attitudes of proper behavior stem from the various disciplines handed down to us through the centuries. Of course our behavior patterns vary, depending upon the situation confronting us. We are guided, however, into proper and acceptable deportment by pronouncements of the past which have been found to be "good."

The events and pronouncements of the past, coupled with those being made almost daily, create the "fences" or boundaries which serve to define or at least identify what may be proper action for us today and tomorrow. Some of these fences may be listed as:

1. The Ten Commandments
2. Common Law and Moral Law
3. Federal, State, and local statutes
4. Customs of the people

The actions of people at the workplace are related to their wants or needs as human beings. No completely sound set of rules exists which prescribes these wants and needs with respect to every possible set of circumstances; however, from past studies the hierarchy of human wants or needs is determinable as a generality. These studies do establish, of course, a reasonably firm hierarchy, and clearly the wants or needs begin with the physiological requirements of food and water.

In general management has recognized this vital set of needs and makes at least some provision for meeting them. Lunch hours are set,

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<sup>3</sup>Tacitus, *Dialogus, Agricola, Germania* (The Loeb Classical Library, Harvard University Press, Cambridge, Mass., 1914), p. 275.

a place to eat is established, and so forth. In fact, consideration of the basic need indicates a companion requirement — most men prefer to partake of their food in reasonably pleasant surroundings. The management of thousands of organizations, therefore, provides facilities which are pleasing, facilities in which employees can satisfy their basic want and need for food and water without being exposed to frustrations related to the environment.

### THE MEANING OF PRINCIPLES

Principles are statements of understanding or logic, or fundamental truths existing within the perimeter of current knowledge.<sup>4</sup> They guide a manager's judgments and suggest his attitudes. They thus facilitate his selection of the correct philosophy — correct for his time and environment.

Many principles have been handed down to us from our forefathers. The point made by Tacitus is one such principle; and there are many others.

For example:

1. From Taylor we learn that: "Deterioration in quality of product produced under incentive wage payment can be prevented by a system of over inspection."<sup>5</sup>

2. From Gantt we discover: "Action based upon opinion will lose in competition with action based on facts."<sup>6</sup>

3. From Thomas Jefferson: "I tolerate with utmost latitude the right of others to differ from me in opinion."<sup>7</sup>

That these statements provide a philosophical base for today's action is clear. Think of the impact of Jefferson's remark. Is it not a principle upon which to base one's concept for handling the labor-management differences which are bound to arise from time to time?

### PHILOSOPHY AND POLICY

The principles espoused in the past establish the base for today's philosophy. This, in turn, prescribes which of those principles will be applied to policy development today, and what *new* principles must be determined in view of today's knowledge.<sup>8</sup> Thus policy grows from philosophy.

<sup>4</sup>Alford and Beatty, *op. cit.*, pp 25-31.

<sup>5</sup>F. W. Taylor, *The Principles of Scientific Management* (Harper & Bros., New York, 1911), p. 90.

<sup>6</sup>H. L. Gantt, *Industrial Leadership* (Yale University Press, New Haven, 1916), p. 89.

<sup>7</sup>Thomas Jefferson, in a letter to Abigail Adams, 1804 as stated in Saul K. Padover, *Thomas Jefferson On Democracy* (Penguin Books, Inc., The New American Library, 1946), p. 155.

<sup>8</sup>Stanley Vance, *Industrial Administration* (McGraw-Hill Book Company, Inc., New York, 1959), pp. 82, 91-92.

Policy statements are made in broad and general terms, not rigid and irrevocable language. They prescribe the direction the organization shall take in its effort to attain the defined objectives of its philosophy.

Anyone may suggest or develop policy advice, but *only* top management can determine and pronounce policy. Manpower managers are among those who carry a specific responsibility to present policy advice. They take an active interest in the development of the company's philosophy and seek understanding of the principles involved. In fact, because of their special knowledge and assignment, they hold the major responsibility for the presentation of advice regarding the human factor of production.

Figures 7, 8, and 9 present the philosophies, or fundamental broad policy statements, of three of the country's leading firms. These statements are frequently referred to as "creeds." They reflect a very real and up-to-date understanding of the attitudes management finds significant in terms of today's knowledge. Their preparation reflects the important idea that an organization's actions, its stated goals, and its standards of conduct must be developed through mutual exchange of

### AMERICAN ENKA CORPORATION

The management philosophy of American Enka Corporation sets forth four basic goals They are

- 1 To maintain a high level of executive and employee morale
- 2 To be the best managed company in the industry
- 3 To be the most highly respected company in the industry
- 4 To be the most successful in relation to profit potential.

How well we succeed in reaching these goals is for others to judge What we are interested in is always striving to attain them

Some of our specific objectives aimed at achieving these basic goals are

1 Develop a research-minded organization in its broadest sense. The rayon industry is a product of scientific research But research may be just as productive in the fields of human relations, management, marketing, and others as in the field of technology. We believe in the principle that it is morally dishonest to decide on the basis of opinion those things which can be determined on the basis of fact

2. Develop a motion-minded supervisory force, with an appreciation of the need for methods improvement and work simplification, and a firm belief in the value of good human relations.

3 Develop an industrial relations program designed to promote maximum utilization of our human resources and the maximum degree of satisfaction on the part of all our people in the performance of their tasks.

4 Bring our administrative skills up to the level of our technical competence and raise the level of both to a still higher plane.

5. Create a climate in which our whole management group can thrive and develop, and prepare itself for greater responsibility.

*Figure 7*

## Figure 7 (Continued)

6. Through constant improvement and a desire for growth on the part of individuals, create internal pressures which will force the company to grow, providing bigger and better jobs for more people and a broader earnings base for our stockholders.

7. Employ the most modern and effective management tools and engage such outside assistance as may be necessary to insure application of the best possible management "know-how." Management improvement should be recognized throughout the company as a continuing responsibility.

8. Establish a system for crystallizing long-range plans and objectives. Planned action helps apply the principle of management by exception. We thereby can concern ourselves with deviations from plan or standard rather than matters of routine. This method of operation results in conservation of executive time and energy which can be used for planning and thinking ahead.

9. Insure a sound organization structure at all levels. This is accomplished by applying sound principles, developing an over-all company plan, and synchronizing departmental organization into the over-all pattern. Our organization plan is described in an Organization Manual containing 45 organization charts, and job descriptions for all supervisory and executive personnel ranging from assistant foremen in the plants to the president.

10. Reduce the company's plans, policies, and procedures to writing. In so doing we insure participation by securing concurrences of interested individuals. Written statements require a considerable amount of work. But reducing things to writing clarifies our thinking, makes our objectives clear, and brings things out in the open where people can see and profit by them.

11. Establish a well-balanced system of reporting designed to insure that all levels of management are fully informed of progress covering significant operations, thus enabling interested individuals to initiate appropriate action when progress may not be satisfactory.

12. Continuous appraisal of results through measurement of performance in terms of predetermined plans. To a large extent our management objective is control through self-control. Since each department head prepares his own plans for higher approval, he helps to establish his own goals. It is an important aspect of participation. To judge his own performance gives him a measure of self-appraisal. This is particularly stimulating when the plans have been carried out. Considerable personal satisfaction is attached to setting one's own standards and objectives and controlling results.

13. Encourage two-way communication, bottom-up as well as top-down and "open shop" in management.

14. Promote among our employees the freedom to speak one's mind on any subject concerning the company's welfare.

15. Accord to our executive group the same right to be heard by higher authority as we do our hourly workers -- without fear of reprisal or recrimination. People with honest differences of opinion on subjects of major importance are encouraged to go to higher authority to get them resolved.

16. Be a good corporate citizen by assuming our full share of responsibility in the communities in which we operate and by constantly striving for good community relations.

17. Keep before our entire management group the importance of setting and attaining objectives so that our profit goal can be met.

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Source: *The Company Creed*, American Management Association, Inc., New York, June, 1958, pp. 7-8.

During the more than 80 years of the Company's existence, certain basic principles and policies have been developed to guide management in the performance of its responsibilities. With the continued growth of the business and the enlarged responsibilities of all levels of management, it is important that every member of our supervisory personnel have a uniform understanding of the present policies and objectives of the House. I hope that you will become thoroughly familiar with both the words and the spirit of these statements.

H J Heinz II

There are certain basic policies which define the scope of H. J. Heinz Company operations. The policies of the House are

1. To manufacture and market processed foods.
2. To limit the marketing of products which are not produced by the Company to not more than 25% of the Company's total sales volume.
3. To distribute in retail stores only those products manufactured by the House.
4. Not to engage in the manufacture of products for sale under private label
5. To make exceptions to expressed policies only on specific direction of the Board of Directors.

Under these policies the following objectives will be the basis for executive decisions

#### PROFITS

Our net earnings after taxes must be sufficient to finance our normal healthy growth and pay reasonable dividends to our shareholders

In order to achieve this profit objective the following are the expected standards of performance --

1. While the gross profit margin will vary between varieties, we should maintain a sufficient margin on each variety to cover its share of allocated cost
2. The introduction of new products is necessary to maintain the vitality of the business. We will introduce a new product only if we can anticipate that the profit from it will exceed the average rate of profit of existing varieties
3. All capital investments will be carefully controlled in order to reach the profit objective. On capital expenditures other than avoidable expenditures for the replacement of facilities, preference will be given to those projects which have the shortest pay-off period.

#### QUALITY

The reputation we have enjoyed since 1869 is based upon a public recognition of "Heinz Quality " Yet quality is a relative term which acquires significance only when the kind of quality is defined and the standard of quality established.

Our objective is to make products of maximum recognizable value and desirability to the consumer within a price structure she can be induced to pay.

The purchase of our quality objective requires --

1. Clear determination of Heinz standard of quality for each finished product.
2. Careful and continuous qualitative evaluation of ingredients, packages, and processes
3. Maximum uniformity of finished products.

A STATEMENT OF POLICIES AND OBJECTIVES OF H. J. HEINZ COMPANY

*Figure 8*

*Figure 8 (Continued)***FACILITIES**

We will maintain grounds, buildings, and equipment in safe, orderly and sanitary operating condition at all times.

Factory, office, warehouse and transportation equipment is to be maintained in efficient operating condition.

Good housekeeping standards shall be observed.

We will take advantage of technological developments when economically feasible.

**RESEARCH**

Research is studies inquiry, exhaustive investigation and directed experimentation, having for its aim the revision of accepted conclusion in the light of newly discovered facts.

A research viewpoint should be constantly applied to all phases of the Company's activity. We believe that there should be continuous challenging of existing practices and constant effort for their improvement.

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Source: *The Company Creed*, American Management Association, Inc., New York, June, 1958, pp. 25-26.

ideas. Their development, then, reflects the need for, and their belief in, the importance of a well-rounded personnel philosophy.

**SELECTED MANPOWER CONCEPTS IN EVOLUTION**

Although one may certainly discover more than the following as significant in the evolution of management concepts, these are selected because of their relationship to the manpower concepts accompanying them.

1. Out of all that had gone before, F. W. Taylor pointed out that management should be based upon "science" instead of individual judgment; that employees should be selected and developed "scientifically" instead of by hit-or-miss practices, and that management and labor should cooperate and apply "scientific" laws to their work instead of letting individuals handle each problem as they wished.<sup>9</sup> His broad statement indicated that the prosperity of employer and employee should be considered together — high wages for excellent work, and low production cost for management.

2. One of Taylor's disciples, Henry Laurence Gantt, added the humanistic thought by pointing out that force in leadership, and attainment of selfish advantage should be replaced by work for the advantage of all, and leadership through knowledge (a point very close to that set forth by Tacitus).<sup>10</sup>

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<sup>9</sup>Alford and Beatty, *op. cit*, pp 25-31.

<sup>10</sup>H. L. Gantt, "Training Workmen in Habits of Industry and Cooperation," *Transactions of the American Society of Mechanical Engineers*, XXX, No. 1221, p. 1037.

We in Crown Zellerbach believe that shareholders, management and labor are all a part of the same team and that each plays a vital role in its success or failure. We also believe a company can progress only as the industry as a whole progresses, and that industry progress depends upon all the innumerable other factors that affect the economy. We further believe that a company must satisfactorily discharge its responsibilities to society if the desired progress is to be permanently attained.

The increase of the past decade on "long-range corporate planning" is a result of more and more companies, of which we are one, recognizing these concentric circles of responsibility ranging from the company team at the center to the broad sweep of public opinion. One of the first tasks of establishing an effective long-range planning program is to define the company's long-range goals and objectives (in excess of 10 years). Daily and medium-term decision-making is then simplified, since each decision can be judged in terms of its contribution toward achieving the long-range objectives.

In Crown Zellerbach, we have defined and established the following six basic long-range objectives

- 1 To regularly produce from our forest resources the highest-quality lumber, cellulose and chemical products at the lowest possible cost -- and while doing so to maintain our plants in the highest degree of efficiency and safety
- 2 To regularly sell such products to the most people at fair prices and with reasonable profits.
3. To regularly provide jobs at fair wages to as many people as we can gainfully employ.
- 4 To regularly pay a fair return to our shareholders on their investment in our business and to protect and safeguard such investment.
- 5 To always be a good citizen in the communities in which we operate
- 6 To discharge our responsibilities to society by maintaining our business in a manner that will earn continual public trust and confidence.

We expect to realize these objectives indefinitely and must therefore plan beyond the life span of our present management so that our business may meet anticipated demands and be perpetuated. Specific steps in furtherance of these basic objectives are planned, periodically reviewed and modified for periods of the next five or ten years. We are not opportunists and constantly forego taking advantage of short-term profit possibilities if they conflict with our long-range objectives.

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Source: *The Company Creed*, American Management Association, Inc., New York, June, 1958, pp. 7-8 of *Management Creeds and Philosophies* (American Management Association, Inc., New York, June, 1958), Research Report No. 32.

### CROWN ZELLERBACH CORPORATION — BUSINESS PHILOSOPHY

#### *Figure 9*

3. Harrington Emerson added the concept of "efficiency" to the picture. He espoused the thought that management should examine and adopt the efficiency considerations present in nature.<sup>11</sup>

4. Frank B. Gilbreth added to both the scientific and the efficiency ideas — in fact one might say he married these ideas — for he pointed to the need for a general management goal of "one best way."<sup>12</sup>

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<sup>11</sup>Alford and Beatty, *op. cit.*, pp. 30-31.

<sup>12</sup>Alford and Beatty, *op. cit.*, pp. 29-31.

Almost all the *general* management concepts of today, certainly those directly associated with production, incorporate major portions of these earlier statements. To the manpower manager they are important for they form a major part of the thinking involved specifically in manpower matters.

**MANPOWER PHILOSOPHIES.** Over the years certain philosophies or concepts evolved which pertain directly to manpower. Today's eclectic approach to manpower management is based primarily upon these views.<sup>13</sup>

1. The *Commodity Concept* held that manpower reacted to the laws of supply and demand and that its price was established by these laws. This concept seems to have evolved from the earlier serf and slave ideas concerning labor. It reflects the same "chattel" point of view.

2. The *Mechanistic Concept* was typical of Taylor and his disciples. It reflected recognition that labor's production was what the employer purchased and nothing more. The employee was considered machine-like.

3. The *Conservation Concept* reflected recognition of the probable fact that man was the most important natural resource — an attitude certainly significant in this day and age. Out of this concept grew various laws designed to protect, if not fully conserve, children and women. The beginnings of workmen's compensation and regulation of hours reflected this conservationist philosophy.

4. The *Paternalistic* or *Human Concept* grew from the conservationist and included much of that thinking. In many cases the doctrine was identical for it held, for example, that man's mind was important as well as his body and production. The philosophy held that employees had rights and that management must recognize these rights. It also held that the manager's obligation went beyond the stockholder and the employee to include the community and the customer.

5. The *Citizenship Concept* gave recognition to the need for developing industrial democracy, the need for establishing "efficient" management as well as giving employees a voice, or share, in control of the organization. A participative concept, it fostered the idea that a business organization should exist under a form of self-government; that employee and employer are dependent upon each other, and, therefore, a mutual exchange of ideas and mutual agreement regarding working conditions and relationships should exist. This philosophy relates to much of present day labor organization thinking.

6. The *Partnership Concept* reflects the reasoning behind profit sharing and stock-ownership plans. The philosophy holds that since

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<sup>13</sup>Walter Dill Scott, Robert C. Clothier, William R. Spiegel, *Personnel Management* (McGraw-Hill Book Company, Inc., New York, 1954), Chapter 1, *passim*.

labor and management are mutually dependent, they should share in the harvest of the field they plow.

### THE NATURE OF CONFLICT

Conflict has existed over the centuries. It develops as principle, philosophy, and technique evolve. Understanding the nature of conflict is important to those who expect to establish effective philosophy and policy, and those who seek to operate an effective organization.

The commonly-accepted meaning of the term focuses upon struggle for supremacy and upon argument and strife between individuals and groups and within the individual. Meaning involves both physical violence and mental or psychological difference.

Decisions and decision problems may lead to conflict. It may rise within the individual or between individuals or groups. It appears, then, that as an event and as a concept, conflict is a human, a living thing.

**PERSONAL CONFLICT.** Individuals, alone or as part of a group, tend to rebel, to enter into conflict unless they can make quick and correct decisions when the need arises. If the right choice stands out clearly among many choices, and if that choice is compatible to them, there tends to be no problem with decision. The question arises: "Why should a correct decision elude a person?" Answering this helps eliminate at least some cause of conflict in the industrial environment.<sup>14</sup>

1. Difficulty may arise because of an individual's degree of competency.

2. Difficulty may exist because an individual is not provided with all the information needed to make a correct decision — perhaps he cannot understand, cannot agree because he lacks fundamental information through no fault of his own.

3. Difficulty may appear because a superior may not allow a correct decision to be made.

4. The difficulty may be psychological in that the individual lacks the sense of security needed to arrive at agreement or to state his understanding — he lacks the certainty to enable his making the decision.

5. Difficulty may arise because the necessary decision, agreement, or understanding is contrary to the individual's beliefs or principles. It is incompatible to him as a person. Incompatibility may arise because:

(a) The matter at hand is contrary to his moral views.

(b) It may be obvious, but it may be against his best interest.

(c) Lacking, or possessing, full knowledge of the outcome or

possible outcome of a decision, agreement, or the like, the individual may seriously consider that outcome undesirable.

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<sup>14</sup>James G. March and Herbert A. Simon, *Organizations* (John Wiley & Sons, Inc., N.Y., 1958), pp. 112-120, *passim*.

(d) The individual may prefer certainty, but the decision may lead him into uncertainty.

(e) Loyalty may also cause incompatibility. Though the person possesses all the facts, sees the needed decision clearly, understands it, and so forth, it may be contrary to the best interest of his boss, the mores of his group, organizational policy, or it may jeopardize a peer or subordinate or a friend.

These points all pertain in some way to the importance of establishing correct organizational goals and policies, and are significant reasons for requiring full communication of goals, policies, and procedures to the rank and file. The points also bear some relationship to reasons for establishing proper manpower selection, development, and conservation practices.

**ORGANIZATIONAL CONFLICT.** Disagreement or misunderstanding may be individual or group in nature. Individuals run into trouble where decision-making follows a dictatorial pattern; where choices are personally incompatible, or where experience leads them to expect, seek, or require choices other than those prescribed by the organization.

The group relationship may include the organization as a whole, or specific organizational units, or simply segments of the total workforce. Such conflict may arise because:<sup>15</sup>

1. The legally-defined goals, philosophies, procedures, no longer fit the pattern of events which currently exist. Manpower managers may point to this as one reason for insisting upon regularly-scheduled audit of manpower practices and organizational goals.

2. The conflict may arise because legal restrictions of some form prohibit the making of a decision. Knowledge of labor legislation is of importance here; manpower managers will claim the point significant to demands that correct labor-relations exist.

3. The difficulty may arise because the group is denied the opportunity to participate.

4. Altercation may arise within, between, and around organizational units, or it may arise between organizational units and the total organization because of a lack of compatibility with the unit's goals, mores, or philosophies.

5. Conflict may also arise because of incompetency within organizational units, or because of lack of information about the decision to be made or the factors involved in the problem.

**EXTRA-ORGANIZATIONAL CONFLICT.** Affiliations outside the firm may drive individuals into conflict with the firm (thus the problem of dual allegiance in employees arises – loyalty to union, and

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<sup>15</sup>March and Simon, *op. cit.*, pp. 112-120.

loyalty to management). Disagreements or misunderstandings tend to follow the same casual patterns already described. Usually they involve political, union, legalistic, or ethical questions. Personal conflict seems to have little to do with the presence or absence of extra-organizational difficulties. They tend to occur whether or not personal conflict exists, and they move into the scene even in the presence of organizational struggles. In fact, often they contribute to such struggles.<sup>16</sup>

March and Simon suggest that a hierarchy of conflict appears to develop. Personal conflict seems to have precedence over organizational or extra-organizational conflict, and personal issues tend to govern at least some of the direction taken by such conflict.<sup>17</sup>

*INDUSTRIAL ENVIRONMENT AND CONFLICT* Stuart Chase points out that today's technology, insecurity, and the tempo of living lead to conflict.<sup>18</sup> These environmental factors generally are associated with personal conflict, but they can be related to almost any definable form.

Our technology is such that old skills and knowledge are being replaced by new. High-skill manual operations are being replaced by simple minimum skill operations, while the knowledge factor pertaining to specific or ancillary operations is shifting from relatively understandable matters to highly complex relationships. These events are frustrating in themselves. How annoying it must be to have no *real* part in determining the results of one's production, or how peculiar to face up to complexities about which "even the boss doesn't know." Such points impel manpower people to demand effective communication programs, effective manpower development and conservation programs; they stand behind the importance of full and comprehensive induction programs.

The *technology* leads to insecurity for it provokes periods, or the possibility of periods, of temporary unemployment. Such a possibility impels feelings of insecurity! Conflict is born: the "haves" vs. the "have nots."

The *tempo* of production and of living frustrates many people. Stuart Chase has this to say:

The worker at his post — often including the foreman — finds many of his hours filled with a sense of discontent if not futility, damaging to his morale and a drag on production, no matter how efficient the machine. He is mostly unconscious of the reasons for such feelings, but they may result in antagonisms against his employer, against racial minorities, against society as a whole, against any group

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<sup>16</sup>March and Simon, *op. cit.*, pp. 112-120.

<sup>17</sup>*Ibid.*, pp. 114-120.

<sup>18</sup>Stuart Chase, *Roads to Agreement* (Harper & Bros., N. Y., 1951), p. 26.

or ideology to which chance or propoganda may direct his aggressive feelings.<sup>19</sup>

Effective manpower management requires that these points be recognized in management's philosophy, policies, and systems. If they go unrecognized, then policies themselves become a source of conflict. Furthermore, effective policies and systems are designed with and through a workforce. The general truth appears that *man wants to participate*. Unless this need is reasonably met, conflict appears.

Today's industrial environment includes the *social* environment. Many of the commonplace events of life cause conflict in man, and the problems — the conflict — tend to be carried to the workplace. Things like sack dresses, unexplained authority, the fact that one's children know little of the American heritage, the cancelled flight, Japanese beetles and Russian double-talk: these frustrating factors rankle in us and by nine the next morning they may have set up such a conflict-proneness that we disagree or misunderstand at the drop of the foreman's eyebrow.

**MANAGEMENT MISCONCEPTIONS.** Usually normal people or groups of people are impelled toward conflict before it actually occurs. Improper attitudes become an impelling force. Management's attitudes toward manpower often fit this category. Carey states such misconceptions.<sup>20</sup>

1. The already-mentioned Economic Man approach — here management thinks that the only thing in which employees have any interest is the pay check.

2. The Stupid Man approach — here the employee is typically considered as a child. "Daddy knows what is good for him" Unions also take this approach — how often too they attempt to get the worker to fall for the theory that the *only* effect a wage increase can have is a good one.

3. The Know Your Leader approach — the attitude is demanding. It holds that all must know who is boss, that everyone should think and act as the boss believes he should.

4. The Profit-Above-All approach — nothing but profit is important. Some union attitudes are like this — no matter what, the Hoffa can do no wrong.

5. The Make People Work approach — the view is that people will not work unless driven to it, but "not even horses can be made to drink."

6. The Make People Behave approach — employees will not behave unless made to toe-the-line. This view exists in unions also:

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<sup>19</sup>Chase, *op. cit.*, p. 26

<sup>20</sup>H. H. Carey, "Engineering The Invisible," *Advanced Management*, March, 1952.

witness the attitude that every man should be a member of the bargaining unit whether he wants to or not. Such interventionism speaks of nothing but conflict.

Each of these causes of disagreement interferes in some way and at some time with efforts to develop a useful philosophy and necessary policy and procedure. These conflicts also tend to distort the true nature of principles, as man looks at them through possibly jaundiced eyes.

### MANIFESTATIONS OF CONFLICT

Conflict exhibits itself for all who wish to see. Manifestation occurs in several forms: physical violence, psychologically, and in the form of edict or law. *Physical* conflict is obvious. It appears as strikes, picket-line fighting, excessive turnover, acts of sabotage and the like. All these forms are familiar: one reads about them daily in the newspapers throughout the country.

*Psychological* evidence is more difficult to discern. It may appear as relatively direct, or in some indirect fashion. The more or less *direct* forms are as follows.

1. Substitute grievances: such grievances are used as a matter of convenience or to save "face" for the aggrieved. They take the place of the true grievance. An employee tends toward such standard issues as wages, for example, instead of complaining about "being served Waldorf salad" in the cafeteria. Or he may complain about the work load instead of about the man working along side of him. Or he screams discrimination, instead of admitting to his own incompetence or raising a question about the propriety of his placement.

2. Frustrational symptoms: psychological manifestation frequently appears as one, or some combination, of the well-known patterns of frustration — aggression, regression, repression, resignation, and fixation. The conflicts appear in the form of fights, horseplay and incessant practical joking, the retention of negative ideas, the attitude "don't ask me," and of course there is the fixation that "what was good enough for daddy is good enough for me" — the resistance to change.

Such matters tend to be direct. They take place at the work station or in the immediate work environment. They are immediate. They happen today and are directly traceable to the work situation, or through the work situation. They are personal. They pertain to you, your staff, your workers. Of course the wise manager understands that conflict is not present to a serious degree, or in the practical sense, until it reaches the point of abnormality.

Not all psychological conflict shows itself as directly connected with the immediate work environment. The *indirect* also exists. We find it in union publications and even in professional journals and

publications. For example, consider what Solomon Barkin said in the *Harvard Business Review*.<sup>21</sup>

The management ideal is freedom to make unilateral decisions which will automatically be accepted by workers. . . .

Trade Union logics . . . are not concerned with benefits to the owners of the enterprise but rather with the effects of management policies on the workers, the union, and the general economy.

The relationship between the psychological and the economic appears with considerable clarity in this example. The real clash is economic but the medium of insinuation is psychological. The impression of total respectability and validity impinges itself upon the reader because of the type of publication utilized.

Another type of indirect evidence, and perhaps the most disturbing to the average American, is the encroachment of racketeers and Communists upon the labor scene. The infiltration depends upon the existence of conflict. The movement of both grows because of conflict, and survives by the conflict they create.

*EDICT, LAW, AND CONFLICT.* Certain legal actions and administrative edicts identify conflict. One of the most far-reaching legal manifestations begins with Sec. 7(a) of the National Industrial Recovery Administration Act, extends through the Wagner and Taft-Hartley Acts, and thence into the Landrum-Griffin Act. It also appears in administrative edict as evidenced by the rulings and opinions levied by the War Labor Board, the National Labor Relations Board, and the many court precedents established over the years. Another example of this kind of evidence can be found in the now famous "wildcat strike" of airline flight engineers in February, 1961. The striking engineers were fighting a February 6 decision by the National Mediation Board ordering them to join the Air Line Pilots Association as a single bargaining unit. Since the pilots outnumbered the engineers on all airlines, the decision conceivably could wipe out the engineers' union. Furthermore, exposed to layoff and the like by the possible power tactics of the pilots, the engineers visualized a serious threat of technological unemployment. Conflict is obvious here. Compulsion and intervention appear as causes on the one hand, and technological improvements on the other.

Another form of legal evidence appears in the companion legislation passed since the advent of the New Deal. Such things as minimum wage laws immediately imply that someone failed to do things in a manner accepted as correct under current conditions and knowledge. A quick look reveals that the manifestation goes beyond matters

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<sup>21</sup>Solomon Barkin, "A Trade Unionist Appraises Management Personnel Philosophy," *Harvard Business Review*, Vol. 38, No. 5, Sept., 1950, pp. 59-64.

directly associated with industrial organizations and labor. We note the attempts to legislate and/or evoke judicial mandate concerning discrimination: here is conflict. We note too the legislation involving agriculture, again evidence of conflict.

What is the point? Simply this: the climate surrounding today's manpower manager is filled with conflict. The nature of this struggle is complex. It involves individuals as individuals *and* as members of groups. It involves people at the workplace and away from the workplace. It involves issues over which the manager, regardless of his specialty, may have absolutely no control, as well as those over which he can and should exercise control. Clearly, if he honestly seeks to develop an effective working climate based upon sound philosophy and policy, he will take into consideration the factor of conflict.

His aim is to establish a general statement of objectives, and a guiding philosophy which will not be, in itself, a cause of conflict, and which focuses attention upon approaches to manpower management conducive to harmony. To aid him in this effort he has the lessons of the past. He knows, or can quickly discover, the evidences of conflict in the present environment. He can learn what has and what has not worked in the past and he can study the present, comparing current conditions with the past.

The philosophy adopted by management, and advised by the manpower specialist, must minimize the effect of conflict and optimize the possibility of cooperation. It must in no way interfere, or suggest interference, with our traditional freedoms, and it must recognize the importance of the maintenance of one's competitive position. Furthermore, the economic needs of employees and their importance as individuals must be recognized, together with the impact and importance of the total environment.

This is a tall order. A manpower philosophy so designed cannot be developed overnight. It requires active cooperation throughout the hierarchy of management, and is enhanced by participation on the part of the rank and file. Once developed, such a philosophy and its accompanying policies and procedures require regularly recurring audit.

The following statement of philosophy emerges, others certainly can be developed which are more suitable for a given case. The strength of such a philosophy lies in its recognition of the total environment, and in the fact that it is eclectic.

### THE MODERN PHILOSOPHY OF PERSONNEL ADMINISTRATION<sup>22</sup>

To define "the modern philosophy of personnel administration" it is necessary to point out the component considerations upon which the definition is based.

<sup>22</sup>Theodore A. Toedt, "The Modern Philosophy of Personnel Administration," *Personnel Journal*, Vol. 32, No. 5, Oct., 1953, pp. 178-180 (Verbatim).

Firstly, personnel administration is a *function* of management which is designed to facilitate the effective and economic attainment of production necessary to maintain the competitive and progressive position of a company.

Secondly, it is *the technique* which determines the methods of handling the human aspects of the industrial situation so that maximum cooperation between management and labor may be attained

So based, this modern philosophy may be defined as a way of thinking which recognized the importance of the individual by considering that the employee and all his problems, both overt and covert, are important not only to himself, but to management as well

We might even go further and say that it is a philosophy which has as a prerequisite to utilization the recognition, acceptance, and practice of two concepts: that of the "Golden Rule," and that of "man as a social being."

"Old-line" management believed that concentration on the material factors of production was sufficient. In other words, it was chiefly concerned with machines, the production line, the production curve, the total number of hours required to make a given product. It was concerned with men only from the point of view of how many would be needed to produce a given product in a given time. Men, to "old-line management," were material factors.

Today we realize that to achieve satisfactory production, management must depend upon possession of all necessary skill and "know-how" concerning the technological factors of production, upon the recognition of the worker as a social being, and also, upon the possession of skill in handling this human factor of production. Cooperation between management and labor is a must to effective production. Certainly we cannot hope to achieve this cooperation unless both parties are cognizant of the factors which contribute to it. It is through the efforts of the personnel department, applying the modern philosophy, that these factors are made known to line management. It is also personnel administration which may instill knowledge of these factors in the workforce.

This modern philosophy is directed toward minimizing the areas of conflict between management and labor, and maximizing the areas of cooperation. The position taken is that *management policies should be focused on discovering, developing, and utilizing most effectively the abilities of employees*. These policies should be equally focused on maintaining both the physical and the psychical integrity of the employee; the former by maintenance of decent working conditions, and the latter by the maintenance of a pattern of working relationships which recognizes the social importance of the employee and which will protect him, so far as possible, from frustration arising because of that totality which we refer to as the "job."

Now let us consider the objectives of personnel administration as required by adherence to the modern philosophy. First, the broad objective which may be stated as follows:

The over-all objective of personnel administration is to help attain, as effectively and economically as possible, the production necessary to maintain the competitive and continuously profitable position of the company concerned, by obtaining maximum cooperation between management and labor, and by conserving the human factor of production.

The fulfillment of this objective is dependent upon the working objectives of the modern philosophy. These may be stated as follows:

1. To secure a potentially effective workforce
2. To develop that force, as nearly as possible, to its capacity.
3. To conserve that workforce both physically and psychically
4. To compensate that workforce equitably.

The acceptance of this philosophy requires management to recognize that its personnel policies must be focused upon the basic problem of satisfying the *totality* of employee wants. These wants appear within the frame of reference of the total complex of physical, social, and psychical situational factors which arise as a result of what we refer to as the "job."

This is not the traditional approach which management has taken toward employees, nor can it be said to be the prevailing one in employee relations today, although there is no personnel policy today worthy of the name, which does not reflect to some degree at least, the influence of this modern thinking. It cannot be said, either, that this modern philosophy has been developed by any "ivory tower" approach, but rather, by a combination of the trial-and-error and the "scientific" approaches. It should be understood that not all the past practices in the field of personnel administration were unsound. Their experimental and practical use have served as a means of developing the principal tenets of this modern thinking.

The "rough and ready" discipline of the so-called "old-line" administration was not entirely ineffective in securing results, and today's thinking recognizes the need for discipline provided it is rightly conceived and administered. Not all of the cold appraisals of Taylor's "scientific management" were inefficacious and uninfluential, nor was all of the benevolence of "paternalism" resented by the worker. Today's thinking recognized as key factors in establishing good personnel administration the existence and equal importance of both the technical and social aspects in the development of a satisfactory employee, and the fact that the worker appreciates a "real" interest in himself and his

problems.<sup>23</sup> Good personnel administration today is, in reality, a selective utilization of what was good in the past, and an endeavor to improve upon it, and a rejection of what was bad.

Where the thinking previously was concerned with getting the most work for the least cost, either ignoring completely the concept of cooperation or giving it, at best, little consideration, today's philosophy teaches that in order to have a high production at a relatively low cost, we must first, and last, have the *free* cooperation of the employee.

Let us summarize our present discussion at this point by saying that the modern philosophy of personnel administration seeks to attain economic and effective production by securing and maintaining maximum cooperation between management and labor, and that all segments of management are responsible for securing and maintaining this cooperation.

It is the duty of the personnel department to see that management, from the top downward, is indoctrinated in this point of view.

It should be noted, in conclusion, that this modern philosophy harbors nothing designed to combat the existence of unions for, in reality, it is a way of thinking which, under any conditions, embraces the workforce, its needs, its wants, its problems. That any union should find reason to condemn such a philosophy is unrealistic unless either the management is giving mere "lip service" to the philosophy, or the union in question is not, in reality, interested in the progressive welfare of the workers.

### MANPOWER TOOLS, TECHNIQUES, AND CONSIDERATIONS

Throughout the previous material reference has been made to the various tools, and the like, available to the manpower manager. The relation between these and the *working objectives* is structured in Figure 10.

In summary, the tools, techniques, and considerations, though in themselves effective, depend upon a principled system for *maximum* effectiveness. It is not so much *that* we apply these methods, as *how* they are applied that is important. That the manpower manager has the proper attitude toward and in his work may be of even greater importance than the proper technical application of his tools.

### SUMMARY

Both the mistakes and the successes of the past are available to us from which to learn. What is required is recognition of the conflicts

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<sup>23</sup>By a "real" interest, we mean an interest which is based upon realistic, rather than autistic, knowledge of worker's reactions and feelings. We mean, also, an interest which is neither eleemosynary, nor an excuse for "slave-driving," nor one stimulated by over-zealous love of money, or self-improvement at the expense of others.

Objectives	The Tools, Techniques, and Considerations
To secure a potentially effective workforce	The labor market, the union and other internal and external sources of labor Their validation The employment interview(s), application blank, medical examination, trade and psychological tests, reference utilization Job and Position Analysis to aid hiring properly The Induction Program to aid adjustments Periodic audit of reliability of sources, job and position analyses, the success of the general process to facilitate control The labor estimates - balanced to production and sales estimates to facilitate control
To develop the workforce, as nearly as possible, to its capacity	Job and position analysis to aid training Interviewing and counseling to aid adjustments and training Testing (trade and psychological) constructed for the jobs and needs of the concern, to follow up employment The training program - executive through employee The promotion plan, based on knowledge of wants and feelings of workers as well as capacity, and designed within the framework of organization policy and future need The transfer plan, based on knowledge of the wants and feelings of workers as well as capacity, not used to get rid of troublemakers, designed within the framework of organization policy and need The union contract, fairly and consistently applied Consideration of out-plant factors with regard to promotability and transferability of people
To conserve the workforce both physically and psychologically	Job and position analysis, interviewing and counseling, the organizational plan, and statistical measurement (Basic here as in the two prior cases ) Safety engineering, dietary consideration, medical program, security and emergency program, vocational guidance, adult education, and child scholarship plans, life, accident, and medical insurance, retirement and vacation plans, grievance procedure, suggestion system and gripe box system, the employee information program, including both the plant organ and public releases, employee participation program (the McCormick, Scanlon, or similar idea), the morale analysis program, fatigue control, the union contract, and the credit union or other financial program All of which should be thought of as employee self-services or cooperative-services programs
To compensate the workforce equitably	Job and position analysis, interviewing and counseling, the organizational plan, and statistical measurement are again basic Job Evaluation, motion and time study (performed by industrial engineering), incentive plan, bonus or profit sharing, other fringe items Clear, concise, well-publicized, and live up to policies, periodic audit of entire system Consideration of cost-of-living and community and industry rates

THE TOOLS, TECHNIQUES, AND CONSIDERATIONS OF  
 MANPOWER MANAGEMENT AND THEIR RELATION  
 TO THE WORKING OBJECTIVES

Figure 10

to be dealt with; recognition that man is both a social and an economic being, that in his industrial environment he must consider the totality of that environment – his community, stockholders, customers, vendors, workers; both in the present and the future sense. In addition, one must recognize the importance of subjecting the tools and techniques available for implementation of philosophy to continual evaluation, always with an eye toward improvement.

To facilitate that future improvement, as well as to assure at least some degree of excellence in conducting the manpower function under present conditions, let us now turn to consideration of the areas of knowledge fundamental to that effort; then, consider the systems useful in pursuing the “working objectives” under today’s conditions.

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*To develop system effectively, one must first achieve mastery of the fundamentals.*

## PART II

# Essentials for Successful Manpower Management

It takes thought and work to translate principles and philosophies into policies, procedures, and methods. Use of the heritage of available knowledge and experience is as much a part of a manager's job — any manager's job — as is the development of operational systems.

This portion of the text concerns those areas of knowledge or theory considered fundamental to the effective management of people. Included are: (1) organization, (2) communication, and (3) control and analysis. "Good" management operates within these areas and constantly utilizes them to achieve its goals. All the processes of management involve these factors in one way or another, hence they are considered basic *essentials*. The impact of these essentials upon the general function of manpower management, and the broad goals of management, was indicated in Figure 2.

**ORGANIZATION.** The management of manpower must involve management of organization as well as its creation. Chapter 3 presents, in very brief form, the fundamentals of Organization Theory. The presentation is developed in recognition of the fact that organization may *cause* manpower problems, and manpower difficulties may *give rise* to organizational problems.

**COMMUNICATION.** The management of people constantly involves communication. Action at any level in a company depends upon the flow of knowledgeable information — a flow to, through, and from the several levels of the organization. Chapter 4 relates to the "theory" involved in systematic development of communication.

Communication embraces more than the use of electric, electronic, or other reporting devices. It involves people, their emotions, their biases, and the matter of semantics. One device is of particular sig

nificance to manpower managers, however. Chapter 5 is concerned with communications devices. The concentration is upon interviewing, however, for the reason that it is a prime means of exchanging information. Interviewing facilitates or actually enables the giving of orders, the exercise of discipline and "trouble shooting," the selection of manpower and, in fact, every facet of the manpower management activity. Other communications devices exist either to support or facilitate interviewing.

**CONTROL AND ANALYSIS.** The management of any enterprise has the prime responsibility for producing a good or a service for profit, and assuring at least some degree of perpetuation and growth. Such a charge involves a creative and a manipulative obligation on the part of managers. Such a charge requires that they exercise *control* over their operations and their organization. Control usually is ineffective unless *plan* and *action* — decisions — have a basis in *fact*. Determination of fact should result from *analysis*, not emotion or opinion. Chapter 6 presents the basic considerations related to control.

Chapter 7 covers a specific analytic tool, job analysis. This manpower technique, or tool, is an *aid* to control. It provides at least one means of analyzing jobs, of determining their content and their make-up. It so happens that job analysis stands as a basic manpower management device. The results of such analysis have utility in selection, in manpower development, in safety management, in labor relations, and in compensation work.

**ORGANIZATION AND MANPOWER MANAGEMENT.** It is essential that the manpower manager (and his peers) understand the position that his unit enjoys within the company structure. It is important that he appreciate the nature of his authority, for it is quite specific and special. It is important also that he recognize the "division" of responsibility existing between his unit and other units in the organization. Chapter 8 presents this picture. It indicates the organizational nature of the manpower function: where it fits, why it may develop, the authority its personnel would have, the division of responsibility, and the communications circuits or "nets" most likely to be involved.

*Community objective is unattainable without a framework, an organization employing the most adequate systems for coordinated effort.*

## Organizations

Every manpower problem involves organization. When a vacancy occurs, the effort to fill it involves coordinated activity throughout the levels of the organization, if scrap is a problem, organized effort is applied to correct it, training requires organized effort and cooperation.

Those responsible for the management of manpower require a reasonably good understanding of organization. This need exists for all managers, whether they are specialists employed in a manpower division (or personnel department, or industrial relations group) or whether they are managers of production, or sales, or finance.

### DEFINITION

What is organization? It means many things to many people. The literature contains a variety of opinions. Some definitions are as follows:

. . . Organization, which is the process of so combining the work which individuals or groups have to perform with the faculties necessary for its execution that the duties so formed provide the best channels for the efficient, systematic, positive, and co-ordinated application of effort.<sup>1</sup>

. . . The administrative process of *organizing* an enterprise or any of its parts consists of (1) *dividing and grouping* the work that should be done (including administration) into individual jobs, and (2) defining the established *relationships* between individuals filling these jobs.<sup>2</sup>

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<sup>1</sup>Oliver Sheldon, *Philosophy of Management* (Sir Isaac Pitman & Sons, Ltd., London, 1923), Chapter VIII, reprinted in Harwood F. Merrill (ed.), *Classics in Management* (American Management Association, N. Y., 1960), p. 301.

<sup>2</sup>William H. Newman, *Administrative Action* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1951), p. 123.

. . . Organization is a tool of management. It is the process by means of which the combination of factors of production is effected. To facilitate the process, structures are designed. . .<sup>3</sup>

. . . But the right organization structure is the necessary foundation; without it the best performance in all other areas of management will be ineffectual and frustrated.<sup>4</sup>

As a company grows, its organization grows. As an organization grows its channels of communication develop, its jobs reach clarification, and its relationships attain shape. Like all dynamic forms of living things (being made up of, and by man), an organization has certain *needs* which must be met if it is to continue to live, to grow, and to achieve the hoped-for success planned by its managers and workers.

Management's job, then, is to organize the components of organization effectively, to establish a *whole* which is effective in attaining defined goals. In part this involves factors such as individual and group security, participation, and assurance of growth. These characteristics of organization are dealt with to some degree by every manager, from foreman to president.

### THE MANPOWER MANAGER AND ORGANIZATION

Manpower managers are involved with organization in several ways. As the heads of specific divisions, departments, or sections of a firm, they are concerned with the *architecture* or *structure* of organization, and with the *processes* which facilitate attainment of an organized *condition*. Their interest relates to their own unit and the company as a whole. Because of specific responsibility and training, they advise the rest of management on matters pertaining to organizational considerations relating to and involving people.

Drucker indicates that a "good" manager, practicing "good" management, takes a positive and active stand.<sup>5</sup> The manpower manager thus constantly strives to make events happen rather than await their happening. Of necessity, he is creative and seeks to develop creativeness in others; he applies imagination and initiative, and encourages these attributes in others; he exercises judgment based upon fact rather than emotion, and concentrates upon growth. Growth is the business of every manager and the manpower manager knows that man alone grows in the man-machine relationship — he seeks to optimize the growth of people in order to facilitate the growth of organization.

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<sup>3</sup>Dale Yoder, *Personnel Management and Industrial Relations* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1956), p. 132.

<sup>4</sup>Peter F. Drucker, *The Practice of Management* (Harper & Bros., New York, 1954), p. 226.

<sup>5</sup>Drucker, *op. cit.*, pp. 7-17, *passim*.

**ORGANIZATION THEORY**

Manpower managers, whether foremen or staff specialists, face human problems generated by organization, magnified by organization, or affecting organization. The theoretical setting involved has four phases: the conditional, the processive, the structural, and the behavioral.

A manpower manager's department may be organized, or disorganized; his firm may or may not present an orderly picture. In the theoretical sense, this *conditional* aspect comes before *and* after structural or processive action and reflects, and in a sense impels, behavior.

Manpower managers coordinate activities, exercise authority of a kind, concern themselves with discipline. Their work is to some degree influenced by the hierarchy of the firm, and they exercise and assist in the development of leadership. These *processive* aspects of organization theory, when properly applied, facilitate the manager's handling of people as well as things.

What the manager of manpower must do, and is able to do, typically is affected by the *structure* of the firm. The staff specialist (manpower manager or personnel director) may be unable to communicate in a timely and direct fashion with some other manager because of the structure. His effectiveness may be reduced because the structure is so designed that he cannot reach the lower echelons with his advice.

Managers find that organization both affects and is affected by the *behavior* of personnel. In the theoretical sense, as well as the practical, a manpower manager's success is influenced by conflict bred of organizational problems. In addition the actions and reactions of people influence his ability to apply the processive principles of organization properly.

Table 3 presents in very brief form the processive considerations so aptly developed by James D. Mooney and Alan C. Reiley.<sup>6</sup> These points refer to the unification of people, definition of work, development of the channels of communication, and the job and personal relationships necessary to effective organization. Two of these points have special impact upon a manpower manager's application of organization theory.

**FUNCTIONAL DEFINITION AND DIFFERENTIATION.** When given the right to act, an individual's function must be defined. This principle is activated by the application of job analysis. As indicated in Figure 11, the prevalence of change makes job analysis necessary if function is to be defined.

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<sup>6</sup>cf. James D. Mooney and Alan C. Reiley, *The Principles of Organization* (Harper & Brothers, N. Y., 1939).

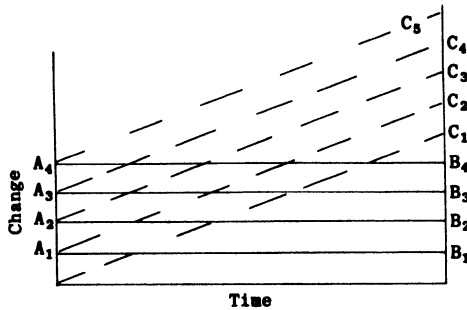
TABLE 3  
THE PROGRESSIVE CONSIDERATIONS  
OF ORGANIZATION THEORY

Consideration	Remarks
Coordination	Coordination refers to the orderly arrangement of group or individual effort to provide unity of action in the pursuit of common purpose.
Authority	Coordination can neither develop nor be effective without authority. Authority is the <u>right to do</u> -- he who has the <u>right</u> , may coordinate.
Leadership	Leadership is the way and power of command (not the right). Those with authority may be unable to coordinate because they lack the ability to do so.
Mutual Interest	Known as "homogeneity of goal," or "common goal," mutual interest assures that, in the long run at least, all processes and people are going in the same direction. It facilitates coordinative effort.
Objective	Objectives or goals are necessary before coordination can be effective.
Doctrine	Doctrine is the definitive action of clearly stating, and making readily available to all people, the goals of the organization.
Discipline	Intent is clarified through objective. Doctrine specifies that intent. Discipline pertains to <u>attainment</u> of that intent. Discipline is personal and relative to leadership. Discipline pertains to command, self-control, training, and response. The <u>prime</u> discipline is self-discipline.
Hierarchy	Hierarchy provides the channels for coordinative effort, facilitates orderliness and unity in command.
Delegation	Authority must be conferred upon people or coordination will be ineffectual. However, final responsibility is not escaped by delegating authority. Delegation means to give, to grant, confer upon, or assign, but what is assigned must be consistent with job definition or obviously necessary due to some unusual condition.

The change-time concept represented in Figure 11 draws attention to the following points:

. . . If organizations and jobs were static, and each individual stayed in each job for an infinite time, we could represent this relationship as from A to B, or  $A_1$  to  $B_1$ , etc.; and there would be little difficulty defining an assignment by mere observation or consideration of tradition.

. . . Even though change took place, if it occurred in a regular, predictable manner and if each individual stayed in each job for an infinite



**THE NEED FOR ANALYSIS  
AND THE IRREGULAR PATTERN  
OF CHANGE**

*Figure 11*

time, thereby having the individual and the job change together and at a regular rate, we could represent this relationship as from A to C, or A<sub>1</sub> to C<sub>1</sub>, etc., difficulty of definition would be in direct relationship to rate of change and could still be made from the armchair.

... Since neither people nor jobs change in such a regular manner, and since people do not hold jobs for infinite periods, it is necessary to arrive at job definition through a specially-formalized analytical device such as job analysis (see Chapter 7)

Correct definition of jobs seeks to *differentiate* duties. Differentiation simplifies definition and proclamation of policy and procedure and the assignment of people. It also helps distinguish between related and unrelated jobs, thus aiding in development of an efficient hierarchy. Differentiation facilitates identification of pay grades, skill levels, areas of risk, and specific responsibilities.

**STAFF ACTION.** This processive principle points out that, as organizations grow, the need for specialized assistance increases. Assistance is best positioned wherever needed in the hierarchy.

The "staff action" concept is basic to manpower managers. In the first place, it provides *assistance* to others, it develops advice, systems, and techniques to facilitate the work of others. Secondly, it recommends change — another form of assistance.

**STRUCTURAL CONSIDERATIONS.** The design of an organization purposely takes into account its function and its environment. Eight rules exist as guides for managers who seek to develop or alter

an organization. These rules are supported by four traditional points – Table 4 – which tie together the processive and structural thinking.<sup>7</sup>

1. *Structure Is Situational.* Because of changes in technology and economic parameters, because of expansion and contraction, a structure satisfactory in one period of time may be totally inadequate in another. This relates to the *dynamics* of organization

2. *Structure Reflects Personalities.* Executives have a distinct effect upon an organization's design. The combination of authority, coordinative responsibility, and personal competence explains this effect. This personal effect extends downward in a hierarchy, but to a lesser degree with each step.

3. *Design for Performance.* An organization's structure exists to facilitate performance. Through manpower, job, process, product, and market analysis, performance requirements are determined. Manpower

TABLE 4

Traditional Structural Considerations which Tie Processive and Structural Theory Together

Consideration	Remarks
Departmentation	This refers to the primary division of labor or work. Division of labor should be carried through the dimensions of structure, not held to the lowest echelons or isolated to production units and personnel
Hierarchy of Authority	In every structure there are certain points where coordination will take place. Implied is that the larger the firm, the greater the departmentation and the more complex the hierarchy of authority. Unless some other factor is considered, decisions tend to lack importance and even, perhaps, frequency at lower levels.
Specialization and Assistance	There are levels where specialized assistance is needed. Division of labor affects, in part, the nature of decisions required. In turn, they determine to some degree the nature of, and the levels where, assistance will be required.
Functionalism and Responsibility	Each organizational unit should serve a functional purpose related to the end product or service provided by the firm. It should be directly connected to that unit or those units depending upon its activities for their ability to meet their organizational responsibilities.

<sup>7</sup>cf. William H. Newman, *Administrative Action* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1951), pp. 279-280; Harold Koontz and Cyril O'Donnel, *Principles of Management* (McGraw-Hill Book Company, Inc., N.Y., 1955), pp. 83-276, *passim*.

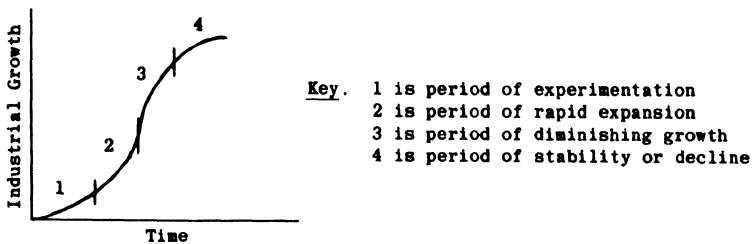
managers, and others, use the information as they design or redesign organization.

4. *Design for Communication and Control.* Effective performance requires effective information-flow. Structure thus requires as few levels as possible and a reasonable horizontal range at each level. In addition, levels should be so fitted into the over-all structure as to provide as nearly direct flow as possible from level to level.

5. *Design for Growth.* An organization's structure and its people must be capable of growth, without this capability the firm may slip rapidly into the "fourth stage of industrial growth" (see Figure 12). The indicated curve is an approximation. The exact shape, and the factors responsible for that shape, will vary from industry to industry. This "design for growth" concept becomes a logical base for the manpower development function.

6. *Design for Integration and Autonomy.* The rule states that every segment of a structure should be so integrated as to facilitate completely coordinated action, but where and when possible, it will provide for autonomy to aid internal control of each segment and to provide the people in authority positions a better opportunity to grow. Proper integration demands functional alignment of the segments of an organization. If carried to an extreme, however, autonomy might eliminate any significant form of functional integration. Managers therefore seek to obtain balance between integration and autonomy.

7. *Design for Decentralization.* An organization requires a vigorous and resolute center, and its branches should be self-sustaining and only less vigorous in that they are subservient to the center — to prime



Source: By permission E. B. Alderfer and H. E. Michl, *Economics of American Industry*, (McGraw-Hill Book Co., New York, 1950), pp. 15-18, *passim*, chart, p. 16.

THE INDUSTRIAL GROWTH CURVE

Figure 12

authority.<sup>8</sup> Two interdependent ideas spring from this comment: (1) federal decentralization, and (2) functional decentralization.<sup>9</sup>

The *functional* arrangement requires that organization structure be designed by process, with the individual segments connected in terms of their contributions to the whole job. Each segment has responsibility for a given process. This may maximize the problems of the manpower manager, for under it local loyalties become more important than loyalty to the company as a whole, and various forms of conflict develop.

The *federal* arrangement, to quote Drucker,<sup>10</sup> “. . . organizes activities into autonomous product businesses each with its own market and product and with its own profit and loss responsibility” From a manpower management viewpoint, the important features of this arrangement are: (1) it tends to maximize loyalty to the company as a whole; (2) promotion and individual development cross the functional lines; (3) the arrangement requires that manpower selection procedures locate *broad*, as well as *specialized*, knowledge and potential, and (4) it forces recognition of manpower development in depth

These two forms of structure “. . . are complementary rather than competitive. Both have to be used in almost all business.”<sup>11</sup> This magnifies the “situational” aspect of structure, and both the situational and the “performance” rules appear as Drucker continues with.<sup>12</sup>

But the genuinely small business does not need it, since it is in its entirety an ‘autonomous product business’ Nor can federalism be applied to the internal organization in every large business

. . . And in practically every business there is a point below which there is no ‘autonomous product’ around which management can be organized. Federal decentralization while superior is thus limited.

8. *Design for Unity in Command.* Each subordinate — person or job, segment (unit) or branch (department or division) — will have one and only one direct and immediate superior. This rule *does not* preclude the crossing of channels — the violation of spheres or boundaries of responsibility in order to seek or present specialized assistance or advice — nor does it preclude the development and application of committees. It does not violate the concept of a hierarchy of authority, a chain of command. It permits the breaking of channels for information and assistance, *but* only so long as the superior is kept informed and his prerogatives of command are maintained.

**BEHAVIORAL CONSIDERATIONS.** Even today, little has been *proven* regarding the behavioral considerations of organization. What

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<sup>8</sup>Drucker, *op. cit.*, p. 214.

<sup>9</sup>*Ibid.*, p. 205.

<sup>10</sup>*Ibid.*, pp. 205ff.

<sup>11</sup>*Idem.*

<sup>12</sup>*Idem.*

is known is significant to manpower people, and particularly manpower managers, for several reasons.

- . They pertain to conflict bred of organization.
- . . They provide insight into the human limitations and relationships regarding organization

Often the manpower problems developing because of organization, or the organizational problems arising because of human issues, can be explained or corrected only through consideration of the behavioral factors.

Each of the following points has a direct bearing upon the daily problems associated with the management of manpower.

1. *Human Behavior Is Complex* Regardless of the adequacy of organization, people do not always respond to stimuli in expected fashion

2. *Influences upon Response Are Varied.* Human behavior in the industrial environment is seldom, if ever, the result of (or the cause of) one influence or factor. The capacity and compatibility of people, their formal and informal associations, and the nature of their organization and its various standing operating procedures (SOP) and methods all influence response.<sup>13</sup>

3. *Behavior May Become Rigid* If the expected and required behavior or response is the rule rather than the exception, behavior may be termed "rigid." Where seniority and position rights are the rule, where the devices used to help achieve an organization's goals are allowed to acquire greater importance than the goals themselves, rigid behavior develops. Where complacency leads to satisfaction with mediocrity, where what is right or best is sacrificed for what is convenient, behavior becomes rigid.<sup>14</sup> With rigid behavior there develops a tendency to treat anything and anyone not directly associated with one's own organizational unit as a "necessary evil."<sup>15</sup>

4. *Job-Dilution Affects Behavior* As the processes of organization lead to rigidity in behavior, a tendency toward increased job-dilution occurs. Job-dilution refers to the "watering down" of jobs, to reduction of job complexity, or to reduction of the significance of decisions or required skills. In other words, an over-delegation occurs.

5. *Special-Interest Behavior Is Related to Goal-Interest* Over-delegation and job-dilution increase the tendency for sub-unit (departmental) or sub-goal interest to displace any real attendance to the organization as a whole.

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<sup>13</sup>cf. James G. March and Herbert A. Simon, *Organizations* (John Wiley & Sons, Inc., N. Y., 1958), p. 35

<sup>14</sup>cf. Clarence B. Randall, "The Myth of the Magic Numbers," *Dun's Review*, Vol. 77, No. 3, March, 1961, p. 33ff.

<sup>15</sup>March and Simon, *op cit.*, pp. 37-40, *passim*; R. K. Merton, "Bureaucratic Structure and Personality," *Social Forces*, 1940, Vol. 18, pp. 560-568.

6. *Goal Homogeneity Necessary to Effective Behavior.* Delegation is important to effective organization, however, the risk of over-delegation and too great a job-dilution must be minimized. Development of "Goal Homogeneity" is the key to this issue. Proper policy and procedure formation and dissemination are necessary, and effort must be generated to "conserve" manpower as discussed in Part V of the text.

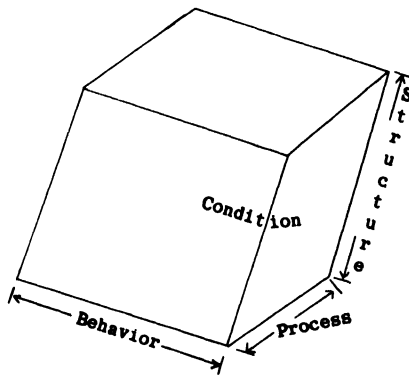
7. *Motivation — the Key to Effective Behavior.* Normally men will not long stand for being "driven." The procedures used in effective organization will be directed toward motivation of manpower.

**ORGANIZATION MAY FRUSTRATE.** A condition, process, or structure which emphasizes rigid behavior may frustrate the personnel. The degree to which a person is abnormally frustrated tends to be reflected in his work. The greater the degree of frustration, the less effective the workforce. Managers therefore seek organizational features which minimize frustration. They seek a structure and process which minimizes internal communication time. In this structure activities are properly grouped; responsibility is assigned with commensurate authority, delegation is not carried to extremes, but is carried far enough down through the structure to encourage initiative at each level, and specialized, coordinated assistance is available when needed.

**PARTICIPATION — A KEY TO MOTIVATION.** Motivation to produce and motivation to participate are related. Man tends to be a gregarious animal. Subordinates in the industrial organization want to know what is going on, and generally want a part in it. Persons who feel no desire to participate, or who feel that their ability to participate has been cut off or minimized, will tend to produce ineffectively.

Too often behavioral considerations are thought of as beginning and ending with the quality of leadership exercised by company managers. The organization itself has much to do with behavior, however. The ability to participate, for example, can be minimized by *structure*. If the layers and channels are so many and so rigidly adhered to that people feel themselves excluded from the total organization, they feel that they cannot participate. In fact, they may be unable to participate. This condition fosters a centering of interest in the immediate or local organization (the section or department) thereby magnifying special interest in the sub-unit. Furthermore, a real or felt inability to participate in the company may cause individuals to concentrate their productive efforts in some external organization.

**INTERDEPENDENCY OF CONSIDERATIONS.** The statement and brief discussion of organizational considerations focuses attention upon the distinct interdependency existing. Figure 13 presents a dimensional view of the broad considerations. Manpower managers realize that no organization can be "organized" unless that condition is facilitated by the organizational processes used by management, and by a



Pandora's Box Contains The Organization

## A DIMENSIONAL VIEW OF ORGANIZATION THEORY

Figure 13

company structure designed to foster that condition. They also realize that if the structure or process spoken of stands as a cause of negative behavior, an "organized" condition will not exist. Each phase of organization theory, or each broad set of organizational considerations, depends upon each other phase. This interdependency sets the stage for the work of manpower managers. On the one hand it immediately suggests the vital importance of proper recruiting and selection. On the other it suggests the importance of developing, maintaining, and compensating employees in proper fashion. Basically, this realization can be traced to the importance of assuring, if possible, behavior that will enable the building and maintenance of proper organization.

### THE FUNCTIONAL NEEDS OF AN ORGANIZATION

An organization is dynamic. It can be likened to a living thing. It has needs which must be satisfied if it is to survive. These needs pertain to the growth and functioning of the company and its people. They hold true regardless of the size or of the nature of the business.

When discussing organization, normally one looks at the very complex theory, thinking for the most part about the rules or principles upon which an organization supposedly is built. Either that, or he considers organization in terms of *what it is* and *what it means*. If people are to be effective within an organization, however, managers also must consider what the organization *requires* of them.

These requirements or needs are important to the profit, the productivity, and the durability of a company.<sup>16</sup> They are *functional*, and tie together the processive, structural, and behavioral aspects of organization. Five such needs exist.

**REASONABLE LIFE CERTAINTY.** A fundamental concept of industrial organization holds that if the members of a company have reason to believe that they and their organization have a future, they can be expected to produce. Without production there can be no industrial life.

The idea of life certainty is dynamic. It implies, and in fact demands, that progress and progressive attitudes exist. This reflects the basic management viewpoint: a manager should take positive action, he should make, not await, events; he should work in the present with an eye constantly on the future.<sup>17</sup> Unless this is management's approach, the organization tends to stagnate and eventually die through its inability to escape the decline in the "fourth stage" of growth indicated in Figure 12. Only through progressive action based upon progressive attitude can organization escape that decline and have reasonable assurance of life certainty.

**UNITY IN COMMAND.** Chaos and disorganization occur in the absence of unity in command. Such conditions endanger both the present and the future operation of an organization.

Generally the term "unity" is associated with "singleness." Ordinarily the term presented is "unity of command" instead of "in command." We depart from traditional terminology here because of the typical reference to "singleness." The rule holds that every man should have *one, and only one, boss*. The typical corollary holds that, in the absence of "singleness of command," a progressive deterioration of compatibility among people in the organization will develop and destroy coordination, production, and durability. Both the rule and the corollary are true and important, however, they leave an incomplete picture.

Two additional points warrant attention. *First, unity* can exist where *command* results from committee or board action. Whether unity does or does not exist depends largely upon the degree of personal compatibility existing within that committee or board, and upon the presence of a reasonable homogeneity of viewpoint and goal-interest. If these requirements are met, unity lies in the collective action of the board or committee members, and the fact that a properly functioning group of this kind expresses itself through *a voice of authority* —

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<sup>16</sup>William J. McLarny consultant, author, and inspiring teacher, has pointed out that the "priority" relationship of durability to profit and productivity is significant because short life makes other facets of limited importance.

<sup>17</sup>Drucker, *op. cit.*, Chapters 2, 12 & 27, *passim*, cf. Stuart Chase, *Roads to Agreement* (Harper & Brothers, New York, 1951), p. 235.

a boss. Furthermore, responsibility for results rests with that "voice," *not* with the committee. The "command" of the organization thus is said to have, and in fact does have, "unity." Manpower managers therefore seek persons having the required compatibility and homogeneity patterns when selecting manpower.

The *second* point is that "singleness" of command might be used as an excuse to insist upon blind acceptance of command and as an excuse to develop dictatorial command. Professional managers (including manpower managers) realize that no effective command exists unless the leadership exercised is acceptable to those being led — witness the eventual end of most of the world's dictators. One concludes from this point that "command" is not a "one-way street." To have "unity" there must be acceptance by the subordinate as well as "singleness" in the command. This requirement again brings into play the important idea of homogeneity and compatibility. Organizations thus require more than just unity of command. They require regular application of the "one boss" idea, full recognition of the "acceptance" idea, and careful implementation of the homogeneity and compatibility points — they require unity *in* command.

**HOMOGENEITY AND INDIVIDUALITY.** Every organization requires homogeneity of viewpoint on the part of its personnel. A danger exists, however. Some may construe homogeneity as meaning that individuality is unwelcome. This is a wrong assumption, for homogeneity can and must exist in the presence of individuality if an organization is to progress.

Individuality, guided by a common goal, strengthens the opportunity for continued organizational life. From such guided individualism, farsighted ideas arise. One concludes that truly effective organization never occurs in the presence of conformists. Individuality, not conformity, is basic to initiative, and initiative is basic to progress. The great inventions, the technological advances, did not come from conformists; however, initiative without direction can lead to chaos. Homogeneity provides the necessary direction.

**POLICY.** Effective organization requires effective goal attainment, but people cannot attain goals they do not know. As pointed out previously, policy is the statement of goal or objective: it is the voicing of the company's doctrine. To be effective, and to foster effective organization, policy must be based upon sound criteria. It must be flexible to facilitate the meeting of changing conditions, but it requires continuity. Policies frequently are spoken. They should, however, be written — published and lived up to. Policy is necessarily available to all, and known to all. Without policy, coordination becomes difficult, to say the least.

Newman defines policy as:<sup>18</sup> “. . . a general plan of action that guides members of the enterprise in the conduct of its operation.” He points out the hierarchical nature of policy, that is, how it broadens and becomes less restrictive as one climbs the organizational ladder.<sup>19</sup> A “top management” policy thus will have to do with a broad plan of action which may require several operating levels to establish *procedures* which, in turn, will require specific *methods* in order that the policy of “top management” can be carried out. From the “top,” an operating manager’s procedure will be considered as a *procedure*; but operating managers (division or department heads, foremen, and the like) may consider it to be *their policy*. Operating management will set up what the “top” will call *methods*; but to the operating management these will be considered as *procedures*. The manpower manager knows that the worker will view a method as a *method*, but will consider, or tend to consider, a procedure as a policy, and the “top’s” policies as policy also.

*THE FIVE PRINCIPLES OF AGREEMENT.*<sup>20</sup> The durability, productivity, and profitability of an organization come about through the application of human effort. That effort must be coordinated, directed toward a common goal, and as conflict-free as possible. In other words the behavior of people is important to the success of organization.

The organization requires harmony. It therefore needs managers who will *lead* rather than “drive.” It needs managers who apply the following principles.

1. *The Principle of Participation* An employee’s motivation is improved when he has an active part in the running of a company. Alert managers implement this participative approach. They avoid the hypocrisy, however, which holds that the employees or *their* organization should *run the company*. Chase points out that:<sup>21</sup> “The keynote is doing things *with* people, not *to* them.”

2. *The Principle of Group Energy* Group energy is usually thought of in terms of mob violence or panic. Note, however, the group energy on the football field, in the hospital operating room, and on so many assembly lines and in so many staff conferences. Correct release of group energy requires flexible channels of communication, development of men, and informed and vocal people, regardless of their position.<sup>22</sup> The effective leader realizes that participation by subordinates involves guided release of group energy.

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<sup>18</sup>Newman, *op cit.*, p. 41.

<sup>19</sup>*Ibid.*, pp. 41-54, *passim*.

<sup>20</sup>Chase, *op. cit.*, p. 235.

<sup>21</sup>*Ibid.*, p. 236.

<sup>22</sup>Kurt Lewin, *Resolving Social Conflicts: Selected Papers on Group Dynamics* (Harper & Brothers, New York, 1948).

3. *The Principle of Clearing Communication Lines.* No organization can become or remain effective unless information flows quickly and accurately through its dimensions. Professional managers strive to keep the channels of communication as simple as possible.

4 *The Principle of Facts First* Emotion can destroy an industrial organization. *To permit emotions the right of primacy is not only impractical, it is downright wrong* if an organization is to operate effectively. Effective and durable organizations are guided by people who seek and operate in the light of fact.<sup>23</sup> The effective manager leans to whimsy, opinion, the "calculated risk," and the "educated guess" *after all possible search for fact has been exhausted.*

5. *The Principle of Security* Organizational life-certainty and individual security have a distinct relationship. The insecure individual represents a threat to the durability of the organization, and the company which lacks reasonable life-certainty threatens the well-being of the person. The rule holds that effort to maintain or improve the durability of an organization will be made easier if it includes efforts to develop a feeling of security on the part of the employee. Corollaries to this "functional need" of an organization may be stated as follows:

(A) People within the structure who feel secure are less interested in internal conflict(s), but may become complacent and thus reduce their effort to search for facts

(B) Where the personnel feel secure, their ability to concentrate upon fact instead of fancy increases, and greater productive attainment can be expected — provided feelings of complacency do not take over.

(C) Good pay and steady work in a desirable environment attract "good" employees and minimize the chance of internal conflict. What may be considered good by one may not be so considered by another, however, and the individual's position in the hierarchy also has an effect upon such feelings.

(D) The living, growing organization is durable and in itself conducive to personal feelings of security on the part of the people involved. Stated in another way, well-paid people who feel they belong and are wanted, and who understand the needs and feelings of others, and participate in the decisions, only infrequently fall heir to conflict

## DEFINITIONAL PROBLEMS

Many organizational problems plague manpower managers. Among the most prevalent are those related to the distinction between "line"

<sup>23</sup>See Melvin Mandell, "Upgrading Industry's Plant," *Dun's Review*, Vol. 77, No. 3, March, 1961, pp. 68 and 73. Some psychologists note that skillful managers "play hunches." This is, of course, true. These "hunches" are, however, the result of long and often painful experience with facts. When a hunch is played, or a "snap judgment" is made, the mind of the skilled manager is, actually ticking off the facts, assembling them, and coming up with an answer someone else could arrive at if he had the facts attained through experience.

and "staff," and those concerning span-of-control and informal organization. Such problems interfere with communication, hamper decision-making efforts, lead to or magnify conflict, and, in general, jeopardize the effectiveness of organization.

**LINE AND STAFF.** Traditionally, these terms denote *action* and *advice*. The line commands, takes action, the staff advises, facilitates the line's action. Traditionally the line organizes, coordinates, assembles, and directs the factors of production, whereas the staff plans and administers control for the line.

In today's industry, every unit (line or staff) to some extent, does take action, provide advice, organize, plan, direct, coordinate, and administer control. Thus it is difficult to apply the traditional definitional views to the organization of the present. The problem is eased, however, if one recognizes the following pattern of distinction.

"Staff" jobs and units exist to facilitate the production and distribution of the item or service the firm seeks to market. A staff individual, job, or unit aids the line in achieving the purpose for which the line exists. Staff does those things assigned to it by the line. It is created by line action. Staff, then, provides specialized *administrative support* and *physical service* to the line.

**SPAN-OF-CONTROL.** Traditionally this principle defines the number of subordinates that a supervisor can supervise effectively. Sometimes one hears it said that the magic number is seven, or nine, or even five. Such impressions achieved logical eminence because of the mathematical examination of the supervisor-subordinate relationships as performed by Graicunas.<sup>24</sup> Actually the mathematics merely defines the relations development which *may* take place. Let us consider the picture in a different light.

1. Span-of-control is not a principle having a right of primacy. It is *one* of the principles involved in span "theory." Span specifies several things: (A) supervisory or managerial reach and response narrows as the hierarchy rises, but (B) responsibility in terms of depth, opportunity-search, and decision-significance broadens as the hierarchy rises. In addition, (C) the limitations to supervisory and responsibility span exist as a function of communication, but (D) time, and the changes wrought by it, as it affects people and things, serves to make span a changeable factor.

2. The question of correct span involves not numbers, *per se*, but functions and people. Thus, the sub-principle of span-of-control can be stated as follows:

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<sup>24</sup>V. A. Graicunas, "Relationship in Organization," *Bulletin of the International Management Institute* (Geneva: International Labour Office, 1933), L. Gulick and L. Urwick (eds.), *Papers on the Science of Administration* (New York: Institute of Public Administration, 1937), pp. 181-187.

The number of subordinates a given supervisor can effectively supervise at any given time is a function of.

- . . . The amount of detail involved in the work.
- . . . The similarity and complexity of the jobs or tasks to be supervised.
- . . . The complexity of the channels of communication involved.
- . . . The compatibility of the people involved – the supervisor to his subordinates, superior, and peers.
- . . . The competencies of all the people involved.

The importance of all this rests with the point that if an organization seeks to utilize minimum effective managers, numerous “layers” will develop in the organization, and the same thing may occur if minimum effective employees are hired. Concerns often use as an excuse for poor selection policies and procedures the idea that span-of-control must be kept narrow, or managerial span increases the complexity of communication channels, threatens the compatibility of relationships, leads to development of kingdoms of self-interest, and endangers goal achievement. This narrowness of span so dilutes managerial and supervisory jobs, however, that the individual acquires little of the experience required for promotion to the next level.

The importance of a proper understanding of span is enhanced by considering several of Drucker’s remarks.<sup>25</sup>

Every additional level makes attainment of common direction and mutual understanding more difficult. Every additional level distorts objectives and misdirects attention. Every link in the chain sets up additional stresses, and creates one more source of inertia, friction and slack.

Above all, especially in the big business, every additional level adds to the difficulty of developing tomorrow’s managers, both by adding to the time it takes to come up from the bottom and by making specialists rather than managers out of the men moving up through the chain.

Some managers hold that as the need for control increases, the span-of-control must, *per se*, decrease. This belief seems to stem from the “error margin” or “economic limitation” concept, that the weaker the economic capacity or the greater the economic necessity of an organization, the less the error permissible in decisions; the less the permissible error, the greater the need for control. “Good” management, however, insists that permissible error and the need for control are relatively constant. Such management also realizes that effective

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<sup>25</sup>Drucker, *op. cit.*, p. 203.

control may be significantly reduced if span-of-control is unnecessarily narrow.

**INFORMAL ORGANIZATION.** Certain characteristics distinguish the informal from the formal organization. Familiarity with these distinguishing marks enables more ready identification of informal organizations by managers.

1. *Development:* informal structures often develop by chance or simply because of length of association. Some common interest pattern will bind together such structures. Their existence may be due to a common interest in sports, politics, extra-curricular activities, or a common dislike or conflict. They develop because of the job and its required associations, or participation in car-pools, or merely because of living in the same neighborhood, or belonging to the same club or church. Such development may be unplanned — and usually is — or it may be carefully or even insidiously planned.

2. *Goaling:* ordinarily the goals of informal organizations lie in a different direction from those of the formal. These goals may or may not be directly or highly influenced by economic considerations.

3. *Leadership:* the leader of such a structure may or may not be the leader in the formal structure — may or may not be the head of a department, a foreman, or even a vice-president. Generally the leadership position is achieved by means of threshold or subthreshold individual decision — a covert election — which may be directly influenced by the group, and which will directly affect the group.

4. *Membership:* manpower people should recognize that membership in such organizations falls into three categories, the associate, the periphery, and the isolate. Recognition acquires significance because of the conflict potential present in such a formation. The *periphery* member associates himself with the rest of the group, but the others merely tolerate him. The *isolate* is just that — he wants and asks for no part in the organization, and the members do not even tolerate him *except*, perhaps, as necessitated by the performance of work.

The design and nature of an informal organization's membership may, and frequently does, change. An isolate may change, as may a periphery member. He may become the leader of the group, and the shift may occur with extreme rapidity; and an associate may suddenly become a periphery or isolate. The situational requirements, as well as the personalities and base interests of the involved people and their work requirements, tend to cause the shifts. It would be of questionable ethics to force such a change, but manpower people may occasionally find it necessary to do just that.

**AUTHORITY.** Authority is variously defined. Previously it was pointed out that authority is "the right to do." Koontz and O'Donnell define it as the ". . . legal or rightful power; a right to command or

to act.”<sup>26</sup> To the psychologist, authority appears as a constraining influence which reduces the action-choices of the individual or the group.<sup>27</sup> Without question, it is a property of the situation.

Misunderstanding or misapplication of the term authority often causes conflict. The *prime error*, as pointed out before, is to treat authority as a substitute for leadership. Managers often make this mistake. The following points are presented in an effort to identify some of the salient characteristics of the term.

1. *Authority – A Necessity.* Consistency in internal objectives depends upon a power within the organization.<sup>28</sup> Authority therefore appears as the foundation of organization. The rule appears: the personnel within each division, subdivision, and the like, *must have the authority necessary to accomplish the assigned mission*

2. *Authority Is Impersonal.* Like any legal right, authority is predicated upon the logic of need, it is institutionalized. It therefore is defined by the structure it serves, and one identifies its degree by study of the job and the over-all organization within which the job occurs.

3. *Authority Is Personal.* Because man interprets and applies authority, there is a personal side to this impersonal factor. It is this side of the coin that gives manpower people, as well as all managers, the greatest amount of difficulty, for how man applies his authority depends upon leadership. The difficulty, it is often easier to fall back upon legal right than to apply skillful leadership.

4. *Authority Is Natural.* Being defined by the job and the position within a structure, authority is held to be inherent, or natural, in the given case. For example, a man has a right to assign work to another man because he holds the job of foreman, or the personnel department has the right to recruit workers due to functional assignment. Both are instances of inherent authority.

5. *Synthetic Authority.* There comes a time in every organization when urgent necessity demands that authority be created which has not previously existed, or which does not exist in the usual case. Such authority may be referred to as being “synthetic.” It exists to handle some unusual or emergency situation which cannot be dealt with through a job’s inherent authority.

6. *Authority Delegation.* When a manager assigns authority to a subordinate, it is said that he delegates that authority. Obviously, because people must be placed in jobs, or make jobs, superiors must assign those jobs. Although the authority of a job is defined in that job, the individual through assignment picks up that authority – he

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<sup>26</sup>Koontz and O'Donnell, *op. cit.*, p. 47.

<sup>27</sup>Robert Bierstedt, “An Analysis of Social Power,” *American Sociological Review*, XV (1950), pp. 730-736, Roger Bellows, “Toward A Taxonomy of Social Situations,” presented at Symposium on Dimensions of Stimulus Situations Which Account for Behavior Variance, Texas Christian University (Sponsored by Office of Naval Research, Group Psychology Branch), April 20 through 22, 1961.

<sup>28</sup>Mooney, *op. cit.*, pp. 6-7.

does not pick it up unless he is placed in the job. The manpower problem evolves because people, being people, often seek to pass off to others those things which they should have done or seen to but do not wish to handle. They claim, by way of justification, that this is "delegation." Actually, as most realize, this is nothing but "buck-passing." Such an action has the effect of establishing a synthetic but unjustified authority. Only in the emergency should a superior "delegate" synthetically.

7. *Authority Is Dynamic.* Since structure and job define natural authority, it follows that authority exists in an active state. It changes as the job and structure change.

8. *Authority Is Static.* Natural authority has a static aspect inasmuch as it cannot be relinquished except in the presence of redefinition or reassignment of job, redesign of structure, or of an urgency leading to development of correct synthetic authority and delegation.

9. *Authority Is Hierarchical.* Since authority is defined by job and structure, it is normal to find that it has a hierarchical affect. The janitor has the defined (inherent to the job) right to perform sundry cleaning operations, the maintenance foreman enjoys the inherent (defined by the job) right to supervise, instruct, discipline, and assist the janitor, and the plant superintendent has the authority to control all his subdivision, including that of maintenance.

Horizontal variation also exists. This stems from functional difference at the respective levels of a structure. Thus the authority [inherent right as defined by the job(s) involved] of the engineering department differs from that of other departments on the same organizational plane. There is, then, both a scalar and a functional foundation to the hierarchy of authority.

10. *Authority — Sharing.* The authority present in a given one-position job is not shared. In a situation where two positions in a given job exist in an identical manner, it is possible that the authority in the job is split and hence shared. Two branch managers, for example, with branch offices of exactly the same size in relatively similar communities, and the same or relatively the same markets, may be considered as sharing authority if one is speaking of authority as contained within the total organization of the firm. If one is speaking of the specific job of Manager of Branch A, there is no sharing.

Another view pertains to committee action. Where committees exist as policy or operational management units, one may find sharing of authority. Under such conditions the set of processive and behavioristic principles indicates that coordination depends largely upon the balanced development of authority. This in turn points to the sharing of which we speak (the joint right to consider). Such sharing would not include final "command authority," however.

**RESPONSIBILITY.** Complications regarding responsibility arise because of the definition itself, and because of human reaction to it. Responsibility is considered as synonymous with liability and accounta-

bility. In essence, then, “. . . responsibility is, . . . obligation.”<sup>29</sup> The manager has the “right” to lead as defined by his job, and the “obligation” to lead well as defined by his status *and* job. Full understanding and proper use of responsibility can be facilitated by the following.

1 *Responsibility Is Personal and Impersonal.* Responsibility follows authority, it takes on many of the same characteristics. The janitor has the right (authority) to do the cleaning needed. He also has the obligation to do that assigned series of tasks, and do them properly. This is all part of the definition of that job, and, in a sense, is impersonal. This facet of responsibility may be called the “obligation to.”

Responsibility “for” (a liability or accountability) also exists. The superior has a responsibility *for* the welfare of his subordinates. This too follows the definition of the job and accompanies the authority.

There is, however, a personal side to responsibility. Although the psychologist treats the term “authority” in a motivational sense, the term “responsibility” is even more motivational in nature. The terms “obligation” and “accountability” imply self-motivation, self-reaction and the like. They refer directly to personal application.

The manpower problem is that people frequently refuse to live up to their responsibility, in either the personal or the impersonal sense. They frequently attempt to exert the power of defined authority with no admission to the accompanying set of responsibilities.

2 *Responsibility Is Inherent.* Like authority, and as indicated in the foregoing, responsibility stems from the job or the structural position. Each member of an organization thus has a *particular* accountability, the extent and exact nature of which depends upon what is to be done as defined by the job at hand.

To the manpower manager, this points out the need for proper job analysis procedures. Job analysis provides the identity of the limits of responsibility in each job. Without these limits, the job holder would be dependent upon the whim of the superior, and the superior might be unaware of the “real” functional limits of the subordinate. These would lead to confusion, conflict, and make coordination difficult, to say the least.

Although inherent, responsibility does not lend itself to rigid definition. Definition must be sufficiently broad to permit the handling of emergency situations not normally a part of a job. Thus one finds a statement in a job definition. “. . . and shall be responsible as directed by the supervisor.”

Some fall upon this type of reference with dog-like ferocity. They plead that because of this responsibility can be delegated. This is *not* true, nor is it the implication of such a statement. Responsibility follows the job; it arises at time of assignment to a job. It is not delegated in the sense of graciously allowing, or furiously insisting, that a subor-

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<sup>29</sup>Koontz and O'Donnell, *op cit.*, p 55.

dinate be responsible. If, in an emergency, one establishes a new series of tasks and assigns a subordinate to them, that subordinate picks up the responsibility inherent to the assignment.

3. *Responsibility – Hierarchical.* As jobs develop, responsibility, being inherent to a job, also develops and attains a scalar character. In this connection one notices that, as the organization hierarchy increases, so does the scope of the responsibility of the individual.

Horizontal variation exists as well as vertical. Again, this arises as the natural result of the definition of a job. One therefore concludes that, like authority, responsibility has both a functional and structural character.

4. *Responsibility Changes.* The personal nature of responsibility plays a significant part in explaining the line and staff relationship in organization. Because it is personal, responsibility can, and does, shift as situations demand. One finds, therefore, that staff responsibilities tend to shift more rapidly than line, for staff work (and people), as a support or service function, tends to be more sensitive to situational change.

5. *Responsibility – Dynamic.* As jobs change, so does accountability. In this respect, responsibility is like authority, it shifts more rapidly, however, as mentioned before. Furthermore, responsibility may be discharged by a single act, and may result from an informal stimulus. Both factors identify a greater flexibility than one finds attributed to authority.

6. *Responsibility – Static.* Unless the principle of command unity is violated, a given individual's obligation remains in given dimensions. That is, to his superior, subordinate, peer, and the like, as specified by the job and the situation. Similarly, the accountability of a group or a department remains with its superior unit.

The manpower problem, in both these points, revolves around the fact that people attempt to escape their obligations. This may arise from ignorance of correct procedure and true obligation, or it may stem from deliberate effort to avoid obligation.

7. *Responsibility – Final.* Final authority and final responsibility are often spoken of as if they were interchangeable terms. In a sense they are. When one speaks of final authority, he refers to the highest authority in a given structure or system, and when he speaks of final responsibility he refers to the highest form of accountability present in a given job or department, or attributable to an individual. In either case, the reference points to the uppermost source within some given structure. Thus one finds that *one cannot escape his responsibilities.*

This comment brings us back to the question of "delegation." Responsibility, like authority, is a natural or normal factor. Every superior enjoys the right or authority to issue orders, and such issuance leads naturally to the holding of the subordinate to an obligation. The *true* leader realizes that he has no right to issue or exact an obligation greater than the subordinate's job definition requires, except in the emergency situation. In the emergency such responsibility, having

been ordered and exacted, would be of temporary duration. The point is that although responsibility, like authority, normally should be defined by the job, there does and must exist an assignable accountability; otherwise, the superior could not meet the unexpected.

The good leader strives to develop a work unit of sufficient training to be able to recognize emergency and assume tacit approval of temporary responsibility. For example, the nurse who notes that the patient is going into shock calls the doctor but takes steps to treat for shock, or the account clerk who, while walking down the hall, notices the valve part way open on an incoming gas tank, shuts it off, or the subordinate, waiting for a spec-list, notices a time error on a route-sheet and brings it to the attention of the superiors. Of course, many instances of so-called "assumption of tacit approval" are nothing more-or-less than examples of tertiary responsibility which would be defined in a properly-constructed job definition.

8. *Responsibility – Shared* In cases where two persons fill two positions or three or four, but have a common job title and a common job description and are obligated to common tasks (four operating rooms, four anesthetists, five drill presses and five operators, and each assigned like obligations), one speaks of shared responsibility just as those involved would of shared authority. Although such situations do not occur in just this way very often, they do arise. When like obligation is exacted by job edict or dictate, and when persons may exchange positions and tasks without changing their responsibility-authority pattern, it appears to be correct to say that they share a responsibility.

## PROBLEMS OF MISAPPLICATION

Man creates many of his problems. This is certainly true in the case of organizational issues. Frequently he misapplies principles, either through some reckless application or through a deliberate disregard for true meaning. In any case, manpower managers may become involved because of resulting grievances or the effect such misapplication may have upon the manpower functions.

*STAFF IN COMMAND OVER LINE.* Occasionally one finds a staff unit making line decisions. In the manpower sense, for example, the employment department may have *complete* and *final* authority for hiring. Such a practice robs the line supervisor of status, puts him in the position of having no say regarding *his* manpower, and makes him responsible for persons even though he has no authority regarding their selection.

Such situations lead to conflict between line and staff. They tend to make the supervisor ridiculous in the eyes of his subordinates, thereby raising another possibility of conflict. Such situations may also cause reduced initiative on the part of a supervisor.

*INEQUALITY OF POSITION.* In some companies staff and line units of equal importance have unequal hierarchical status or position.

As a case in point, consider the company that suddenly found it could not recruit well-educated people to learn the basic line jobs and work up the managerial ladder through the line. On the other hand, the company had no difficulty acquiring people for the beginning staff jobs. These beginning positions were not equated. Pay was better for the staff jobs, working conditions were better, and initial responsibility and authority were greater.

*LACK OF LOCAL SUPPORT.* In some cases the line is not given support where it is needed. Frequently this condition arises as a result of uncontrolled, unplanned growth wherein departments suddenly find themselves overburdened, particularly with paper work. As a case in point, a foreman found himself confronted by severely decreased tolerances and a speed-up in schedule. Both requirements were accompanied by increased amounts of records work. This became such a burden that he actually spent better than 60 per cent of his time off the "floor," and he began to lose control of his people. Fortunately his problem was discovered quickly and he was provided with a schedule clerk and an administrative clerk. He regained control and was able to spend better than 75 per cent of his time on the "floor."

*LINE'S VOICE IS AUTHORITATIVE.* The staff exists to assist the line; it is created by and for the line. A request from a line unit to a staff unit hence should be considered authoritative. Furthermore, a report from a line unit to a staff unit may be purely informative, but it also may be authoritative. For example: a general foreman prepared a written report to engineering stating the results of an employee's experiment which appeared to correct certain very costly problems concerning production. The method developed by the employee could not be installed as "routine" until an order came down from the vice-president of manufacturing, and this would not take place until engineering provided a report. Engineering took no action on the general foreman's report. The general foreman complained loud and long and finally something was done.

All of this took time and cost money, and very hard feelings developed. None of this should have happened. A foreman, and certainly a general foreman, by job definition, has the *right* to expect immediate action from his immediate superior when a personal complaint is made, when an action report is submitted, and when a report regarding methods or process change is submitted. The same is true if such a report is submitted to the immediate support or service staff agency.

Typically, errors in the application of authority fall into one, or some combination of, the following.

. . . Improper delegation — at the wrong time or place, or to the wrong person or job.

. . . Improper definition — poor definition of jobs or development of departments not equated with, or improperly equated with, responsibility

. . . Incompatibility with the concepts of good structure — this tends to lean toward work undone, as well as personal conflict.

. . . Application of “co-optation” (the *defensive* mechanism whereby people attempt to protect themselves from real or imagined problems by assuming authority where it is neither their right nor wise for them to do so), or usurption (the *offensive* mechanism whereby people assume authority incorrectly).

. . . Application of authority in a dictatorial instead of a democratic manner leads to rapid development of human conflict.<sup>30</sup>

**PEOPLE AND RESPONSIBILITY.** At times managers and others treat responsibility as a purely personal matter having no foundation in the job or situation at hand. Misapplication under such circumstances falls into three categories.

. . . A refusal to accept the responsibility inherent to the job, or an attempt to pass it to another.

. . . An attempt to usurp the responsibility inherent to another job.

. . . An attempt to co-opt responsibility belonging elsewhere.

Frequently responsibility problems arise due to the failure to define properly that responsibility in job descriptions and when assigning men to their work. Sometimes this is due to management failure, sometimes to the situation at hand.

## DIAGNOSTIC AIDS

Managers require some means of diagnosing their situation, of telling where their organizational problems may originate, of predicting where they will arise. Like the doctor, managers need a way of checking out the patient before deciding what, if anything, should be done. The following aids pertain specifically to issues evolving from, or involving, organization.

**STRUCTURE AND RELATIONSHIP DIAGNOSIS.** An organization's structure and internal relationships may be inadequate for existing or planned future conditions. Table 5 offers guides for checking out such a situation.

**BREAKDOWN OF RELATIONSHIPS.** Many reasons may account for the destruction of relationships within an organization, and

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<sup>30</sup>See Ronald Lippitt and Ralph White, “An Experimental Study of Leadership and Group Life,” *Readings In Social Psychology* (Henry Holt & Company, Inc., New York, 1947), pp. 315ff.

TABLE 5

GUIDES TO PROPER ORGANIZATIONAL STRUCTURE  
AND STRUCTURAL RELATIONSHIPS

Guides	Remarks
<p>Ordinarily divisions of an organization should be formed with "the nature of the job and the expected performance in mind," i e , a division should be composed of those activities which are relatively similar and complementary, and lead directly to that performance</p>	<p>Combination of dissimilar or unrelated jobs makes coordination difficult for it confuses authority-responsibility patterns and magnifies or creates human differences</p>
<p>(A) Nature of the Job -- consideration of similarity or ability to complement in relation to equipment, location(s), skill(s), material(s), or general activities</p> <p>(B) Frequency of recurrence as regards the above considerations must be accounted for</p>	<p>(A) Internal functionalism is a natural reflection of similar or complementary activity</p> <p>(B) Regular recurrence tends to make a function of major importance as regards related activities</p>
<p>Divisions of an organization should contain those support activities which, if not present, will appreciably reduce the productivity of the unit, or make relations with other divisions difficult to maintain in harmony</p>	<p>Coordination at any level is at best ineffectual when based upon inadequate information or unsound or untimely advice In addition, the coordinator must be able to focus attention upon major issues and over-all control</p>
<p>Subdivisions of any structure should be as self-sufficient as is economically possible, and should be accountable for all actions</p>	<p>Self-sufficiency and self-accountability minimize time spent in "channels," facilitate control, make managers manage, and help fix responsibility</p>
<p>The entire structure of an organization should reflect considered study and application of the Span-of-Control concept</p>	<p>Every effort should be made to maximize supervisory capability Every effort should be made to hold supervisory responsibility within the Span-of-Control, but not at the expense of capability So doing minimizes coordinative difficulty Levels, however, must be minimized Levels cost money, confuse and slow down communications, and maximize the possibility of internal conflict</p>
<p>(A) One should seek to expand the Span-of-Responsibility in order to facilitate manager development and reduce levels in structure and reduce accompanying costs</p>	<p>The "top" of production, sales, manpower, fiscal and research, should be equated, as well as geographical or product divisions (so long as they are of equal importance)</p>
<p>Major divisions of an organization should be horizontally equated -- on the same plane, of the same status Major units should not be subservient to each other</p>	<p>(A) Subserviency builds conflict unless based upon factual need and inherent right, and unless recognized as such by involved persons</p>

TABLE 5|(Continued)

<u>Guides</u>	<u>Remarks</u>
<p>Coordination of major divisions should provide for equal attention to special needs</p>	<p>The special needs of one unit should have precedence only when factual analysis shows this to be in the interest of the company as a whole -- normally the result of an emergency or a new event.</p>
<p>Physical and administrative service units of like importance should be hierarchically equated.</p>	<p>Subserviency should be avoided in the interest of harmony and coordinative ease and to facilitate over-all control.</p>
<p>Subdivisions of "line" and "staff" units having relative importance and like reporting channels should be hierarchically equated.</p>	<p>Subserviency should be avoided in the interest of harmony and coordinative ease and to facilitate over-all control.</p>
<p>"Staff" divisions and subdivisions should be so established that they do not command "operating" (line) units, and so they cannot bypass those "operating" units which they are designed to support (except in emergency).</p>	<p>In the interest of harmony and coordinative ease, and to facilitate the provision of proper advice and in the interest of control.</p>
<p>Major "operating" and "supporting" units should be equal under their coordinating "head."</p>	<p>(A) To protect command unity.                      (B) To exercise emergency control.                      To maximize command unity, harmony, and coordination, to aid control and flexibility attainment, and to help obtain common interest.</p>

many results may occur from such destruction. The pattern appearing in Table 6 seems to be most typical.

*SYMPTOMS OF ORGANIZATIONAL MALFUNCTION.* The previous material presupposes the existence of malfunction. The aids are useful in deciding what to do to correct the malfunction. Suppose, however, that the manager does not know, but merely suspects, that malfunction exists: what then? In such a case, he needs a diagnostic aid which has a certain predictive capability, and he might very well turn to factors presented in Table 7.

**SUMMARY**

Organization is the key ingredient of any receipt for industrial success. Without organization, effective work can result only from chance. Organization involves people. It is developed by, and composed of, people. It provides the framework in which they can unite to perform required work. Managers have the responsibility of organizing that work and the people to do it. Because of its distinctly human composition, and because it affects people and is in turn affected by them, organization becomes a primary consideration of manpower managers.

TABLE 6

## RESULTS IN THE PRESENCE OF A BREAKDOWN OF RELATIONSHIPS

<u>The Usual Result</u>	<u>The Typical Reasons</u>
Lack of Coordination	Improper assignment of people to work. Improper assignment of work to units. Improper assignment of units to coordinative positions. Too great a hierarchical distance from coordinator to function requiring coordination. Too much "time" pressure upon coordinator. (A) Related to Span-of-Control. (B) Related to capability. (C) Related to inadequate "staff" work. (D) Related to inadequate structure, process, or personnel.
Inadequate Communication	Due to any or all of the above. Due to too many <u>or</u> too few levels in the structure for the existing case. Due to an inadequate system of control. Due to improper groupings of units or poor personnel assignments. Due to lack of command unity.
Improper Authority and Responsibility Patterns	Due to failure to delegate or improper delegation. Due to failure to provide authority commensurate with responsibility Due to failure to put responsibility at lowest possible level. Due to failure to insist upon the exercise of the Exception Principle. All of which means that coordination and communication break down.
Quality of Management is Reduced	All of the above lead to development of negative attitudes. Hence, the ability to recognize opportunity and to make "good" decisions is minimized.

As important as an understanding of organization is to the manager, it is no more important than his understanding of communication. Managers who cannot or do not communicate effectively will not manage effectively. The ability to communicate and to handle communications problems requires more than the physical ability to speak or write. It requires an understanding of the behavioral, processive, and structural aspects of communication as described in Chapter 4.

**TABLE 7**  
**SYMPTOMS OF ORGANIZATIONAL MALFUNCTION**

<u>Predictive Factor</u>	<u>Considerations</u>
Levels	Growth of a large number of levels, or the sudden development of levels or their isolation <u>indicative</u> of confusion, failure to remove deadwood, over-control, failure to relinquish or delegate authority, and of the development of centers of special interest, possibly indicative of over-delegation
Pressure	Pressure for coordinators, for aids and increased personal secretarial staffs, and the insistence that "more time is needed" <u>indicative</u> of incapable supervisors, a lack of clear job definition, of uncontrolled growth and of clear knowledge of goals, also, improper delegation, and a lack of staff assistance
Committees	Overdevelopment of committees, incessant meetings, and committees for this and that, and committees operating within and through the "line," making decisions instead of fully analyzing advice and possibilities (not acting outside the line as in the case of Multiple Management)  <u>Indicative</u> of supervisors who are technically unsure of goals which are not clearly defined and of prima donnas requiring ego support, and indicative of a management unwilling to assume its responsibilities -- and sometimes of a management running "scared "
Channels	Rigid adherence to channels (vertical) <u>Indicative</u> of self-interest, for when held to the vertical channels people tend to think of function instead of over-all business Also indicative of insecurity in "high places" and the usual and corresponding lack of faith in subordinates To be expected is a group of specialists almost totally dependent upon high level service units for general business decisions Management fails to develop, and manpower replacement becomes a real problem  Over-utilization of vertical channels, constant waiting to get through, late arrival of information: <u>indicative</u> of at least the following (1) violation of the Exception Principle, improper delegation of authority, possible unsatisfactory assignment of personnel, and unwise fixing of responsibility, (2) over-control, and (3) generally poor understanding of administrative procedures  Channel hopping, and too frequent utilization of horizontal channels: <u>indicative</u> of inadequate procedures, supervision, and unsatisfactory manpower assignment. Also indicative of poor positioning of coordinators

TABLE 7 (Continued)

<u>Predictive Factor</u>	<u>Considerations</u>
Age Imbalance	A management group either too old or too young so far as the majority are concerned, or a skewed age distribution at given levels <u>Indicative</u> of inadequate past planning, lack of manpower replacement policy, uncontrolled growth, and possibly indicative of a situation where the needs felt by managers are not being taken care of, or of an untenable economic situation (the rats are leaving the ship) In such a case, one may expect to find corporate disaster "right around the corner "
The Exception Principle	One of the cardinal management considerations, this holds that the manager should be capable of making his own decisions regarding routine matters, that he should go to his boss regarding only those matters which are not typical to his operations, not covered by SOP, which have not come up before, and about which no policy or rulings have been made  Violation of the Exception Principle is <u>indicative</u> of (1) poor manpower assignment, (2) poor supervision, (3) inadequate policy and SOP formation, (4) inadequate manpower development, and probably (5) "panic button" management
Homogeneous Assignment	Actually, what is meant here is that the manager should be certain that his unit is organized according to the previously mentioned "structural principles," and that the right men have been fitted to the right jobs Any violation is <u>indicative</u> of inefficiency throughout the unit, of inadequate manpower development, and inadequate policy and procedure development
Delegation	Assuring that one's subordinates have the authority and responsibility inherent to their assigned jobs Violation is <u>indicative</u> of poor supervision, inadequate understanding of the management job, and of a situation where the growth of subordinates is being restricted, or, in the case of over-delegation, it is indicative of "buck-passing" and incapability
Command Unity	Where there exists more than one boss in direct authority over any given number of subordinates, you may expect a complete state of confusion, and as already discussed, a distinct conflict set Further, careful thought will indicate that only poor leadership would condone such a practice
Standing Operating Procedure (SOP)	Routine and predictable functions or requirements should be reduced to a set of simple instructions which state the "standard" methods to be applied The SOP should be sufficiently flexible, however, to allow the user to handle minor change without reference to higher authority Violation is indicative of confusion, blocked channels, personal conflict, and is, in itself, a violation of the Exception Principle

TABLE 7 (Continued)

Predictive Factor	Considerations
Flexibility	<p>The manager, his people, and, through them, their unit, must be capable of completing assigned work even though faced by changing conditions. Violation is <u>indicative</u> of poor manpower assignment, inadequate manpower development, and overly-rigid policies and SOP.</p> <p>Change is the rule, just as is death. Organization should be flexible enough to meet with change in a planned, not a "panic button" manner. When this is not the case, we tend to find incessant "planning," meetings, and, of course, the symptoms point to poor past planning, poor manpower assignment and development, and to a lack of control.</p>

Note to table: One cannot overemphasize the importance of this principle. Defined by Koontz and O'Donnell, *op cit*, p. 295, as "each manager at each level should make those decisions that he can, in light of his authority. Only those matters that he is incompetent to decide, because of authority limitations, should be referred to his superior." Defined by Newman, *op cit*, pp. 42, 52, *passim*, as "exception principle" is utilized, under which subordinates are expected to proceed with action so long as the situation is covered by standing plans, but when exceptional problems arise (they are expected) to bring these to the attention of the supervisor. One notes two important things here: (1) if the principle is applied, the manager can keep close control over many jobs with relative ease for he knows constant action is taken in similar cases, he can predict action, and can feel that action will be in keeping with his judgment. (2) the idea supports the Span discussion.

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*"Communication is the interchange of information, ideas, attitudes, and/or opinion."<sup>1</sup> It is a mutual interpersonal sharing and involvement, and without understanding there is no communication*

## Communication Considerations and Concepts

The practice of "good management" is the charge facing every manager. Good management cannot exist in the presence of poor communication. The "barrier" effect of poor communication is intensified in the presence of *specialized man!* Today's technology requires highly specialized people, and unfortunately they bring with them a language of their own and a background often devoid of professional training in management. This combination of difficulties is associated with the exchange of information and the sharing of ideas. It increases the probability that opportunities may be missed, and the risk of erroneous decision is intensified.

Manpower decisions always involve an exchange of information; the search for ideas, the collection of data, and the seeking of opportunity for decisions all include communication in some way.<sup>2</sup>

Communication is like an artery carrying an organization's life blood. It is a complex system. It operates internally, providing a flow of information to analysis and decision centers. It operates externally also to provide information flow between units such as vendors, customers, government agencies, and other concerns.

Communication facilitates an intensive and extensive determination of goals. It serves as a planning aid and enables transmission of plans. It makes direction possible and becomes the prime tool for control by providing the network for information transmission and analysis.

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<sup>1</sup>By permission from Dale Yoder, H. G. Heneman, Jr., John G. Turnbull, and C. Harold Stone, *Handbook of Personnel Management and Labor Relations* (McGraw-Hill Book Company, Inc., New York, 1958), S.13.1.

<sup>2</sup>See "Design for Communication and Control," Chapter 3.

One can consider communication as the light, and *clarity of communication* as the lens, which serve to bring all inputs, whether internal or external, into focus upon the goals of an organization. One can conclude also that this system's efficiency directly influences the effectiveness of the organization.

The importance of communication demands that the manager give it special attention. In this chapter we hope first to put its importance, with respect to good management, in the proper perspective. From this point of departure we move to discussion of necessary considerations, and then into discussion of typical communication approaches and media.

### COMMUNICATION AND GOOD MANAGEMENT

Each member of an organization not only must be informed, but also provide at least the required degree of information needed for decisions. Such action tends to minimize insufficient information and helps reduce confusion and accompanying insecurity. The propensity for conflict within the organization thus can be avoided. Conflict tends to block opportunity search and recognition and put unwarranted emotion into decisions.<sup>3</sup>

Since good decisions and good management go together and arise from a combination of good judgment and knowledge of facts, *knowing* requires not only a flow of correct information: what flows *must be understandable and understood*. Without understanding, *flow* becomes a useless and often destructive flood.

*COMMUNICATION — A BLOCKING OR FACILITATING AGENT*. Communication can either facilitate or retard a manager's work. "Bad" communication becomes a block to good management. It causes and magnifies the propensity for conflict, confusion, and error. It is possible that improper information concerning a job vacancy may completely negate the effectiveness of a manpower selection program. A lack of *rapport* may undermine the effectiveness of a training program. Misunderstanding may make a simple grievance into a serious labor dispute.

For example, professional manpower people understand the need for, and the meaning of, programs involving employee self-expression or determination; engineers often misunderstand these matters, however, considering them as permissive and "give-away." The conflict usually stems from a lack of common background on the one hand, and the special language of both groups on the other. Or consider the situation in which a supervisor is asked to "control" absenteeism. He may, under some circumstance, interpret the request as an order to enforce distinct

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<sup>3</sup>W. V. Owen, *Modern Management* (The Ronald Press Company, New York, 1958), Chapter 11, *passim*.

restrictive effort. On the other hand, the manpower people who have made the request may very well have used the word "control" in its correct management sense. As a result, instead of acquiring necessary information concerning the minimization of absenteeism, the whole problem may be magnified. Lack of common background and language differences also block correct information flow and understanding, as in a most obvious case — the scientist-mathematician making a request in his language to a non-science group, or vice versa.

The manpower manager's responsibility in this connection is two-fold. *First*, he stimulates management efforts to break through specialization barriers. *Second*, he creates and administers the kind of manpower development programs which, through proper education and experience assignment, will cause men to minimize this barrier. In both cases improved communication is the key.

### COMMUNICATION CONSIDERATIONS

Traditionally, communications has been treated in terms of some particular discipline. Actually, however, it makes little difference which discipline one represents, if communications presents a problem, *all* transmission concepts will, or may, come under consideration.

*DEFINITION.* Study of the term "communication," and its various implications, leads to the conclusion that by definition communication is: (1) a principle of organization, (2) a sub-principle of coordination and of control, (3) the interchange of information — a mutual sharing or involvement. It concerns information flow and content: that is, the extent to which information passes, is received, and is understood.<sup>4</sup> From these points one notes that the association or position, the need, and the specified action are identified. Since all association does, in the final analysis, involve man, one concludes that the important considerations regarding communication include both *intrapersonal* (internal) and *interpersonal* (external) factors.

*INTRAPERSONAL FACTORS.* These factors pertain to the individual. They involve the physiological and psychological characteristics of man, including his intelligence. In other words, they pertain to man's physical and psychological capacity for internal transmission, recognition, sorting, and response, and they facilitate his participation and ability to function externally. They affect man's ability to recognize opportunity and make decisions which govern his actions and reactions and his performance.

Acknowledgment of the importance of the intrapersonal factors provides a logical base for planning proper manpower development programs, "preventive" medical care, and necessary selection character-

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<sup>4</sup>As stated throughout Chapter 3 and defined on p. 1 of this chapter.

istics. Understanding even the basic tenets of the particular disciplines involved helps the manager appreciate those he manages and their problems.<sup>5</sup>

*INTERPERSONAL FACTORS.* These factors include man's interchange of ideas and mutual involvement, his operating plans and procedures, and his formal and informal channels. They also include the organizational characteristics (hierarchical decision points, channel definition, and data storage and the like) and the technology of communications.

A general consideration requires attention. The manager must understand and believe that successful management action in this day of advanced technology depends heavily upon interchange of opportunity and decision information. Every supervisor, in fact every employee, must *be*, and be considered as, a part of the system of mutual involvement. By *action* as well as word, the manager *requires* good communication. This, of course, is another way of stating the demand that communication be a two-way or cyclical affair.<sup>6</sup> Understanding this general consideration, the manager adopts the following, or a similar attitude: do not provide your subordinates with "lip-service," give them your attention, your consideration, your certain assurance that what they report and what they say will be evaluated carefully before action is taken. In this way, you at least assure the fact that when their information is vitally needed it will be provided.

*CIRCUITRY.* Although the human aspects of communication probably do not fully depend upon, and certainly do not fully explain, the engineering or technical aspects, in order to have maximum communication within an organization of people the engineering or technical features must be adjusted to the human. Even a cursory understanding of the communication process in management depends first upon development of an appreciation for the circuitry involved. This, in turn, begins with an understanding of the activities and functional requirements.

1. *Originator:* the source of idea, information, or command: the point or person of initiation. An employee thus can be an originator of a complaint or an idea. The department head can be the initiator of a report embracing the several sections of his department, or of an idea pertaining to some detail of operation.

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<sup>5</sup>Although beyond the scope of this book, these factors and sciences directly involve and indicate the need for selection devices capable of measuring man's capacity to communicate: some biology, psychology, and analytical mathematics are important to managers.

<sup>6</sup>Schuyler D. Hoslett, "Barriers to Communication," *Personnel*, The American Management Association, Vol. 28, No. 2, Sept., 1951, pp. 108-114, *passim*.

2. *Medium of Transmission.* the method, media, and circuit-connector by which, or through which, information or command flows; the flow device. It embraces both the nature of, or type of, signal (word or non-word symbols), and the primary and secondary channels (voice and writing, and face-to-face and mecha-electronic device). Transmission occurs through a chain-of-command or channel-of-communication, in other words, through the hierarchy — this is the direction of the circuit, but not necessarily the circuit.

A department head thus may have a telephone, closed circuit TV, or radio available as media of transmission. He also may send and receive written reports. These may be so governed as to require that he direct transmission upward to certain points or persons and downward to certain points or persons.

3. *Receptor.* the apparent end-source of a single communication, activator of response, authentication, and the like; the point or person to which a transmission is directed. A grievance may be directed, according to policy or procedure, from foreman to department head, which makes the department head the receptor. Since he may well be required to forward it to the manpower division if he cannot resolve it, he would activate a response, the nature of which depends in part upon procedure or policy and in part upon the fact that he was a receptor.

4. *Retention* storage, memory, a function of holding in readiness some knowledge or data or opinions for future use. To an individual this may involve merely his memory, or it may include his utilization of files, IBM cards and the like, and require recognition and recall.

5. *Recognition and Recall.* recognition involves identification and recall involves a function similar to "removal from stores." One seldom, if ever, happens without the other. Specifically, recognition is a function of recall which may or may not require overt response in a given case. A foreman may be made aware that a certain deviation from standard has taken place on the production line, but he recognizes (by recalling from past experience and knowledge) that the deviation is not important and makes no response other than a verification of receipt of transmission. On the other hand, the deviation may be recognized as very significant, and he may then initiate an entire series of transmissions of an active, rather than an authenticational, nature.

Recall may involve merely personal action such as remembering one's wedding anniversary and bringing this knowledge to the fore so that required response can occur. It may involve also a series of matters including the foregoing as well as removal of information from files, tape, or the like.

6. *Evaluation:* the analysis of a situation involving search of stored data. It is a function of recognition and recall, as well as retention. The process may involve the use of various pieces of equipment or merely of learned procedures.

7. *Sorting:* the classification or declassification of transmitted data, or its coding or decoding. This may be internal, taking place within the individual's mind, or it may be done with the aid of various pieces

of equipment. The department head thus may require that the cost clerk classify economic information by running cost cards through a "sorter;" or he may "sift" his experience to decide which of several pieces of information in his mind is pertinent to a given case.

8. *Response*: a reaction to received data, information, or command. This may take the form of a simple verification or a simple authentication; or it may involve a complex series of very specific reactions. For example: a foreman tells a subordinate to let him know when the hundredth piece goes through, the subordinate verifies receipt of command by nodding, saying OK, or some other form of signal indicating receipt of message and intended compliance (thus authentication). When the hundredth piece goes through, the subordinate completes the required response by yelling, calling, or signaling the foreman in some way (by initiating a simple message of verification). Of course, the more complex response might be as follows: a subordinate notifies a superior that a machine has broken down. The superior's response to the subordinate may be a simple authenticating nod, but may continue to the initiation of a series of messages designed to start repair action by the plant engineering group, re-routing action by the production control people, and the like.

9. *Authentication*: in everyday language is similar to verification, acknowledgment, and the like. It is some signal — a spoken word, a grunt, nod, activation of a sound or light signal device. When a person nods approval, waves OK, or the like, he engages in an authentication. If one countersigns a memo he also authenticates.

10. *Transmitter*: a device to prepare or activate a message for transmission. It may be a telephone changing the voice signal into varying electric current, a radio transmitter, a teletypewriter, a closed circuit TV projector, or the like. It may be — in the case of face-to-face transmission — the voice-box of the human which changes (prepares) the brain waves into transmittible terms and initiates the flow. We note, then, that the transmitter makes a circuit work. It appears that the transmitter, in itself, may "encode" a message. As in the case of the human voice-box, the brain waves are changed into an understandable signal (it is hoped).

11. *Receiver*: one might describe this as a reverse transmitter device. To be workable, the signal must be switched back into words or non-word symbols. The telephone receiver picks up an electric signal and "decodes" into sounds that the human interprets as words, the ear picks up words and sets the sound vibrations into a form useful to the brain and brain-wave action. A receiver can be a completely (geographically or physically) separate item of equipment, or it can be a built-in portion of a system or piece of equipment.

## COMMUNICATION REQUIRES CLOSED CIRCUIT

Communication functions fit into a closed circuit. Unless closed, the circuit will not actually service communication: that is, unless the

receiver receives and responds, one can only assume that a transmission has occurred. Regardless of the situation and of the multitude of possible or existing sub-systems, the communication scheme develops through a simple closed circuit. For example: a foreman informs a given individual that the practice of shutting down a machine 15 minutes before a shift change will be stopped. He then goes on about some other business. Did he communicate with the employee? From what has been said, we do not know! Why? Because the example presents no evidence that the individual heard and understood the presented information – or to put it another way, a “closed” circuit situation is not indicated.

*THE SIMPLE CLOSED CIRCUIT.* Communication often receives the same treatment as the simple “stimulus-response” phenomenon. Something is originated, passed, and received, and that is the end of it. The notification of receipt is treated as a new communication. Where a management situation is involved, however, one-way action becomes totally inadequate and exists as an incomplete action. The simple closed circuit of communication (the basic circuit) thus includes a transmission from originator to receptor and back. The return may be, and in the case of a simple base circuit would be, a mere authentication or acknowledgment. This base circuit can be represented as follows.

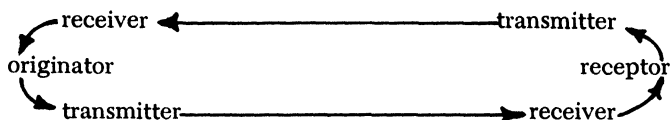


Upon this base the entire complicated system of industrial or organizational communication develops. Between the originator and the receptor, as in the “practical circuit,” a transmitter and a receiver will appear. There also may be a sorting function, an intermediary receptor, an analysis function, or, at the receptor point, there may be an entire new circuiting, involving every communication activity before a final response is flashed to the originator.

Obviously, in the presence of such possible complication, those hoping to communicate should realize that in any given instance a large number of activities may be necessary before the circuit can be closed – before the communication attains completion. Training in this field is important for those seeking to manage effectively, for there is little in the natural background of the average human which allows inherent recognition of circuit needs or applications.

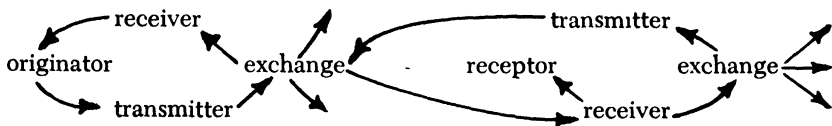
*THE “PRACTICAL CIRCUIT”* Although the basic circuit provides a theoretical reference point for the study of communication, it

fails to describe the actual, or practical, base circuit. This can be pictured as follows:



In the case of the really simple practical circuit – superior to subordinate and back, or face-to-face – the originator functions as source *and* transmitter, and oral transmission of word or some simple non-word symbol flows directly to the receiver-receptor who, reversing the process in some manner, acknowledges.

Where the circuit involves something more than this simple superior and subordinate condition (whether that something is an additional person or an added device), but deals purely with routines, it may appear as follows:



Though the term “routine” implies maximum simplicity to most people, it should be remembered that even routines attain some degree of probable deviation from standard. For the most part, they do involve pre-defined or almost certainly expected events, transmissions, and responses, but there always exists some possibility of a deviation. Those seeking to apply, or to teach, communication therefore should avoid giving the impression that where routines exist communication will always be simple, and that circuits will remain unchanged over long periods of time.

**SITUATION AND CIRCUIT.** Communication is situational! Like organization, communication depends upon need. The situation impinges upon it and, in part at least, determines its nature. One concludes therefore that communication will change in some relation to changing needs and conditions. Recognition of this fact is often lost in man’s efforts to retain status, to make permanent what has worked once, to hold what has been considered security. Through development of proper manpower training, proper morale programs, and insistent and extensive auditing of jobs and conditions, the manpower manager sees

to it that other managers do not lose sight of the situational nature of communication.

A companion point, or rule, holds that *adequate communications demand flexibility of action within an organization*. Communication thus requires a pattern of management action responsive to change, and a circuitry responsive to change.

Inflexibility may lead to development or magnification of negative channels of communication — “noise” circuits which never attain positive results. In fact, if edict seeks to hold in line that which naturally should change, then the natural course will be accomplished through some illicit, undesirable, or unofficial means. Managers who apply “edict” as the general rule rather than the exception prove to be inflexible and tend to cause undesirable action patterns.

An inflexible manager tends to lead to a situation where his subordinates, peers, and possibly even his superiors seek ways of avoiding direct communication with him. This leads to conflict. The conflict may show itself in increased accident rates, absenteeism, or grievances. It is the manpower manager’s business to see that such costly conditions are kept at a minimum. He seeks evidence of inflexibility and ways to “train it out” when he finds it.

### CIRCUIT CONSIDERATIONS

Certain fairly explicit rules influence the adequacy or inadequacy of communication circuits. In selecting and utilizing circuits, the communicant should take them into full account.

*HIERARCHY AND CIRCUITRY* Effective organization requires and should facilitate, speedy, accurate, and timely transmission of ideas, information, or command. As an organization’s hierarchy develops, the circuitry of communication becomes more and more complex. Although the actual individual circuits may remain basic through many levels, each level becomes an exchange point and the origin of a new circuit.

Aside from socio-psychological considerations, the *mere mechanics* of an exchange is enough to develop some distortion, some noise. Consider, for example, what transpires when an individual is used to doing something for another, in the form of an intermediary. Think, if you will, of the noise or distortion (or static) that arose the last time you failed to mail a letter your wife or mother told you to mail! Your action (or inaction) as an “exchange” point created one form of distortion, while your failure caused still another form on the part of the originator. Or consider the case of a telephone switchboard and the static put into the circuit when the connection is bad. Now, how many opportunities for noise or distortion arise as we increase the number of possible exchange-points due to use of various levels of supervision as exchange-

points (and all their correspondingly numerous possible human or electro-mechanical devices)?

Distortion of any degree should be avoided whenever possible. Managers take great care in developing and utilizing hierarchy. *They create only necessary exchange-points.* This viewpoint attains significance with reference to policy and procedure interpretation, for example, and when developing grievance procedure or administering the labor contract.

**ANALYSIS OR EVALUATION CENTERS.** Telephone companies have long recognized the very real importance of carefully placing their exchanges. Long ago they began the practice of placing new centers only after careful study of present and future need. The same degree of care is necessary in developing communication circuits in industry, and in developing "evaluation" centers. As a hierarchy develops, the risk of duplication of evaluation centers increases. This should be avoided, and obsolete centers eliminated.

**TRANSMISSION TOLERANCE.** Unless the media used to transmit information is suited to that information, suitable for the situation, and suited to the individuals and/or equipment involved in the flow of information, distortion of some kind can be expected to occur. This condition lends itself to a rule: *the media must have a tolerance for the transmission occurring*

Usually management's media of transmission includes words and other symbols moving orally or in writing, with or without the aid of some device such as a telephone. These words or symbols are often foreign to one of the parties involved in a transmission, for they reflect the specialized background of the originator, the lack of similar background of the receptor, and so on. Furthermore, not all words or symbols suit the communication requirements of all situations. For example, comparative reports involving numerical data are more effective when submitted as a combination graphic and narrative presentation. In other words, to some the graphic media is more satisfactory than the narrative; when a communication involves numbers, or ideas through numbers, the graphic media is more satisfactory.

Sometimes the inflection of the voice is the key to the meaning of a communication. Clearly, if the meaning is so complex as to *require* voice inflection, the transmission cannot be handled through a written report, it requires an oral treatment.

**MESSAGE CHOICE AND DECISION RULES.** Wherever transmission takes place, the originator makes a decision. The choice may be simple — a selection between transmitting or not transmitting, followed by choice of media. On the other hand, a situation may be exceptional; there may be no routine, no past experience as a guide. In such cases the number of available choices involved in any communication decision

or function increases significantly.<sup>7</sup> As an example, think back to your first experience concerning some emergency — perhaps the first time you saw at firsthand, and as the first witness, an auto accident. How many different courses of action flashed through your mind? How many ways and types of messages did you think of before you selected one? How long did it take you to make up your mind as to what was the correct thing to do? Or consider the industrial case: a department head discovers workers obviously intoxicated and fighting. He has never run into this before, the contract with the union does not cover the condition, the shop rules do not cover it, and his immediate superior is out of town. How many, and how complex, are his choices?

Of importance here is the number of “free” choices open to the originator. According to Shannon and Weaver “. . . about half the letters or words we choose in writing or speaking are under our free choice. . .”<sup>8</sup> One might well find himself in a completely untenable situation (whether it involves routine or exception) unless something exists to restrict choice availability. The fewer the decision rules, the more simple the situation becomes.

One concludes that an organization’s personnel, if allowed “free” reign, could well develop messages (and circuits) which, because of the variety of combination opportunity, would take considerable time to decipher unless the receiver-receptor were tuned directly to the originator-transmitter’s selection *at the time of selection*.

**MESSAGE CHOICE AND MANAGEMENT APPLICATION.** The manager consciously or by intuition applies this concept of message choice when he seeks to establish systems of standing operating procedure, and when he teaches subordinates the required responses and channels for different events. He also applies this thinking when he follows and causes others to follow the organizational principles previously discussed (Chapter 3)

To the manpower manager these considerations once again spell out the need for proper selection and placement and good manpower development programs. They introduce a reason why manpower people foster, or at least actively support, efforts to establish administrative and productive standards. The need arises from the fact that information-flow must be rapid, accurate, and timely, hence message choice should be minimized. Where message choice is maximized, one tends to find confusion and conflict, both of which complicate or confound efforts to maintain a satisfactory and a satisfied workforce.

**LIMITATION OF MESSAGE CHOICE.** Limiting the amount of message choice can be accomplished in several ways, however, unless

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<sup>7</sup>Claude E. Shannon and Warren Weaver, *The Mathematical Theory of Communication* (University of Illinois Press, Urbana, Illinois, 1949), p. 98.

<sup>8</sup>*Ibid*, p. 99 — e.g. a “u” must follow a “q” in an English word.

the roots of this matter come under attack the success of such efforts will be short-lived. The attack must be directed toward developing an understanding of, and appreciation for, company goals and hierarchical and situational needs. One may say. *universal symbol acceptance and utilization improves the effectiveness of an organization's communications*, or the fewer the message-choices and decision rules, the more effective the circuitry.

**CIRCUIT CAPACITY** The capacity of a communication circuit, in the management sense, can be described as the maximum capacity of the most restrictive element, be it the originator, the transmitter, the receiver, the receptor, or the media of transmission. In other words, it becomes a question of ability to produce and carry what is required in the given situation. Suppose, for example, we have a case where (using a simple circuit) the originator-transmitter stutters violently, or the words required for transmission are scientific and complicated in phonetic structure, or the receptor is slightly hard of hearing. The capacity of any such circuit will be strained and very limited as compared with a case where the originator-transmitter speaks distinctly, the required transmission is words of simple and patently obvious meaning, and the receiver-receptor is thoroughly accustomed to the words and the originator and hears perfectly well

*The capacity of a circuit depends upon the effectiveness of the coding used for enciphering a message.* The effectiveness of the coding is really a question of balancing the transmission rate, and the enciphering and deciphering time required by transmitter and receiver for the particular code used

If a transmitter and a receiver turn out to be a person instead of a device, the rule applicable to the device still holds true. The capacity of the circuit will be affected by an individual's ability to encipher and release for transmission, and by the receiver's ability to decipher and pass to receptor.

Circuit capacity, circuit choice, and message-choice are related. Three additional points indicate this relationship.

Incomplete information can result from uncertainty arising from a large spread in message-choice and behavior

. . . Misdirected information may develop because of too wide a circuit choice, too wide a message-choice, and behavior

. . . Distortion, or communication difficulty, may arise from socio-psychological causes, crowding of circuits, poor placement of communications devices, and interference due to behavioral factors. *Noise* is related to "distortion" Noise tends to develop as a circuit develops through a hierarchy. The clarity of an original message diminishes as the number of translations or rehandlings increase. Noise or distortion

thus appear as some technical, organizational, or human limitation upon effective communication.

**ORGANIZATIONAL CONSIDERATIONS**

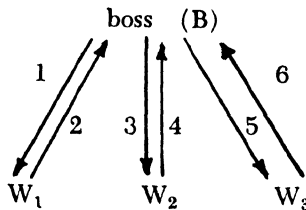
Circuitry considerations indicate that hierarchy can impair communication unless a relatively simple or unencumbered structure exists. Further, the effectiveness of the processive factors of organization influences communication. The mutual dependency of organization and communication can be viewed by considering the facts related to levels and circuits.

*LEVELS AND CIRCUITS.* Simple circuits (one boss and a subordinate, originator-receptor) seem to offer little complication except from the point of view of personalities. Once a hierarchy of any depth or size enters the picture, however, complexity increases rapidly.

*Superior-Subordinate Circuits.* At first glance, the superior-subordinate, or command, circuit appears to be relatively unencumbered, the kind of circuit which handles routines with little difficulty. In addition to previously described limitations, its capacity is dependent upon the superior's effectiveness as a superior (his ability to develop routines, train for spontaneity of response, and the like), and by the ability and desire of the subordinate to function as required by the superior.

If all situations met by a superior and a subordinate were completely predictable, perhaps this simplicity would really occur. Exceptions do take place, however, and the routines may not be applicable. Even in the absence of exceptions, the presence of many subordinates may, or may not, complicate the communications for the superior.<sup>9</sup> This very real possibility shows up in at least two ways.

*First*, it appears in terms of the number of simple circuits possible for a superior with a given number of subordinates. For example, one boss with three workers would be involved directly with the following possible relationships (each case having a different originator, but always involving the boss)



<sup>9</sup>V. A. Graicunas, "Relationship in Organization," *Bulletin of the International Management Institute*, Geneva, 1933, in L. Gulick and L. Urwick, (eds.), *op. cit.*, pp. 181-187; by Graicunas' formula,  $n(2^{n-1} + n - 1)$ , the relationships would appear as 18 instead of 19 for one boss with three workers.

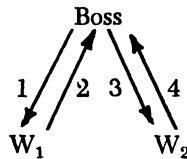
In addition to these six direct actions or communication circuits, we note that the following circuits also become possible.<sup>10</sup>

- |                                                               |                                                               |
|---------------------------------------------------------------|---------------------------------------------------------------|
| 7. B to W <sub>1</sub> and W <sub>2</sub>                     | 14. W <sub>2</sub> to B and W <sub>3</sub>                    |
| 8. B to W <sub>2</sub> and W <sub>3</sub>                     | 15. W <sub>1</sub> to B and W <sub>3</sub>                    |
| 9. B to W <sub>1</sub> and W <sub>3</sub>                     | 16. W <sub>3</sub> to B and W <sub>1</sub>                    |
| 10. B to W <sub>1</sub> and W <sub>2</sub> and W <sub>3</sub> | 17. W <sub>1</sub> to B and W <sub>2</sub> and W <sub>3</sub> |
| 11. W <sub>1</sub> to B and W <sub>2</sub>                    | 18. W <sub>2</sub> to B and W <sub>1</sub> and W <sub>3</sub> |
| 12. W <sub>2</sub> to B and W <sub>1</sub>                    | 19. W <sub>3</sub> to B and W <sub>1</sub> and W <sub>2</sub> |
| 13. W <sub>3</sub> to B and W <sub>2</sub>                    |                                                               |

From this picture of relationships, it appears that a descriptive formula exists which the manager can utilize to determine his individual simple-circuit possibilities. Given "n" subordinates, it would be:

$$n(2^{n-1} + n - 1) + 1$$

If, instead of three, the superior had two workers, the following would be possible



In addition, the following possibly would develop.

5. B to W<sub>1</sub> and W<sub>2</sub>
6. W<sub>1</sub> to B and W<sub>2</sub>
7. W<sub>2</sub> to B and W<sub>1</sub>

By formula this would appear as  $2(2^{2-1} + 2 - 1) + 1 = 2(3) + 1 = 7$

What does all this mean? If you had four subordinates directly under you, you would be dealing with the possibility of 45 direct and crossed relationships. Under this working condition, you could spend 7 1/2 hours of each day in supervisory communications if you averaged just 10 minutes a day on each of the possible relationships as the originator and as the receptor. Note, therefore, how complicated the so-called simple-circuit situation can become.<sup>11</sup>

A second way of looking at the situation appears. Instead of starting with the originator (boss or subordinate), the circuits could be evaluated by considering the number of different groups of 2, 3, 4, etc., persons

<sup>10</sup>Note that the order of listing the participants of the crossed part of the circuit is immaterial; B to W<sub>2</sub> and W<sub>1</sub> is equivalent to B to W<sub>1</sub> and W<sub>2</sub>.

<sup>11</sup>Note that for four subordinates it is quite easy to grasp and remember every combination of groups, but that from five on the task begins to take on formidable proportions.

who can be tied up in communication. This number is given by the expression.

$$\sum_{r=1}^{r=n} C_r^n$$

where the number of combinations of the executive with "n" subordinates, taken "r" at a time is:

$$C_r^n = \frac{n!}{r! (n-r)!}$$

and  $\sum_{r=1}^{r=n}$  means to sum up each of these numbers of combinations from one subordinate at a time, two at a time, three at a time, on up to all "n" together. The expression "n!" (n factorial) stands for the product  $n(n-1)(n-2)(n-3) \dots (3)(2)(1)$ . By definition,  $0! = 1$ .

In the case of two workers, the possible combinations would be three. B with  $W_1$ , B with  $W_2$ , and B with  $W_1$  with  $W_2$ . By formula we would find.

$$\frac{(2)(1)}{(1)(1)} + \frac{(2)(1)}{(2)(1)} + \frac{(1)}{(1)} = 2 + 1 = 3$$

If you had three subordinates, it would follow that:

$$\frac{(3)(2)(1)}{(1)(2)} + \frac{(3)(2)(1)}{(2)(1)(1)} + \frac{(3)(2)(1)}{(3)(2)(1)(1)} = 7$$

and, the combinations would be

- |                           |                                      |
|---------------------------|--------------------------------------|
| 1 B with $W_1$            | 5 B with $W_2$ with $W_3$            |
| 2 B with $W_2$            | 6 B with $W_1$ with $W_3$            |
| 3 B with $W_3$            | 7 B with $W_1$ with $W_2$ with $W_3$ |
| 4 B with $W_1$ with $W_2$ |                                      |

If you had four workers, you would have the following possible combinations:

$$\frac{(4)(3)(2)(1)}{(1)(3)(2)(1)} + \frac{(4)(3)(2)(1)}{(2)(1)(2)(1)} + \frac{(4)(3)(2)(1)}{(4)(3)(2)(1)} + \frac{(4)(3)(2)(1)}{(4)(3)(2)(1)(1)} = 4 + 6 + 4 + 1 = 15$$

The reader can work out the fact that five workers will result in 31 combinations. An additional worker each time *doubles* the previous number of combinations, *plus* one more.

*Why the Circuit Works.* Why is it that many organizations — successful organizations — have from four or five up to fourteen or fifteen (and in some cases many more) subordinates reporting to one superior? According to the picture just presented the situation would result in a totally unmanageable condition. The fact of the matter is that *every possible combination does not need to communicate equally as often.* What seems to be a large number of subordinates therefore becomes a practical arrangement when the superior is involved with some subordinates only a fraction of the time that he is involved with others. Obviously, this not only calls into play all that has been said and will be said about communication, but it also again raises the significant views expressed in the third chapter regarding “Span.”

Ernest Dale reported:<sup>12</sup>

General Eisenhower told me in an interview that in World War II he had at one time 150 Battalion commanders reporting to him. This, he believed, resulted in clearer understanding up and down the line, an opportunity for personal inspiration, and a chance to voice complaints. Now it would be physically quite difficult even to receive reports from 150 people or, to express it in organizational language, ‘effectively supervise’ so many people. What the General had in mind is that accessibility to the chief executive can make important contributions. The number of people he supervised was small, while the number who had access to him was large.

In other words, it is not so important *how many* you have to communicate with, as it is *how often* you must do so.

These points might lead to the observation that “n” circuits (superior-subordinate) in themselves are relatively simple, for half of them are direct. They operate with a simple relay (on and off) effect. That is, the superior can, if he will, turn them on and off when he is the originator. What if he is not the originator, as in the case with the remaining half of the direct circuits? What if the originator-transmitter is the subordinate and the total number of circuits includes “cross relationships (circuits)” as well as direct? The mathematics and the psychology of the situation make it obvious that this would result in a condition that *could* make the job of effective management impossible. One must conclude, therefore, that the number of such relationships should be as small as possible in order to keep down the frequency of the need to utilize the opportunities available.

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<sup>12</sup>Ernest Dale, “Dynamics and Mechanics of Organization,” *Organization Planning and Management Development*, Personnel Series, No. 141, American Management Association, Inc., New York, 1951, pp 7-8.

One reason the circuits *do* operate has to do with their number, and another has to do with the effectiveness of the subordinates and superiors – the more effective they are, the less often they *must* become involved with communication.

*The Superior-Superior Circuit.* The superior-superior circuit(s) also exist at every level. As indicated in Chapter 3, every superior has a horizontal pattern of communication responsibilities and a vertical pattern. The manager wishing to determine the number of possible horizontal, or consultative, circuits for superiors will follow a model similar to the earlier one.

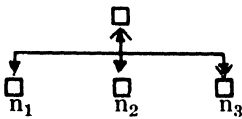
$$\sum_{r=2}^s C_r^s$$

Where “s” = the number of superiors in the horizontal set, and “r” = the number in a given circuit (2 being the minimum).

The “s” circuits lack the simplicity inherent to “n” circuits. One does not turn a peer on and off at will. The selectivity of such circuits is more difficult to establish and maintain. In addition the vertical circuit is involved, thus complicating the possible circuits. The total formal circuits therefore would be:

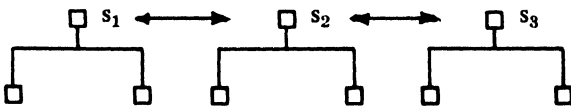
$$\sum_{r=1}^n C_r^n + \sum_{r=2}^s C_r^s$$

The vertical, or command, or “n” portion fits this diagram –



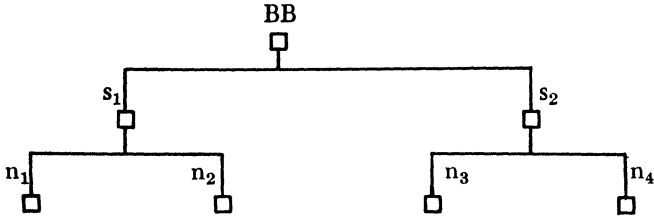
$$\sum_{r=1}^n C_r^n$$

and the “s” or horizontal, or consultative, portion fits this diagram –



$$\sum_{r=2}^s C_r^s$$

When the “s” (superior-superior) circuit is looked at from above, it becomes clear that the communication problem becomes one of a vertical group, rather than a simple chain or a simple peer condition. Thus, it appears as:



Now, if the “big” boss (BB), the focal point as above, of the possible circuits, is to have a group of supervisors, each with “n” subordinates and with an equal opportunity of originator or receptor contact with the subordinates, the circuit formula would appear as follows for “G” number of groups.<sup>13</sup>

By formula:

The Number of Circuits =

$$G \left[ 2 \sum_{r=2}^{r=n+1} C_r^{n+1} - G \sum_{r=2}^{r=n} C_r^n \right] + \sum_{r=1}^{r=s} C_r^s + \sum_{r=2}^{r=s} C_r^s$$

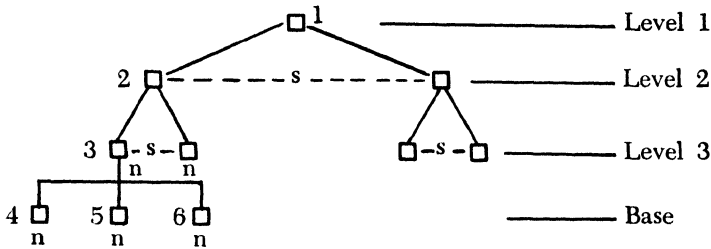
Obviously, therefore, as the levels increase, the communication problem becomes progressively difficult. Some have attempted to control this organizational and communication problem by insisting that the “chain” of command be adhered to, that if it is, the number of circuits to be dealt with at any one time is reduced, thereby easing the manager’s communications responsibilities. As demonstrated by the following diagram, this simply means that some of the circuits are eliminated as a possibility, and that the elimination is accomplished by *edict* which removes all combinations characterized by a link of the chain not used. Thus (in the diagram below) 1-2-3-5 may exist as a circuit, but 4-2-1 may not, nor can 1-3-5. But 1-2-3 is allowed for this does not result in a broken or unused link.

<sup>13</sup>The *first* category includes the vertical, Big Boss, circuitry and that from supervisor to subordinates, with the horizontal combinations among “n’s” within each group removed. In the diagram, they are:

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 1. BB with $s_1$ and $n_1$           | 4. BB with $s_2$ and $n_3$           |
| 2. BB with $s_1$ and $n_2$           | 5. BB with $s_2$ and $n_4$           |
| 3. BB with $s_1$ and $n_1$ and $n_2$ | 6. BB with $s_2$ and $n_3$ and $n_4$ |

The *second* category represents the additional circuits *just* among supervisors, with and without BB. In the diagram, they are:

- |                  |                            |
|------------------|----------------------------|
| 1. BB with $s_1$ | 3. BB with $s_1$ and $s_2$ |
| 2. BB with $s_2$ | 4. $s_1$ and $s_2$         |



Too rigid adherence to the chain of command (or too severe a restriction upon vertical group channels of communication) may reduce the operational efficiency of the boss, just as much as when he has too many circuits to work through. This arises because of the problems of absenteeism, special work, and the like, as we shall see a little further on, and as indicated in Chapter 3 with respect to the "exception principle" and support and service needs.

*Exception and Advisory Circuits.* Level-to-level and within-level circuits, as previously described, do not necessarily follow the perfect mathematical picture we have presented and in many cases, they should not. Although it may be true that the number of "n" and "s" circuits per level describe the total circuitry of an organization, this would be true only where *perfect* organization existed and where *perfect* interlevel control were executed. This so-called perfection does not exist! If it did we would have no recognition or utilization of the rule of "management by exception," nor would the so-called Span considerations apply.

The fact is that "e" circuits exist whether they are desired or not: These develop by plan or chance to facilitate the handling of unusual problems or situations. These are the *exception* circuits. In addition to the "e" circuits, there also exists a communication net designed to facilitate the operation of the support and service units of an organization, and their work for and with the line. These "a" (*advisory*, or functional-staff) circuits do not follow the pattern of the "n" or "s" circuits any more than do the "e."

1. "*e*" Circuits: generally involve activities of the previously-mentioned vertical group channel. They develop in cases such as the following. If the "big" boss needs an answer to a specific question and he knows that a certain employee of long years of experience knows that answer, he may very well call him on the phone directly without going through the various supervisory levels. Or, if the department head is out sick, his subordinate may contact the division manager directly because of the urgency of some problem. Again, a department head may be faced with an unusual situation requiring immediate action and may make a direct contact with both the division head and the manager or the worker involved, completely breaking channels because of knowl-

edge that those in the direct (command) chain lack the authority to provide the necessary instruction.

The "e" circuitry evolves because of the reality of the "Exception Principle." It becomes difficult to hypothesize the total number of possible "e" circuits. Furthermore, because these circuits will develop whether wanted or not, definitions of "n" and "s" circuits do not completely describe communication circuitry.

Balance between the number of levels and the number of subordinates in an organization would certainly facilitate communication, but the presence of "e" circuits may still severely complicate a situation. To develop a "rule" concerning these circuits, one first goes back to their impelling force — the levels and the competencies of the individuals in those levels.

We gain a clue by noting that it is easier to suppress subordinates or minimize their number than it is to minimize levels.<sup>14</sup> In other words, the subordinate can be turned on and off with greater ease and less economic danger than accrues from efforts to manipulate "s" circuits. It thus appears that the number of levels of an organization may be of more significance to effective communication than the number of subordinates.

One notes that "e" circuits tend to develop because of the levels as well as the individual situations. A boss, for example, who may be three levels removed from a worker with a specific competency is more apt to apply "e" circuitry to that worker than the immediate superior of that worker. In fact, the immediate superior does not need the "e"; he can turn the "n" on and off, more or less at will.

A boss three levels removed from an operations problem tends to apply "e" circuitry when a subordinate supervisor is incompetent. When the only way to get to a vendor problem, or a union contract problem, is on the golf course rather than through channels, the executive uses this expediency circuit.

These circuits have a distinct *instability* about them. They come into play at one moment and disappear the next. Instability and uncertainty tend to accompany one another. Uncertainty can add to communication difficulties and conflict. Thus it stands that "e" circuits can be inefficient.

Some have suggested seriously that the utilization of this type of communication channel be eliminated. They point out that the only way to eliminate the resultant ineffectiveness and conflict is to remove the possibility of the circuit's use. This takes us back to the rigid idea

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<sup>14</sup>As the functional (marketing, innovation, and production) requirements increase, the "shape" or structure of an organization must change. Somewhat like the *square-cube* rule, the difference in shape will make a great difference in the organization's ability to perform its functions.

of "staying in channels." In many cases, this approach actually may be completely desirable — particularly with respect to: (1) routine problems or situations where an immediate effect is less important than a future result; (2) where the immediate action is less important than a total action (as in the case of some military or business strategy designed to engage the enemy or competition on one front while the main challenge develops on another). These circuits of expediency are going to develop whether wanted or not, whether dictated against or not and, in many cases, whether or not they are noticed when initiated.

It therefore seems desirable to establish as policy, as training intent, *the guiding rule that one should recognize the unavoidable existence of "e" circuitry, and establish an atmosphere designed to make such contacts beneficial to the company.*

The manager learns to distinguish among situations where: (1) to apply such circuits would be dangerous and incorrect, (2) to apply them is the only way to accomplish a desired goal, (3) to apply them is the only way to accomplish a desired goal at a given time, and (4) to apply them makes no difference one way or the other. Manpower managers thus seek creation of development programs which facilitate learning of these courses of action. Manpower managers must establish compelling evidence which permits the passage of advice, and recommendation of procedure to top management — recommendations designed to encourage and facilitate "management by objectives" and management "by exceptions" — both of which make it mandatory for the manager to distinguish between fact and chance, and routine and exception.<sup>15</sup>

2. "a" Circuits: these are advisory or staff circuits. They move across channels as a matter of routine. One may hypothesize "a" circuitry if the basic and accepted organizational concepts of the firm are first determined. The actual channels may be structured in terms of the probability of expected problems and of the probability that given channels will be used in handling those problems.

These advisory circuits aid or complement the "n" and "s" channels. They facilitate the work at each hierarchical level and the operations of the individuals within each level. They connect the support and service activity groups with the line. They *do not* refer to the internal circuitry of staff (support or service) units, these take the form of "n" and "s" and "e" circuits.

Unlike "e" circuits, advisory channels attain a real stability. They follow definitely predetermined patterns. In many cases, the originator and the receptor are as readily predictable as in the line channels. These "a" circuits arise because of predetermined events, routines, and

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<sup>15</sup>Drucker, *op. cit.*, pp. 121-136, *passim*

plans, and they follow routines. They simplify the working of the organization if properly used. In themselves, they do not develop difficulties in communications patterns the way that "e" circuits might. In fact, their presence (the "a" circuits) tends to minimize distortion in the line and the over-all communication system because they reduce the burden upon the line circuits.

A final point of comparison between the four circuits discussed indicates that "a" and "e" circuits are *radial*, whereas "n" and "s" circuits tend to be serial. The serial circuits tend to extend along vertical or horizontal lines, moving from boss to boss, not crossing or going around bosses in the same line. Radial channels cross lines, and they move out from staff units as rays of light move out from a light source.

**COMMUNICATION — POLICY AND PROCEDURE.** Certain basic considerations relate to the statement of communications intent and approach to be adopted as policy and procedure.

. . . Direct functional contact between organizational units is a necessary adjunct to effective communication.

. . . Insistence that the "exception principle" be followed facilitates effective communication.

. . Recognition that "e" circuits are unavoidable may ease conflict arising in relation to communication

. . . Changing conditions make it necessary that communications methods, channels, and the like be subject to constant study

. . . Communication is facilitated when staff assistance is available at low levels as well as upper organizational positions.

. . . Development of communications routines, message priorities, and circuit use routines and priorities helps develop and maintain effective communication

**INFORMAL ORGANIZATION AND COMMUNICATION.** Informal organization also finds its place in the organizational branch of communication thinking. This is accounted for in several ways.

*First*, to the formal organization's circuitry, the communication network of the informal organization(s) represents "e" circuitry. *Second*, if the formally established circuits are full, and a message has any urgency — real or imagined, business or social — "e" circuits will be intentionally or unintentionally used.<sup>16</sup> *Third*, every formal organization has within it a *primary internal* "e" circuit which has direct connection with the formal circuitry of the organization and is called the

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<sup>16</sup>Intentional use refers to planned use. It is not unusual for subordinates to carefully plan "e" circuit use to gain information before their superiors, or before the superior is ready to release it.

"grapevine." This primary circuit of expediency provides a continuing but recognized unofficial means of communication.<sup>17</sup>

Not all "e" circuits are connected to the informal organization(s) of the company at hand. The communication network involved often exists outside of the formal and informal organization(s) of the company. By the same token, not all of the informal organization's communication nets are open to people acting formally. A given foreman may be unable to communicate with the "real" leader of the informal organization existing in his department because the "direct circuit" to that individual is closed off to this foreman. At the same time, the "grapevine" may be of no avail because transmissions relating to this "isolate" are degraded or disowned by the hierarchy of the informal organization.

Should the informal organization's circuits be used? As long as one directs this question to use of the "e" circuits (to the grapevine for example), the answer is yes. As already discussed, since these structures and circuits will develop whether wanted or not and may provide useful information whether solicited or not, and since this circuitry may provide vital information more quickly than the formal circuits, simple wisdom prescribes their use, if possible. Caution should be exercised, however.

The informal organization is motivated differently from the formal. As discussed in Chapter 3, the motivational difference and the difference in physical grouping may (and usually does) put the manager on the outside of any rank-and-file group. Then too the line manager will be on the outside of a staff group — and so on. This condition indicates that when the manager "plans" to use the circuitry of the informal organization he must avoid seeming to disturb it.

Two points stand out regarding use of the informal circuitry by a manager (non-member of the particular informal organization involved). *First*, in general, management should encourage an environment, an atmosphere, conducive to development of informal organization. No overt steps should be taken to foster that development; rather, so long as a positive, nonsubversive development occurs, nothing should be done to prevent it. *Second*, if the informal organization's communication system is to be used, the manager must recognize and understand the language, codes, rites, and leaders of the informal structure(s).

A *final* point appears. If one is not a member of a given informal structure, but seeks to use that structure's network, he must avoid

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<sup>17</sup>See Edward Gross, "Some Functional Consequences of Primary Controls in Formal Work Organizations," *American Sociological Review*, 18, 1953, pp. 368-373, *passim*; see also, Albert H. Rubenstein, and Chadwick J. Haberstroh, (eds.), *Some Theories of Organization* (The Dorsey Press, Inc., and Richard D. Irwin Inc., Homewood, Illinois, 1960), Section Four pp. 229-322, *passim*.

divisive influence or action. This warning does not pertain to the use of the circuitry of one's own informal organization; however, even here, care should be exercised. For example, if the use to which that circuitry is to be put holds a threat to that structure, deliberate distortion may occur by other members of the group.

*CIRCUIT USE — A GENERAL CASE.* There is a general and more-or-less common pattern of circuitry in most organizations. This is of particular importance to the novice, for by quickly determining the general system, he can avoid embarrassing errors.

*First*, he should realize that both a vertical and a horizontal pattern exist. These patterns extend throughout an organization (formal and informal) and appear even in the social set outside the company when company business is at hand. The "e" circuits tend to reflect this design even when energized on the golf course or during the bridge game on the train.

*Second*, vertical channels or circuits generally are used for the passage of instruction, reports, and for coordinative effort.<sup>18</sup> The informal circuits will parallel the formal in this respect.

*Third*, horizontal circuits generally are used for problem solving and work-flow coordination within a given level or department.<sup>19</sup>

*Fourth*, the upper echelons of an organization tend to utilize vertical channels more than horizontal, for the higher one goes the fewer opportunities there are for the horizontal to appear.

*Fifth*, radial channels, or circuits, exist for the purpose of control and the provision of staff advice. Although the position in the hierarchy plays some determinative role in the frequency of existence and utilization of horizontal channels, this is not necessarily so regarding the radial circuits.

*Sixth*, the lower echelons tend toward greater utilization of horizontal channels because of the greater opportunity at lower levels to use such circuitry. There are more of them than one finds at the vice-presidential level, for example.<sup>20</sup>

*Seventh*, horizontal channels probably will be utilized when seeking information or advice within the "line" of divisions or departments, or between "line" divisions or departments, and when coordinating specific line functions of mutual interest ("s" circuitry applies here).

## HUMAN CONSIDERATIONS

Regardless of material and technical aids, the human is the key to the success or failure of communication. He is involved both intra-

<sup>18</sup>Richard L. Simpson, "Vertical & Horizontal Communications In Formal Organizations," *Administrative Science Quarterly*, Sept., 1959, pp. 188-196, *passim*.

<sup>19</sup>*Idem*.

<sup>20</sup>However, the reasons for their utilization may be of greater significance at upper levels.

and inter-personally. His effectiveness is the vital ingredient. Certain rules or considerations exist which at least point out the proper direction or thinking necessary for effective human action. They can be stated as follows.

**KNOWLEDGE — ACCUMULATION AND ASSIMILATION.** Truly competent managers have accumulated and assimilated considerable knowledge, and the same holds true for any employee. In the management sense, the search for and the recognition of opportunity, and the making of decisions require accurate, timely, complete, and understandable knowledge of past and present events — and the ability to make “good” estimates of the future in terms of that knowledge.

Communication serves as a means by which man accumulates necessary knowledge. Assimilation depends in part upon communication, for when information flows properly and in correct form, man finds it easier to digest.<sup>21</sup>

On the other hand, accumulated and assimilated knowledge is a vital necessity to proper communication. For an originator-transmitter to initiate at the correct time, and direct it through proper channels, depends upon knowledge of the situation necessitating the message and upon knowledge of the circuitry available, including the demands or needs of the receptor.

**THE MANAGEMENT ERROR.** Too often management forgets this two-sided pattern. Too often management settles for the kind of communication which merely facilitates information flow within *specialized* areas.<sup>22</sup> Such action really fails to establish any mutual exchange throughout the organization. For example: if production notifies employment that a welder is needed, how is employment supposed to know what kind of a welder — since all such specification indicates is an occupational title of the most general type? Production knows exactly what the term means, but not employment. If the Accident Prevention Section of the Manpower Division notifies production that “The incidence of fatigue-impelled, multiple-effect accidents is increasing,” what does this mean to production? It may mean many things or nothing! The safety people know what is meant, and what response is expected, and they get quite upset when the desired response does not occur.

Facts which are real and significant to the receptors must be transmitted.<sup>23</sup> If not, kingdoms tend to develop, misunderstanding and

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<sup>21</sup>Simon, *op. cit.*, Chapter VIII, March and Simon, *op. cit.*, Chapter 6; Paul Figors and Charles A. Myers, *Readings In Personnel Administration*, “What Is Meaning and How Can We Share It?” (McGraw-Hill Book Company, Inc., New York, 1952), pp. 153-166, *passim*.

<sup>22</sup>The specialists talk to themselves.

<sup>23</sup>cf. Chapter 3, *passim*, Drucker, *op. cit.*, pp. 208-209 *passim*.

conflict increase, and specialists fight and compete with one another instead of spending their time and energy improving the company's competitive position.<sup>24</sup>

*MANPOWER MANAGEMENT IMPLICATIONS.* To the manpower manager in particular, this issue once again points out the need for planned efforts to break through the "specialization barrier." A significant principle: man must accumulate and assimilate all the knowledge pertinent to his responsibilities, both present and future, and communicate through this knowledge. Further, in organizations "oneness" of knowledge and language is a goal if effective communication is to develop.<sup>25</sup>

Some may hold that knowledge properly diminishes in depth or scope as one moves upward in a given hierarchy. The belief that Span-of-Responsibility means that the "top" does not require full knowledge is a fallacy! The *details* may well be forgotten or discarded from the knowledge stack, but the concepts must remain. Holding to the fallacy that full knowledge is not required tends to weaken management performance. Where such beliefs have developed and been fostered, communication systems merely provide half-knowledge. As a result good decisions tend to occur by chance instead of plan, and tend to lack reliability. It appears then that:

All management action must be directed toward performance. Performance depends upon accumulated and assimilated knowledge conveyed at the right time, to the right place, in the right order and form.

*COMMUNICATION AND BEHAVIOR.* Another significant principle holds that communication governs behavior.<sup>26</sup> Its significance comes from the fact that the success of organization depends largely upon man's behavior, as an individual acting alone and as a member of a group or groups.

Behavior therefore should be directed toward the goals of the organization; to be so directed, the goals must be conveyed to the individuals and groups that are concerned. Without communication there can be no conveyance of this information and man cannot be expected to react as required.

In addition, the *conveyance* of information is only one part of the battle. What is conveyed must be turned into knowledge (accumulated and assimilated). Positive effect only comes from the movement of information when it is understood — when it is, in fact, knowledge in the

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<sup>24</sup>cf. Chapter 2, *passim*.

<sup>25</sup>The "oneness" idea does not mean "all alike," it asserts to the importance of common understanding.

<sup>26</sup>Whether this be principle or corollary is a matter of academic controversy, rather than practical interest.

useful sense! One concludes that *without knowledge, behavior and organization will be non-existent in the productive sense.*

**STATUS AND LISTENING.** In a way related to status-inhibition,<sup>27</sup> another typical human error involves *not listening*, or listening only to ourselves or what we want to hear. Often the superior ignores the subordinate's ideas or engages in the luxury of giving the subordinate a courteous, but closed, ear. Then too, the "boss" tends to ignore the *feeling* present in a subordinate's report. This pattern also reduces the information originated or received.

### SUMMARY

Man's effectiveness in the industrial environment is governed largely by his ability to communicate. The mutual exchange of ideas and information, carried out in a knowledgeable, timely and undistorted fashion makes the difference between successful and unsuccessful management of enterprise. It is fundamental to every activity.

A look at the concepts related to communication reveals that its theory embraces certain technical or circuitry considerations as well as organizational and behavioral points. The term circuitry is used in both the personal and the impersonal sense. It refers to the networks of human relationships involved in the mutual exchange of ideas and information whether these are facilitated by material devices or merely activated by the unaided exchange of words or symbols directly between people.

Study reveals that within the formal structure of an organization several typical circuits exist. Command and response, the vertical flow of messages through a line, follow "n" circuits.

Organizational considerations reveal that: (1) the number of levels in an organization should be kept as few as possible and the connections or channels between them should be unencumbered; (2) that "e" circuitry is unavoidable, and (3) that support and service activities should be so placed as to facilitate the full development of responsibility at the lowest possible levels of the organization ("a" circuits reduce the burden upon the line). Finally, (4) by implication, at least, it becomes clear that the policies of the firm and its SOP's should be reviewed periodically to determine practical compliance with the other three principles.

The considerations and concepts related to communication make up but one side of the coin. The other has to do with the devices or techniques for communicating. In the industrial situation these devices

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<sup>27</sup>March & Simon, *op. cit.*, p. 164. cf. Melville Dalton, *Men Who Manage*, (John Wiley & Sons, Inc., New York, 1959), also considered the works of Stuart Chase.

are many, however, the predominant one is interviewing. In the following chapter we shall discuss these devices, paying particular attention to interviewing.

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*It is one thing to have knowledgable understanding of concepts, it is another thing to apply those concepts.*

## Communication Devices and Errors of Application

Management cannot exist without communication. Probably no communication device is used more widely than the interview. Its universal application and impact upon operational progress explain its significance.

Man cannot lead successfully without knowing those he leads, and no man follows satisfactorily without knowing his leader. In fact, every task requiring face-to-face or ear-to-phone contact requires some degree of this same knowledge. Interviewing is a process of acquiring this knowledge.

### **PURPOSE AND BASIC CONSIDERATIONS OF INTERVIEWING**

Whether one thinks of the interview as a technical device or as a personal aid to the individual manager, an understanding of the process is facilitated by developing an appreciation for its purpose. Technically, the interview serves three distinct purposes: (1) to discover facts, (2) to give information, and (3) to motivate the interviewee.<sup>1</sup> A fourth purpose, more human than technical, is to gain a friend.

Differentiation of purpose is achieved by varying the degree of emphasis placed upon a given purpose during the interview, *not* by the exclusion of those purposes which, at the moment, may be unimportant or of only secondary importance. For example, the interviewer who seeks facts regarding a grievance must motivate the interviewee in order to stimulate his honest cooperation. Motivation, in turn, may (and often does) require that the interviewee be furnished with information. A friendly atmosphere tends to encourage cooperation and

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<sup>1</sup>Walter Van Dyke Bingham and B. V. Moore, *How to Interview* (Harper & Brothers, N. Y., 1941), p. 27.

facilitate both the imparting and the acquisition of knowledge. Fear may do the same thing the first or second time the interview is held; beyond that, incorrect information may well be given. The *fact-finding* interview thus is distinguished by the emphasis placed upon fact-finding; the *motivating* (counseling, disciplinary, or trouble-shooting) interview by the emphasis upon motivation, and the *informative* by emphasis upon dissemination of knowledge — *emphasis*, not exclusion, identifies the type of interview used.

### DEVELOPMENT OF THE INTERVIEWER

Those who expect to use interviewing in an effective manner must acquire experience and become familiar with the intricacies of human behavior. This requirement pertains to managers of all types, not just employment interviewers. It is a requirement of effective foremanship just as much as it is for those charged with industrial relations. All who lead or provide service to others should develop an appreciation for the problems involved in interviewing, and develop an understanding of the available types of interview in general use.

The problems involved take several forms. *First*, the matter of the interviewer himself: he is, or can be, his own worst enemy! *Second*, certain technical pitfalls exist which, if not avoided, tend to destroy any hope of achieving success with an interview. *Third*, as a communication process, the interview requires some degree of systematizing. It therefore is necessary to recognize certain general rules regarding the conduct of an interview in order to avoid the difficulties which seem to appear whenever communication lacks system.

**THE INTERVIEWER** The quality and effectiveness of an interview depend largely upon the adequacy of the interviewer. Crissey has warned against the deceptive simplicity of the process.<sup>2</sup> It looks so easy and seems so natural that everyone tends to believe in his ability to conduct a "good" interview. The following tips serve as a behavior guide to the interviewer (see Table 8)<sup>3</sup> The individual who is required to carry out the verbal phases of communication, and who considers these points with an eye to developing himself as a generally acceptable interviewer (or communicator), will find greater success in his job.

Recommendations regarding the development of the interviewer point to the fact that every manager, and every person involved in any way with interviewing, should examine his behavior and seek *self-improvement*.

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<sup>2</sup>Orlo L. Crissey, *Current Trends in Industrial Psychology* (University of Pittsburgh Press, Pittsburgh, 1949), p. 76

<sup>3</sup>Although these considerations were developed empirically, most students of human relations recognize their importance.

TABLE 8<sup>4</sup>  
 BEHAVIOR TIPS FOR THE INTERVIEWER

DO'S	DONT'S
Have poise and confidence Be neat -- regardless of the job held, the representative of management should give heed to his appearance Be tactful and courteous Be sincere Learn to listen Be critical of yourself Have a sincere interest in others, practice taking the interviewee's point of view Have a pleasing voice and clear enunciation Know your organization and your place, and the place of those with whom you must deal in the organization Develop the ability to see <u>all</u> sides of a problem Be straightforward rather than shrewd and clever Be known as one who backs up what he says, his subordinates, and his boss	Do not be rushed -- allow all the time necessary for the problem at hand Do not brag or center the interview on yourself Do not fidget and squirm Do not be a "chain smoker" Do not be a "wise-cracker," or fresh Do not become involved in religious or political arguments (in some situations this will not pertain, due to the nature of the purpose of the interview) Do not attempt to be what you are not -- doctor, psychologist, patent lawyer, or clerk Do not be an "Oh' I've had that," or a "See my operation," type of conversationalist Do not neglect your responsibility to your company merely for the sake of maintaining rapport. Avoid a "show of authority" if at all possible Avoid the "I told you so" approach.

**TECHNICAL PITFALLS OF INTERVIEWING.** Certain technical traps lie in waiting for the interviewer. He can improve his chances of success by mastering these and by developing an understanding of their nature. Table 9 presents the most typical of these pitfalls.

Another "pitfall," and one seldom given any consideration, has to do with the interview-experienced interviewee. Some persons have the peculiar facility of being able to twist an interview to their particular advantage regardless of the circumstances. This ability can be attributed to many things, a very important one would be experience. The danger is that the untrained, or inexperienced, interviewer could be hoodwinked by such an interviewee. Unfortunately, little can be said about this possibility, or a defense against it, except to warn interviewers to be careful of the individual who begins to put the interviewer into the position of being the interviewee.

<sup>4</sup>Though developed empirically, nearly every student of human relations has at one time or another pointed to the importance of this list of considerations.

**TABLE 9**  
**THE COMMON PITFALLS OF INTERVIEWING**

The Pitfall	Remarks
Personal Bias	<p>(This can be on the part of either party ) Identified by this type of thinking "I don't like him, don't know why, but I know I don't like him and he'll never make a good man for this organization "</p> <p>Obviously, the interviewer must control this type of thinking He also must be on the lookout for this kind of reaction to him on the part of the interviewee This reaction on the part of the interviewee can destroy the rapport and consequently the reliability of the interview If this pitfall is detected, the interviewer should make an effort to develop common interest and liking, or diplomatically turn the interviewee over to someone else</p>
Contagious Bias	<p>(This, too, can be on the part of either party.) Contagious bias is transferable For example, one may be firmly convinced that veterans got a raw deal at the end of World War II, thus, whenever a veteran applies for a job he gets it from you, regardless of his actual merit Or, one may be quite naturally sympathetic in nature When some employee in trouble for infringement of a company rule approaches you with a tale of woe designed to pluck your sympathy-strings, you fall for it</p>
Suggestibility	<p>Many untrained (or wrongly trained) interviewers are guilty of using leading questions The term "leading questions," as used here, refers to the type of question that tends to result in answers designed to please the interviewer, or answers which reflect either the interviewer's or the interviewee's bias, or both It is the question that frequently calls for, or suggests, "Yes" or "No" answers only This is as bad as preconceived answers, for it leaves cause, effect, and background, as well as the possible ramifications of an answer, unexplored The interviewer who utilizes these types of "leading questions" risks obtaining unreliable or invalid results Suggestibility also arises through the tone inflection used by the interviewer, or through his emphasis on certain words Note, however, that on some occasions, one will necessarily apply suggestibility -- in cases where a trap <u>must</u> be set for the interviewee</p>
Terminology	<p>Many people get a "charge" out of using big words or words not typical of the average vocabulary When interviewing, such words should be carefully avoided The language used by the interviewer should be readily understood by the interviewee In other words, talk the interviewee's language</p>
Stereotypes	<p>It is a more-or-less natural tendency for a man to attempt to classify almost everything he sees, hears, feels, or tastes Classification in itself is not a pitfall of interviewing. When the classification is allowed to influence a decision, and when the influence is the result of fiction, not fact, however, then the interviewer is in trouble. Management people should be thoroughly familiar with the common stereotypes and their own tendencies to accept stereotyping They should be sufficiently trained so that they will avoid basing decisions on stereotype recognition. Following are</p>

TABLE 9 (Continued)

The Pitfall	Remarks
Halo Effect	<p>three rather common stereotypes which obviously have their base in fiction rather than fact (1) high foreheads are indicative of a high degree of intelligence, (2) Irishmen fight at the "drop of a hat," and (3) blondes are dumb</p> <p>The "halo effect" can be defined as the tendency to judge the total worth of a man, or a statement, on the basis of a specific trait or phrase. The evil of this "effect" is dependent upon the trait or statement, and the situation involved. If the trait or statement is critical to the job, then there is every reason to base decision upon it. Likewise, if the statement is critical to a grievance, then there is reason to base a judgment upon it.</p>
Lack of Rapport	<p>Rapport is the establishment of a friendly relationship with the interviewee, a putting him at ease. It is the development of common interest or sympathy. Failure to achieve rapport is evidenced by, among other things, tension between the parties, or on the part of one or the other, lack of communicativeness, or lack of respect. Actually, the first step an interviewer should take in <u>any</u> interview is to establish rapport. Failure to attain rapport generally destroys every semblance of reliability of findings. There may be instances when one needs a condition of no-rapport, however, as when investigating an interviewee's reaction to stress.</p>

**COMMON RULES FOR CONDUCTING AN INTERVIEW.<sup>5</sup>**

One stands a fair chance of avoiding the technical traps of interviewing if he conducts the interview properly. Proper conduct becomes a prime requirement in situations where the purpose or application of the interview involves one of the following: (1) manpower selection; (2) manpower placement, (3) transfer or promotion, (4) demotion or other disciplinary action, (5) counseling, (6) grievance handling; and (7) termination. These common rules for conducting an interview appear as follows:

*Preparation for the Interview.* Preparation involves knowledge and environment.

1. *Know your Mission:* know the purpose of the interview. *If possible,* make an outline showing purpose. Either written or mentally, outline the steps you plan to take and the result you hope to achieve; the facts you require, the information you intend to give out, and the attitude you hope to develop, the problems you expect to run into and the possible methods of solving them.

2. *Know the Interviewee:* it is unwise to attempt to interview a person without having at least some prior information about him. *If possible* check the files. Consult acquaintances, foremen, fellow workers,

<sup>5</sup>Through many years, A. J. Fehlber, and other employment specialists, have worked and reworked these points as they train their interviewers.

and former employers. In all too many cases this step will be either impossible or impractical — it should, however, never be forgotten; and it should be undertaken at every opportunity, for through it a pattern of “good” questions can be developed.

3. *Provide for Privacy*: few things destroy the possibility of rapport as quickly as a lack of privacy. Privacy tends to minimize self-consciousness, inhibition, and caution. Privacy makes it easier for the interviewer to observe and interpret the interviewee and his remarks.

Privacy requires proper conditions. Distracting noises should be at a minimum and light, air, and heat should be comfortable.

4. *Interview by Appointment if Possible*: appointments allow for the development of advance information. They generally save time. They aid in the establishing of rapport since it is known that the hour is satisfactory to both parties, thus eliminating one possible source of conflict.

5. *Consider the Interviewee's Point of View*: preparation for an interview is incomplete unless the interviewer has attempted to consider the purpose and approach taken during the interview from the other person's position. Consider from the interviewee's standpoint the objective, the questions, the language, and the attitude you (the interviewer) intend to use. The importance of examining and discounting your prejudices cannot be over-emphasized. One reason for attempting to take the other person's point of view is to try to achieve additional control over bias, thereby minimizing error and conflict.

*Activation of Interview.* Most of the guides to proper activation are behavioral, and all are related in one way or another to the technical pitfalls.

1. *Establish Rapport*: do it early; try for mutual confidence, the “we” feeling. If the interviewee can feel that the interviewer has genuine confidence in himself and in him, and if he can feel that the interviewer has a genuine interest in him, the battle for rapport will be practically won. Not to be forgotten is the fact that the surroundings also contribute to the development of “ease” in an interview.

2. *Be Helpful*, helpfulness and friendliness are coincidental. Most successful leaders point out that the best way to deal with others is to avail oneself of every opportunity to be helpful to them. Of course rapport is destroyed by the altruistic helper of others, the patronizer, and the help coming from the cynic.

3. *Be at Ease and Encourage the Interviewee*: make the fact that you are at ease quite apparent to the interviewee. Give him plenty of time to compose himself and adjust to his surroundings and to you. Let him know directly and indirectly that his ideas and views are important to you. Do not be brusque (unless you are testing the stress reaction). Make every effort to handle the situation so that it is mutually pleasant and interesting. Avoid domination. Allow the interviewee his pride and an opportunity to show it. Let *him* feel that you believe *he* is doing *his* best to help *you*.

4. *Listen — Encourage the Interviewee to Talk:* do not be dominant. Listen! Even though it hurts, listen (but don't let him know it hurts)! When it is necessary to stop a rambling conversation, do so courteously and without being abrupt

5. *Allow Plenty of Time.* but don't waste it! There should be no standard time for an interview. On the other hand, an interview should not be construed as a social call

6. *Retain Control* without control, the interviewer cannot depend upon his findings. Be tactful, do not be dominant, but keep the interview headed toward the objective

7. *Be Alert at the Close of the Interview.* tension is apt to be at a minimum near the close of the interview, at this time casual remarks are made. Be alert, in the statements prior to departure the interviewee may well reveal many key points, attitudes, or ideas. They slip out because the guard is lowered. Remember that the interview isn't over, as far as the interviewer is concerned, until the door has closed behind the interviewee. When ending the interview be sure to establish mutual understanding. Indicate clearly the status of the interview — give decision, or advise when it will be given

*Interview Follow-Up.* So far as the interviewer is concerned, the departure of the interviewee does not end the situation. Follow-up is necessary.

1. *Check and Clarify Your Notes.* as soon as the interviewee departs, check over your notes, or make them, and clarify all sketchy points.

2. *Copy and File* as soon as possible, certainly not more than 24 hours following the interview, the notes should be transcribed and filed. It is wise to maintain one file with the complete notes, and one with the salient points (a tickler file). Names, addresses, dates, and locations are particularly important for future reference

3. *Keep Your Word.* in most cases interviews make necessary an action by the interviewer, action often requires that a report be made by the interviewer. In any case, required action should be taken at once. In some cases, the interviewer will promise an action to the interviewee. This promise should be kept as quickly as possible.

4. *Record Your Action.* any action on the part of the interviewer should be recorded immediately. Names, dates, locations, and the nature of the action are necessary adjuncts of the record.

**SYSTEMATIZING THE INTERVIEW.** System in interviewing depends primarily upon purpose — each distinct area of utilization requires its own specific approach. In the general case, however, system may be considered to depend upon the adequacy of the interviewer's preparation, activation, and follow-up. Of all the considerations, general or specific, which affect the development of a given system, the *time* factor seems to stand out — allow plenty of time, but do not waste it.

## THE BASIC TYPES OF INTERVIEW

Just as several purposes account for the utilization of interviewing, several methods exist for conducting an interview. Discussion here revolves around certain types of interview which may be considered basic.

**THE GUIDED INTERVIEW.** The *guided interview* is directive. In effect it is similar to a questionnaire. The interviewer follows a preconceived, or standard, list of questions designed to attain certain specific, simple-choice answers from the interviewee. In other words, the interviewer directs the situation along carefully-structured channels in such a manner as to gain significant (or what is thought to be significant) information about specific things.

The technique appears most effective for manpower selection and placement, job analysis, accident analysis, and the like. It also has been applied in counseling and morale analysis. By its nature, this approach exposes the interviewer to all the so-called pitfalls. It also leaves him open to the possible trap of believing that what is being looked for is significant, when, in actuality, it may not be.

The *guided interview* is a relatively quick procedure. It is likely to take less time in the average case than the *unguided technique*. Although the unskilled interviewer may face a multitude of problems or possible problems with the *guided interview*, the more skillfully trained interviewer can be expected to attain fairly positive and effective results.

**THE UNGUIDED INTERVIEW.** A favorite interview in counseling, morale analysis, and general catharsis; in the *unguided interview* the interviewee is encouraged to discuss whatever is uppermost in his mind. The interviewer makes little or no effort to channelize the conversation. He does not base the interview upon a list of specific questions or responses and does not seek preconceived responses. Instead he depends heavily upon *what is not said, the manner in which things are said*, and the interviewee's facial expressions and other symbolic motions and movements, as well as upon what is said. The interviewer may avoid keeping a running record of the conversation. If necessary he may develop the actual record when the interview is ended.

The method is extremely personalized and time consuming. *Unguided* interviewing requires that the interviewer be skilled in semantics as well as human behavior. Its greatest utility lies in counseling and morale study. Its distinct advantage lies in the fact that it can determine not only the morale picture or an employee's needs and problems, but it can develop morale at the same time.

**IMPROVEMENTS TO THE BASIC METHODS.** Most people who utilize interviewing in their daily routine try to develop improvements to the original methods (guided and unguided interviewing).

Certainly the disadvantages inherent to those basic methods act as a challenge to the inventiveness of most practitioners. These personally-developed attempts at improvement are difficult to identify and discuss in a general manner, however. Fortunately several extensions of the basic techniques exist which have been tested by practice and have attained some acceptance by manpower people.

*The Diagnostic Interviewer's Guide.* Though the guided interview requires a pattern of specific questions and simple-choice answers, the questions are not necessarily standardized. In addition, neither the guided nor the unguided techniques, as originally developed, provides for any systematized method for rating the interviewee. These inadequacies appear as the prime reasons for efforts to improve the basic methods.

One of the extensions, Wonderlic's *Diagnostic Interviewer's Guide*, seeks to alleviate these traditional shortcomings.<sup>6</sup> It improves the original guided interview by furnishing the interviewer with a device which at once standardizes the interrogation and systematizes the process of rating the interviewee. The questions used are formalized and developed for such activities as manpower selection and placement before the interview. They cover four specific areas: (1) work history, (2) social history, (3) personal history, and (4) family history or background. Forced-choice judgment of the responses to the questions asked serves as the rating device.

The section on work history includes questions designed to indicate, among other things, the nature of the interviewee's work history, the attitude of the interviewee toward his work, his capacity for growth, and the potential ability of the interviewee to adjust to "this" company and its policies.<sup>7</sup> Weights assigned to the questions and types of response perform as the rating.

Obviously this particular technique was initiated as a selection tool. It has been applied, however, as a means of analyzing morale and in promotion and transfer work.<sup>8</sup>

*The Patterned Interview.* Robert N. McMurry developed another variation of the guided interview.<sup>9</sup> His patterned interview embraces five significant points designed to improve the traditional method. It requires: (1) that the interviewer be trained, (2) that a plan of action be established prior to the interview, (3) that before the

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<sup>6</sup>C. I. Howland and E. F. Wonderlic, "Prediction of Industrial Success from a Standardized Interview," *Journal of Applied Psychology*, Vol. 23, No. 5, Oct., 1939, p. 537-546.

<sup>7</sup>A reproduction of the *Diagnostic Interviewer's Guide* can be found in W. D. Scott, R. C. Clothier and W. R. Spriegel, *Personnel Management* (McGraw-Hill Book Company, Inc., N. Y., 1961).

<sup>8</sup>E. F. Wonderlic has applied the "guide" to the morale situation.

<sup>9</sup>Robert N. McMurry, "Validating the Patterned Interview," *Personnel*, American Management Association, Inc., N. Y., XXIII, No. 4, 1947, p. 263-272.

interview takes place, as much knowledge as possible be gathered concerning the interviewee, the job(s) to be filled, the issues to be resolved; (4) that the interview will be carefully developed to assure consideration of predetermined points, and, (5) that interviewers be trained in evaluation of interview data.<sup>10</sup>

The patterned approach is adaptable to the entire system of manpower management.<sup>11</sup> Alert manpower managers recognize this, although the method evolved as a selection and placement device, the concept is applied to development, conservation, and compensation work.

*The "Non-Directive Employment Interview"*<sup>12</sup> A further extension of a basic method, this technique reflects a desire to facilitate and improve the employment function. Unlike the previously-mentioned variations, it attempts to improve upon, and redirect, the utility of the unguided (or *non-directive* or *free*) interview

Typical of any unguided approach, the "Non-Directive Employment Interview" encourages the interviewee to talk freely regarding his interests. The interviewer is expected to listen and foster this free expression. The belief specifies that, given this opportunity, the interviewee will reveal information not only technically related to his job qualification but also relevant to his attitude. The interviewer's guidance is expected to be limited to encouragement of the interviewee. The significant difference from the traditional method is as follows:

. . . The interviewer learns as much as possible about the interviewee before the interview occurs

. . . The interviewer is furnished with, and interprets, the interview in relation to job specifications.

. . . The interviewer develops a plan for conducting the interview which is, in effect, tailor-made for the interviewee in question. The plan is supposed to be based upon.

. . . topics designed to stimulate conversation and gain the confidence of the interviewee

. . . a pattern of the interviewee's history.

. . . a preliminary judgment of his estimated qualifications.

Obviously, this variation parallels McMurry's approach. The main difference lies in the manner of interrogation.

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<sup>10</sup>An interesting adaptation can be found in Lon D. Barton, "How to Size up a Man in Sixteen Minutes," Management Magazines, Inc., 1959.

<sup>11</sup>cf. George Strauss and Leonard R. Sayles, *Personnel: The Human Problems of Management* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1960).

<sup>12</sup>George D. Halsey, *Selecting And Inducting Employees* (Harper & Bros., Publishers, New York, 1951), p. 97-103.

Most variations of basic interviewing methods were developed to facilitate the manpower selection and placement task. Their development results from recognition of two inadequacies present in both the guided and unguided interview — the lack of a system for rating the interviewee, and the lack of a studied or standard pattern of questions to be asked. None of the extensions (including those reported in recent “trade” literature) results in the creation of a new technique; rather, each attempts an improvement upon a basic method. Though open to controversy, one can maintain that McMurry’s concept is important as an over-all manpower procedure because it requires study or analysis of the case, as well as training on the part of the user.

### DEPENDABILITY

The validity and reliability of interviewing have been challenged. The fact remains, however, that the interview is still about the only practical and reasonably dependable diagnostic communication device available to all manpower people, and managers in general.

Few studies condemning the interview indicate that the interviews used in the study were planned, that the interviewers were trained, or that the system of rating the interviewee was standardized. In fact, in many cases, such studies have not fully indicated the nature of the controls applied.

Actually, the dependability of any interview seems to hinge upon the degree of training of the interviewer, the degree of preparation by the interviewer, the relationship existing or developed between the interviewer and the interviewee, and the attitude of the interviewer. In addition, the quality of the company involved appears to affect dependability.

No company should adopt the interview as a basic management tool *unless* it also adopts a method to audit the success of that tool. One such method is to maintain a “continuing training” program for all who use the interviewing process regularly. A program of this sort requires that a random sample of each person’s interviews be recorded and then reviewed to pick out the errors, the possible improvements, and the clues to the factors behind an interviewee’s attitudes.<sup>13</sup>

### THE INTERVIEW — ACTION OR SUPPORT ACTIVITY

Most textbooks in the field of Personnel Administration make a point of emphasizing the importance of the interview as a personnel department technique and as such, a support-group (staff) activity. It should be understood, however, that the interview is a basic communication tool for management. It is a communication process having

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<sup>13</sup>Harry W. Daniels, “What Are Interviews Made Of?” *Personnel*, American Management Association, Inc., New York, November, 1953.

almost universal application and not just a personnel tool. It is, therefore, both an "action" and a "support" activity.<sup>14</sup>

### OTHER STANDARD COMMUNICATION DEVICES

Various measures other than interviewing have been developed to facilitate or provide communication within organizations. Some pertain specifically to direct workaday communication, and some to indirect and informal communication. They range from complex electronic devices through typical media such as bulletin boards and memoranda.

*TECHNIQUES, TOOLS, OR DEVICES.* The following listing, though certainly not complete, presents most of the communication methods in current use. Although the comments included are equally incomplete, they provide a base of knowledge upon which one can begin more concentrated study should he so desire.

1. *House Organs, Company Magazines, Local Newspapers:* their use has four general purposes: (A) to inform *all* employees and interested parties of policies, procedures, problems, and the company position on important issues; (B) to make employees feel a closer kinship for the company; (C) to facilitate employee-employee and employee-management understanding; (D) to help community leaders reach their public on issues related to company and employee welfare.<sup>15</sup>

*Prime consideration* in the utilization of these devices involves readership. The copy necessarily must be pertinent and compatible with employee interest. The employee should have some direct part in the publication or preparation of copy. The copy should include family events of significance — not such items as Mrs. Jones gave a tea, but items such as Mr. and Mrs. Jones' oldest son graduated with honors. Company publications should be distributed at a time and place most apt to foster reading; the art work, editorials, and features should be of a quality to interest the employee's family.<sup>16</sup>

In most organizations, these devices find application as aids to "downward" and "lateral" communication. Where question and opinion sections are included, the "lateral" or horizontal value is improved.

2. *Bulletin Boards:* their use generally involves the following considerations. The bulletin board provides the employee with on-the-spot, immediately current information on procedures, rules, changes, problems, and ideas. It usually places prime emphasis upon the particular

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<sup>14</sup>See Chapter 3.

<sup>15</sup>Barbara Beach, "Employee Magazines Build Morale," *Personnel Journal*, Vol. 29, No. 6, Nov., 1950, pp. 217-218 cf. "How To Play The House Organ," *Fortune*, October, 1952.

<sup>16</sup>Roger T. Lyman, "Of, For, and By Employees," *Personnel*, Vol. 29, No. 4, January, 1952, pp. 319-321. Barbara Beach, *idem.*, "No Question Too Tough To Answer," *Modern Industry*, Vol. 21, No. 3, March, 1951, pp. 77.

section or department where it hangs, and second emphasis upon the company as a whole.

Secondary purposes of bulletin boards include: (A) providing employees with information regarding rent, riders, wanted to buy, and wanted to sell; (B) informing employees of programs and progress regarding company or community projects.<sup>17</sup>

A prime consideration in the employment of bulletin boards focuses upon proper use. They should be kept current, lively, understandable, and unquestionably pertinent. Employees should have a direct responsibility for this medium of communication. Although generally applied as a "downward" and a horizontal device, if properly used and managed the bulletin board can provide "upward" information of limited effect.

3. *Handbooks and Information Manuals*: these devices (A) provide a ready reference and complete statement of rules, technical and administrative procedures, and the like; (B) inform employees of programs and program requirements, benefits, and benefit procedures. They suffer from the fact that all too many are not maintained in an up-to-date manner. The *prime consideration* thus involves both accuracy and current applicability, as well as readability, ease of carrying, and certainty of distribution. Both as a morale building device and as a means of helping to assure applicability, the employee should have some direct part in the development of these manuals. These "downward," and to some extent horizontal, communication devices have particular importance in large organizations where, for one reason or another, it may be difficult for the individual to contact fully- and properly-informed management people.<sup>18</sup>

4. *Information Programs*. such programs facilitate efforts to discover the extent of employee information and *misinformation*, and they help acquire or improve interest and confidence in management.<sup>19</sup> Although the information program idea has not been accepted too widely except in large concerns, it is one of the few devices which can provide for "upward" communication. Because of this, one might predict that in the not too distant future such programs will become more prevalent. The prime considerations in their utilization are the maintenance of anonymity and actual employee participation.

5. *Letters and Memoranda*: these are, in many cases, the only devices applied, other than interviewing and telephones. They generally are used to: (A) present urgent information to employees,

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<sup>17</sup>Elmer W. Earl, Jr., "Bulletin Boards," *NICB Studies In Personnel Policies* #138, July, 1953.

<sup>18</sup>C. H. Lawshe, W H Holmes, Jr., and G. M. Turmail, "An Analysis of Employee Handbooks," *Personnel*, American Management Association, Inc., N. Y., Vol. 27, No. 6, May, 1951

<sup>19</sup>Ross G. Walker, "The Misinformed Employee," *Harvard Business Review*, May, 1948, pp. 267-281.

including managers; (B) provide uniform interpretation regarding specific problems, questions, procedures, policies, and the like, (C) lend dignity and prestige as well as emphasis to awards, information, instructions, and statements of position.

A prime consideration must be given to pertinency, truthfulness, timeliness, and accuracy. Official letters and memoranda should not be over-used — and they can be quite easily — nor should they be applied to issues of selfish bias.<sup>20</sup>

6. *Annual Reports* generally their purpose includes: (A) the presentation of a true picture of the company's current position and an accurate and complete statement of its economic condition, (B) information to employees and instillation of confidence, and (C) the announcement of pending changes or future plans. *Prime consideration* should be given to readability, truthfulness and accuracy. Employee participation in development of such reports appears to be a helpful morale device<sup>21</sup>. Generally annual reports are applied as a "downward" communication device. There is reason to feel, however, that if employee participation is involved, the technique might provide some "upward" communication.

7. *Histories and Growth Reports* Generally these devices come out infrequently and usually are directed more to investors and the general public (or potential employees) than to the existing workforce. Management might do well to apply these devices more frequently particularly as a means of counteracting government, union, or other pressure-group activity, providing accurate information concerning future plans, and helping attract competent technicians, scientists, or engineers.

These devices provide "downward" and horizontal information, but they are not to be considered as *direct* communication tools. Since they usually are applied for "outside" consumption, it is rather doubtful that they have much bearing upon the internal, operational flow of information in most companies. The *prime considerations* for all written histories and growth reports are accuracy, readability, and timeliness.

8. *Conferences, Meetings, Discussion Groups* The purpose of such formal or informal gatherings is to inform employees, managers, or the public of operational developments, aims, problems, and plans, provide factual data regarding past, present, and estimated future activity, direct, or assist, in the development of group effort regarding

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<sup>20</sup>Case Book of Employee Communications in Action, National Association of Manufacturers, October, 1950

<sup>21</sup>Siroon Pasbalian and W J E Crissy, "How Readable Are Corporate Annual Reports?", *Journal of Applied Psychology*, Vol 34, No. 4, August, 1950, pp 244-248. "Employee Reports Need A Change," *Management Review*, American Management Association, Inc., New York, Vol. 41, No. 11, Nov., 1952, pp. 755-756.

specific problems; facilitate individual growth, and develop more inclusive knowledge regarding problems.

*Prime consideration* in formal and informal meetings often becomes the frequency of their utilization. In many instances conferences and meetings tend to block actual work because the managers are in constant attendance rather than in their departments. If they are properly spaced and properly conducted, however, and if the participants *do* participate, these devices can provide useful "downward," horizontal, and "upward" communication.

9. *Telephone*: the purpose of the telephone is obvious. In today's industrial organization, disruption of telephone service is tantamount to cessation of production. The prime considerations include proper location, proper use by the individual, development of standard telephone procedures and channels, and insistence that phoned orders or reports be followed by written reports or statements.<sup>22</sup> The device obviously provides direct "downward," horizontal, and "upward" communication.

10. *Public Address Systems*: like the telephone, the purpose of this device seems obvious. With the system, managers can call individuals located in remote corners of a plant, make mass announcements, and the like. Prime consideration focuses upon installation. A bad installation results in garbled transmissions. Too frequent use results in its being ignored. When using a system of this type the transmissions must be short and to the point. Basically it is a communication device which should be used only for getting attention and giving information. Public address systems can provide "downward," horizontal, and "upward" communication.

11. *Recording Devices*: recorders serve to conserve or store communication. They become useful when precise repetition is necessary and written instruction might fail to provide the desired emphasis. Probably the best advice one can give with reference to recorders is to suggest that the producers be contacted.

12. *Movies and Slides*: these communication devices facilitate special activities such as employment, training, problem solving, and the like and provide historical documentation. Although one generally associates their use with sales and induction, and as such they become "downward" aids, where applied in problem solving they facilitate horizontal communication.<sup>23</sup>

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<sup>22</sup>Stephen Habbe, "Communicating with Employees," *NICB Studies In Personnel Policy*, No 129, 1952. "Robot Announcer Keeps Supervisors Informed," *Mill and Factory*, Vol 46, No. 6, June, 1950, p. 102. G. E. Hesse, "We Pick Up a Phone to Get Real Control of Operations," *Factory Management and Maintenance*, Vol 109, No. 1, January, 1951, pp 78-80.

<sup>23</sup>John Bemis, "A Movie Night Tells Your Company Story," *Factory Management and Maintenance*, Vol. 110, No. 7, July, 1952, pp. 122-123.

13. *Closed Circuit TV and Visual Telephone Circuits*: these communication devices can be effectively used to: (A) provide information, command, inspection, surveillance, and facilitate problem solving; (B) assist with training and induction; (C) facilitate operational correction, (D) provide for complete and accurate response in complex situations. When recording and computational devices are included, command and inspection not only are facilitated, but the complete participation of employees becomes possible.<sup>24</sup>

Not too much has been done in this area as yet, except in the military and really large companies; however, it is a proven technique and brings the employee into direct contact with management even though separated by vast distances. The prime consideration is, of course, proper installation.

14. *Surveys and Suggestion Systems*: these communication tools will receive more complete attention in the fourth section of the text. Like interviewing, they have a special significance in manpower work.

#### COMMUNICATION PROGRAMS — REQUIREMENTS

It should be clear that successful communication does not just happen of its own accord in the industrial situation. Some form of programming is required not only to assure the proper use of the right device for the right case, but also to assure that all those involved will be performing in a proper manner. This latter comment further signifies the importance of avoiding a complacent view regarding existing communication techniques. The question arises then: "What are the general requirements of a successful communications program?"

The *first* and obvious requirement is that the manager should understand the complexity of communications, both as a process and a set of considerations. The *second* and equally obvious point is that management should assure the existence of a planned and well-financed program of communication research and improvement. In addition, every manager should realize that communication procedures and devices, correct in one instance, might not be correct in another.

Once those three basic requirements are understood and established as fundamental to management action, the following general factors should be adhered to consistently.

1. No program works unless it has direction. The direction a program takes should be based upon recognition of the people involved — their needs, abilities, rights, views, and the like — as well as the organizational or operational requirements of the company.

2. No program works unless it reflects the *real* needs of the organization and its people. Fact, not opinion, should be the basis for

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<sup>24</sup>"TV — A New Employee Communications Medium," *Management Review*, Vol. 41, No. 5, May, 1952. "Telescriber Traffic Cop Speeds Material Flow," *Management Review*, Vol. 42, No. 3, March, 1953.

program development, and one should note that the *real* needs of personnel are not necessarily different from the *real* needs of organization.

3. Those involved in the program must believe in the goals of that program. They must believe that they are an important part of the total input utilized to make decisions.

4. The executives must do more than believe! They must provide active leadership, instilling the concept that events must be *made* to happen. They must help their subordinates make them happen. They must *not* delegate communication functions which are inherently basic to their own task patterns.

5. This active leadership must include both a *willingness* to share information with employees and a positive effort to do so. It must encourage the passage of information from subordinates, and after distinct efforts to determine what employees want to know, this leadership sees that they are informed.

6. Both the program and the leadership must be continuing affairs. Communications is no campaign, here today and gone tomorrow.

7. The program should be designed to reflect company policy accurately.

To the manpower manager, this once again signifies the need for carefully established and conducted training programs, selection systems, and efforts designed to maintain the physical and mental well-being of the workforce.

### SOME GENERAL ERRORS

A distinct illusion of simplicity hovers about communications like a mirage — we all tend to think that we communicate. After all, we talk! This illusion leads to some rather fundamental errors.<sup>25</sup>

*MEDIA VS TRANSMISSION* Too often, as we seek to improve communication, our attention focuses upon media of transmission, to the exclusion of what is to be, and what actually is, transmitted. When we sense that something is wrong with communication, too often we accept the obvious as the cause.

Analysis really should begin with the questions: “*What* should be communicated, *why*, has it been, and do the communicants want and need this?” In this connection it also pays dividends to note that *not all people do talk!* As Davis indicates, people often function as “passive receptors.”<sup>26</sup> It is incorrect to assume that because they are people, a receptor will act or a supposed originator will originate.

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<sup>25</sup>Frank E. Fischer, “A New Look At Management Communications,” *Personnel*, American Management Association, Inc., N. Y., Vol. XXXI, No. 6, May, 1955, pp. 487-495.

<sup>26</sup>Keith Davis, “Communication Within Management,” *Personnel*, American Management Association, Inc., New York, Vol. XXXI, No. 3, November, 1954, pp. 212-217.

*ALL CHANNELS ARE NOT FORMAL.* Probably the most complex error developing around the communication and organization set involves the question of circuitry. Many managers tend to visualize the channels either as command channels – moving straight up and down through the organization – or liaison channels, moving across the structure at a given level. Often they completely ignore the “e” circuits, or consider them *only* as a part of the informal organization’s communication net. They assume that the only channels of interest to them are those formally defined by the organization chart. As a result, they may ignore the necessity of establishing an environment which enables effective utilization of those “e” circuits, and may even set up an atmosphere which prevents them from being energized when they are needed.

One should remember that command circuits *do* move in a generally vertical or horizontal manner, as pointed out in our discussion of “n” and “s” circuits, but they come together at various points within a hierarchy – usually where levels end, where departments become divisions, or sections become departments. At the same time and place, the various staff circuits (“a”) tend to join with the line. At certain points in a hierarchy, therefore, the command net will include the staff net.

Moving with this pattern – sometimes directly in coincidence, sometimes crossing – we find the “e” circuitry. The erroneous thinking lies in the idea that, because an organization’s hierarchy has been laid out in black and white on paper, the communications net follows that exact hierarchical scheme without variation.

*THE GRAPEVINE.* Experience and observation lead to the feeling that many managers, including some manpower managers, think that a grapevine *just develops* – that it follows no pattern, has no reason, and is unpredictable. It would simplify life for the manager if these concepts were true! Davis very correctly points out conditions typical to grapevines.<sup>27</sup>

1. People talk most when the news is recent.
2. People talk about things that affect their work.
3. People talk about people they know.
4. People working near each other are likely to be on the same grapevine.
5. People who contact each other in the chain of procedure tend to be on the same grapevine.

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<sup>27</sup>Keith Davis, *idem*. Interestingly, one way of checking the effectiveness of formal communication is to listen to the grapevine, but, you must know where to listen and what to listen for. See Chapter 4 for circuit reference to the *informal organization* and the “grapevine.”

To these observations one can also add that *people talk about people new to the organization, and people whose movements to and from work* cause their association (whether they *know*, or merely are acquainted with, each other), tend to be on the same grapevine.

What is the point? Simply that failure to recognize these factors may mean that the manager who seeks to utilize the grapevine for one reason or another may find it impossible to do so. Or, being unfamiliar with the points, he may use the wrong "vine" and his purpose, information-search, will be fruitless.

*THE QUESTION OF LISTENING.* Man, being what he is, tends to jump toward what appears to be easiest, with little consideration for the consequences. Since the question of listening is no different from many other issues, man tends to assume that he is listening, or that the person to whom he is directing information is listening.

Thomas and Mackmore provide sound advice on how to listen, advice which all managers, as well as subordinates, should heed.<sup>28</sup>

1. Disregard the speaker's moods and feelings unless these are significant to the matter being transmitted, or the purpose for listening in the first place.

2. Disregard symptoms and look for causes, unless the matter at hand is such that causes are known and it is important to determine the symptoms.

3. Let the speaker preserve his self-respect. One might add here — do not interrupt.

4. Avoid moralizing and get the facts. This has particular significance in instances where one is seeking information about accidents, grievances, and the like.

5. Suspend judgment until all the evidence is in. Managers should remember that obvious evidence is not always complete evidence.

*COMIC BOOKS.* In an attempt to gain maximum reader interest and increase readability of a communication a number of concerns and military establishments utilize comics to provide a flow of specific information to employees<sup>29</sup>. One might say this is an attempt to apply the Flesch concepts fully<sup>30</sup>.

Actually, this approach may have an undesired effect upon the communication problem. It may serve to down-grade the ability of receptors by accustoming them to extreme simplicity. In turn, this

<sup>28</sup>R. I. Thomas and J. H. Mackmore, "Getting Results in Problem Interviews," *Personnel*, American Management Association, Inc., N. Y., Vol. 21, No. 1, July, 1944, pp. 31-37. Also, see Chapter 4.

<sup>29</sup>"How Industry Is Using Comics To Get Ideas Across," *Factory Management and Maintenance*, Vol. 108, No. 10, Oct., 1950, pp. 82-83.

<sup>30</sup>Rudolf Flesch, *How To Test Readability* (Harper & Brothers, Publishers, New York, 1951).

may mean that when a piece of information, idea, command, and the like cannot be reduced to comic books levels, no communication is possible or likely. One serious question in the minds of some is, "Will the downgrading of language facilitate man's ability to master the future?"

The warning here then, is: *if* comic books are to be utilized, make certain that they are needed; that they fit the *total* problem; that they will provide for *complete* knowledge accumulation and assimilation. Be sure that their use will not, in the future, make communication difficult.

### SUMMARY

Probably the most widely-used communication device is the interview. Although this manpower tool usually is associated with the employment function it actually serves as a primary means of obtaining and disseminating information, giving instruction, motivating desired action, and establishing fact.

Challenged frequently as being unreliable, the fact remains that the interview is a vital management tool. The key to effectiveness rests with: (1) the skill of the interviewer; (2) the adequacy of interview records; (3) the quality and standardization of interviewee ratings; (4) the existence of continuing training, and (5) the adequacy and timeliness of audit.

Many other communication devices and techniques exist. With the exception of the telephone, closed circuit television, and intercom devices, most have limited value though each serves some distinct purpose. Proper use of each device requires attention to the *primary considerations* identified throughout this chapter. Management must recognize and avoid the *general errors* discussed.

This and the previous chapter raised typical questions facing manpower managers in particular, and all managers in general. These questions relate to communication. They pertain also to organization and control, neither of which can be effective without satisfactory communication.

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*Without plan, without an ability to tell where we are and should be, in the absence of proper control, success is due to chance!*

## Control

Management and managers exist to obtain customers, to acquire profit, and to attain continued existence.<sup>1</sup> The successful maintenance of our way of life depends largely upon how well management accomplishes this threefold purpose. Managers must make things happen by taking positive action, not by waiting for events.<sup>2</sup> Successful action comes from thought and plan, it calls for control as well as communication and organization, for control increases the probability of proper customer and profit acquisition and continuance of life.

### CONCEPT AND CONSIDERATIONS

Some will say control is a power to influence or suppress, some will claim it means the ability to guide or steer, still others will speak of it as a condition or a simple state of being. Actually, none of these views, standing alone, spells out the management meaning of the term.<sup>3</sup>

**DEFINITION.** "Control is that function of regulating events rather than being regulated by them, and of assuring that justified change, to either plan or action, is accomplished according to a correctly prescribed program."<sup>4</sup>

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<sup>1</sup>Peter F. Drucker, *The Practice of Management* (Harper & Brothers, Publishers, N. Y., 1954), pp. 3-18, 121-136, 341-369, *passim*

<sup>2</sup>*Ibid.*, p. 11.

<sup>3</sup>Alex W. Rathe, "Management Control," *Advanced Management*, 20:24, May, 1955; William H. Newman, *Administrative Action*. (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1951), p. 407.

<sup>4</sup>Theodore A. Toedt, "The Meaning of Control," *Hospitals*, Journal of the American Hospital Association, Vol. 32, December 16, 1958, p. 45.

As defined, control becomes an active and positive concept. The cycle of planned study and corrective action indicated means that the manager cannot wait for events to occur if he is to meet the definitional requirements.

**CONTROL CONSIDERATIONS.** The idea of control develops as a principle of organization, and works in coincidence with communication. Organization delineates the functions of work and of relationships, communication provides the life flow, control allows diagnosis of failure and success and estimation of the steps required for continued life. Like its parent, therefore, control embraces certain specific considerations.

- . . Control is a condition or state of being.
- Control operates systematically
- Control functions within an organizational structure
- . . . Control affects, and is affected by, behavior

### CONTROL — A CONDITION

In the conditional sense, control does or does not exist over a particular situation. In other words, either managers *are*, or *they are not*, regulating a specific event. Either steps taken to institute change and to study its necessity *are*, or *are not*, — one by one — properly prescribed.

To the manpower manager this means that he knows why things happen, when they can be expected to happen, and is able to prevent or seek to prevent the unwanted or undesirable from occurring. For example, he develops a prediction device to identify the expected labor turnover, accident pattern, shift in labor skill, and the like. He evolves methods for reducing that turnover, those accidents, and in particular, methods which will work *before* the turnover or the accident occurs, if possible. We say, therefore, that he has control over grievances if he has effected the establishment of a formal grievance procedure; if that procedure is administered in such a way that grievances are handled and corrected quickly, if a grievance (a *real* one, not a matter arising from indirect aggression) is analyzed and steps taken to eliminate its cause.

### CONTROL — A SYSTEM

The definition of control suggests the processive pattern or system of control. Since one of the basic points made in definition requires regulation *of*, rather than regulation *by*, events, that system must be positive, active, and *not* permissive. The manager must determine, identify, or isolate those events to be controlled. This, then, specifies

the need for the *first* step or phase of control — goal and plan determination.<sup>5</sup>

*Second*, both plan and action must be recorded. Records — whether written, typed, taped, put on a platter or disc, or pictured — provide the prime means for collecting and then transmitting the facts pertinent to the events to be regulated. A record accomplishes nothing, however, unless it is put to use.

So, *third*, the recorded information must be transmitted. The feedback includes a comparison requirement, a measurement. It is here that one notes the relationship to circuitry and hierarchy, for some types of recorded data require feedback only within a given hierarchical level, while others require transmission to other levels. The distinction as to what remains within level and what moves out of level depends upon the nature of the event, the nature of the plan.

*Fourth*, comparison involves more than simple measurement. An analysis should be made to examine the deviation of action from plan so that the significance of deviation can be evaluated. Knowledge that a difference exists has relatively little meaning unless the cause of the deviation is clearly identified.

Simple comparisons of frequencies or percentages usually constitute measurement in such form that they fail to meet these requirements of analysis. Effective analysis generally will result from more sophisticated data, and techniques often will involve objective mathematical tools.

*Fifth*, a decision must be made. The decision may be one of several. Its specific nature is dictated by the analysis of the situation, as judged by the decision-maker.

Decision will be governed by many factors. Certainly the most frequently occurring will involve economics, personalities, available choices, and predicted events. In other words, decision will involve the extent to which opportunity can be recognized.

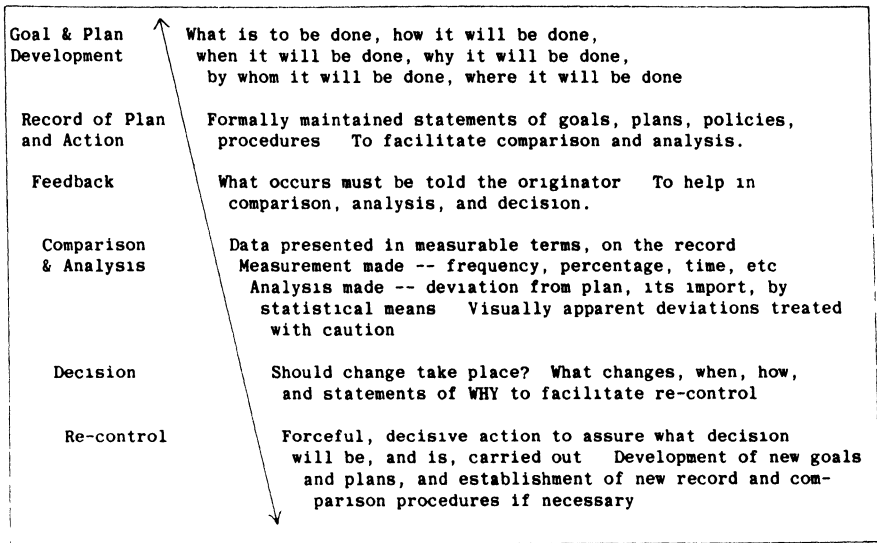
*Sixth*, the final step involves re-control, or the taking of decisive steps to assure that decisions will be actively pursued and that an entire new pattern of control is established around the newly-developed goal and plan. Failure to re-control means that the hierarchy will be uninformed or misinformed, that time, energy, and money will be wasted. These possibilities add up to weakened morale and probably reduced operational effectiveness.

This theoretical system of control can be represented to lower echelon managers as in Figure 14.

**GOAL AND PLAN DETERMINATION.** Goals and plans must be operational. They must be operational at the level of application.

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<sup>5</sup>Toedt, *idem*; Newman, *idem*. cf. Henry H. Albers, *Organized Executive Action* (John Wiley & Sons, Inc., New York, 1961), pp. 30, 60-61.



### THE CONTROL SYSTEM

Figure 14

A goal becomes operational and level-oriented when it is clearly stated, measurable, realistic, and translatable into standards.<sup>6</sup>

**RECORD OF PLAN AND ACTION.** The records goal can be stated as: one record that provides all information necessary for the control of a given area of management responsibility. Such a goal requires some operational rules. These are: preparation should require minimum expenditure of time, effort and money, an adequate record is comprehensive, its interpretation requires a minimum expenditure of time, effort and money, and provides or assures only *one* interpretation by any reasonable man, it is easy to utilize, cost of its preparation and storage is minimal, its storage is planned to facilitate its use.

These rules indicate the need for keeping records under constant surveillance. Kipling's famous "six honest serving men" — why, who, what, when, where, and how — apply not only to the entire control concept, but also to each of its phases. Manpower managers, therefore, constantly strive to improve their "reports control system."

**FEEDBACK.** Information regarding an action or event can be effectively positioned for only the comparative process, for control

<sup>6</sup>Newman, *op. cit.*, pp. 407ff.

action if needed, when transmission takes place. Feedback simply means and specifies that transmission of information will take place; information will flow from a process to an authority who can control. This in turn brings into focus all the theory of communication.

In most cases today, feedback depends upon reports — oral or written, formal or informal. That this condition still prevails in the face of the advances made in electronics gives some support to the feeling that manpower management has failed to keep pace with the other primary management functions.

The nature or mechanics of feedback should depend upon the events to be controlled and the time allowed for that control. In a concern where highly dangerous materials are used, accident information thus flows more rapidly than where the production situation has little risk built into it.

There are certain rules regarding feedback effectiveness. They are as follows.

1. Feedback, the transmission of operational information to an analytical center, must occur if control is to exist.

2. Feedback should be as rapid as needed for the comparative analyses and decisions required.

3. Effective feedback requires that facilitating devices be tolerant to the information-flow required. A written record thus would be rejected in favor of an automatic electronic device where instantaneous transmission is needed. The reverse would be true where such rapid flow was unnecessary.

4. Facilitating devices must be readily available — located in terms of need. A phone, therefore, would be located in the machine and equipment room of a hospital rather than 20 feet down a twisting corridor, and closed-circuit TV is desirable at the automobile assembly line instead of a runner.

5. Those charged with feedback responsibilities require training in the proper use of facilitating devices (including proper writing), and in the general concept of control.

6. Effective feedback, and, therefore, control, depend in part upon the personal and operational relationships between workers and their immediate superiors, "line" supervisors, and the subordinates and managers of support and service departments.

7. *Correct feedback can better occur in the presence of non-conflict, low-distortion relationships.* Conflict and distortion block communication, whether internal to the people concerned or external, or whether impelled by poor organization structure or improper human relationships, or improper communication circuitry or devices.

8. Feedback is directly influenced by what is reported. If every event becomes a matter of record and is reported or fed back to a control or analysis center, the people involved will all look like bureaucrats riding their bicycles in four directions at once. Avoidance of this

"D. C." confusion comes from feedback designed to facilitate transmission — the use of priority-coding and reporting of "exceptions" before routine is in order.<sup>7</sup>

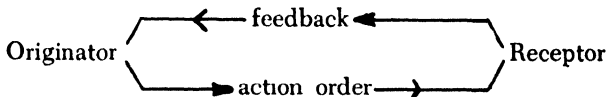
As a case in point, a foreman hardly would be expected to notify the manpower division that "there were no grievances today!" (negative report) as a matter of routine procedure. To do so would tend to waste everyone's time and could render less useful any feedback from the foreman, for everything he sent in might be put aside until the more informative material was acted upon.

9. Oral feedback should be as formal as written, and conducted in an atmosphere where formality exists in direct proportion to the significance of the events to be controlled, and the personal and hierarchical relationships of those persons responsible for that control. Like all feedback, oral transmissions should be based upon fact and logical conclusion timed to meet situational and procedural needs.

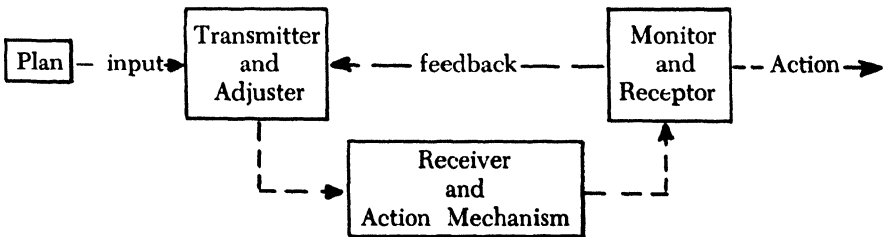
10. A manager has a right to expect timely, factual, concise, and clear information from his superior *and* his subordinates. They, in turn, have the same right to expect this of him.

11 At only one level is full reliance upon oral feedback really justified and that is between immediate superior and immediate subordinate. Even then, written or recorded reports are necessary in cases of "exception."

**CONTROL CIRCUITRY AND FEEDBACK.** Effective control in the management sense requires the monitoring of operation against goal.<sup>8</sup> Feedback permits this action. If control is applied to the basic communication circuit discussed in Chapter 4, the design may be as follows.



A more complicated, but still simple, electronic system may appear as:



<sup>7</sup>Note the relationship between this and the priority, scheduling, and message-choice remarks in Chapter 4.

<sup>8</sup>A "communication and control" discipline continues to evolve. See Albers, *op. cit.*, pp. 430-431, 327-328, 361.

In this circuit, the defined standard (plan) is fed into the circuit, transformed into a useful signal, the action mechanism is started, the monitor detects deviation from standard and notifies the adjuster, which causes the action mechanism to correct and continue action. This would be somewhat typical of a basic radar system.

Feedback makes monitoring effective, permits adjustment in the process, and, therefore, enables control. The foregoing procedures can be extended to fit very complex situations including sorting, memory search, recall, authentication, and so forth. Instead of merely forcing a process to conform to a standard or enabling this effect, the system of control, with properly devised feedback, can cause a goal-change. It thus appears that by arrangement of the many communication functions and devices into a *control circuit*, any desired degree or kind of control can be established.

**COMPARISON AND ANALYSIS.** Comparison seeks to determine the presence of deviation from plan or goal; analysis examines the detected deviation. The terms often are used synonymously, but accuracy and technical proficiency demand recognition of their difference.

Comparison is plagued by a permissive simplicity. People make comparisons almost without thinking. They compare today's weather with yesterday's, the year before, and so forth. They compare today's annual report with that of 20 years ago. Usually such comparisons are more emotional than factual. Seldom are such comparisons made in terms of all the factors which might explain any observed differences. Such action clearly is open to serious error. The general approach useful in correct comparative action can be stated as follows.

1. Comparison usually requires feedback. The form in which information is reported necessarily facilitates comparison. As a case in point:

A certain personnel department prepares an elaborate report on labor turnover each year. It shows: (A) the number of separations by department, (B) the number of separations by cause, (C) makes an elaborate explanation of the need for cooperation between supervisors and the personnel department, and (D) briefly explains the meaning of certain of the causes of turnover, as classified. This does not facilitate comparison, however, nor does it provide the information needed for proper turnover control.

The number of separations by department is useless without a picture of what happened in the past and what was predicted, and it is relatively useless without a statement of the size (or Mean size) of the workforce in each case. The same is true of the number of separations by cause. Maximum effectiveness requires matching of cause to department.

2. Comparison is facilitated by standardizing the reporting procedure.

3. Planned study improves the effectiveness of comparative action. Planned study helps place responsibility for comparison at a level (A) as low as possible, (B) as comprehensive as possible, and (C) where constant search for better methods of comparison, feedback, analysis, and planning is possible.

In general the areas requiring such study are organization, communication, production, sales, service, and manpower functions.

*Analysis.* This function examines detected deviation. Examination means: (1) determination of the significance of the difference between action and plan, (2) determination of the cause, direction, or type of deviation present, and (3) determination of the action-choices available under the existing circumstances. To undertake the comparison-analysis phase of control effectively, a knowledge of statistics, the analytical techniques typical to industrial engineering, job analysis, and organizational analysis is required. Table 10 indicates some of the tools useful in this analytical work.

*DECISION.* The decision phase of control depends upon all prior steps, particularly comparison and analysis. In general, the decision possibilities appearing after analysis include the following.

1. No change
2. Change in plan but not action
3. Change in action but not plan
4. Complete change to plan and action
5. Partial change to one but not the other
6. Varying degrees of change to one, the other, or both.

The ability to recognize action-choices (opportunities) plays an important part in making decisions, and one enhances this ability through proper application of the preceding steps and by proper mastery of the included knowledge. The basic decision considerations are as follows.

1. *Decision Depends Upon Opportunity.* Decisions occur within the light of the opportunities presented. Often the person faced with the possibility of decision lacks the authority to act. Often he who sees an opportunity only can watch it pass into the night. Lack of authority or lack of ability may result from some rigid procedural rule set by top management. In addition to pointing out that decision occurs within the light of opportunity, one thus notes that *opportunity may be restricted by edict.*

Edict is not the only restriction upon one's opportunities. Position in the hierarchy may restrict also. For example, the foreman would hardly be in a position to undertake a contract commitment that would affect the entire company with the union.

2. *Fact Should Govern Decision.* Adequate decisions are based upon facts and experience-knowledge, not emotion and status-founded

**TABLE 10**  
**SELECTED TABULATION OF COMPARATIVE**  
**AND ANALYTICAL TOOLS FOR CONTROL**

Area of Application and Tool	Remarks
For General Study of Organization and Provision of Basic Control Information	The initiation and application of these devices generally requires action by top management
Organization Analysis	Executive group must participate Minimum audit every five years Provides basic data for most major decisions and programs
Job Analysis	Company-wide program, requires executive direction, included department head and section chief participation Study sequence of operation, requirements re men, materials, equipment Provides detailed picture of existing organization and jobs Aids all manpower functions
Process Analysis	Not an inherent manpower responsibility, but manpower should be prepared to assist industrial engineering For reference see competent texts re production and industrial engineering
Specifically for Manpower Control, but useful to All Managers	Though these analytical techniques stand alone, they are interdependent and rely upon the statistical methods
Turnover Analysis	Designed to show problem departments, significant causes and trends. Weekly or monthly computation best Record of frequency by department, by cause, and cause by department, show gain and loss Requires excellence of exit interview Information for labor policy, training, supervision, and operational cost
Absenteeism Analysis	Same format and purpose Should be designed to pick out seasonal and cyclical variations
Accident Analysis	Show problem areas, reflect frequency, severity, department, cause Weekly or monthly computation Information re insurance planning, policy, expenditures, training, labor policy; control charting useful -- also true of preceding
Marginal Rehires	Executive or department head maintenance Current "log" of who and why, and department To verify turnover analysis, to provide check on area economics, personnel, and supervisory proficiency. Show trend and seasonal variation Code to apply to turnover absenteeism and accident procedures.
Grievance Analysis	Cause by department and frequency Manpower division maintains Information for labor policy, training, and supervisor proficiency. Weekly or monthly computation

TABLE 10 (Continued)

Area of Application and Tool	Remarks
Performance Rating	Executive order, executive review, supervisor participation Standards established through job analysis, work measurement, etc Information re production, training, wages, and special benefits Yearly Most effective when a basic part of employee 201 file
For General Operational Control, Normally not a Manpower Responsibility	Ordinarily established by executive order and handled by industrial engineering Manpower needs information to aid in hiring, promotion, transfer, training See competent texts in production and industrial engineering
Motion and Time Study	Effects skill requirements and numbers of persons required, training, etc
Work Measurement and Work Simplification	Effects skill requirements, standards, numbers of persons needed, training, accident work, etc
Specific Tools and Specific Applications -- Manpower Should utilize Them	These devices apply throughout the organization Their use is vital to proper control
Budgeting	Variable budget of particular use Lowest management echelon should know Provides standard against which manager can measure monetary progress See competent texts in accounting
Break-Even Analysis	General application in fiscal division Provides over-all control Income to expenditure with periodic variation Specific applications at each level Should apply at lowest management level Aid in decision making (\$ to \$, material to material, material to \$, etc ) Control re cost and value received See competent texts in accounting and production
Replacement Analysis	Wherever <u>actual</u> operational (not book value) cost should be compared to aid decision to replace equipment or real estate, subordinate to break-even analysis, required prior to supervisor recommendation See competent text in industrial engineering or production
Economic Inventory Analysis	Originate in controller's office but each department and division head should be responsible for own position, etc Function of cost, time, storage, haulage record carrying, order, etc. Assure correct amounts at proper time and price See competent texts in industrial engineering, accounting, etc
Sampling	A tool for all division and department heads To reduce cost of data accumulation for comparison and analysis, to improve speed of computation Many types exist.

TABLE 10 (Continued)

Area of Application and Tool	Remarks
Pareto Concept (A maldistribution analysis)	A quick starting point in determination of cause and effect relationships For all managers to decide where to start analysis, what to change, when, etc Aid in deciding which of many things should come first A troubleshooting device
Tests For Significance	Several types For all managers, to decide whether a deviation is or is not due to chance, can or cannot be expected to recur, is or is not worth consideration Vital to correct analysis of any system variation
Analysis of Variance	Same as foregoing and to provide estimates of significant variable in the processes and in the presence of many Vital to most advanced analysis of variation in systems
Trend Analysis	Linear and curvilinear For all managers to project, to estimate future, to show relationships and a vital planning aid
Control Charting	Several types of charts For all managers To provide a picture of events as they occur in relation to estimated limits Vital to fact knowledge of where we are, and to planning and deciding when to begin change or study, etc
Probability	Fundamental knowledge for all manpower control For all managers Basic to planning and to analysis and decision making
Personnel Selection Methods Analysis	Initiation by top management, budget involvement, analysis of validity of psychological selection tests, interviews and related procedures, involves criteria of efficiency and turnover, an aspect of personnel research
Morale and Attitude Analysis	Initiated by top management, periodic surveys enabling time comparisons and department comparisons, yields remedial decisions, participation and control of conditions involving employee satisfaction, an aspect of personnel research
Employee Motivation Analysis	Initiated by top management, involves studies yielding decision data relating to leadership, supervisory and executive training, strategic planning regarding labor contract negotiation, an aspect of personnel research

opinion.<sup>9</sup> Here, of course, a *real* problem often exists, for in many organizations fact-finding is little ahead of where it was in grandfather's time. Very often what little fact-finding effort does exist gets lost in some maze of "informal" oral feedback (or communication), or

<sup>9</sup>Some claim that their position entitles them to opinion which attains the status of fact. Seldom is this true!

in status-founded opinions such as, "Look, we've been doing it this way for years and haven't lost money; it seems to me, therefore, that to do it that way just increases our expenditures."

What is required is the development throughout the organization of the "analytical attitude" and complete acceptance of the control concept. This requires a correct utilization of the several analytical methods mentioned, proper reporting and record keeping, and a *real* insistence, on the part of top management, that proper fact-finding be the rule rather than the exception throughout the organization. In this connection, it might be well to remember that *decision without a foundation in facts is at best a compromise developed upon misinformation or lack of information, and resulting in misapplication.*<sup>10</sup>

3. *Tradition Limits Decision.* Both tradition and fear of changing the *status quo* limit opportunity recognition and actual decision. Managers, though often as responsible as anyone for this state of affairs, find themselves bound by these factors until someone from above insists upon their elimination.

4. *Reservation of Decision.* Decision should be preserved until *all obtainable facts are in*, and until comparison and the best possible analyses have been made. Occasions will develop which require "spot" decision, but these tend to be few and far between.

5. *Consider the Indirect Facts* Companion and ancillary facts and information should be considered. For example, the plant engineer would not approve a layout change or recommend the start of an addition to a building unless building codes had been checked. The wage administrator would not pass a wage and salary recommendation to the vice president of industrial relations (or manpower management, etc.) without having checked out the effect upon other concerns in the community. The industrial relations manager would certainly consider the effect that a grievance decision on work-loads in one department would have upon all others; in some cases, he also should consider the effect it might have upon other companies in the area.

6. *Calculated Risk.* Managers who recognize the nature of the decision system understand that a *calculated risk* is sometimes necessary. Actually, fact-knowledge and experience-knowledge lead to judgment which in turn ends in decision, as represented by the diagram in Figure 15. At times fact-knowledge just does not, and cannot, exist; again, occasions arise when fact points to one thing and experience to another. In such cases, a decision made against or without fact would be a *calculated risk* — a considered guess, not a computed risk.

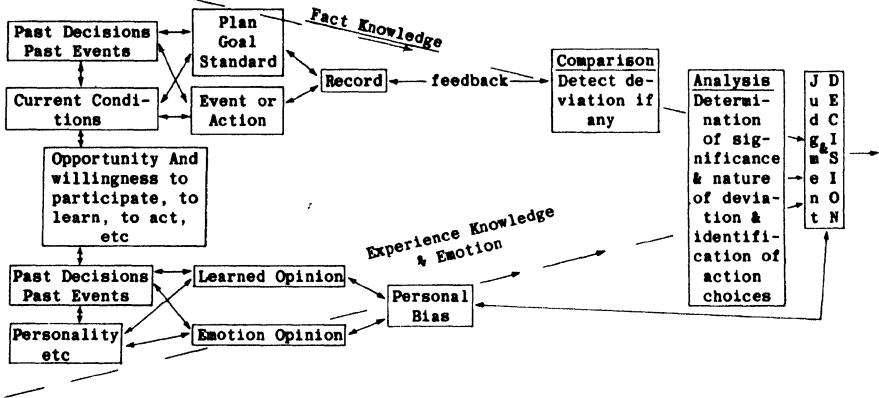
These six situations bring out the need for an organization's decision-makers to have an awareness of this test question, or rule, to be considered consciously before reaching any decision: "Will the total

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<sup>10</sup>Though the origin of this thought is lost, Mary Parker Follett presents interesting views in this connection: H. C. Metcalf and L. Urwick (eds.), *Dynamic Administration: The Collected Papers of Mary Parker Follett* (Harper & Brothers, Publishers, New York, 1941).



A Factor Diagram -- Control & Decision



Note judgment = selection of action-choice  
decision = acting or not acting upon  
that judgment

A DECISION-FLOW DIAGRAM  
A FACTOR DIAGRAM – CONTROL AND DECISION

Figure 15

effect, if any, of this decision upon the entire firm be *more favorable than any other decision?*"

**CORRECTIVE ACTION.** Decision leads to corrective action. Discovery of the need for change has little value unless it results in change. Managers exercise caution, however, and do not make changes simply for the sake of change. On the other hand, managers sometimes hesitate to take corrective action when it should be taken.

Thoughtless action – merely to be doing something – usually results from a failure to understand the impact and meaning of the control concept, and from a natural but irrationally-conceived desire to “keep up” with others. Any favorable result from such action derives only from chance.

Hesitancy, on the other hand, results from fear, poor system, poor communication and control. Some managers just do not know how to

get a change accomplished, or feel they cannot get their subordinates to accept the desired change.

Corrective action turns out to be largely a matter of selling — selling top management, subordinates, peers, and the union. We all know that one seldom can hope to accomplish a sales job if hesitancy exists, or if a “so what” attitude (or worse still, a “Why should I be the one to stick out my neck” attitude) exists. Avoidance of such attitudes and creation of a real appreciation for the salesman approach requires training — teaching people in responsible positions to believe in management theory and the importance and nature of the company’s goals, its methodology, and its needs.

Before pressing for change, even though certain of its correctness, the originator should be certain that the needed personnel exist.<sup>11</sup> Although training will not create change, it paves the way by helping to assure the existence of the required people.

A particularly salient feature of taking corrective action is *getting approval*. There is no rule in existence which can be learned and which will assure acceptance. About the only advice that can be offered is: follow policy, do not make a proposal unless you can back it up, and make your presentations in a way which leaves nothing open to logical question or disagreement.<sup>12</sup>

*Re-Control* Re-control simply means that the responsible managers make certain that, once a change has been initiated, a new control pattern is established and followed. This, of course, means that goals and standards are reset, record keeping is continued and adjusted as required by the new situation, and that feedback, comparative-analysis, and decision-making continue in a form adjusted to the new situation.

Effective re-control often is blocked by complacency or the inability or unwillingness of people to recognize and take the required action. What happens is this: a new process is established, a grievance procedure or accident analysis program is updated; once the new set is implemented, managers sigh and turn to something else, forgetting that problem until change again becomes so great as to warrant drastic action.

## CONTROL AND STRUCTURE

Control operates within, because of, and for, organization. Control keeps the organization on the most desirable of the paths open to it. What it does for the firm as a whole it does also for the various divisions, departments, and sections.

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<sup>11</sup>Newman, *op. cit.*, pp. 424-425, *passim*; his points have practical significance to every organized effort.

<sup>12</sup>While easier to say than to do, this advice works!

Control develops because of organization. Visualize, if you will, what would happen to a natural "organization" such as a tree if its growth were not governed according to, and held within, the recognized flexible boundaries established by "nature." The point is that one should recognize that the fact of organization simultaneously involves control.

Because of organization, information-flow must occur in a facilitating manner or the "condition" of organization becomes one of disorganization. Feedback, and the concept of system-units it services, make possible such help. Since organization is in part dynamic, change is natural to it.<sup>13</sup> Because of organization and its involvement with the effects of time, change thus must be identified and required action regarding change must be determined.

That which is to be recorded, reported, compared and analyzed, and subjected to decision must be manipulated by those entities which comprise the organization, and for the purpose *recognized* and *accepted* by the organization. To establish the control outside the given organization is, in effect, establishing a *new* condition, system, and structure of organization. We note thus that government price control is a system affecting a given number of individual organizations which in turn must redesign their internal control systems. At the same time, it forces the creation of an organization *within which* "control" over those organizations takes place. So control is thought of as properly existing within any organization.

**STRUCTURAL RELATION TO SPAN THEORY.** Though pathetically foolish to point out the neat mathematics of the Graicunas idea of "Span-of-Control" as a legitimate consideration,<sup>14</sup> the totality of Span Theory (as described in Chapter 3) establishes at least two foundation points regarding the structural side of control. These are that control must parallel responsibility and authority and that the structural position of control must not exceed or strain existing Span at any specific level.

For example, if a given foreman has no clerical help available, it may be incorrect management procedure to require him to submit detailed daily reports on personnel actions. It may complicate his communication responsibilities, and it may tie him down with clerical functions to a degree that would make it impossible, or at least difficult, to carry out his true responsibilities.

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<sup>13</sup>L. Urwick, *Scientific Principles of Organization*, Institute of Management Series, No 19, The American Management Association, Inc., New York, 1938, Albers, *op. cit.*, pp. 415-451, *passim*. Herbert A. Simon, *Administrative Behavior* (The Macmillan Company, New York, 1951), pp. 200-242.

<sup>14</sup>Mason Haire (ed.), "Growth of Organizations," *Modern Organization Theory*, (John Wiley & Sons, Inc., New York, 1959), p. 295.

On the other hand, consider this situation. Here we have a foreman who has absolutely no part whatsoever in the grievance system. Such a foreman has little, if any, *real* knowledge of one of the primary facets of his job's total responsibility-span. Under such circumstances, management could not correctly say that the span-of-responsibility extends to the lowest possible level, nor could they claim that information-flow embraces every involved link in the structure.

In the first example, addition of a properly trained clerk would at least tend to resolve the problem. This also points to the *fact* that, structurally, the adequacy of, and ability to exercise, control are related to the degree of administrative support *available to "action"* (or decision) jobs.<sup>15</sup> In turn, this re-identifies the point that every manager should examine his "functional needs" carefully. In this case, a correct application of the control "system" might well cause elimination of the detailed daily report.

*HIERARCHICAL EFFECT.* Control is sensitive to hierarchy! It varies throughout an organization's structure in relation to both the jobs involved and the structural positions of those jobs. This effect parallels that which organization has upon responsibility, authority, and communication.

Vertical position affects the degree, whereas function determines the type of control required and exercised. For example, manpower managers execute plans and handle decisions related to support activity, for the most part, whereas production managers concern themselves predominantly with line or "action" issues. A foreman operates more in terms of short-range plans than does a division head, and concerns himself with fewer, but more detailed problems than does the division head. The foreman thus exercises a more *intensive* degree of control, and the division head a more *extensive* degree. In other words, the foreman executes detailed control over particularized and daily issues whereas the division head exercises more control effort over less itemized, but more encompassing, problems concerning several sub-units and involving a larger time span.<sup>16</sup>

Vertical position governs degree in the general sense; however, examination of two jobs on the same horizontal plane, but in a different vertical branch, will indicate that function also influences degree. For example, the employment manager may be on the same horizontal plane as the industrial engineer and the production engineer. Although

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<sup>15</sup>cf. Chapter 3, also, Simon, *op. cit.*, pp. 4-19, 45-161, *passim*, Albers, *op. cit.*, pp. 136-156, *passim*.

<sup>16</sup>This inherent situation emphasizes the difficulty (and, accordingly, the great importance) of the foreman and the division head in making decisions which will have effect upon the *entire firm* more favorable than any other decisions. They need the aid of "decision rules." Manpower management is often in the best position to give such aid.

all three engage in support activity of the same relative importance to the company as a whole, the employment manager exercises a more extensive form of control. His sphere of influence directly embraces every division, department, and section within the company; the other jobs directly influence only their own vertical division — with only some indirect influence upon other divisions.

This suggests that as one moves upward through a given vertical division, the degree of control generally becomes more extensive and less intensive; and within the same division, the nature of the jobs defines the nature of control. From a horizontal comparison one notes, however, that although the job defines the type of control, it also influences the degree of control to be exercised. As a result, it appears that both hierarchical position and job definition, or content, affect *degree*; but, job content alone affects *kind*.

Recognition of the general influences of hierarchy leads to certain other, and possibly more significant, points. For example if a manpower manager is to consider job function, communication, and control he examines *each* functional requirement in terms of the importance of the included responsibilities, the necessary communication net, and the possibility of attaining and maintaining control. In handling recruitment the manpower manager therefore considers the internal system. He will determine where knowledge of requirements first occurs; where such knowledge is verified; how long it will take; who will give the "green light" to act upon such knowledge, and when; how short-circuiting of action or information-flow can be avoided, and why existing procedure *does* exist. He establishes or recommends whatever corrective action appears necessary, and he considers the external system in a like fashion.

**DESIGN CHARACTERISTICS.** The design of any control system necessarily is related to the structural considerations laid out in Chapter 3. In this instance, the specific points are as follows.

1. Individuals or units charged with a control responsibility necessarily dominate all other units with respect to that responsibility
2. Domination requires communication-flow or linkage with every unit in the organization where events to be controlled take place
3. Such linkage *radiates* from the control unit. This radial effect stands out clearly if the labor-relations section of a manpower division is considered as the generating, or hub-point of a grievance control system.
4. Although radial-flow facilitates control, it may complicate the general communication system.
5. Some of the complication clears up if, throughout the organization, the contact points for the control channels are selected because of the competency of those points regarding the issues to be controlled. This is relative to selection of the right place for reinforcing timbers

in a building, or selection of the correct location for traffic lights on a highway.

### CONTROL AND BEHAVIOR

Two points deserve repetition. *First*, like communication, control exists to facilitate organization and is an integral part of organization. The behavioral considerations important to organization and communication therefore are important to control. *Second*, effective managers are students of human behavior. Unfortunately, neither this book, nor any like it, can provide sufficient insight into behavior to take the place of such study, nor will experience alone be a substitute. These points notwithstanding, the following are views which, though not complete, do provide additional information necessary to a better understanding of control.

**GOAL TANGIBILITY.** Industrial organizations are goal-oriented.<sup>17</sup> Made by man, these goals often become unacceptable to man as an individual, and unrecognizable to him either as an individual or part of the organized group. In either case, and regardless of the fact that they are developed by him, conflict tends to arise and make attainment or maintenance of control difficult.

From the manpower point of view then, it becomes important to recognize the need for goals, plans, and standards which (as previously discussed) are tangible — realistic, measurable, and the like. The point is that the *more tangible the goals, the less conflict will arise and the greater the ease of attaining control*. As an example of this significance, consider the fact that many companies make it a practice to notify the workforce of the company's goals, particularly with reference to working conditions and wages. Labor trouble still confronts them. Frequently this trouble can be traced to the intangibility of the stated goals. Because they are intangible they are subject to debate; and since they are subject to debate, conflict arises and attainment or maintenance of control becomes difficult. Another way to look at it points to the relative difficulty of budgeting a manpower division as against the relative ease of budgeting production.

**CONTROL AND THE LAW OF EFFECT.** In its simplest language, the Law of Effect indicates that behavior which leads to reward tends to be repeated, and that behavior which does not lead to reward tends not to be repeated. Every manager is aware of this long-recognized behavioral guide, but many ignore it in their daily performance. What has this to do with control?

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<sup>17</sup>James G. March and Herbert A. Simon, *Organizations* (John Wiley & Sons, Inc., New York, 1958), pp. 52-64, 90-109, 158-169, *passim*; Albers, *op. cit.*, pp. 587-588, the experience and work of most modern social scientists supports this and the other points made here.

Effective control demands timely feedback, among other things. Suppose a foreman has been trying to get certain information into the manpower division according to schedule. Suppose he has just made it by squeezing it in at four o'clock in the afternoon and the clerk always greets his efforts with some unkind, if not fresh, remark. Before long, we can expect the foreman to stop trying to meet the schedule. Or, suppose a particular wage program either fails to meet the employee's understanding of that program or fails to reward for outstanding work to a degree that overcomes the covert restrictions of the group for doing outstanding work; then, quite obviously, the outstanding work will not be forthcoming.

**TANGIBLE REWARDS.** As Haire points out, rewards must be tangible and clearcut.<sup>18</sup> If they are not, the result may very well be the same as when no rewards are present. The monetary gain for outstanding work thus must be significant.<sup>19</sup> Praise must be given as soon as possible after the event requiring it has ended, or even while it is occurring. Additionally, schedules concerning feedback must be attainable. If these rewards are not tangible, there is complication of the effort to attain or maintain control, which leads to conflict behavior — reward cannot be given unless events are known.<sup>20</sup>

**CONTROL AND DEPENDENCE.** Under usual conditions and speaking of normal people, man objects to subordination. He resists efforts to subject him to dependence and regimentation.<sup>21</sup> This behavioral characteristic has long been recognized. Managers know it, but fail to heed it in all too many instances as they undertake their daily work.

Control requires subordination! It demands a close adherence to system, and therefore, a noticeable degree of regimentation. Even where goals, plans, standards, and rewards are tangible, acceptable, and understood, therefore, the control system itself may be objectionable and lead to conflicts which controvert the system. To overcome, or at least minimize this behavioral effect, managers strive to *develop a system which subverts as few people as possible*. This carries back to the idea of having as few circuits as possible and to the idea of having control-points as comprehensive as possible.

**A GENERAL STATEMENT.** Simon tells us that by studying the patterns of institutionalized human behavior, we can determine the real

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<sup>18</sup>Mason Haire, *Psychology in Management* (McGraw-Hill Book Company, Inc., New York, 1956) p. 16.

<sup>19</sup>Taylor and Gantt held this point of view and it is borne out by today's social scientists.

<sup>20</sup>Haire, *ibid*, brings out this view as do most of today's social scientists.

<sup>21</sup>Chris Argyris (Mason Haire, ed.), "Understanding Human Behavior in Organizations," *Modern Organization Theory* (John Wiley & Sons, Inc., N. Y., 1959), p. 119.

meaning and function of organization.<sup>22</sup> This same truth holds for the vital few sub-principles of organization such as communication and control. In the case of control, one certainty can be rigorously pointed out: without favorable behavior, control will not work! Manpower managers therefore direct a good portion of their effort to assuring the existence of productive behavior throughout the company.

Manpower managers have a particularly difficult task to perform in the area of control. They not only develop their own control systems for the fulfillment of their functional responsibilities, but they must assure that others (managers and employees) design systems for their use which will not be controverted by man's natural aversion to subordination.

### PRIMARY TOOLS FOR CONTROL

Control over enterprise is not easy to attain; and once attained, it is not easy to maintain. Although many tools or techniques exist which have distinct utility in the gaining and maintaining of control, four stand out as being effective in every known industrial case. They are policy, organization analysis, job analysis, and statistical methodology. Let us consider these very briefly.

**POLICY — A CONTROL TOOL.** Policy becomes a control tool because, if properly developed and stated, it reveals the general goals of the company and provides a statement of direction for program development, planning, and plans. This, of course, is widely appreciated and has already been indicated. It also has a more direct tool-like application for it provides for, or facilitates, management action in several ways<sup>23</sup>

**ORGANIZATION ANALYSIS — A CONTROL TOOL.** Table 10 indicated the many tools or techniques utilized in control. Basically, their purposes are analytical. It is true, some merely facilitate feedback or records-keeping, but most find a variety of use in the analytical sense. Although several of these devices appear simple, this is deceptive. As any qualified manpower manager will quickly indicate, one needs careful study and considerable experience to master them fully.

Organization analysis is one of these rather deceptive tools. On the surface it appears simple, but it involves many complex considerations.<sup>24</sup> Its control application is almost universal so far as industrial organization is concerned. If, for example, one is involved with manpower development, organization analysis becomes a first step to

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<sup>22</sup>Herbert A. Simon, *Administrative Behavior* (Macmillan Company, New York, 1951), p. 109.

<sup>23</sup>Dale Yoder, *Personnel Principles and Policies* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1952), p. 71.

<sup>24</sup>cf. Chapter 4.

program establishment. Or, if one seeks reasons for unaccountably severe waste, accident patterns, labor problems, or unreasonably large peaks and valleys of employment, it again becomes an important step.

Such an analysis involves several considerations: (1) examination of the existing structure to determine its weaknesses; (2) development of complete job descriptions and specifications through job analysis; (3) estimation of the future growth of the organization in terms of the existing structure, competition, product and process, and the general economy, and (4) a realistic appraisal of the actual activities being performed. Like policy, this tool will receive attention elsewhere in the book, specifically, in the chapter on Manpower Development.

*JOB ANALYSIS — A CONTROL TOOL.* Another deceptively simple technique, job analysis really requires tremendous skill on the part of the practitioner. Chapter 7 is devoted to discussion of this important tool.

*STATISTICAL METHODS.* Probably the most useful of all the control tools falls into this classification. Through statistical techniques, discussed in each of the functional chapters, and again in the Appendix, one can determine the nature of deviation and its significance; what the cause and effect relationships may be; which of many available choices is the most likely to be correct. These tools enable more than analysis — they facilitate planning and provide a means of checking upon the significance of differences in program or action effects. They tend to increase the probability that decision judgment will be based upon fact instead of opinion. When properly applied, they tend therefore to assure the positive nature of control.

## SUMMARY

Control enables the regulation of events. There is nothing passive about control for it demands constant comparison and analysis, and decision. It requires search for deviation from plan, and determination of the cause and significance of any deviation. The combination of search and adjustment are fundamental to growth and the continuance of organization. Every manager applies control. The competence of his application has a significant effect upon his success or failure as a manager, and upon the success or failure of his firm.

Manpower managers are vitally concerned with control. Practically every phase of their work involves functions or systems which facilitate the control of manpower in some way and in some place in the concern.

A number of tools or methods exist to facilitate control. In some cases these tools belong in the hands of the industrial engineering group and fiscal people, but in all cases the results from their use

have a bearing upon manpower work. One tool stands out as basic to everything manpower managers seek to accomplish: job analysis.

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*Successful management requires knowledge of jobs. It is from analysis that such knowing is acquired.*

## Job Analysis

Job analysis is fundamental to all phases of manpower management. Analysis of jobs shows why people are hired, what kind of people they must be, and, if properly handled, it suggests the numbers of people required, and when, and how they shall be placed, classified, evaluated, and paid. This procedure is designed to force as much objectivity as is possible into an otherwise subjective affair.

It has been stated that if organizations, jobs, and people remained static in themselves and in their relations with each other, the acquisition of factual and reliable knowledge about them would be a relatively simple matter. Such stability is nonexistent (and undesirable), hence we must depend upon the best analytical devices available if we are to gain useful knowledge about these elements. At this time, the only reasonably dependable method for acquiring knowledge about jobs is through job analysis.

### DEFINITION

Shartle defines this device quite simply, indicating that it is a method, both intensive and direct, for determining all the pertinent facts about jobs.<sup>1</sup> A more complex, but perhaps more specific, definition is that of the War Manpower Commission as follows:<sup>2</sup>

. . . . the process of determining, by observation and study, and reporting pertinent information relating to the nature of the specific job

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<sup>1</sup>Carroll L. Shartle, *Occupational Information: Its Development and Application 3rd* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959), p. 13.

<sup>2</sup>*Training and Reference Manual for Job Analysis*, War Manpower Commission Division of Occupational Analysis and Manning Tables, Washington, D. C., U.S. Government Printing Office, 1944, p. 1.

It is the determination of the tasks which comprise the job and of the skills, knowledge, abilities, and responsibilities required of the worker for successful performance and which differentiate the job from all others.

## BACKGROUND

There is nothing really new about the concept of job analysis. Plato conscientiously observed differences in the abilities of people when he wrote: "In the first place, no two persons are born exactly alike, . . . one being suited for one occupation and another for another. . ."<sup>3</sup> By voicing his observations he served notice, by implication at least, that there were definable differences between jobs. The fact is that most leaders in history have recognized job differences and their importance. As far back as the written word takes us there is mention of the differences, for example, between the goatherd and the minstrel or the boatman. Armies throughout history have been built upon such definable variations – the bowman vs. the lancer. Over a century ago our Congress was petitioned to study job duties and determine the differences in an effort to eliminate pay inequities.<sup>4</sup>

In our time, job analysis has been formalized and efforts to define job content have been recognized as highly significant to the effective planning and operation of organizations in general. Perhaps the first really serious effort to formalize rests at the feet of Taylor who pointed out that before a standard time could be developed for a job, it had to be broken down into its simplest parts. Furthermore, he indicated the importance of *selecting* men for their job capability.<sup>5</sup> The Gilbreths added depth to job study by breaking jobs down to their elemental motions.<sup>6</sup> Shartle brought the entire question of occupational information into a formal pattern.<sup>7</sup> Shartle's formalization provides us with a readily applicable and experience-tested system for the development of vital job and occupational information. From this foundation we construct present-day systems.

These systems permit development of sound information about job content. Such knowledge is vital to correct formulation of manpower selection and development, effective transfer and promotion, correct

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<sup>3</sup>*Republic of Plato*. Translated into English with an analysis and notes by David James Vaughn and John Llewelyn Davies, 3rd Ed., Philadelphia, J. B. Lippincott & Company, London, Macmillan Company, 1866.

<sup>4</sup>Senate Document 71, 25th Congress 2d Sess., Vol. I, January 3, 1839.

<sup>5</sup>Frederick Winslow Taylor, *Common Sense Applied to Motion and Time Study* (Harper & Brothers, Publishers, New York, 1911); Frederick Winslow Taylor, *Scientific Management* (Harper & Brothers, Publishers, New York, 1947); Frederick Winslow Taylor, *The Principles of Scientific Management* (Harper & Brothers, Publishers, New York, 1911), p. 25ff.

<sup>6</sup>Frank B. Gilbreth, *Motion Study* (Van Nostrand, New York, 1911).

<sup>7</sup>Shartle, *idem*.

compensation technique, useful safety and health programs, and is fundamental to effective organization analysis. Properly defined job content helps determine exemption from the Fair Labor Standards Act and coverage by the Walsh-Healy Act. Furthermore, job analysis provides data useful in determining who properly is included in the "bargaining unit" under the Labor Management Relations Act.<sup>8</sup>

These definitional and background statements indicate the operational intent behind job analysis. Manpower managers recognize this objective as being the establishment of:

A proper and current definition of the functional design of organization, and the accurate and timely definition of the jobs and job relationships of the included personnel.

Behind such an objective is the serious desire to do those things necessary to foster the maintenance or improvement of the company's competitive position.

## TERMINOLOGY

Generally speaking, management terminology lacks standardization. Consequently, definitions usually are subject to argument and individual interpretations. Job analysis terminology is standardized, however, and definitions can be challenged only as to choice of words. Many people including Carroll Shartle, who headed the Occupational Research Program, U. S. Employment Service, beginning in 1934, Dale Yoder, and the early disciples of Taylor deserve a large portion of the credit for the standardization.

Managers, and particularly manpower managers and their subordinates, need an appreciation for these terms. Knowing them facilitates the performance of job analysis and is helpful in handling the daily labor management problems. Table 11 gives this terminology.<sup>9</sup>

**DEFINITION IN ACTION.** The terms "job," "position," "task," and "occupation" often are used synonymously. Although the terms are standardized, their every day use by nonprofessionals is still quite loose. Because of the confusion which may arise due to the use of these terms in the vernacular, let us consider them in a specific setting.

We enter the doors of any major office and immediately face the receptionist. This receptionist has certain *tasks* to perform such as answering the phone, greeting potential customers, and arranging interviews between outsiders and company officials through the secretaries of the officials in question.

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<sup>8</sup>Lawrence C. Lovejoy, *Wage and Salary Administration* (The Ronald Press Company, New York, 1959), p. 126.

<sup>9</sup>For additional terminology see Shartle, *idem*; Roger Bellows, *Psychology of Personnel In Business and Industry*, 3rd (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1961), Chapter 9.

**TABLE II**  
**JOB ANALYSIS TERMINOLOGY**

Term	Definition and/or Remark
Task	A specific function carried out by an individual. Oiling a bearing, sterilizing a needle, dictating a letter are tasks. The accumulation of enough tasks, or the cumulative effect or frequency of one task, to warrant the attention of an individual for a full work period results in creation of a job (and a position or positions).
Position	The personal reflection of function or duty. When an individual is consistently involved in performing one series of tasks or duties during his entire work period, he speaks of this functional accumulation as his position or job. The lathe operator's position thus may include the tending, operating, and cleaning of his lathe. A position is personal, it belongs to the individual and reflects his characteristics.
Job	A job usually is considered as a group of similar positions involving similar skills, responsibilities, and the like. Where there is but one particular position in an organization, however, it, too, is a job. There may be several girls doing file work in the personnel office, but only one job of personnel file clerk. There is but one director of a hospital, or president of a company, and only one such job in each case. A job, then, is impersonal, it is the reflection of the totality of positions constituting the usual functional assignment of individuals.
Job Analysis	Previously defined. In more up-to-date concerns, the traditional approach is expanded to (1) emphasize the authority-responsibility patterns, (2) expose the position interactions or job interactions, (3) seek to specify the physical and the socio-psychological factors necessary to job performance. Its design facilitates development of responsibility beyond primary responsibility.
Job Description	An abstract or summary of the information gleaned through the analysis (in some cases this data is filed <u>in toto</u> , using the analysis forms, in some an abstract or summary is prepared for filing). The statement sets forth characteristics, duties, responsibilities, authority, and the like in brief.
Job Specification	An abstract or summary of the minimum hiring requirements to be met by an applicant.
Job Progression Guide	A guide in chart or tabular form which clearly depicts the progress possible from job to job. This is particularly important where there are many dead-end jobs, for when properly designed it also indicates the "promotional transfer" jobs available for preparation of an individual for movement out of a dead-end position.

TABLE II (Continued)

Term	Definition and/or Remark
Occupation	An aggregate of similar jobs found in a relatively large number of establishments Nurses -- across the country, they have the same occupation, welders have a common occupation as do carpenters
Job Family	A cumulation of two or more jobs found in a given situation which have roughly similar description and result in roughly similar specification An occupation is comprised of many job families
D O T	Dictionary of Occupational Titles -- a compilation of job titles and descriptions to provide basic and generally common facts regarding jobs throughout the country Data compiled by the United States Employment Service

In addition, the receptionist holds a *position*. The position is that of receptionist. The position becomes such due to the nature of the tasks which she performs. This aggregate of tasks, plus the presence of the position, lead the company to list the activity -- which to the incumbent is her position -- as a *job*. This job exists because of the duties performed. It differs from other jobs in the company except those where the tasks typical of receptionist exist, or where a receptionist position exists. It also differs from the position definition because it refers to the impersonal rather than the person, and because if there were more than the one position of receptionist, there would still be one job title "Receptionist" listed. The fact that one or more than one incumbent, and therefore position, was necessary would be indicated in the job analysis under the heading "number of employees"

On the other hand, consider the case of several persons holding several positions but actually engaged in one job.

The receptionist would arrange interviews with officials through their secretaries. The interview arranged, the caller would find himself in the presence of a secretary to one of the officials. The secretary has certain tasks to perform for the man to whom she is assigned.

There are several officials at the same level in the organization and each has similar tasks to be performed by a secretary, and each is located in a single and separate office. It would be impossible for one girl to serve the needs of each of these officials. In the normal course of events, therefore, several girls have been hired so that each official can be served. Each girl holds a position -- her position -- and each performs her tasks in her own inimitable, though relatively standardized, way.

The position which each girl holds is dictated by the nature of the tasks performed. Further, the positions which they hold govern their status in the total organization, and probably influence their social

life outside, as well as inside the organization. Most important from a management point of view, the tasks common to one of these girls are relatively common to all who hold these positions.

Though the positions are personal to the secretary and treated by them as being isolated and typical of no other, to the company they are the result of an aggregate of common or relatively common tasks so numerous as to require the presence of a number of incumbents. The common nature of the tasks leads the company to list one "job" of "secretary."

We note, therefore, that the tasks performed are similar, or relatively so, the positions are similar, and the combination adds up to the establishment of one job. The several positions present would be indicated in the job analysis under the heading of "number of employees."

Seldom, if ever, does a new job arise except when job characteristics emerge as different from other job characteristics through work innovations, economic requirements and variations, or significant changes in the organization and its included relationships, objectives, and methods.

### **CONCEPTS AND POLICY REQUIREMENTS**

Regardless of his level in an organization, a manager must understand the thinking — concepts or principles — upon which his tools and techniques are based before he can expect to utilize them effectively. In addition, he must understand the policies and procedural requirements indicated by that thinking.

*UNDERLYING CONCEPTS.* Manpower management, or, if you wish, management in the general sense, depends quite heavily upon the full recognition and proper application of certain very fundamental considerations. Among the most significant of these, in the general sense and in terms of proper utilization of job analysis, are the following:

1. Men and jobs differ.
2. Jobs change and evolve.
3. Jobs contain both positional and functional authority.
4. Jobs are influenced by the jobholder.

### **MEN AND JOBS DIFFER**

That men and jobs differ is a relatively well-accepted fact. Its importance in this case rests with the realization that, in part at least, it identifies the path taken by a proper job analysis. By constant recognition of the fact of difference, one tends to avoid the risks of assumption. Although many jobs appear the same on the surface, complete questioning of the "tasks" and the personal and impersonal

relationships reveals their basic differences. It is easier, however, to assume similarity than to seek out the difference, or prove the similarity. It is the treachery of this ease that we guard against by maintaining a constant awareness of job difference.

**DIFFERENCE AND IMPERSONALITY.** Job analysis is supposed to be an impersonal procedure, a complete and direct study of all factors involved in a job. To be complete, to be direct, nothing can be left to chance or assumption. To ignore the true or apparent personal differences existing would mean, however, that assumption was being applied. Impersonality, as used with reference to job analysis, *does not mean* that the analyst should ignore personal differences.

In the *first* place, most analyses occur while a job is being performed. The analyst thus is exposed to the incumbent's influence on the job, and certainly should note that different incumbents effect the job in different ways. To report the impersonal aspects, the analyst must discover and separate worker-facts from job-facts.

In the *second* place, being human, analysts will view jobs differently. Careful managers and manpower people guard against this human difference by assuring that the analyst follow carefully conceived procedures of analysis. When an analysis is audited, one guards against and is alert to differences in interpretation. It is deceptively easy to assume a job change when actually all that has occurred is a difference in interpretation of the same operation, or a different interpretation of a worker's effect upon that operation.

Three principles seem to evolve from this basic concept and its implications.<sup>10</sup>

1. Correct job analysis requires *concentration upon the relevant facts*. Relevancy depends upon the professionalism of management. Poor management would tend to establish a separate analysis for each purpose. Poor management would accept assumption, possibly would consider chance as reality.

2. Correct job analysis requires *accurate study of a job's elements, environment, and relationships*. Poor management would tend to ignore the questions of environment and relationships.

3. Correct job analysis requires both *competency in the analyst and the free and honest cooperation of all the parties involved*.

These principles and the concept of difference lead to another principle.

4. One analysis of a job *should* provide all the information necessary to facilitate any management purpose, particularly when said purpose is related to the recruitment and selection, development, maintenance, and equitable compensation of the workforce.

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<sup>10</sup>Dale Yoder, *Personnel Principles And Policies*, 2nd (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959), pp. 199-200; Lovejoy, *op. cit.*, p. 125.

Common practice involves separate analysis in many cases. If the analysis is to be used as foundation for job evaluation and wage and salary administration, one set of facts is gathered; if it is to be used for selection and placement, another set of facts is gathered. Of course the "relevancy of fact" idea, and the interrelated nature of all manpower functions indicate that this is poor practice. It leads to (1) duplication of effort, (2) the condition in which needed facts are unavailable until gathered, and (3) the condition wherein it becomes more economical to make assumptions than to get fact.

One must admit that practical considerations may make separate analyses necessary, particularly in going concerns. It is important, however, to strive to put all the data from these separate analyses together into one master file, thereby reducing at least the risk of incomplete knowledge.

### **JOBS CHANGE AND EVOLVE**

Unplanned, or day-to-day, improvements in method originate with operators, and operators, supervisors, and staff men devise improvements in equipment, materials, and products. These improvements are usually rather insignificant *at any one* particular time, but they accumulate and finally the jobs concerned change. As change builds upon change and new tasks add to the job patterns, these jobs evolve into totally different jobs.

Except for management-planned changes, job change is almost imperceptible. Even the effect of management-planned changes is often slow or difficult to measure except in the long run, though it must be measured if control over the enterprise is to be maintained.

*CHANGE OR EVOLUTION.* Job evolution and job change are sometimes treated synonymously. Actually job evolution is the *cumulative effect of job changes*. It is long rather than short term in its development. Furthermore, job change usually results in routine problems which can be handled effectively at the first line of supervision or in conjunction with the department head and minor staff action. On the other hand, job evolution is in itself a matter for high-level action, and results in problems which require organization-wide consideration because of their complexity.

Consider, for example, the evolution from Yankee Peddler to chain store, or from inspection to quality control engineering. On the other hand, consider a job change such as standing on the right instead of the left or using the two hands at the same time instead of one at a time.

Job evolution has a cyclical occurrence — the country doctor to the specialist, and now re-emphasis of the need for more country doctors. Lags and spurts appear — during the thirties evolution was not too widespread; however, since the end of World War II the story has

changed. Job change and evolution are brought about by technological, economic, and competitive-market factors; but evolution tends to be external and industry-wide, whereas change is internal and preliminary to evolution.

The point of all this seems obvious: if one waits until a job evolves of its own accord, he may find that he has lost control of the situation along the way. Unnecessary expense is suddenly unleashed and a bad morale problem may appear. This lays the foundation for the *fifth* principle: correct job analysis is a *continuing program*. Jobs must be audited periodically, if management is to be aware of the changes taking place, so that they can be prepared for evolutionary events.<sup>11</sup>

*Positional and Functional Authority of Jobs.* This fact has been established in Chapter 3. Mary Parker Follett pointed out that every job in every hierarchy has both positional and functional authority.<sup>12</sup> Knowledge that the two types exist is one thing, being able to differentiate between the two is quite another. It takes skill and cooperation to make such an identification. The totality of the job and the fact that the two may change must be considered.

An appreciation for the concept will depend upon an understanding of its applicability. A knowledge of the degree and specific nature of authority is important to the recruiter — the applicant may ask: "What will be my authority?" It is important to any manager who judges the actions of others — "Did Joe act with authority in that case?" It is important when considering matters of, or pertaining to, the training or compensation of employees. In every instance one needs complete and correct knowledge, without a differentiation between the two authorities, that knowledge cannot exist.

This concept of authority, as well as the previously-described concepts and principles, implies the need and necessary existence of a *sixth* principle, "Job analysis should provide accurate, reliable information."<sup>13</sup>

*Jobholders Influence the Job.* The higher one goes in an organization, the more important judgment becomes as an operational requirement. Judgment is personal! The exercise of judgment means that personal influence is being exerted on the impersonal aspects of the job. In addition, the upper level jobs involve considerable human contact — contact important to the organization as a whole. Such contacts are personal — they reflect personality. In addition, the higher we go in an organization, the more we depend upon

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<sup>11</sup>Yoder, *op. cit.*, p. 199; Lovejoy, *op. cit.*, p. 125. Note, consideration of what is "periodic" will be covered later in this chapter.

<sup>12</sup>"*Dynamic Administration:*" *The Collected Papers of Mary Parker Follett*, H. C. Metcalf and L. Urwick, (ed.), (Harper & Bros., New York 1940).

<sup>13</sup>Yoder, *idem*.

the individual to structure the jobs beneath him, the methods and procedures his job is controlling and coordinating. Obviously, he is exerting personal influence upon those jobs. Finally, human compatibility and personal characteristics become the most critical success factors in the upper level jobs. In view of these points, it seems clear that when analyzing a job, particularly in the upper echelons of hierarchy, it is important that the analyst examine the influence of the incumbent upon the job.

One aspect of this importance is sometimes overlooked: when seeking replacements for executive or supervisory jobs, the personal effect of the existing or departing official upon his job raises annoying questions such as:

1. Should the methods used by Mr So-and-so be changed?
2. Should the new man have free access to records?
3. Should the new man continue the daily (weekly, monthly) supervisory complaint sessions? (and so forth).

The need for complete and accurate knowledge about an organization's jobs really stems from the factor of utility. Just as one cannot really claim to have analyzed a job if he has failed to consider the influence of the jobholder upon that job, neither can one claim managerial competency unless he utilizes the job knowledge properly. The concept of completeness therefore relates to utility; a principle evolves from the relationship, "The value of job analysis depends upon the use to which it is put and the skill of the people who use its results."<sup>14</sup>

**POLICY REQUIREMENTS.** The primary requirement to policy development rests with management's full acceptance of the principles just set forth. Unless all management has accepted, and is willing to attempt to apply, these principles, policy is almost surely doomed to failure. Aside from this basic and obvious requirement, there exist certain policy considerations common to any organization planning to apply or applying job analysis. Other considerations, or policy areas, will also exist, but they will pertain to specific concerns. The following pertain to all concerns! They are spoken of as policy areas because they refer to *areas of decision* regarding basic and common issues which must be faced before job analysis procedure can be installed, or before one really can hope to achieve full success with a procedural set that has been installed. These common issues are:

- . Shall there be job analysis?
- . . . Who shall conduct the analyses?
- . . . How shall information be used?
- . . . Shall analyses be audited and revised periodically?

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<sup>14</sup>Lovejoy, *op. cit.*, p. 125.

It would be a simple matter to state flatly a policy for each consideration, but to do so maximizes at least one significant risk — the risk of misunderstanding. Instead, let us point out that a properly-established policy recognizes a need and, in a broad sense, gives the right to apply a means to meet that need.

*The Economic Question.* Some will point out that job analysis is a costly procedure. They are correct! Incomplete or incorrect knowledge often can be more costly, however. The nonexistence or incorrect application of job analysis, like the failure to exercise proper audit, can lead to situations similar to the following:

### *Illustration 7.1*<sup>15</sup>

The ——— Company had its jobs analyzed 20 years ago and performed a job evaluation in 1942. One operation, known at the time as “set-up man,” was classified into a pay grade which allowed a range of from \$.92 to \$1.12 per hour. Although none of the jobs were re-evaluated or re-analyzed for several years, there were several “across-the-board” wage increases and cost-of-living adjustments so that in 1954 the job in question was drawing from \$1.80 to \$2.00 per hour. It so happened that the job had within it two positions originally, but 15 years later there were *six* positions. A grievance was filed because the two senior incumbents felt they should be getting much more than their mates.

The matter went to arbitration. Careful consideration revealed that these two senior men were not, in fact, performing as “set-up men.” They were doing the job of tool and die maker, and supervising setup operations. Revelation of this fact forced the company into an immediate complete re-analysis and re-evaluation which meant a short-run expenditure of many thousands of dollars.

### *Illustration 7.2*

In a certain institution, a particular job for years had required very specific and demanding physical effort. Because of this fact, and the odd hours involved, it was quite difficult for the personnel manager to recruit employees for that job.

No job analysis program existed in this instance, and communication in the organization was far from effective. Unknown to management — personnel manager, division head, and top executives — the foreman and the workers had devised a scheme which practically eliminated the physical effort. This innovation so simplified things that a change in work hours was possible but was not made because those whose responsibility this was did not know of the condition.

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<sup>15</sup>The student is assured that all illustrations or cited cases in this text come from actual practice.

A vacancy appeared in this job and went begging for three weeks. In the middle of the fourth week another took place and the foreman put up a "smoke screen." When neither vacancy had been filled by the end of the fifth week, he laid down a "barrage;" the personnel manager was called on the carpet, and general all-round bad feelings developed.

This ill will was so pronounced that an ultimatum was issued. A lesser man than this particular personnel manager would have quit. Instead he studied the case and discovered the methods change and resulting job change; and he learned that persons qualified for the job as it was then structured were in plentiful supply.

If the organization had had a program of job analysis, and had subjected its jobs to regular audit, this matter might never have arisen. Strangely enough, however, this organization still does not have a correct program of job analysis — the controller feels the process is too costly. During the past five years, however, there have been three personnel managers, and at what cost!

*Who Shall Conduct the Analyses?* This, too, is a top management decision. The basis for the decision rests again with a full understanding and appreciation of all previously-presented materials. Certain additional points come into play. *First*, and as a general rule, when installing a job analysis program in any organization it seems wise to acquire the services of outside specialists. The specialist will hold less biased views regarding internal problems, and will tend to see problem areas more clearly. Whether the specialist will have to perform the entire study, or merely supervise its beginning, is a situational question. *Second*, where an already existing system of job analysis is being totally reviewed, a specialist from the outside may well be in order, and for the same general reasons. *Third*, in small organizations it is entirely possible that the operational personnel will have neither the time nor the special knowledge necessary to proper development of a job analysis program; hence, the specialist seems to be required, at least to get the program started and to audit it periodically.

*Fourth*, in most organizations of any size, it is not only possible but completely desirable to use the concern's own supervisory personnel in the program. The program of job analysis should be handled by the manpower people and administered by them. Obviously this means that a specialist, or team of specialists, will become part of the internal organization of the manpower division.

It therefore appears that the thing to dwell upon, from a policy point of view, is the importance of getting all the data required; and this probably means that a special training and skill will be required, at least for supervision of the program and its maintenance. Most

concerns of any size now employ, as part of the personnel department, a staff of job analysts.

*How Shall Information Be Used?* This decision is again a top management responsibility. As in the two previous questions, manpower responsibility lies in giving proper advice regarding the making of the decision, and then handling the functional requirements involved in carrying it out. As before, the basis for decision rests upon the adequacy of top management's understanding of organization, communication, and control considerations, and the functional responsibilities of manpower management.

Although many organizations use job analysis information for one purpose only — wage and salary administration, the foundation data for job evaluation — the professionals in the field of manpower management long have realized that this is a bankrupt practice. Policy on the use of information should dictate *complete utility*.

*Shall Analyses Be Audited Periodically?* Illustrations 7.1 and 7.2 certainly warn that a policy of “no audit and revision” can be just as costly as a policy of “no analysis.” Of course the decision is a responsibility of top management, and the basis for that decision is a full appreciation of all previous material. From this base, it appears impossible to draw any correct conclusion other than this: policy should dictate that jobs will be audited periodically and revised as indicated thereby.

Question remains as to what is meant by the term “periodic.” The question cannot be answered with certainty for the general case. It is advised, however, that no *key* job should be unaudited for more than a two-year period. This advice may be completely unjustified in many cases; therefore let us point out a series of questions one can ask, the answers to which indicate a definition of “periodic.”

1. How often do supervisor and managerial personnel “turn over?” Such individuals exercise a distinct influence upon their jobs and those under them. It seems wise to recommend that whenever turnover in those positions, or jobs, occurs the jobs should be audited.

2. How often do job changes occur, or how often do they become of sufficient significance as to alter the true nature of the job and its requirements? Obviously the jobs should be audited when this happens.

3. If a union is involved, how often does the union press grievances (a) regarding job classification, (b) regarding work load, and (c) regarding assignments? Obviously, if an examination of records reveals even some evidence of a *trend* in these areas, then the proper management strategy is to audit the jobs early enough to be able to make adjustments before the expense of arbitration becomes a reality.

## **JOB ANALYSIS — METHODOLOGY**

When we think of the methodology of job analysis, two logical questions come to mind immediately: what information do we need,

and how should it be obtained? In practice these are initial operational questions which depend upon the answers to the previously stated policy decision-questions.

*THE INFORMATION REQUIRED.* General speaking, the information required through job analysis would cover the work done, the performance requirements, the responsibilities involved, and the conditions under which the work is performed.<sup>16</sup> The foregoing has been standard for many years and still is considered sufficient in most cases. Table 12 lists the information required.

**TABLE 12**  
**INFORMATION REQUIRED AND OBTAINABLE**  
**THROUGH JOB ANALYSIS**

Information	Reasons and Comments
Job Title or Job Name	For classification, payroll, and as a general aid for identification
D O T Title and/or Composite	Standardization helps when giving or checking information Code number included Match company name and "dictionary" name and number
Organizational Location	Aids identification of job and its relationships with other jobs State the department, division, section, or plant Should reflect actual location according to existing organization chart
Number Employed or Positions	Cross-check on payroll, aid in "staffing" plans, aid in predicting future need and change State the individuals and/or positions involved in a given job title Identify by name if possible
Average Annual Turnover by type	Aid in predicting needs and planning change Rough index of recruitment success or base for index Classify by hire, quit, discharge, layoff, not mandatory
Scope of Job	Quick estimate of job importance, aid in predicting dependability of data General statement of activities, organization, facilities and equipment used, preceded by name and title of superior, length of time on job
General Statement of Over-all Purpose of Job	Provide base for judgments regarding job Quick summary and statement of job goals as the incumbent sees them

<sup>16</sup>Yoder, op. cit., pp. 200-201, *passim*.

TABLE 12 (Continued)

Information	Reasons and Comments
Work Performed	Complete identification of what, how, when, why, and with what work is performed Key informational section Rough time breakdown on primary duties
Supervision -- given and received	To whom the incumbent reports, and who reports to the incumbent Aid in planning, training, compensation, organization, hiring, and supervisory evaluation Time involved is included
Authority and Responsibility	Clarification of areas of authority and responsibility as related to people and property, etc Aids as aforementioned
Degree of Difficulty	Covers knowledge, skill, initiative, experience, training, judgment, alertness, mental, physical, and social requirements Aid in planning, as aforementioned, also aids to safety and accident-health work
Working Conditions	Hours, shifts, output standards, location and environment, tools, personal contacts, risks, etc Aid in planning as aforementioned
Relationships	Statement of: channels used, unit and people most frequently worked with, added knowledge and responsibility acquired Aid in planning as mentioned before Specific aid to promotion, transfer, training, and replacement.
Social Requirements	Management positions Statements of personal relationships, who is called on for what, of degree, of degree of isolation and whether by choice or requirement; complete horizontal and vertical picture of relationships Aid to all manpower planning (as in prior paragraph)
Physical Demands	Check-off of degree of severity of requirement regarding specific factors Aids in planning as aforementioned
Worker Characteristics	All personal characteristics required for job, and reference to development of those required on next job Aid in planning as previously mentioned
Experience and Training	As previously mentioned Aid in planning as previously mentioned
Pay and Selection	Rate and method of pay Procedure for selection including tests, need for reference checks, security, and the like. Aid in planning and grievance and contract work

Source: A composite of information in Shartle, *op cit.*, pp. 33-38, *passim*; Yoder, *idem*; Roger M. Bellows and M. F. Estep, *Employment Psychology: The Interview* (Rinehart & Co., Inc., New York, 1954), pp. 38-56, *passim*.

**ACQUIRING JOB INFORMATION.** The procurement of job information involves system. System, in this case, embraces preparation for analysis, collection of the information, maintenance of the data, and use of the information. Some may question the use of the term "system" in this sense. Their question seems less important than the fact that job analysis methodology requires a carefully co-ordinated and reasonably standardized approach which is based upon plan — obviously such an approach is systematized to a rather significant degree.

*Preparation.* Probably the most difficult part of job analysis is the initiating, or preparation, phase. Several rules, or considerations, exist which, if followed with care, may reduce that difficulty significantly. In fact, if they are not followed, the program of job analysis may well be doomed to failure before it can really start. These considerations appear as follows:<sup>17</sup>

1. *Management Acceptance and Decision:* the totality of management, from president to foreman, must recognize the *need* for job analysis, and must make and/or agree to affirmative decisions regarding the previously mentioned policy-areas

2 *Objectives Established:* positive acceptance and recognition of need, and affirmative decision regarding policy must result in equally positive establishment of the objectives of the program of job analysis<sup>18</sup> The purposes, the use to which the information will be put, must be firmly stated. Whether that objective is single- or multi-purpose is not the question. Whether job analysis is to be established merely as a basis for wage and salary administration, to determine exemption and non-exemption under the law, or as a base for the entirety of manpower management activity, the objective must be set.

3. *Programs Consume Time.* job analysis is not a cursory activity. It does not lend itself to a "one shot" approach. Job analysis, if properly conducted and maintained, takes time. Management must realize this, and make provision to establish the function as a formal part (or as the totality) of a job. One should not expect even a trained analyst to be able to perform more than one "correct" and complete analysis, or more than one correct audit and revision of a job description, in less than four or five hours. Obviously, management must agree that the cost of such a program is warranted.

4. *Approval and Responsibility:* when need has been ascertained, objectives established, and the cost problem recognized, approval can be made. A program as far-reaching as job analysis should be approved formally. A fully circulated official statement should be made, and that statement should in itself become a matter of policy.

The statement issued also should specify, as to responsibility for the program. If the manpower division is to be responsible, this should

<sup>17</sup>Lovejoy, *op. cit.*, pp. 132-133, *passim*.

<sup>18</sup>One notes that any management effort which does not first specify "management by objectives" will tend to failure.

be stated. If an outside organization is to be responsible for initiating the program, this should be specified. In other words, the responsibility must be fixed at the beginning.

5. *Notification, Participation, and Cooperation*: the decisions to have, or not to have job analysis, to apply the information in one way or another; and to assign administration of the program — these are management decisions. The decisions and the program of job analysis have such far-reaching influence, however, that all who are involved in any way should receive full notification of those decisions. In addition, they should be given the opportunity to participate in the development of the program. Notification and participation are in line with the “principles of agreement” as set forth in Chapter 3 and by Stuart Chase.<sup>19</sup> Notification may occur in the form of an announcement in the “plant organ,” a special bulletin or letter to supervisors, and employees, or be presented at a meeting or series of meetings with members of the organization.

As indicated, all who will be involved in any way must be notified, their support and understanding of the program is a fundamental necessity. The reality of this statement rests with the fact that failure to acquire support leads to conflict, and conflict blocks success.

*Participation* may begin by establishing a “sponsoring committee.” Such a committee may be composed of “top,” “middle,” and lower echelon managers, and members of the rank and file. It would be carefully and fully instructed as to purposes, needs, objectives, and methods of performance and maintenance. It first would assist with the task of notification and indoctrination. Later, the committee might well assist in the actual analyses, or in the auditing, or both. Members must have interest and technical competency (at least in potential), and selection must avoid politics. The success of such a committee will depend in part upon their training, and in part upon their selection. Further, membership on this, or any other such committee, should be so publicized that the rank and file would consider it as somewhat of a privilege to be nominated to the group.

*Cooperation* will depend largely on the propriety of notification and the degree of participation obtained. Cooperation will not occur in the presence of conflict. In the area of conflict, a touchy subject arises: the fears and suspicions of employees. Many people have the misconception that job analysis is similar to job evaluation, time study, or merit rating. It must be demonstrated clearly that this is not the case. Furthermore, “kingdom builders” are threatened by job analysis. This should be recognized. If, for one reason or another, top management deems it wise to play ball with “kingdom builders,” a statement should be made to the effect that changes in job structure and organization will be instituted only by degrees. On the other hand, if top management is not particularly sympathetic to the kingdoms and their builders,

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<sup>19</sup>Stuart Chase, *Roads To Agreement* (Harper & Bros., New York, 1951) p. 235ff.

then a concise statement should be made to the effect that changes will be made as indicated by the analyses — and let the chips fall where they may. All involved personnel should be reassured, by the president of the organization, that pay will *not* be cut as a result of job analysis.

6. *Where to Begin:* this, too, is a management decision. The manpower manager, however, should urge that initial analyses be on the upper level jobs in the organization. By having the program begin at the top, or reasonably near it, one suggests to subordinates that the bosses aren't afraid of the results, so why should others be fearful.

7. *"Ground Rules" and Preliminary Data.* before instituting the job analysis program, its "ground rules" should be set. After all, one ought to know where the foul line is before he goes to bat! In this connection, those responsible for the program should realize that while the preliminary work is going on (while the objectives are being set, the initial decisions are being made, the notification is taking place), valuable information and ideas will be uncovered. This should be recorded! Opinions, as well as facts, internal and external information; anything connected even remotely with the jobs and the reasons for them, with their locations and risks and the like, should be made a matter of record by those involved with the preparations.

*Collecting the Information.* As Yoder points out, there are three principle sources of job information:<sup>20</sup> (1) the employee on the job, (2) his immediate supervisor and other employees who know the job in question, and (3) the independent observer. Although many analysts use but one of these sources, it seems reasonable to recommend utilization of *all three* wherever possible.<sup>21</sup> Such an approach seems to provide a better opportunity to get the "big picture" as well as the detail. Such an approach finds support in several points.

1. The employee may not be completely familiar with his job, or may be incapable of a proper description of it.
2. The employee may be suspicious of the study even after careful explanation, or he may feel that he is being set apart from his buddies for some ulterior reason.
3. The supervisor or other employees also may be incapable of a proper description, may be lacking in familiarity, may be suspicious or they just may "not care."
4. The observer may be weak, biased, or suspicious of the motives of those he is observing.

These minimal risks are general; in a given situation there will probably be other points to consider. In view of these risks, one concludes that the use of all three sources of information, instead of one, tends

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<sup>20</sup>Yoder, *op cit*, p 201

<sup>21</sup>Experience of the authors indicates that the situation dictates which of the sources, or whether all three should be utilized.

to average out the negative factors of each. However, this approach is more costly for it is more time consuming.

Just as there are several sources of information, there are several ways of gathering that information. One may utilize the *Indirect* approach or the *Direct* approach. The *Indirect* method means accepting someone else's word; it involves: (1) questionnaire, (2) interview of the incumbent's superior, and (3) the possible interview of other employees. The *Direct* method means obtaining the data by: (1) observing the job cycle under actual work conditions, (2) interviewing the incumbent, and (3) having the incumbent respond to a comparative questionnaire wherein the analyst's observations and the incumbent's responses to interview are checked.

Since a combination of both approaches often provides the best results, we shall describe that methodology.

1. Examination of recorded information pertaining to the job under examination, including its organizational relationships.
2. Observation of the job being studied
3. Distribution of questionnaire to the incumbent and of brief instructions regarding its completion
4. Interview of the incumbent based upon the data obtained through the questionnaire and through the first two steps.
5. Interview of the incumbent's immediate superior and/or subordinates or related employees who may have, or be expected to have, a reasonable familiarity with the job

*Examination of Record.* In addition to the points made in reference to preparation, it is important to locate the job according to the existing organization chart, its structural position, its authority-responsibility channels and the like should be determined. Then, too, any standing operating procedures pertinent to the job should be noted and significant instructions recorded in the analyst's *work sheet*. Any pertinent policy statements, methods instructions, safety instructions, and the like also should be recorded.

*Observation.* Observation is conducted by the analyst or the supervisor in terms of the information to be obtained (reference, Table 10). Actually the purpose is to increase the knowledge of the analyst, rather than to obtain specific and complete information. Special attention should be given to working conditions, reports made, authority exercised, tools and equipment used and how used, degree of risk present or apparent, and the apparent degree of skill, knowledge, and training required. During observation the analyst concentrates upon development of rapport, and strives to determine and understand the incumbent's views and feelings. Impressions gathered at this time are recorded on the work sheet.

*The Questionnaire.* Proper utilization of a questionnaire is usually most difficult. Difficulty arises because the job analysis questionnaire

is subject to all the pitfalls of any survey questionnaire, because of the amount of time it takes to review and digest the information acquired and because of the necessity of prodding people to get their questionnaires returned on time. Another difficulty lies in the fact that when a committee is being used under the supervision of an analyst, the analyst must be careful to see that each of the members involved fully appreciate survey pitfalls, and is well prepared to observe jobs and evaluate the questionnaires properly. The "pitfalls" spoken of appear in Table 13 as follows:

Distribution of the questionnaire sometimes poses a problem. Should this be the case, it is wise to remember the issues of anonymity and of supervisory responsibility. Anonymity can be maintained and assured if the analyst supervising the program is in a position to work with an outside professional; this relationship seems to reassure subordinates. Under such a condition, the questionnaires can be mailed to the disinterested third party's home or place of business, and professional ethics would assure that a request for anonymity would be honored. Supervisors enter this relationship since they would distribute the questionnaires together with letters of explanation.<sup>22</sup>

Those distributing the questionnaires should be prepared to explain the purpose, method, and utility of the study being made and should be capable of allaying suspicion. Although questionnaires can be sent to incumbents via plant or public mails, the personal distribution by a competent supervisor permits on-the-spot instruction and reassurance.

*Interview.* The interview utilized in job analysis is subject to all the pitfalls of interviewing, the rules for conduct of an interview, and the several possible interviewing methods as described in Chapter 4. Actually, the most effective approach in the job analysis situation is tailored from the "patterned interview" concept. It would involve the following, or relative, steps:

1. From the data furnished by the questionnaire, questions regarding the job are developed. These are entered upon a work sheet or on the interview form.

2. Data collected through examination of the records, through observation and through the questionnaire, are compared. Where a deviation occurs, questions regarding that deviation are developed and entered on the work sheet or the interview form.

3. The employment record of the individual is studied, or his superior is consulted, in an effort to determine a basis for the establishment of rapport, and to clarify or help to clarify deviations mentioned previously.

4. Armed with a "patterned" interview, the incumbent then is questioned concerning his job. The information sought, as mentioned

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<sup>22</sup>Bellows, *op. cit.*, p. 76.

TABLE 13

THE PITFALLS OF SURVEY AND THEIR GENERAL CONTROL

Pitfalls	General Control
Answers to all questions cannot be accepted at face value	Analyst, committee assistant, and job incumbents should be cognizant of this Careful training of all involved is required.
Conclusions, on part of respondent or analyst, may be based upon one question or one answer.	Analyst, committee assistants and incumbents should be instructed and warned Analysts and assistant carefully trained
Answers of "don't know" and "undecided" may be overlooked.	Training is the answer, plus experience.
Answers may differ if wording of questions is changed.	Training is an answer (all parties), pre-testing may detect variations
Respondent may not understand the question	Pretesting and training are required.
Respondent may lack ability to express thought.	Interview becomes important Analyst and assistant should note such personal characteristics
Respondent may fear answering	Questions should be designed with these points in mind, and explanation is needed
Respondent's answers may be regressive, etc.	Fear is put to rest by assuring anonymity
Respondent may overrate his job and the importance of details pertaining to it.	Frustrational patterns controlled by instruction of incumbents, developing, rapport, and by developing participation
Answers or questions may be ambiguous	Overrating may accompany frustration or lack of knowledge Overrating controlled by training, pretesting, and the like
Terminology may be singularly different from the work language (though not ambiguous).	Ambiguity is in part controlled by pre-testing and in part by repeat questioning and observation
Questions may be designed to "lead" to an ivory tower preconception.	Analyst and assistants should employ steps a and 2 as mentioned, be trained to the situation
Questions may be biased.	Management, analysts, and assistants must realize they are after fact, not opinion, or fact that supports preconceived opinions Questions used by analysts and assistants should be pretested; analysts and assistant should be familiar with the variety of terminology typical to their organization.

Source: Composite of ideas and views in: Elmo Roper, "Survey Pitfalls," *Fortune Magazine*, April, 1947, Vol. 35, No. 4, pp. 6, 12, 16, 25; Yoder, *op. cit.*, p. 102; Bellows and Estep, *op. cit.*, p. 76, and C. H. Lawshe, *Psychology of Industrial Relations*, (McGraw-Hill Book Co., Inc., New York, 1953), pp. 66-68, *passim*.  
NOTE: It is particularly helpful to design a checklist of pitfalls for use by analysts and assistants. The checklist should reflect these, and any other, risks specifically pertinent to the given organization.

before, is dictated by: (1) data gathered via questionnaire, (2) deviation in data gathered by questionnaire, observation, and from a check of the record. The entire "pattern" covers the information specified in Table 12.

As an *alternate* to this approach, one can apply the following. When the questionnaire is circulated, the incumbent is instructed to fill it out at his leisure, but within a certain reasonable time limit, and is told to hold the questionnaire until the analyst comes to interview him. The analyst develops specific questions based upon the information he has gathered through perusal of the records and observation of the job. He may even enter tentative answers on the interview form. The interview is again a "patterned" interview. The form used is the same as that sent out as a questionnaire to the incumbent. During the interview, the analyst goes over the incumbent's answers and enters changes, additions, corrections, amplifications, and the like on *his* copy of the form. It is important to note that, in either case, the interview is planned and structured to elicit as much information as possible regarding the data specified in Table 12.<sup>23</sup>

*Interview — Superior/Subordinate.* Interview of the job incumbent's superior, subordinate(s), or those with whom he has frequent job-related contacts also should be conducted through a "patterned" technique. The questions asked of these individuals will depend upon the information determined during the previously described phases of the job analysis. The purpose of the questioning is to verify, clarify, amplify, and otherwise add to the knowledge that has already been obtained about the job. It is important to note that information regarding the interactions engaged in by the incumbent can be clarified by this step. This is particularly true when analyzing supervisory and management positions.

*Who to Interview.* If there is a choice as to whom to interview, the answer depends largely upon whether the job involved is supervisory and upon the nature of the incumbent's routines. If the record shows the job in question to be predominantly routine and shows that the incumbents have relatively similar backgrounds and experience, it makes little difference whom one interviews, otherwise, the experienced man seems best. If the job is not a routine type, one may have to interview several jobholders in order to identify the true nature of the job. If supervisory positions are in question, who will be interviewed is a simple question — each supervisor.

What subordinates or peers one interviews depends upon the contacts of the incumbent of the job being analyzed. Normally one would

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<sup>23</sup>Florence Laslie, "Planned Interviewing Gives More Information In Less Time," *Textile World*, Vol. 103, No. 8, August, 1953, p. 101ff.

concern himself with those with whom most frequent, or most severe, contact is indicated.

*Maintaining the Analyses.* The maintenance of the information involves two issues — the records keeping and the audit. The matter of audit has been discussed previously in this chapter. Suffice to say that audit is necessary; that who shall perform it depends largely upon the availability of qualified personnel (and management policy); and when audit shall occur is a function of the frequency and severity of job change or evolution and management policy.

Records keeping is another matter. Generally speaking, there are a minimum of forms required for job analysis. The individual studying the job should have a work sheet on which he can record impressions, facts, questions to ask, and the like. This work sheet should be a rough copy of the questionnaire to be used (or the interview form).

The questionnaire itself is another of the records (or forms) required. As indicated previously, the interview form makes a third record — it may be exactly the same as the questionnaire, of course, thereby making only one such form necessary.

The job analysis report is a form used to make the final record of the job. It becomes the *master* record form; the job description and the job specification information are extracted from the analysis. One can also extract the data needed for an authority and responsibility record if it is to be kept.

Finally, there should be a master schedule to provide a visual control record concerning the progress of job studies in the concern. Such a schedule would be patterned after the familiar Gantt chart, or it could be a simple table of jobs, starting and completion dates arranged in columnar form.

From an administration point of view, it is wise to establish the records so that information of daily utility is readily available to the individual(s) likely to require it. By the same token, information used infrequently should be available to the user with little trouble, but certainly should not be cluttering up files or other space which could better be reserved for operational data. With this in mind, some manpower managers extract from job descriptions and job specifications the critical job information necessary to each manpower function and place this data on 3 inch by 5 inch cards which they furnish the personnel responsible for the function. For example, the receptionist or preliminary interviewer in the employment section would have a card describing the critical employment requirements, critical working conditions, and pay and promotion data. These cards would become part of the visual desk file setup used by the individual. On the other hand, the job description, *et al*, would be filed in the office's operational files, and the full job analysis record would be in the "permanent" file.

**SAMPLE MATERIALS**

Figures 16 through 21 are examples of data that can be developed through application of job analysis. Figure 16 is a simple job description for a minor service activity-position or job. Figure 17 refers to

Department	Library
Division	Cataloging
Position Title	Catalog Library Clerk
Position Grade	
Under Supervision of	Chief Catalog Librarian
<u>Supervision Received</u>	
Work under supervision of chief catalog librarian, performing work according to detailed instructions Follow standardized procedures permitting little choice of action, or receive short assignments on varied simple tasks.	
<u>Duties and Responsibilities</u>	
Perform various routine duties and short, specific assignments such as searching for cataloging information, withdrawing from or reinstating books on records, changing records and retyping cards, preparing books, shelving, getting books from shelves, running errands, mending, discarding, recasing, cleaning, and lettering books May carry out specific assignments under the supervision of the catalog librarian	
<u>Supervision Exercised</u>	
None	

**JOB DESCRIPTION**

*Figure 16*

a sales job in an automobile sales organization. It was contributed by Mr. A. J. Fehlber. Figure 18 represents a portion of a job analysis of a fairly complex technical job found in many aircraft and machine-shop situations. Figure 19 is a page out of a personnel department "desk file" which shows the job description and specification for a particular executive engineer job. Figures 20 and 21 are pages from an analyst's work form. From such a form the analyst can check into the technical and personal aspects of a job in a fairly standard manner.

I. IDENTIFYING INFORMATION

Schedule #1-6

A Job Title

1. Official Company Title Salesman

2. Alternate Title \_\_\_\_\_

3. D O T. Title Salesman, General

4. D. O. T Code Number 1-80.01

B Supervisor

1. Official Company Title \_\_\_\_\_

2. Refer to Schedule No. 1-1

C Subordinates

1. Number of Subordinates none

2. Official Company Titles

a \_\_\_\_\_ (Refer to Schedule # \_\_\_\_\_)

b \_\_\_\_\_ (Refer to Schedule # \_\_\_\_\_)

c \_\_\_\_\_ (Refer to Schedule # \_\_\_\_\_)

D Name and location of Company \_\_\_\_\_

E Industry Automotive Branch Sales Agency

Department of Company Sales Department

F Analyst A. J Fehlber Date \_\_\_\_\_

II. SUMMARY DESCRIPTION OF DUTIES

Under direct supervision of and responsible to president for sales transactions and procedures, communicates with customers, demonstrates automobiles, equipment, and accessories, talks forcefully and convincingly to customers of sales item features, as utility, appearance, economy, investment, and desirability of owning product, appraises used cars, initiates, checks, completes, and submits sales records to office and service department, coordinates and maintains good customer relations to promote repeat sales. Performs other miscellaneous duties as directed by president, may purchase new and used vehicles from other dealers. Earnings are strictly on commission basis.

III. WORK PERFORMED (Detail of duties and tasks.)

A. Under direct supervision of and responsible to president of company for new and used car retail sales transactions and procedures

B. Demonstrates and sells automobiles, equipment and accessories, contacts customers by phone or in person through own following or furnished leads, in order to consummate sale, remuneration is entirely on commission basis.

JOB ANALYSIS SCHEDULE

(Sample Pages)

Figure 17

## Figure 17 (Continued)

1. Talks to customer and permits their inspection of vehicle on sales floor, at their home or business residence, answers mechanical and financing inquiries, points out "unique" or selling features of vehicle and altogether attempts to convince customer of utility, appearance, economy, investment, and desirability of owning sales item.
  2. Appraises used cars to be received in trade-in settlement of sale, quotes tentative trade-in allowance and submits quotation to president for final approval, trade knowledge, published National Automotive Dealer Association Book figures and current area trading practices used as basis for appraisal.
  3. Closes sales, prepares customer purchase order (sales contract) and obtains customer signature to such, records and computes total sales price data of vehicle in accordance with manufacturer's advertised and company established price, in the case of new and used cars respectively, records such data as car price, factory installed equipment sales price, sales price of dealer installed items, sales tax and settlement finance charges, if any, to establish total sales price of vehicle and procure written acknowledgment of customer's manner of payment. May accept customer cash down payment or deposit on contract
  - 4 Assists customer in completion of finance company time-payment credit statement, computes time-payments on balance of sales price to be financed, if any, through the use of finance company rate charts, to establish and insure customer's manner of payment
  - 5 Checks, completes and submits sales records to office and service department in accordance with company standard operating procedure #2 and #3 respectively, in order to coordinate and expedite sales procedures
- C. Responsible for coordination and maintenance of good customer relations prior and subsequent to all sales, assists customer, answers any customer inquiries that may arise following sale, in a manner which will promote repeat sales

Source This format is a modification of Job Analysis Schedule examples contained in the *Training and Reference Manual for Job Analysis*, War Manpower Commission, Bureau of Manpower Utilization, Division of Occupational Analysis and Manning Tables, Appendix I, June, 1944 This schedule was designed by A. J. Fehlber

*Utilizing Job Information.* Gathering job information is incidental to the process of analysis. The purpose is what counts! Lytle has stated this purpose as, ". . . procuring all data on the man-job unit which the personnel staff needed."<sup>24</sup> The implication here follows the previously indicated viewpoint that purpose is to furnish all job information, technical and personal, necessary to meet the objectives of manpower management.

This is not the traditional point of view. In 1922 the National Personnel Association defined job analysis as, ". . . that process which results in establishing the *component elements* of a job. . ."<sup>25</sup> Also included was reference to determination of human requirements necessary for successful performance, but, as Elizabeth Lanham indicates,

<sup>24</sup>C. W. Lytle, *Job Evaluation Methods* (The Ronald Press Co., New York, 1954), p. 132.

<sup>25</sup>*Job Analysis*, National Personnel Association, 1922.

1. Job Title	<u>Engine Lathe Operator,</u>	2. Number	<u>Example</u>
	<u>First Class</u>		
3. Number Employed	_____	4. Plant Number	_____
5. Alternate Title	_____	6. Date of Analysis	_____
		Number of Sheets	<u>1 of 7</u>
7. Industry	<u>Aircraft Manufacturing</u>	8. Branch	<u>Airframe</u>
9. Department	<u>Machine Shop</u>	10. D O T Title and Code	_____

#### 11. WORK PERFORMED

Sets up and operates an engine lathe to turn small airplane-fittings from brass or steel bar stock or from unfinished aluminum or magnesium alloy castings, finishing the fittings down to specified close tolerances

a Examines written instructions or job orders received together with blueprints of parts from foreman, to determine the number and kind of parts required and the kind of metal stock or rough castings from which the finished pieces are to be made Requisitions and obtains the required amount of bar stock or rough castings from the stockroom and carries the stock to the workplace by hand, hand truck, or by monorail crane As necessary, measures the bar stock and rough cuts it with a power hacksaw into lengths suitable for machining (1 -- percentage of time negligible)

b Sets up lathe Carefully examines blueprints to determine the dimensions of the part to be machined, using shop mathematics to calculate any dimensions not given directly on the prints or to calculate machine settings

(1) Sets up lathe to turn stock held in a chuck Attaches to lathe the accessories, such as chuck and toolholder, necessary to perform the machining, threading and locking the chuck on the headstock spindle, and setting and tightening the toolholder in the tool post with a setscrew (tool post screw) and wrench Opens the chuck jaws to the approximate size of the workpiece between the jaws, and tightens the jaws down on it Carefully centers the workpiece in the chuck jaws, locating a dial indicator against the workpiece, rotating the chuck and workpiece by hand, and making coincident minor adjustments to the chuck jaws until all "wobble" in the workpiece disappears as shown by the needle of the dial indicator

(2) Sets up lathe to turn stock between centers Threads and locks faceplate on headstock spindle and inserts a spindle center into the hollow end of the spindle by hand Clamps a holding dog about one end of the workpiece, holds the workpiece with one hand so the predrilled center hole of the workpiece is against the spindle center and the tail of the holding dog is engaged in a slot in the faceplate, and turns the tailstock handle until the . . .

#### SOURCES OF WORKERS

12. Experience. None \_\_\_\_\_ Acceptable \_\_\_\_\_ ENGINE LATHE OPERATOR, 2d Class

(see comments)

### JOB ANALYSIS SCHEDULE (Sample Pages)

Figure 18

Figure 18 (Continued)

13. Training Data Minimum Training Time

- a Inexperienced Workers
- b Experienced Workers 12 months

Training	Specific Job Skills Acquired Through Training
In-Plant Training	
Vocational Training 1 year Machine Shop Trades	Knowledge of machine tool operation, use of precision gauges, blueprint reading
Technical Training	
(SRW) Eng General Education 1/2 yr. each of High School Trigonometry, Physics, Chemistry	Calculation of dimensions, laying out work, basic laws governing materials worked on
Activities and Hobbies Home Workshop, Automobile Repair	Use of mechanic's hand tools, understanding of mechanical devices

14 Apprenticeship Formal \_\_\_\_\_ Informal \_\_\_\_\_ Length Required 4 years

MACHINIST APPRENTICE

15 Relation to Other Jobs

a. Promotions from and to, transfers, etc Promotion from Engine

Lathe Operator, 2d Class, Promotion to Foreman (Machine Shop),

Transfer to Turret Lathe Operator

b Supervision Received General X Close \_\_\_\_\_ By (Title) Foreman,

(Machine Shop)

c Supervision Given None \_\_\_\_\_ Number Supervised 2-8 Titles Engine

Lathe Operator, 2d Class, learners, Engine Lathe Operator, 3d Class, helpers.

The following items must be covered on supplementary sheets

PERFORMANCE REQUIREMENTS

- 16 Responsibility (Consider material or product, safety of others, equipment or process, cooperation with others, instruction of others, public contacts and the like)
- 17 Job Knowledge (Consider pre-employment and on-the-job knowledge of equipment, materials, working procedures, techniques, and processes)
- 18 Mental Application (Consider initiative, adaptability, independent judgment and mental alertness)
- 19. Dexterity and Accuracy (Consider speed and degree of precision, dexterity, accuracy, coordination, expertness, care and deftness of manipulation, operation or processing of materials, tools, instruments or gages used).

COMMENTS

- 20. Equipment, Materials and Supplies.
- 21. Definition of Terms
- 22. General Comments

C-1a Job Description

Supervises and is immediately responsible for the structural maintenance of the physical plant, the general maintenance of grounds, the general repair and improvement of equipment, and is responsible for all utilities involved in the operation of the company from a maintenance and general repair point of view -- except for telephonic--, and has operational responsibility over all utilities other than telephonic. Supervises fire prevention, supervises and prepares specifications and drawings for alterations, construction, responsible for liaison with municipal and state agencies regarding physical plant, supervises and prepares operational and planning reports. Is responsible for 75 people, supervises training, discipline, etc. Functions as part of "top" operating management

C-1b Job Specifications

I General Person capable of highest degree of memory for details, oral and written directions. Must be decisive, alert, creative, and adaptable. Capable of planning, scheduling, routing, followup, and group action. Initiative, attention to detail, and ability to concentrate must be of the highest order. Capable of oral and written expression. Must have tact and persuasiveness and ability to meet and work with people and public

## II Performance Requirements

- A Responsibility High degree, administrative Highest order, operational Accurate records and reports, interpretations of policy and procedure, correct decisions regarding physical maintenance and utilities operations, and correct decisions regarding operations and administration of "factory" (shops)
- B Physical Demands good health, moderate dexterity, good perception and discrimination, keen senses, strength of legs and back to a minor degree
- C Mental Demands High degree adaptability, stability, memory, self-discipline, mathematical ability, mechanical aptitude, medium degree clerical ability, tact, and reading
- D. Psychosocial emotional stability, initiative, constancy, loyalty, take intense pressure, work alone, with others, through others, and follow through, correct others, give staff advice and direction, work with detail, fair but discriminatory, command respect

## III Education Requirements

- A Baccalaureate -- civil, mechanical, or industrial engineer
- B. Accreditation/License as professional engineer
- C Master's degree desirable but not necessary
- D. Membership in professional society desirable

## JOB DESCRIPTION AND SPECIFICATION (Sample Pages)

*Figure 19*

Figure 19 (Continued)

## IV Experience

- A Minimum of five years
- B. Advancement from assistant engineer or similar position in other industry or institution
- C. Experience should include supervisory responsibility

## V Job Knowledge

- |                                |                               |
|--------------------------------|-------------------------------|
| A Stationary engineering       | B. Heat transfer and power    |
| C Power reduction and control  | D Internal combustion         |
| E Air conditioning             | F Ice making                  |
| G Oxygen generation            | H Metal, wood, electrical     |
| I Estimation                   | electronic systems and manu-  |
| J Production control           | facturing, and paint spraying |
| K Instructional techniques     | L Planning                    |
| M Familiar, production systems | N Familiar, community         |

this definition implies an industrial engineering function or purpose in the use of the term "element."<sup>26</sup> The implication is that the study is of "what should be," whereas job analysis actually provides a basis for such a study rather than *being* that study. Logically one must determine "what is" before seeking to determine "what should be." In a situation where one is establishing, for the first time, a series of jobs, they should be written up in terms of "what is intended." From this, and after experience has been gained with these jobs, the write-up can be audited and revised. But, let us return to the question of purpose!

In Lytle's statement one detects the implication that the purpose of procuring information is a staff purpose — to facilitate the work of the personnel department. In the second instance, an engineering sense is discovered. Neither intent is completely satisfactory. To be satisfactory, *the purpose behind the utilization of any management tool or technique must be related to the performance of the organization as a whole.* One thus must specify purpose in terms of the organization's goals: the purpose of job analysis is to facilitate management efforts to achieve economically the goals of the organization.<sup>27</sup> This, of course, is the viewpoint espoused since the beginning of this chapter, for the procurement of job information *is not the end; it is only a means to an end!*

Effective utilization of job analysis information therefore must begin with correct statement of purpose which, in turn, is transmitted to

<sup>26</sup>E. Lanham, *Job Evaluation* (McGraw-Hill Book Co., Inc., New York, 1955), pp. 124-125.

<sup>27</sup>All purposes, principles, procedures, and methods subordinate to organization should be expressed in terms of the goals of the organization.

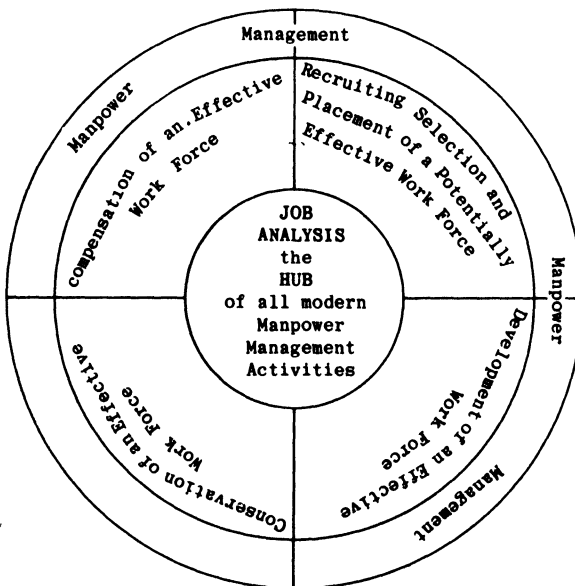




all managerial personnel. This, however, is only the beginning of the task. All persons — from foremen to executives — must be trained to apply the data in their daily work as well as in long-range planning. Since, as depicted by Figure 22, job analysis acts as a hub around which the manpower management activities revolve, both the technique and its resulting information should be understood by all managers.

*Use in Selection and Placement.* Job data enables identification of the requirements necessary to fill jobs effectively, knowledge of the actual duties to be performed, of the tools and equipment to be used and the like. Foremen, department, and division heads who have this data readily available find it far easier to make intelligent requests for employees than if they merely notified the manpower people that “I need a man.”

Furthermore, knowledge of the job factors permits the proper development of tests and interview techniques to facilitate the making



All the activities or functions of manpower management pivot upon the application of Job Analysis

JOB ANALYSIS — THE HUB ACTIVITY

Figure 22

of a "correct" choice between applicants. This knowledge allows both supervisors and personnel men to make reliable estimates of future employee needs in terms of known or expected job changes.

From accurate job analysis one achieves the ability to develop reliable "critical indicators," and reasonable "cut-off points." It is accurate job information which enables the manpower staff to send the individual of multiple potential to the supervisor (and job) where he or she is most likely to succeed.

Job information used in this manner is complete. The supervisor and the manpower people consider every possible factor and particularly those which may be contained in the job specification; they do not fall such easy prey to the trap of "halo-effect hiring."

*Use in Manpower Development.* Job information tells us what the worker *must* do, where he must do it, how and when and why he must do it. Such information is fundamental to training, for one certainly cannot do an economic or technically efficient job of training without knowing what must be taught. There cannot be training efficiency unless one knows what the worker needs in the way of additional training. Job information therefore is basic to development of proficiency rating, progress counseling, and the like.

Supervisors and manpower people use job information in this instance by seeking patterns and progressive relationships with duties to perform and evidence of progressive authority and responsibility. Such information is obtained by comparative study of job descriptions, job specifications, and authority-responsibility records (if they exist).

Also pertinent to the question of manpower development is job classification, or the determination of which jobs are executive, supervisory, professional, and non-supervisory. Such classification is necessary for promotional and transfer action and for determining compliance with the Fair Labor Standards Act and similar legal restrictions. Classification is facilitated by determining patterns and progressive relationships as mentioned before.

*Use in Conservation of Manpower.* Properly constructed, job descriptions and job specifications contain information indicative of the danger points and hazard conditions typical of the jobs. They clarify the responsibilities involved in the jobs, thus facilitating efforts to improve management-worker relations and organization structure. Job information available in the records identifies procedures and personal contacts required for the jobs. It thus enhances development of organization manuals (procedure manuals).

Morale often is weakened if the channels of communication are unclear. The information available as the result of job analysis aids in the determination of overlapping duties, blocked channels, and the like. From a dietary point of view, job information indicates the

physical requirements of jobs and may well help the dietician in efforts to provide an adequate menu.

From a strictly labor relations viewpoint, adequate job information is vital for it specifies duties, responsibilities, and requirements so necessary in settling workload, disciplinary and other non-monetary disputes. It also clarifies status in terms of exemption or non-exemption under the law.

*Use in Wage and Salary Administration.* There is only one method currently available for determining the information fundamental to the establishment of relative job worth. That method is job analysis. It is not possible to conduct a reliable job evaluation program without first analyzing the jobs.

Even if job evaluation is not in use, job information still is required if one is to accurately determine his reason for paying wages. Time wages differ from job to job. Difference cannot be equitably structured without knowing the jobs, and so it is with wages based upon performance.

As previously indicated, there are federal and state laws which must be obeyed. Compliance depends to a large degree on job knowledge which in turn should stem from job analysis. Most "fringe" benefits involve job knowledge in one way or another. Pension plans, profit shares, compensation for illness and/or accident — even these issues must be founded upon reasonably accurate knowledge of the jobs and the organization. Such knowledge comes only from job study.

*Utilization — General Considerations.* Though we have at least implied that job analysis is not typically an industrial engineering tool, the information provided by job analysis does facilitate industrial engineering work. Such aid comes about because the knowledge provided pinpoints tool and equipment usage, among other things. The pinpointing provides a cross check for the engineering staff interested in examining the effectiveness of production methodology. In institutional work, such information provides similar cross check for professionals interested in examining the effectiveness of their activities. This cross check idea is particularly important to "fiscal" people who may be interested in factual examination of duplicated costs. Job analysis tells how, when, and where, the labor dollar is being spent.

The real impact of job analysis on the broad field of management lies in its ability to provide projective data regarding manpower, tools, and equipment as related to the over-all goal of the organization. The data procured through job analysis is fundamental to planning for the future. For example, a properly developed program (including properly developed audit) will provide a rather complete picture of the progressive development of tool and equipment utilization, manpower use, and organizational changes. Creation of the picture does

not take place automatically; but, if the job information provided is subjected to proper study and recording, management can develop that picture.

This general characterization of utility would be incomplete unless some guides were suggested connected with, and significant to, a broad application of job analysis.

1. *Deviation*: when studying job information, look for deviations between recorded data and data provided through interview and questionnaire, and through observation. The job analysis must contain information which spells out "what is," but effective use of this data requires comparison with "what was," "what is thought to be," and "what should be." An operational rule for manpower people: *challenge the logic of deviations*.

2. *Consistency*: job information is gathered and recorded in a way that facilitates location of patterns and progressive relationships. It is important to look for these features. As previously indicated, one may find that tools utilized in one department are typical of those in another, and that tools used in the two are basic to those in a third. Other things being equal or relative, this condition may well indicate a promotion stream where none was thought to exist. The same condition may arise regarding the nature of problems faced in daily routine or of analytical approaches required, and therefore, may reveal a previously unrecognized promotion stream or the possibility of a realignment of the organization structure.

3. *Internal Variation*: it is one thing to look for deviations between recorded data and determined data. It is another thing to look for deviations when there is no record with which to make a comparison. It thus is important to realize that one should be alert to variations within given jobs — from position to position — or within given departments as job to job. Manpower managers should encourage the kind of training within the company which will tend to assure that foremen and department heads will be alert to such variations, and will inform the manpower people about them.

## STAFFING CONSIDERATIONS

Four considerations regarding staffing for job analysis warrant attention here. These are (1) recruiting and selecting analysts, (2) training analysts, (3) functional assignment, or the duties of an analyst, and (4) organizational relationships of the analyst.

*RECRUITING AND SELECTING ANALYSTS*. Certain issues affect the major consideration of recruitment and selection. *First*, the number of individuals assigned to the job analysis function must be decided. This decision should be based upon the function of the number of different jobs in the concern, the number of positions per job, the number of jobs of similar or closely related detail, and the known

or expected rapidity of job change and evolution. For example, a small concern which has only a very limited number of different jobs will require far less job analysis activity than another company of relative total size which has many actually different jobs that tend to change quite rapidly.

*Second*, responsibility for the job analysis function must be decided. In an organization where the decision to have a manpower division has already been made, no problem should exist — the function belongs under the manpower division's control. Where there is no manpower division, for one reason or another, a decision problem will exist, however. Two logical possibilities appear where one might assign the job analysis responsibility to the engineering or production group, or to the fiscal group. The fiscal group has a vested interest in the function because it describes the manner in which the labor dollar is expended. The engineering or production group has a vested interest since job analysis provides basic job information and concerns the assignment of men to production or service work. How one decides where to assign the job analysis responsibility when no manpower division exists will be a matter dependent almost entirely upon the specific case — no rule or principle seems to exist.

*Third*, a decision must be made concerning the amount and nature of clerical assistance needed in the performance of job analysis. This decision will be based upon the same type of thinking as that concerning the number of analysts needed. The decision should be made by the supervisor of the job analysis program, and should depend upon the nature of the work that will be involved (or is involved).

*SOURCES FOR ANALYSTS.* The same thinking and procedures referred to in Chapter 10 apply, in general, to this question. In addition, however, one should consider the special nature of the job. Since the function is specialized, the sources should be mentioned. They are:<sup>28</sup>

1. Internal — the transfer of qualified personnel from elsewhere in the personnel department, or from other units of the organization.
2. External — either hiring green hands and training them for the assignment, thereby treating it as one of the introductory jobs to the manpower field; or seeking already qualified and experienced people by attracting them from the competition, or from non-competing but related organizations.
3. Consulting Service — contracting for the service of professional consultants.

*QUALIFICATIONS OF A JOB ANALYST.* The selection of job analysts is often handled in a more or less matter-of-fact manner. It

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<sup>28</sup>Lovejoy, *op. cit.*, p. 135.

is not unusual, for example, to find the second and third string members of a college graduating class being offered such positions. On the other hand, many firms realize that this is no simple function and is not a job to be filled today and replaced tomorrow. The manner in which the job is handled can make or break the entire manpower program, it can influence a workforce positively, or it can stir up untold trouble. The job influences practically every aspect of management, nearly every organizational unit. Obviously, therefore, whatever the general requirements for employment in an organization, there will be certain very distinct qualifications necessary to the job analyst function.<sup>29</sup>

1. *Observant*: an analyst must be observant. He must be able to separate fact from fiction, he must be able, at least in potential, to distinguish form differences, quality differences, and he must readily recognize *real* job elements as distinguished from things an incumbent would like him to believe are job elements. His power of observation must include an ability to recognize some of the intangible factors which surround almost every job — he must be sensitive to suspicion, to the overrating or underrating of which an incumbent may be guilty.

2. *Analytical Ability*: this goes beyond simple ability to observe and appreciate the difference between essentials and nonessentials. The analyst requires an ability to understand the operations he will observe, thus he may need a clerical aptitude, mechanical aptitude, and so forth. Included here also would be the ability to analyze those operations in terms of “what is” and “what should be.”

3. *Tact*: the analyst who cannot avoid ruffling an incumbent cannot hope to perform a fully correct analysis of the incumbent’s job. The analyst must be capable of establishing and maintaining rapport even after the job analysis is completed.

4. *Sympathy*: together with tact, a sympathetic attitude is a requirement. Often the success or failure of the analyst depends upon whether he can arouse the sympathy of the incumbent, or whether he can convince the incumbent of his appreciation for the incumbent’s point of view. Naturally the ability must be accompanied by *sincerity*. The two competencies tend to go together.

5. *Impartiality*: it is one thing to be tactful, sympathetic, and sincere, to be able to elicit information. It is quite another thing to be able to do this in an impartial manner. The analyst must be able to arouse confidence in the incumbent, but he must understand that the incumbent knows — perhaps covertly — that all the analyst is seeking are the facts, and all that he can accomplish is the collection and verification of fact. The analyst is not a moralizer — he is not in

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<sup>29</sup>Lovejoy, *op. cit.*, p. 135.

a position to gain favors for the incumbent or to correct grievances. Furthermore, although he is the representative of management, the analyst is neither spokesman nor defender. His impartiality must be complete.

6. *Dependability*: regardless of impartiality requirements, the analyst must back up his word.

7. *Patience*: many times an incumbent will try to avoid being analyzed, to shield the true facts, and to distort the facts. The analyst requires great patience if he expects to overcome these maneuvers and still maintain rapport. Furthermore, the mere gathering and writing up of job information is a relatively tedious activity requiring patience.

8. *Expression*: both oral and written expression are basic to the analysis of jobs. Proper conduct of an interview, proper application of a questionnaire instruction sheet, even proper observation often require fairly expert oral communication of the job analyst. To write up the jobs after analysis requires distinct ability for written communication.

9. *Self-Discipline*: a job analyst of necessity will operate with little direct supervision. He must, therefore, be competent to govern himself, the utilization of his time, and his personal conduct. A job analyst normally stands as a prime example of the "exception principle" in operation.

10. *Emotional Stability and Maturity*: there is much about the job of collecting information that can disturb the blood pressure, if one lets it. The analyst must be stable.

**TRAINING THE ANALYST.** Success in most management jobs depends largely upon the combination of personality, accumulated and assimilated knowledge, and the exercise of good judgment. Knowledge and judgment can be acquired through experience, however, this takes many years and even may never be accomplished effectively. This condition, plus the fact that even the top jobs in the area of job analysis do not command really significant salaries, make it almost impossible to obtain people of an age that would permit assumption that they had *all* the experience and, hence, *all* the knowledge needed for the job. It appears, then, that before giving the analyst the opportunity to practice, he should be given thorough instruction in the principles and techniques of analysis. He should be oriented to the socio-psychological factors operating in the company, to the undercurrents of frustration, to the political grouping and the like. Only after such instruction has been given should the "practice makes perfect" concept of training be applied. Of course the best guide to training rests with proper selection. If the trainee or experienced individual hired for the job *has* accumulated knowledge, instruction regarding the peculiar requirements of that company is simplified.

*DUTIES OF AN ANALYST.* Actually, the duties of an analyst have been set forth in the discussion on methodology. Basically this fundamental pattern includes, as Lovejoy points out, five basic elements.<sup>30</sup>

1. Gathering information: obtaining the data through records, observation, interviewing, and questionnaires.
2. Organizing the information: breaking the data into logical and related groups such as scope, objectives, physical requirements, and mental requirements.
3. Recording of information: concise writeup of the facts; preparation of the full job analysis record, the job description and job specification, and of the other records which may be required.
4. Verification of information: once the descriptions have been prepared, many people assume this is the end. It is not! The analyst should confirm or verify the content of the job description and specification before it is made a part of the permanent record. If this is not done, there is apt to be conflict over the information — disagreement which may be due to language used, facts missed or misinterpreted. Such conflict may well lead to costly arbitrations.

*ORGANIZATIONAL RELATIONSHIPS.* We shall assume here that a manpower division exists. The job analyst therefore is directly responsible to some senior analyst, the wage and salary administrator, or the head of the manpower division, depending on the size and structure of the division. Internally, that is, within the the manpower division the analyst has line responsibility over his immediate subordinates. Within the company as a whole, however, his is a staff responsibility. In most manufacturing establishments the job analyst will have frequent reason to consult with the engineering, production, and fiscal units as well as with members of the union hierarchy. Although he wisely operates through formal "a" circuits in these contacts, he may find it necessary to apply "e" circuitry in order to clear, or have cleared, from his path obstructions which were thrown there by suspicious and unindoctrinated individuals.

## SUMMARY

Job analysis is a study of the "what," "where," "when," "why," and "how," and of the conditions of a job. The data provided through study embraces the technical, personal, and economic features pertinent to the job. The objective of job analysis is to facilitate the economic attainment of the organization's goals, to aid it in meeting the purpose for which it exists.

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<sup>30</sup>Lovejoy, *op. cit.*, p. 136.

Job analysis should be systematized with respect to the creation of the program and the collection of the information. To be of maximum worth, job information should be re-studied and revised periodically. Failure to do so results in unnecessary expenditures of money and may even mean that significant organizational changes will be missed, thereby creating a threat to the stability of the concern or institution.

The utility of job information as gathered through a program of job analysis is complete. Such information is basic to all management functions in any way related to the prime commodity — man. In addition it is particularly necessary to the operation of a manpower management division.

The past five chapters dealt with the fundamental considerations necessary for effective manpower management. We now examine the manpower function as a departmentalized activity.

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*Only through the efforts of men will enterprise succeed; but this success requires that these efforts and these men be managed.*

## The Manpower Function In Organization

Machines alone cannot get results, and money cannot think, man's guidance must be actively and properly involved if enterprise is to succeed. The manager provides that guidance. Experience gained in the thirties and through the two recent wars, as well as the difficulties encountered in dealing with hostile unions, have led increasingly large numbers of managers to realize that the management of men involves both line and staff activity.<sup>1</sup> The realization — *that every manager is a manpower manager* — certainly has foundation in operational and historical fact.

How well the manager deals with others — organizes and instructs them, motivates and satisfies them, and backs them up or disciplines them — plays a large part in determining his operational success or failure.<sup>2</sup> No manager long can afford the luxury of ignoring the human aspects of his job. The research done by Whiting Williams, Robert Hoppock, Elton Mayo and many others signifies the validity of this view.<sup>3</sup> The manager who thinks he can escape his human responsibilities — and attempts to do so — is “shaking hands with failure.”<sup>4</sup>

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<sup>1</sup>Robert Saltonstall, *Human Relations in Administration* (McGraw-Hill Book Co., Inc., N. Y., 1959), pp. 128-129; Dale Yoder, *Personnel Principles and Policies, 2nd* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959), pp. 1-29, *passim*.

<sup>2</sup>Saltonstall, *idem*, Peter F. Drucker, *The Practice of Management* (Harper & Brothers, Publishers, N.Y., 1954), Chapters 2, 12, 27, *passim*.

<sup>3</sup>Whiting Williams, *Mainsprings of Men* (Chas. Scribner's Sons, N.Y., 1925); Robert Hoppock, *Job Satisfaction* (Harper & Bros., N.Y., 1935); Elton Mayo, *The Human Problems of an Industrial Civilization* (Murray Co., Cambridge, Mass., 1946).

<sup>4</sup>Saltonstall, *op. cit.*, pp. 128-129.

On the other hand, there can be no denial of the need for specialized manpower knowledge and departmentalized effort. Today's industrial climate makes these a necessity.

Although every manager has an irrevocable responsibility for the proper management of manpower, often he needs assistance in meeting that responsibility. Managers with line or staff responsibility for production, engineering, accounting, sales, production or quality control and the like, find their time so taken up with getting out the work that little, if any, is left to devote to manpower reports and the development of tools and programs to deal with manpower problems *per se*. Furthermore, the special knowledge required in the manpower field generally is *not* a significant part of the formal disciplines of other fields.

It appears, therefore, that manpower management is a "split" function. On the one hand it is the business of a special department whose personnel have particular competencies relating to manpower, on the other, it is recognized as an inherent responsibility of every effective manager regardless of his special talent.

### FUNCTIONAL SPECIALIZATION

Not too long ago, even large firms had very little departmentalized manpower activity. Not until the turn of the century is there significant evidence of the use of hiring offices.<sup>5</sup> Today the small company seldom has the manpower function assigned as the sole responsibility of one given unit.

A quick look at any local situation will reveal furthermore a wide variation in the treatment of manpower work and the development of manpower departments. Add to these points the previously stated fact that the manpower function is a split activity, and certain functional considerations become apparent. These may be listed as follows.

1. What conditions make it necessary to establish a special manpower division or department?
2. What is the natural or accepted division of responsibility between the line and the staff regarding manpower work?
3. What form or structure should a manpower unit adopt or be adapted to?
4. What authority should be vested in a manpower division (or in the managerial personnel assigned to such a division)?

It is to these questions and their answers that this chapter is directed.

In the general case, this consideration involves two related issues: first, the conditions existing in the general environment which make

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<sup>5</sup>cf. Table 2, Introduction. Note too that apparently the first full department, of modern characteristics, appeared in 1910.

specialization necessary and second, the considerations relating to "when" a concern should establish a special organizational unit. The typical environmental factors necessitating special knowledge and departmental activity are several: (1) the nature of an organization's technology; (2) the size of a workforce, (3) the militancy of the involved union; (4) the nature of an organization's philosophy, and (5) the influence of government. One can add, of course, that the general economic condition of the country and the company have much to do with the matter, however, the economic condition is a basic factor influencing each of these environmental issues. It is therefore under discussion whenever considering the listed factors

### THE IMPACT OF TECHNOLOGY

The complexity of our technology is such that many line managers must give exacting supervision to their operations during most of the working day. In addition, our technology is changing so quickly, and to such a significant degree in many cases that, when not supervising, the manager is either studying or teaching. This means that managers require help in handling administrative obligations, including manpower management. In the absence of specialized help, it is not unusual for a manager to take care of the most pressing duties and just skip the others.

*THE SIZE OF A WORKFORCE.* Remember "the old woman who lived in a shoe and had so many children she didn't know what to do"? This is the problem here! As a workforce grows in numbers, the complexity of the individual manager's job also grows: the number of possible communications circuits increases, and the probable number of grievances increases. Many other factors complicate the manager's job as the number of employees in the firm increases.

*THE IMPACT OF UNION RELATIONS* Quite literally, management is obliged by law and economic pressure to deal with unions. Very often, and regardless of the Landrum-Griffin Act (1959), management finds itself dealing with situations where the "other party," the union, has no legal obligation.<sup>6</sup> In fact, management even finds itself forced to act as the agent for a union; in some cases that union may not even represent the majority of the employees

This condition demands special talent, additional specialized clerical activity, and carefully conceived public and employee relations activities. Some of the burdens imposed upon present-day managers by this set of circumstances are as follows:

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<sup>6</sup>Petro, *op. cit.*, pp. 109-122, 155, 239, *passim*

<sup>7</sup>In certain United Aircraft Corp. plants, management maintained, during a recent strike, that less than 45 per cent of the total workforce were union members according to the "check-off."

1. Management must act as the union's agent in collecting the union's dues from employees — the "check-off."
2. Grievances cannot be handled in a simple and direct manner if a union exists. Instead, a sometimes complex system of steps involving special committees must be administered
3. In many cases necessary changes in workloads, equipment, job assignments, and rates must be cleared with the union hierarchy before being initiated.
4. A contract must be negotiated with the union before a peaceful work climate can exist. This is a recurring obligation, but the basis for agreement is seldom the same from one negotiation to the next.
5. Management must establish a close watch upon companies where the same or a closely-affiliated union (or local) has a contract, and upon organizations whose services they use in order to escape the impact of secondary boycotts, allegedly "wildcat" strikes, and sympathy walkouts. This surveillance takes time and requires manpower.

All these situations, and many more which stem from the power of the union, demand time and special talent if they are to be met effectively. This, too, indicates the need for a manpower division within the organization of an industrial enterprise.

*THE IMPACT OF A MODERN PHILOSOPHY.* The truly modern business philosophy recognizes much more than profit as the goal of industrial organization.<sup>8</sup> Drucker points out the importance of recognizing the combination of profit, continued life, and customer acquisition as management goals.<sup>9</sup> Most social and political scientists point to recognition of the community welfare as important to management and labor. It consequently must be considered important in business philosophy. In addition, social scientists and management specialists point out the very real significance of including the welfare of the workforce in management goals — the idea of considering the "whole" man, man as a social being, permeates current literature.<sup>10</sup>

The reason for recalling these points is really quite simple — any philosophy, or set of goals, having such a broad base requires rather specialized talent to administer the procedures and programs. A sound management philosophy leads to development of retirement programs, profit-sharing, accident prevention and control programs, and various community participation activities. Such work requires special administrative and clerical talent, and such programs involve *time* which the average line manager cannot, or should not, give unless he can

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<sup>8</sup>cf. Chapter 2; see also, Dan H. Fenn, Jr., *Business Responsibility In Action* (McGraw-Hill Book Company, Inc., N.Y., 1960)

<sup>9</sup>Drucker, *op. cit.*, pp. 3-17, *passim*.

<sup>10</sup>Mayo, *op. cit.*, Herbert Simon, *Administrative Behavior* (The Macmillan Company, New York, 1951); Mason Haire (ed.), *Modern Organization Theory* (John Wiley & Sons, Inc., New York, 1959).

afford to minimize his general supervisory efforts. One again notes that there is a need for a specialized departmental structure.

*THE INFLUENCE OF GOVERNMENT.* As governmental restrictions or demands upon industry increase, companies find their clerical burdens expanded. As noted in Chapter 1, these restrictions (spoken of as interventionism) have become widespread. One might say that interventionism is the "mark of the era." In the manpower field, there are many requirements or demands. Their presence increases the need for staff action in the industrial organization.<sup>11</sup> A few of these requirements follow.

1. Income tax (withholding): the company is responsible for preparation and mass-mailing of such forms
2. Wage and hour law classification and control data require clerical action.
3. Labor department labor turnover and acquisition data are requested periodically.
4. Social Security payroll deduction must be made, information prepared, and fiscal transfer of funds provided
5. If charged with unfair labor practices, a company must provide data to, and submit its defense before, the National Labor Relations Board
6. Government stabilization regulations in times of national emergencies, such as World War II and the Korean conflict, demand that every employer adhere closely to the spirit and letter of these regulations or suffer the penalties prescribed

The foregoing items indicate the need for attention normally assigned to a specialized staff that maintains functional control over these activities.

*GENERAL GROWTH.* Add to these factors the picture of general growth typical of today's economy and it becomes apparent that industrial expansion is a continuing phenomenon. The Department of Commerce reported a \$503 billion gross national product in 1960 (an increase of some \$21 billion). In March of 1961, Fortune magazine reported that output came close to capacity in 1955, that it was growing faster than capacity from mid-1958 through mid-1960, and should be as close to capacity in 1962 as it had been in 1955.<sup>12</sup> Such a picture is indicative of the continuing need for more manpower in the industrial world. This ceaseless need in itself is a reason to suggest the continuing importance of manpower specialization. It is reason to indicate that company growth, and with it the need for departmentalized manpower work, will continue in our lifetime.

<sup>11</sup>Sylvester Petro, *The Labor Policy of the Free Society* (The Ronald Press Co., New York, 1957), pp. 53-124, *passim*.

<sup>12</sup>"Business Roundup," *Fortune*, March, 1961.

"WHEN" SHOULD DEPARTMENTALIZATION OCCUR? The factors just presented bear directly upon the individual situation. For example, when the technology of a concern reaches such a point of complexity that managers find their time devoted more and more to study, technical trouble-shooting and the like — when not actually supervising — then the need for staff assistance in manpower work is present. As the workforce moves toward fifty to one hundred, there is reason to assign manpower work as the special function of a given manager. Yoder has surveyed many companies with the view of determining the *personnel ratio* in the organizations surveyed. His findings indicate a felt need for specialized manpower work such that, in a company of 1,000 employees there would be, on the average, eight employees assigned to the personnel department.<sup>13</sup> One might decide to establish a manpower unit when the workforce reached 100, and to expand that unit whenever a 100-man growth took place.

Such an approach is convenient, but hardly realistic. The actual size of a workforce is less important than the work to be done when it comes to the decision to establish, or not to establish, a manpower unit. Size of the workforce will play a part in such a decision, but other factors demand greater attention. Among the questions to ask, and the considerations involved in making the decision, are the following.

1. *Supervisory Time*: are line and staff supervisors neglecting actual supervision, technical study, technical trouble-shooting, and "personal" contact with employees because of involvement with administrative reports concerning manpower? Obviously if the answer is yes, there is reason to establish a staff activity.

2. *Functional Activity*: is supervisory time being spent in handling recruitment, selection, third-stage grievances, accident control, and other similar work? Are these functional activities becoming increasingly frequent? Are they consuming more time now than they did say, a year ago? If so, there is more evidence to support the conclusion that staff assistance is required.

3. *Records Study*. do the records show that labor turnover, accidents, absenteeism, scrap, down-time and the like are increasing? Comparison of such data may suggest that supervision is wanting and that staff assistance is required.

4. *Union Pressure*. are the stewards, the local and/or international representatives complaining because of hasty or incomplete attention to labor-relations work? If so, more evidence of the need for staff assistance exists.

5. *Government Reports*: are there increasing numbers of late submissions of required federal or state government reports? Is the

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<sup>13</sup>Dale Yoder, *Personnel Principles and Policies*, 2nd (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959), p. 89.

accounting office complaining of the time taken in handling nonfiscal reports to government agencies? Have the staffs of the fiscal unit and the production unit been increased to handle manpower work? If so, additional evidence exists to support the claim that manpower work should be centralized.

### **DIVISION OF MANPOWER RESPONSIBILITY**

Where study has indicated the need for a manpower division (a personnel department, industrial relations department, or whatever name you wish), there arises the problem of responsibility. In the theoretical as well as the practical case, it is clear that manpower management is a function of every manager. If every manager should be a manpower manager, but a manpower division is needed, then there must be a clear-cut delineation of responsibility between the line and the staff. Failure to establish such a division of responsibility will cause conflict, and interfere with the economic operation of the company. Table 14 presents the inherent and accepted "split" of function. Robert Saltonstall provides this clear and concise statement.

This delineation of responsibility provides an operational guide for manpower managers and all members of the management team. It also presents a basis for the organization of a personnel or manpower division or department. In addition, this statement of responsibility classification can also become the basis for creating an "effectiveness" check-list, whereby top management can evaluate the operational efficiency of the manpower establishment. Such a check-list might well be as shown in Table 15.

Tables 14 and 15 have been said by an experienced management consultant to provide an excellent functional outline of the manpower responsibility. Probably the most important point, however, is that the total responsibility in any well managed organization is realized to be, and treated as, a shared obligation — both line and staff have the obligation.

### **STRUCTURE OF A MANPOWER DIVISION**

The division of responsibility for manpower work, as shown in Table 14, establishes a basis for the design of a manpower division. This design is further suggested by the "working objectives" discussed in Chapter 2. The basic structure of a manpower unit tends toward the simple line organization until operational or other demands indicate the need for internal staff development. The base design thus can be visualized as in Figure 23.

TABLE 14

DIVISION OF RESPONSIBILITY IN MANAGING MANPOWER

Basic Function	Responsibility of a Manpower Division (staff)	Responsibility of Line or Other Departmental Supervision
Employment	<p>Development of employment sources, and actual recruitment</p> <p>Interview, testing, and reference check of applicants Referral to the line after evaluation Preliminary general indoctrination</p> <p>Personnel records-keeping, complete file on individuals Maintenance of "call" file, notification of persons re physical exam, etc</p> <p>Processing discharge, promotion, transfer, etc Diagnosis of reports, recommend changes in assignment</p>	<p>Preparation of manpower requisitions, and advice as to expected skill and quantity change</p> <p>Selection from available screened applicants, actual decision to hire, assignment to job, indoctrination in details of safety, rules, procedures, etc Instruction</p> <p>Personnel follow up, reporting of progress, events, etc</p> <p>Decision on promotion, transfer discharge, layoff, etc</p> <p>Exit, change in status, etc interviews, reporting of findings</p>
Safety and Health	<p>Study and recommend correct health and safety programs, needed physical exam, etc</p> <p>Safety inspections and recommendations</p> <p>Analyze jobs for safe operation, sell safe procedure promote safety consciousness</p> <p>Work with (or as) engineer consulting on safety design and installation, and use</p> <p>Compare and analyze accident reports, locate cause and effect, recommend change</p> <p>Work with insurance company administer insurance requirements, interpret law, represent or assist in court</p> <p>Administer and operate (or oversee) education.</p>	<p>Top management decision Operating management cooperation, feedback, and on-the-job control</p> <p>Decide on expenditures, installation of devices</p> <p>Assure safe work practices, reward safe workers</p> <p>Establish, maintain, and assure correct installation and use of safety devices</p> <p>Furnish basic data on accidents, health problems, etc . enforce good housekeeping, maintain discipline</p> <p>Prepare and forward correct and detailed reports, assure existence and use of preventive measures</p> <p>Assist in education effort by instructing and supervising.</p>

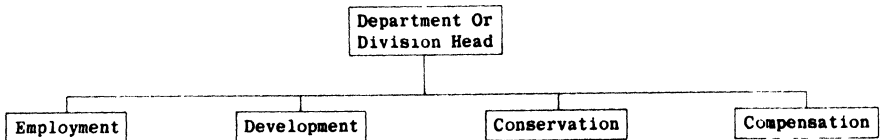
TABLE 14 (Continued)

Basic Function	Responsibility of a Manpower Division (staff)	Responsibility of line or Other Departmental Supervision
Manpower Development	<p>Study and recommend as to need, program design, policy methods, timing, and maintain records</p> <p>Develop or assist in setting promotion, transfer, and training "time tables," and in changes in table of organization</p> <p>Sell concept of overall manpower development, oversee public and employee relations program related to training</p> <p>Prepare training data, aids and systems including time-tables Conduct research concerning methods, skill needs and changes, recall problems and means of overcoming them</p> <p>Teach supervisors to teach Conduct vestibule training Schedule and evaluate out-of-company education</p> <p>Develop conference and committee leadership, and participation training Evaluate results</p> <p>Consult with other units of company re future expectations and needs</p>	<p>Study and work with Manpower to develop effective recommendations Provide basic data, report as to changes occurring, etc</p> <p>Implement and cooperate in the implementation of program Provide information immediately upon development</p> <p>Request and use manpower personnel in teaching, coaching, reports development and control</p> <p>Reports on effectiveness of training data, aids, and methods</p> <p>Conduct on-the-job training, evaluation of individual progress and effectiveness of systems</p> <p>Assign supervisors and others to scheduled educational sessions, assure attendance and cooperation, assume responsibility for discipline required, report problems and dissatisfactions</p> <p>Cooperate in study of future needs</p>
Labor Relations	<p>Study contracts and their development, study law and changes occurring Study cause and effect re labor disputes, ideas, aims, etc</p> <p>Analysis by department and cause of grievances, recommend means of preventing recurrence, of solving the existing problems, establishing reports-control system.</p>	<p>Facilitate study efforts by providing data and advice as requested</p> <p>Report actual facts behind problems which develop, actions being planned, unrest developing, internal union political strife if known</p> <p>Full cooperation re necessary reporting, implementation of recommended action, evaluation of merit or recommendations</p>

TABLE 14 (Continued)

Basic Function	Responsibility of a Manpower Division (staff)	Responsibility of Line or Other Departmental Supervision
	<p>Act as management spokesman liaison, and advisor in all labor matters. Cooperate with company counsel</p> <p>Interpret law, contract, current arbitration and court decisions, advise as to implications, means of avoiding problems, etc</p> <p>Establish and maintain direct contact with top union officials, attempt to dispel the "fight" and "fear" attitudes on part of both labor and management. Join with and advise line re the community relations</p>	<p>Assist in arbitrations, contract negotiations, give special technical information, oversee or assist in grievance meetings.</p> <p>Learn, apply, and evaluate the success of current contract. Establish rapport with union officials, live up to contract</p> <p>Make final decisions on labor problems. Assume responsibility for success and failure. Represent the company truthfully and accurately to public and employee, and actively seek laws of real value to all parties. Help overcome labor rackets</p>
Compensation	<p>Study and develop policy and procedure recommendations re correct systems, legality, timing, problems of implementation, etc</p> <p>Cooperate with industrial engineering, furnish job analysis information</p> <p>Perform job evaluation</p> <p>Evaluate economic changes, analyze implication, suggest steps to avoid problems re wages.</p>	<p>Provide basic data and cooperate as requested in studies. Assure employees and labor representatives as to purpose of studies and give them opportunity to express their views</p> <p>Assist and advise re facts, problems of application, etc</p> <p>Assist, advise and participate</p> <p>Implement and oversee correct application of procedures. Assist in rating</p>

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BASIC STRUCTURAL DESIGN — MANPOWER DIVISION

Figure 23

**TABLE 15**

**OPERATIONAL CHECK-LIST: MANPOWER DIVISION**

A purpose of manpower management is to facilitate the maintenance and the progressive improvement of the organization's competitive position. A manpower division (personnel department, industrial relations division, or by whatever name it is known) supports the operating and other staff elements of the concern by providing administrative service in the form of advice and special activity in the areas of employment, manpower development and conservation, and compensation. The function is being carried out

Correctly	Incorrectly
1 If jobs are completely analyzed, inventoried, and identified, if they are regularly audited to see that job descriptions are up-to-date. Audit periods should be determined by growth studies	If no job analysis, or limited job analysis exists, and if jobs are left unaudited for long periods of time
2 If the workforce is inventoried so that accurate information as to primary and secondary (and even tertiary) skills is available	If there is no inventory of existing skills and levels of skill, or if the method of inventory is unrealistic
3 If the sources for recruits are kept under constant reliability study	If sources are tapped with no idea of quality and dependability
4 If hiring and placement have a basis in estimates of present and future needs and individual capabilities, and how those individuals fit into the present and planned workforce	If hiring and placement reflect merely an effort to acquire "warm bodies," if rehires of marginal and submarginal people prevail, and if testing and proper interviewing are not practiced
5 If the educational and experience progress of individuals is recorded indicating initiative, advancement of skill and knowledge, if individuals are encouraged to better themselves, and if facilitating programs and controls are developed and used	If manpower development is ignored and encouragement and opportunity are not provided, and if records are not maintained. If all training is left strictly to the individual or the supervisor, and there is no check on progress
6 If training is analyzed and established in the light of known job requirements and employee deficiencies, and if the possible psychological problems are held in check by proper counseling and provision for promotion and transfer	If training is established as a matter of personal whim and not based upon job analysis, employee performance rating, growth studies, and if no heed is given possible development of personal frustration
7 If a program of personnel appraisal and promotion and replacement is carefully developed and projected, and if key jobs are "backstopped"	If no program of manpower replacement exists, and replacement and promotion are handled as matters of the moment.
8 If labor turnover and absenteeism are controlled through analysis of cause and effect, cause to department to time, and if active effort is made to remove indicated cause and plans are designed in terms of estimated effect.	If the only control on turnover and absenteeism is that imposed by legislation, or governmental request

TABLE 15 (Continued)

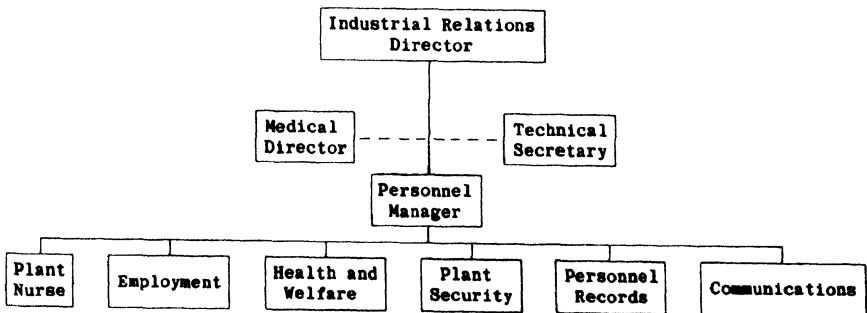
Correctly	Incorrectly
9. If accident prevention and control programs are developed from careful analysis of cause and effect, cause by department, equipment, time cost, and if control charting is applied and production methods adjusted for safe operation	If the only form of accident prevention and control is that advised or imposed by government, insurance carriers, or the union.
10. If employees are kept fully informed as to technological developments, as to economic and competitive condition and future plans and expected problems	If "lip-service" alone is given the morale factor, and employees are told merely "what is good for them to know "
11. If ancillary factors such as transportation, housing, schools, and parking, banking, store, and medical service hours are studied and efforts made by the company to improve any problems existing	If there is no interest in the community and its problems, or the effect of those problems or conditions upon the workforce If no effort is made to resolve such problems
12. If preventive industrial medicine is practiced and kept under constant study, and the company joins in community efforts to improve service	If only the bare minimum of medical examination and service is provided and if no interest or support is given community efforts to improve service
13. If regular liaison is established between wage and salary and payroll and industrial engineering, and if the best methods of job evaluation and work measurement are practiced and kept under constant improvement study	If wages are established by archaic system, edict, or merely as a result of union pressures
14. If grievances are handled promptly, fairly, and resolved uniformly when possible, if cause is studied and effort made to remove cause If discipline is considered and practiced as corrective action.	If grievances are allowed to go unresolved until the union protests, if no effort is made to resolve cause If discipline is considered merely as a matter of punitive action.
15. If individual and group productivity and production costs are readily discernible through record. If employees are made aware of the importance of productivity as a concept	If productivity and manpower cost is left unrecorded, or merely recorded in generalities If no effort is made to educate employees regarding the concept of productivity.
16. If periodic study and regular record of age and relative health of employees is maintained, including executives, and related to operating success	If opinion is the sole source of information regarding age and health and their effect, real or potential, or age and health on the organization's future is left unstudied
17. If employment, training, and wage needs are projected on a minimum five-to ten-year basis	If no projection of future manpower needs is available
18. If wage, turnover, accident, and skill levels and rates are constantly checked against community and the industry.	If no comparison of manpower factors is made with community and industry experience.

TABLE 15 (Continued)

Correctly	Incorrectly
19 If the ratios of supervision and technicians to production employees are kept under study, and the needs developing with increased mechanization are prepared for -- including pre-training for promotable persons or those to be displaced and transferred	If no planning or action is taken regarding changes in manpower needs and assignments
20 If efforts exist to facilitate or initiate community projects designed to pre-train, re-train, and otherwise maintain the productive ability of displaced, unplaced, or about to be replaced, persons (other than unemployables)	If no planning and no cooperation with community efforts to plan for the pre-training, re-training problem exists
21 If communications are kept timely, comprehensively, complete, positive, economical, concise, and clear	If no thought is given the need for good communications throughout the concern

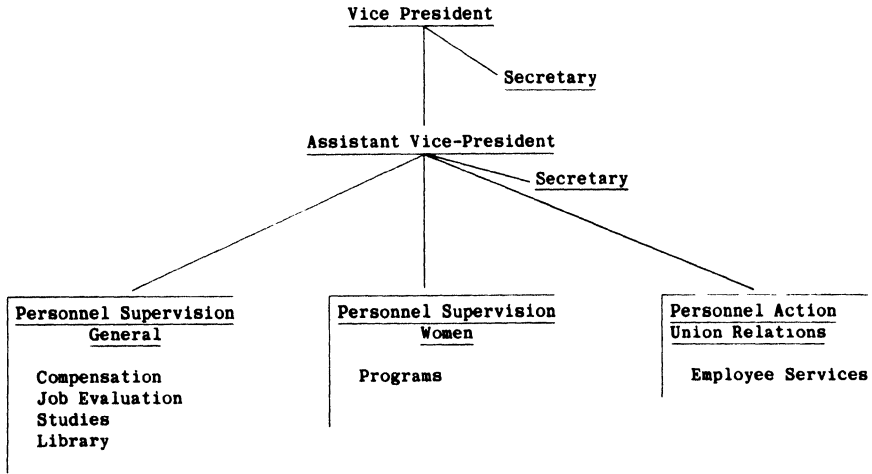
Source: Theodore A. Toedt, Hartford, Conn., Chapter, Society for the Advancement of Management, February, 1956. Lecture Series.

This layout has almost as many variations in practice as there are companies. As indicated in Figures 24 and 25, however, the general tendency is to begin with a simple superior-subordinate design.



PERSONNEL DEPARTMENT  
(MEDIUM SIZE MANUFACTURING COMPANY)

Figure 24



**PERSONNEL RELATIONS DEPARTMENT  
(A PUBLIC UTILITY)**

*Figure 25*

**FACTORS CONTRIBUTING TO CHANGE.** A manpower division may start as a simple line organization, however, as conditions change it tends to expand. Like its peer-functions, the manpower unit tends to expand functionally by adding internal staff sections. In other words it departmentalizes and adds staff assistance to its own line as it becomes necessary and economical.

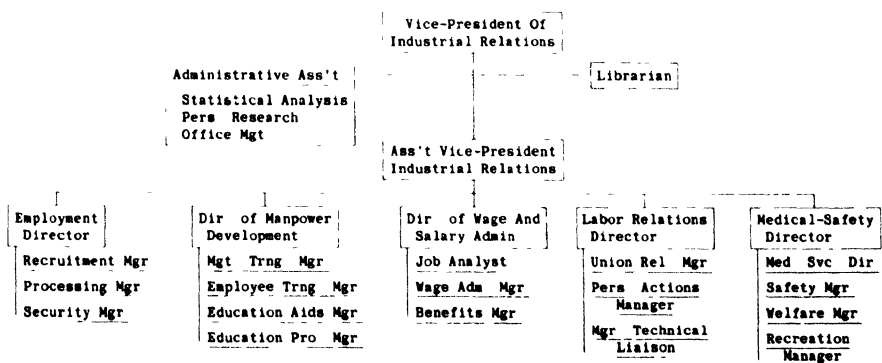
The factors previously discussed as necessitating manpower specialization influence change in the structure of a manpower unit. As the functional sections of a manpower unit are expanded, the need for internal staff assistance tends to increase. As the size of the workforce and the complexity of the work increase, the complexity and frequency of labor problems tend to increase. This, in turn, increases the need for a legal library service. As union activity increases, it becomes important to departmentalize the labor-relations work. In addition, the need for specific staff assistance for the search and evaluation of problems increases. Government demands have a strange habit of increasing instead of decreasing over the years. One can conclude that Parkinson's law can be applied here and used as a constant growth factor.<sup>14</sup>

<sup>14</sup>cf. C. Northcote Parkinson, *Parkinson's Law* (Houghton Mifflin Company, The Riverside Press, Cambridge, Mass., 1957).

Change in the design of a manpower unit also is influenced by *board decisions and policies*. Although the need for a manpower unit and for change in its design is affected by growth, technical complexity, union and governmental activity, the board of directors normally will decide whether or not to meet that need.

**EXPANDED STRUCTURE.** Expansion of the manpower division may or may not follow definite rules or patterns. Experience indicates that expansion seldom occurs by rule or principle, even today. This condition is probably a reflection of the youth of the manpower discipline as we know it today, and in part at least, of the general lack of acceptance and understanding of organization theory. The Guides to Proper Structure and Structural Relationships provided in Chapter 3 should be considered when expanding a manpower unit. In essence, this would mean that support would be given where needed, that command-unity would be maintained, that care would be taken to assure that units and sub-units of like importance were not subservient to each other, and so forth.

Table 16 presents a possible set of sub-section titles and reporting channels. In this table the broad functional pattern shown in Figure 23 is the basic pattern. It is the pattern suggested as the base for building an expanded manpower division. An example of an expanded manpower unit taken from a manufacturing concern is found in Figure 26.



AN EXAMPLE OF AN EXPANDED MANPOWER DIVISION —  
A LARGE SCALE MANUFACTURING COMPANY

Figure 26

TABLE 16

FUNCTIONS AND CHANNELS OF AN EXPANDED MANPOWER UNIT

Unit/Title	Functional Assignment	Position and Circuits
<p><u>Industrial Relations Division</u> (Vice-president) or (Director) Assistant -- if any -- would function as executive officer next in command. Or administrative aid</p>	<p>Advises re development of, interprets, analyzes manpower policies and procedures. Manages division, coordinates manpower work in company, consults with and advises other managers on labor, organization, communication, and human relations matters Responsible for success or failure of manpower policies, etc</p>	<p>Top management position. Reports to executive vice-president or president. Line channels internally Horizontal "s" circuits with other managers of same hierarchical status. Staff circuits to all management personnel. Specially active circuits to controller, vice-president production, and engineering manager.</p>
<p><u>Employment Department Manager or Director</u> or <u>Employee Relation Department Manager or Director</u></p>	<p>Manages department, responsible for recruitment, selection staff phase of induction, preparation of personal records Appraises and advises on policy, procedures, installs procedures, interprets policy. May supervise central records</p>	<p>Reports directly to vice-president, or assistant Line channel continues through his department Staff channels to other departments in personnel and in each unit of the company Special activity to production and engineering, and to payroll</p>
<p><u>Recruiting Supervisor</u></p>	<p>Supervise recruiting activity Coordinate with all department heads Advise on policy and procedure. Administer procedures, responsible success of effort</p>	<p>Report to employment head Line circuit in section and to employment head Staff circuit throughout company Originates transmission according to accepted procedure Exceptions by employment head</p>
<p><u>Employment Supervisor</u></p>	<p>Supervise selection interview testing, etc</p>	<p>Report to employment head Line circuit in section and to employment head Staff circuit throughout company Originates transmission according to accepted procedure. Exceptions by employment head.</p>
<p><u>Records Supervisor</u></p>	<p>Supervises all personal records in the preparation stage. Forwards to central records for control and future action. Handles the staff phase of induction or placement.</p>	<p>Reports to employment head. Line circuit in section and to employment head Staff circuit throughout company Originates transmission according to accepted procedure. Exceptions by employment head.</p>

TABLE 16 (Continued)

Unit/Title	Functional Assignment	Position and Circuits
<u>Training Department</u> <u>Manager or</u> <u>Director</u> or <u>Director of</u> <u>Manpower Development</u>	Manages department, responsible for policy and procedure advice, policy interpretation, administration of procedure, Overseas orientation program, in-and out-plant education and job training Overseas audio-visual aids development and use	Reports to vice-president or assistant Line within department and to vice-president. Staff circuits to other department in personnel and in company Special activity to production, engineering, sales, and external educational facilities
<u>Supervisor --</u> <u>Educational</u> <u>Services</u>	Manages section Advises re policy and procedure coordinates with department heads, and outside education facilities, coordinates, and supervises internal programs, teaches	Reports to training head. Line circuit in section and to training head. Staff circuits throughout company and with outside Originates according to accepted procedure, exceptions by department head
<u>Supervisor --</u> <u>Educational</u> <u>Aids and Records</u>	Manages section Supervises all work re preparation, maintenance, and utilization of aids Supervises preparation and maintenance of any special records Analyzes program effectiveness, need, etc	Reports to training head Line circuit in section and to training head Staff circuits throughout company Line or staff to outside agencies Originates according to accepted procedure, exceptions by department head
<u>Wage and Salary</u> <u>Department</u> <u>Manager or</u> <u>Director</u>	Manages department, responsible for policy and procedure advice, policy interpretation, administration of procedures Establishes job analysis, job evaluation programs, evaluates effectiveness Coordinates with industrial engineering, payroll, union, and industrial relations.	Reports to vice-president or assistant Line within department and to vice-president Staff circuits to rest of company and external units. Special activity, industrial engineering, payroll and industrial relations.
<u>Job Analyst</u>	Develops procedures and forms, performs analysis of jobs, evaluation of jobs, writes up jobs, etc., and supervises section activities	Reports to department head. Line in section and to department head, staff circuits to rest of company and to external units.

TABLE 16 (Continued)

Unit/Title	Functional Assignment	Position and Circuits
<u>Health and Welfare Department Manager or Director</u>	Manages department. Advises re policy and procedure. Coordinates with department heads. Responsible re programs for physical and mental health. Coordinates with outside agencies. Performs medical or psychological or psychiatric examination depending upon competencies. Operates clinic or dispensary or small hospital facility. Gives pre-employment physicals. Maintains physical records, coordinates with area civil defense, etc.	Reports to vice-president or assistant. Line in department and to vice-president (May be line to employment head). Staff to rest of department heads and company units. Special activity with employment, safety, and local medical facilities.
<p>(Remainder of organization depends entirely upon situation, no standard pattern has as yet emerged, but would probably include industrial nurse, competent nurses aides, male and female, internal or external medical competencies for examination purposes. Circuitry would be staff except in department. However, where a medical problem existed re an individual, the circuit would be a matter of 'command' )</p>		
<u>Employee Service Department Manager or Director</u> (May be under the above.) (May include recreation )	Manages department (or section). Advises re policy, and procedures, interprets policy, administers procedures. Services covered include cafeteria, insurance, savings, transportation, retirement, dismissal, transfer, promotion, counseling, etc. Department includes counseling supervisor, personnel actions supervisor (promotion, etc ), cafeteria manager, etc.	Reports to vice-president or assistant. Line circuit in department and to vice-president. Staff to other department heads and remainder of company.
<u>Safety Department Manager or Director</u> (May be under Health and Welfare)	Manages department. Advises re policy and procedure, administers procedure, interprets policy. Develops or assists in development of devices, inspects analyzes cause and effect, controls and coordinates all safety work.	Reports to vice-president or assistant. Line in department and to vice-president. Staff in rest of company (May have the 'right' to shut down operations.)

TABLE 16 (Continued)

Unit/Title	Functional Assignment	Position and Circuits
<u>Labor Relations</u> <u>Department</u> <u>Manager or</u> <u>Director</u>	Manages department Ad- vises division head and top management activities Advises re policy and pro- cedure, interprets policy, administers procedure, rep- resents company in nego- tiations, grievances, ar- bitrations, works with corporation counsel Oversees entire grievance program Works with train- ing head to assure that managers know policies and procedures, etc	Reports to vice-president or assistant May report to executive vice-president on certain matters Line in department and to vice- president. Staff in re- mainder of company May have line circuit as far as union matters are concerned or with union hierarchy
<u>Central Records</u> <u>Department</u> <u>Manager</u>	Manages department Ad- vises re record adminis- tration Supervises record keeping and control Supervise analytical oper- ations for others in divi- sion	Reports to vice-president or assistant Line in depart- ment and to vice-president, staff otherwise

Source: Composite of information included in Robert Saltonstall, *Human Relations in Administration* (McGraw-Hill Book Company, Inc., New York, 1959), pp 144-146, *passim*, C L Bennet, *Defining the Manager's Job*, (American Management Association, Inc, New York, 1958, pp 419-432, *passim*, and Dale Yoder, H G Heneman, Jr, John G Turnbull and C Harold Stone, *Handbook of Personnel Management and Labor Relations* (McGraw-Hill Book Company, Inc, New York, 1958), Section 2, *passim*

Table 16 indicates the formal or accepted channels typical to the functions or units described. A detailed or even general statement of the expediency and informal circuits could be made only after study of a particular case.

**INTERNAL FUNCTIONAL ASSIGNMENTS.** The functional assignments of a manpower unit are determined by *structural decision*. They reflect the same pressures that influence design decision: that is, the previously mentioned forces tend to influence the assignment of function just as they influence the growth of the manpower unit. This condition is perfectly within acceptable theory for it reflects the impact of functionalism as described in Chapter 3. Table 16 indicates some generally acceptable assignments.

**POSITION IN THE COMPANY.** Throughout this text the claim has been made that the manpower function is one of the primary

functions of management. One would expect, therefore, to find that wherever a manpower unit existed, the job titles and the position in the company would be the same, or relatively so, and that this position would be one of equality with the other management functions of production, sales, finance, and research.

Such uniformity, unfortunately is non-existent.<sup>15</sup> Variations in company position, job titles, departmental design, and functional assignments seem to be related to the size of a company, and the other forces mentioned: namely, board decision and policies, union relationships, and technology and skills.<sup>16</sup> One also can presume that these variations reflect the previously mentioned lack of general acceptance and understanding of organization theory.

The fact that variation exists, that no uniformity of position or title has yet been established, does not alter the very real significance of the view that the manpower division should be a major functional unit of an organization, and that the top position in a manpower unit should be a part of the top management group. This point of view stems from the fact that the management of manpower comes before the management of things, and is necessary to the management of things. Let us recall the traditional "first lesson" in management — the land, labor, and capital idea; or the equally traditional concept that management concerns men, machines, materials, methods, and money.<sup>17</sup> In small companies it may not be reasonable to have *real* specialists in the manpower function, but wherever the decision has been reached that the prime importance of the manpower function is such as to require departmentalized effort, that organizational unit should report directly to the top echelon of the organization.<sup>18</sup>

**NORMAL INTERNAL CIRCUITRY.** Within its own boundaries, the manpower unit is a line unit. As such, there will be line, or command circuitry, within the manpower unit and from the manpower unit to the hierarchical authority having command over it — the executive vice-president, or president. This circuitry will reflect and involve all the rules, problems, and considerations mentioned in Chapter 4. Its design should be based upon the concepts laid out in Chapter 4.

Internally, and depending upon structural design, there may well be staff circuitry. A central records unit, for example, should be in a staff circuit to the rest of the manpower division. The problems

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<sup>15</sup>Dale Yoder, *Personnel Principles and Policies, 2nd* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959), p. 90.

<sup>16</sup>Yoder, *op cit.*, pp. 86-92, *passim*.

<sup>17</sup>William B. Cornell and John H. MacDonald, *Business Organization and Practice*, (American Book Company, New York, 1936), p. 130.

<sup>18</sup>The student's attention is directed to the organization charts appearing in the various personnel texts and handbooks.

and concepts regarding staff circuits mentioned in Chapter 4 will pertain here.

Then, too, internally the manpower unit will include "e" circuits. There will be instances when informal communication channels will exist. The employment manager may operate directly with the clerk handling accident reports. This may be a means of acquiring replacement information at a much earlier time than if the employment manager were to wait for formal notifications to arrive.

It appears then that the internal organization of a manpower division will contain, and be involved with, all the circuitry considerations mentioned previously as general background knowledge. It also appears that manpower people must learn to handle such considerations not only to facilitate their relationships with the other major divisions of an organization, but to facilitate their internal communications and control efforts.

*EXTERNAL CIRCUITS.* The only line circuit, which exists outside the boundaries of the manpower units, is its hierarchical authority. All other circuits will be of the staff or expediency variety. Being a staff organization, these circuits will radiate. They will not move in serial fashion unless forced to do so by some edict. Even then, like water under normal conditions, its circuits will "seek their own level" — they will reach out to direct contact with the organizational units and levels of *functional* interest. As with the internal case, the external circuits of a manpower unit will include the previously discussed "e" and informal circuits as well as staff circuits.

Table 14 provides one possible picture of a manpower division's structure and circuitry. Another is provided by Figure 27. Although no reference is made to the circuitry involved, the general rule would hold: within the departments and to the immediate superiors, the circuits would be line, and between the departments and to all other elements of the company, the circuits would be staff.

### DEPARTMENTAL AUTHORITY

A manpower division is a staff unit, a *support* activity.<sup>10</sup> Its only rightful claim to "line" authority is within its own departmental boundaries. Throughout the rest of the firm it exercises that peculiar combination of persuasion and proof referred to as "staff authority," or it acts with an equally peculiar right known to many as "speaking for," or invoking the "voice of," the boss (commander).

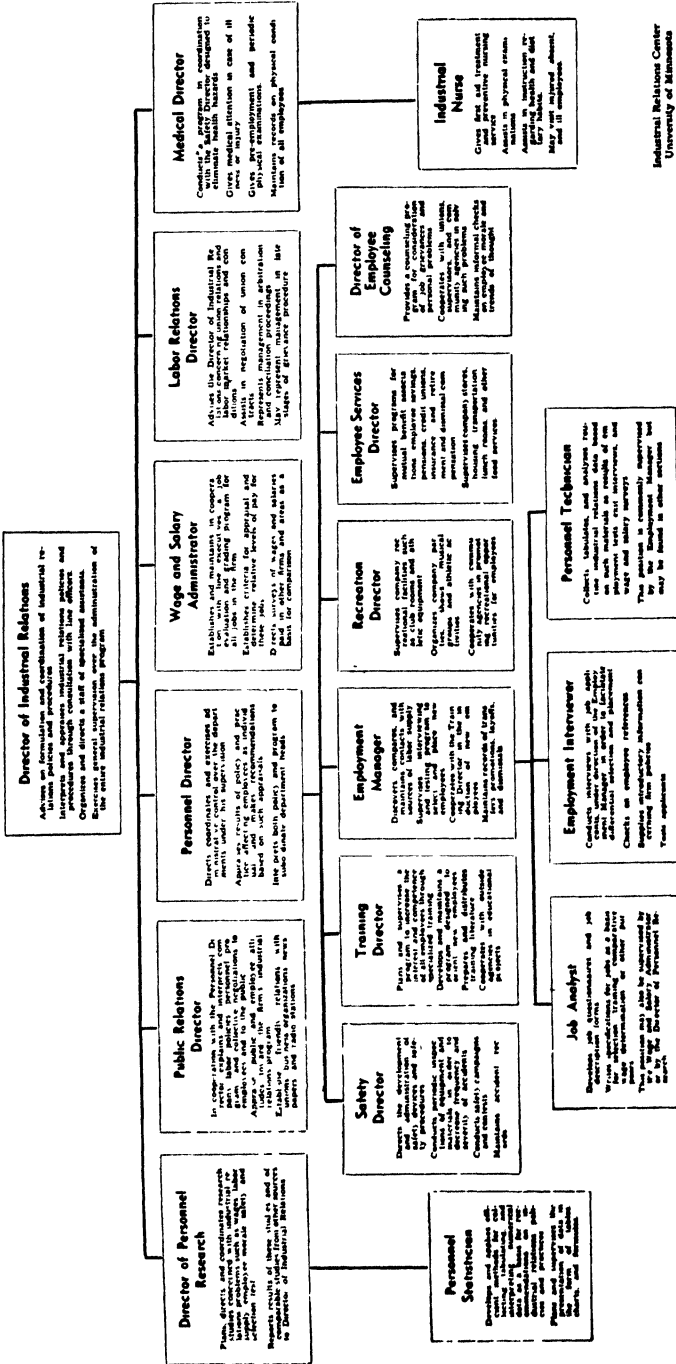
Manpower people cannot command other departments or managers; they must convince them or persuade them. Persuasion requires more than a handiness with words and a winning personality.

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<sup>10</sup>Dale Yoder, *Personnel Management and Industrial Relations* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1956), p. 22.

# Industrial Relations Jobs in Business Organizations

(This is a partial list to be expanded through further study)



Industrial Relations Center  
University of Minnesota

(By permission from Philip H Knecht and Margaret Bentson, "Jobs in Industrial Relations," Release No. 2, University of Minnesota Industrial Relations Center, 1947 )

INDUSTRIAL RELATIONS JOBS IN BUSINESS ORGANIZATIONS  
Figure 27

It depends heavily upon proof! Proof requires evidence as to past actions and defensible hypotheses; and proof is founded upon quantitative evidence whenever possible.

Persuasive language and reasonably concrete proof is what one speaks of as advice. The staff authority is that of advice, it is an authority of diplomacy, not edict. It acquires merit and attains attention through satisfactory experience.

*AUTHORITY WITHOUT PERSUASION.* If persuasion will not work, staff action may be implemented by invoking the "voice" This may be accomplished in two ways:

1. Top management may be called upon to issue a command. This is a drastic step and requires that the staff unit furnish full proof of the wisdom of its request.

2. The other generally applied approach would find the manpower representative saying "The president wants this done."

A third possibility for getting work done lies in *trust*. If time has shown that the manpower people usually are *right*, then their *requests* for action may be treated as commands. This is an enviable achievement and not to be expected unless one is a truly professional manpower manager.

*LINE TO STAFF.* The coin has two sides, and so it is with the authority picture affecting a manpower management unit. One points out that a correctly constituted manpower division cannot command the line or another support or service unit. The line can *demand of*, or command action by, the manpower division, however, so long as the order stems from the proper hierarchical level. For example a foreman cannot command the vice-president of industrial relations (or manpower management) to perform a re-analysis of the jobs in his (the foreman's) department. He can forward an action request through channels to *his* vice-president, who, in turn can *demand* action — or it can be forwarded to the executive vice-president who can *command* action. Though this *formal* picture is true and correct, its effectiveness and efficiency are open to serious question. One thus points out that a legitimate request — one pertaining to an assigned or inherent manpower obligation, such as a request for personnel, for assistance on a grievance, or for a re-analysis of job *because* of a job change (with identification of the change) — made by *any* manager, should be *treated* by the manpower division as a legitimate command. By so doing, the efficiency of the relationship between the manpower division and other units of the company is generally improved, and the operational effectiveness of the organization as a whole is en-

hanced.<sup>20</sup> Since the staff exists to *serve* the line, since its purpose in life is to facilitate line action, then it should make every effort to do just that!

*IMPORTANCE OF PROCEDURES OR SOP.* It is one thing to agree with the foregoing statements, but quite another thing to make them work. No rule now exists which can guarantee operational success regarding those statements. One thing is certain, however: the existence of written procedures or standing operating procedures (SOP) will facilitate proper application of authority by the line and by the staff. Without such statements the question of who should do what, and when, and that of who can demand what, and when, may — and usually does — break down to a matter of personalities.

Manuals which are kept up-to-date help identify the correct channels or circuits for demands for service by the line and for action or information requests by the staff. Such manuals also help to identify and maintain the clarity of the internal organization of the company and its respective units.

## SUMMARY

Manpower management is at once a line, and a staff, responsibility. Every manager, regardless of his specific background, training, and assignment has a prime operational requirement: the effective management of his personnel. Each industrial organization of any size, however, requires special departmentalized effort to facilitate the management of people. Such an effort exists to recommend, evaluate, and administer the many specific programs necessary to assure a reasonably correct management of manpower. It exists to improve, or at least help maintain, the economic effectiveness of the company as a whole.

Manpower divisions exercise control over manpower programs. They relieve the line of tedious administrative burdens associated with manpower work. They provide expert advice on manpower problems. The personnel of manpower units stand beside other managers in their efforts to resolve problems relating to, or stemming from, the crucial human relationships in organization.

In their relationships throughout a company, manpower people use persuasion and proof to get their points across. They may, as a last resort, invoke their special authority by calling upon the "voice of the boss."

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<sup>20</sup>cf. Roger M. Bellows, "Motivation By Dynamic Supervision," *Personnel Journal*, Vol. 39, No. 8, January, 1961, pp. 304-308. His treatment of authority has a direct bearing upon the remarks made here. One notes that the dynamic manpower manager being sensitive to situations as well as people, will establish cooperation as his rule. Thus we can conclude, as above, that he will insist that legitimate requests from the line be *treated* as legitimate commands.

Normal communication between a manpower unit and other elements of a concern is radial in nature. Serial circuitry is limited to internal communication and contact with the "boss," the executive vice-president, or president of the company.

These programs cover a variety of issues. Like the organization of a manpower division, however, they tend to follow the general pattern of the "working objectives." In the following sections of the text these broad areas of activity are discussed. Part III begins with the vital matter of manpower selection.

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*Man selects the materials necessary for production — and what care he takes! But who selects man? And how well is this done?*

## PART III

# Obtaining A Potentially Effective Workforce

Into the manager's conscious thoughts there sooner or later creeps the troublesome question of methods of staffing. In this section, attention focuses upon the first of the "working objectives" of personnel administration — the staffing issue (the procurement of a potentially effective workforce). Attainment of this objective requires the economic operation of three interrelated manpower management functions: recruitment, selection, and induction or placement as indicated by Figure 28.

The general significance of the objective, and of the functions necessary to attain it, originates in the fact that (the competitive and continuously profitable position of a company depends largely upon the effectiveness of its personnel). This effectiveness refers to their technical and physical competence and the propriety of their behavior. Since the technical and behavioral characteristics of man are not easy to determine by casual observation, one must follow a carefully developed program, rather than a hit-or-miss series of expediences, to uncover them, if a potentially effective workforce is to be obtained. Such a program involves study of changing job and economic conditions, and present and future manpower needs.) It includes also such administrative activities as the requisitioning, selection, and processing of manpower.

We speak here of a "potentially effective workforce" and call attention to these significant points: (1) not all things are what they appear to be, and (2) few people can be truly effective in a new environment until adjustment occurs (and this adjustment process extends to, and includes those already employed in the concern). The manpower procurement function assesses proficiency and provides

for adjustment. It uses procedures which determine the skills required, and discovers the best sources for obtaining those skills. It is to this set of complexities that we turn our attention in Part III.

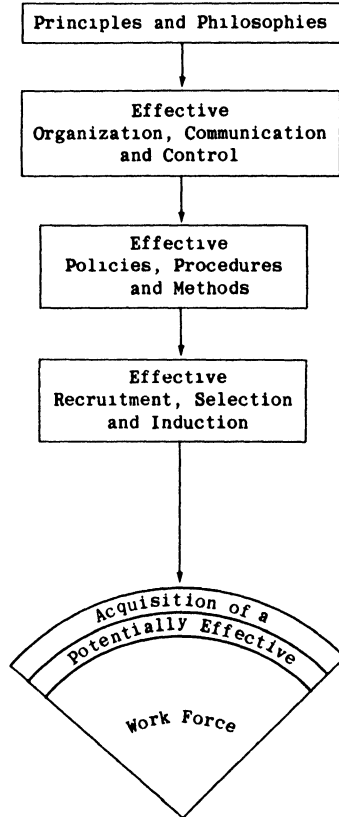


Figure 28

*"Should it happen, moreover, that our society succeeded in supplying itself with machines and failed in providing itself with adequately trained manpower, there would be cause for concern."<sup>1</sup>*

## Manpower Acquisition — Purpose and General Policy Considerations

Not each man has the same mental or physical proficiency, nor is each man readily compatible with every other man. One therefore seeks to establish an organization containing both proficient and compatible people. The special skills required by today's technology increases the problem of attracting the right people to the right place at the right time

Devices must be developed and used which will provide a reasonable assurance that the organization will be staffed with competent personnel. Just as man's efforts do not meet with success unless organization exists to facilitate its attainment, the utility of organization is lost unless the men designing and operating within it are competent in terms of the specific requisites of that organization.

### **RECRUITMENT AND GOOD MANAGEMENT PRACTICE**

At one time conditions favored the practice of stepping into the immediate community and indicating that a job was available. Nowadays this is impossible or impractical over an extended period of time, or for filling a large number of vacancies. The distances that the average man lives from his work, the competition for vital skills, and the tendency to decentralize industrial effort all have played a large part in this change during the past several decades. The result is that carefully controlled programs become necessary if people needed for job vacancies are to be attracted to them.

Satisfaction of the management obligation, or, if you wish, the "goodness" of management practice, develops through carefully planned

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<sup>1</sup>John Kenneth Galbraith, "Men and Capital," *The Saturday Evening Post*, March 5, 1960, p. 32.

effort in sales, production, manpower, and fiscal management, and through research and innovation in each area. Careful planning and operation in these areas demands knowledge — both accumulated and assimilated. That knowledge must be pertinent to the jobs and the problems typical of the given concern.

*Recruitment* programs exist as a means of seeking out those individuals possessing the required knowledge, the physical and mental competency, and the psychological compatibility. These programs exist as part of a larger effort. The nature of such programs, therefore, is affected significantly by the definition and construction of that larger effort.

If the total staffing effort of an organization is haphazard, the results from even the most technically correct recruitment program will be relatively poor. One immediately surmises that good management practice requires competent selection and induction as well as competent recruitment. This, in turn, re-emphasizes the need for a sound over-all management philosophy.

### SELECTION AND GOOD MANAGEMENT PRACTICE

The entire responsibility of manpower management follows the pattern of an inventory problem related to the theory of "organizational equilibrium."<sup>2</sup> The item of inventory is man's most valuable raw material — man. The staffing effort becomes to the manpower manager what vendor analysis is to the purchasing agent. Staffing includes the determination of the manpower needed, the determination of the best source of supply, and the development of the best means of acquiring and assuring quality selection from the chosen sources. It also includes consideration of the best way to put man into his new environment.

Recruitment serves to locate the proper sources and to interest potential employees in the possibility of employment. *Selection serves to identify and procure the desired quality.* Selection thus facilitates good management practice by isolating the required knowledge and compatibility necessary to that practice, and making it available to the organization.

### POLICY

Development of any program begins with goal determination and statement of goal through policy. Although the responsibility of manpower management normally *does not* include decision regarding the policies under which the manpower division operates, the presentation of advice concerning policy and assistance with policy development is a responsibility of manpower managers.

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<sup>2</sup>James G. March and Herbert A. Simon, *Organizations*, (John Wiley and Sons, Inc., New York, 1958), pp. 84-111.

**EXTERNAL CONSIDERATIONS.** At least three external factors require consideration when developing staffing policy and procedure. Their importance arises from the fact that they influence the steps taken and reflect the degree of success or failure obtained through those steps. They can be stated as follows:

1. The condition of the labor market.
2. The reputation of the concern.
3. The attitudes of the union leaders concerned.

*The Labor Market.* The "labor market," as a term, signifies the quantity of labor supply available. It pertains to *employable* persons, not the total number, in a given society or community. A "tight" market reflects scarcity. In the general case, a "tight" market means that management must increase its efforts to recruit, probably be satisfied with a lower quality result from selection, and intensify its induction and training activities.

The implication found in the general case indicates that unless positive steps exist to minimize or prevent the effect of the "tight" market, increased manpower expenditures will occur during periods of labor scarcity. Good management practice specifies that managers will govern events rather than be governed by them. One can specify that such periodic increases (followed, in times of plentiful supply, by decreases) are to be avoided as far as possible. Avoidance will depend in large measure upon policy which demands that there is long-range, careful, and flexible planning. Policy designed with the labor market in mind permits rapid adjustment to the changing character of the market. Proper policy also fosters development of procedures to facilitate that adjustment.

*Policy Provisions.* What should such policy provide? *First*, budget establishment — the budget and general fiscal approach should seek to level out the expenditures for recruitment and selection, as well as manpower development. Flexibility is needed in the budget to permit a ready shift in the nature of expenditure. *Second*, general planning should be such that the changing needs of a company are predicted, and are subject to trend analysis and projection. In addition, the changing availability of manpower will be subject to trend analysis and projection. *Third*, policy also demands the development of procedures designed to establish long-range, close cooperation with manpower sources, and to foster a correct analysis of the desirability of those sources. *Fourth*, effective policy recognizes the importance of public relations, and demands procedures designed to enhance them.

It would be helpful if one could establish a set of general rules useful in the development of policy and procedure (as heretofore specified), but these as yet have not been formulated. An exact statement of policy and procedure, and system in general, as well as the

development of such statements, therefore depends in most instances upon the specific case at hand. The previous comments regarding policy provisions are *guides* to action, rather than specifications of action.

*Reputation.* Study and long experience indicate that the company with a good reputation attracts good employees more readily than one with a bad reputation. Though this point is obvious, it seems to be forgotten or ignored in many instances.

Reputation is insidious! It infiltrates a community and a trade. Policy, with its resulting procedures and programs serves to develop (or destroy) that reputation. Policy should certainly be specific as to belief in the fact that man is a social being as well as an economic being, and that procedures evolving from policy should put that belief into action. Adequate staffing effort reflects the significance of social and psychological compatibility, as well as technical competency. Any other approach ignores the importance of reputation, for reputation of a company evolves from the socio-psychological as well as the technical activities and characteristics of that company and its employees.

Bellows speaks of the importance of reputation. His viewpoint certainly should receive careful attention:<sup>3</sup>

The personnel department has control over this reputation only indirectly. If personnel management has been successful in allocating appropriate personnel to jobs for which they are suited, it is quite likely that it has contributed to the over-all job satisfaction of the employee group. This, in turn, reaches the listening ears of the community.

These listening ears serve to establish the social position of the company in terms of its being a good or a bad place to work. Both policy and procedure come to those ears, and both are measured.

*The Attitude of Union Leaders.* Union leadership influences the community as well as the workforce. The quality of that leadership becomes an important management consideration — how ethical, how technically competent that leadership is must be taken into account when developing company policies and procedures, because this leadership will interpret those matters for the workforce. That interpretation will play an important part in determining the attitude of the workforce toward the company and its policies and procedures. Unfortunately, both the quality and ethical sense of union leaders lack uniformity not only between companies but within individual union structures. It is not unusual, therefore, to find that the influence exerted upon community and workforce by this leadership varies from

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<sup>3</sup>Roger M. Bellows, *Psychology of Personnel In Business and Industry*, 2nd (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1954), p. 217.

good to bad, from helpful to harmful, and — as determined by the McClellan Committee — from honest to dishonest.<sup>4</sup>

Good management seeks to establish superiority over events. Good management establishes policies, procedures, and programs designed to assure (or attempt to assure) better union leadership. In the staffing sense, one would therefore recognize the inevitability of the fact that if a union exists, employees will become shop stewards and union officials of every rank, hence, additional care should be taken in the recruiting and selection of those employees. Furthermore, since employees operate within the community, policy and procedure is directed toward the selection of persons who will benefit the given community. In the long run this becomes an economically sound practice because it lessens the chance that the community will support dishonest, thoughtless, and unsophisticated union leaders.

Manpower managers know that cooperative union leaders work with management to assure development of desirable procedures and the selection and placement of desirable people. On the other hand, the unsophisticated, the political or selfish, or the racketeer leader blocks even the most honest and technically correct management efforts. This blocking action develops because unethical men tend to survive best in an environment of unrest. Policy should provide for consultation with the honest leader, but should not facilitate the continued presence of the dishonest.

Sincere union leaders realize that constructive criticism and cooperation go together. They realize that working with management to develop an atmosphere of job satisfaction is good economics and good human behavior, and that such an atmosphere simplifies their job and makes for greater benefits of longer duration for their people. By the same token, the wise manpower manager heeds the advice of such union leaders. This all points to the fact that effective policy, procedure, and programs encourage the development of good leadership throughout the company.

*INTERNAL CONSIDERATIONS.* The minimum internal considerations pertinent to the development of staffing policy, procedure, and programs involve the following points:

1. Management's attitudes.
2. The effectiveness of liaison.
3. Economics.
4. Responsibility.

*Management's Attitudes.* Management's attitudes govern the direction taken by policy, procedure, and programs, and they directly influence operations because they carry over to the subordinates.

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<sup>4</sup>Sylvester Petro, *Power Unlimited* (The Ronald Press Co., N. Y., 1959).

As pointed out in Part I, the attitude of management bears directly upon the success or failure of organization, communication, and control. Furthermore, management's attitudes extend to the community and help generate the climate of appreciation or contempt with which the community views the company. These factors combine to play an important part in regulating the type of persons who seek employment in a concern.

It follows, therefore, that a "tongue-in-cheek" attitude regarding development of policy usually results in minimum effective policy and ensuing practice. Furthermore, establishment of a given policy merely because some other company has done so may also result in inefficiency. In other words, the manpower manager must constantly strive to impress upon his peers *and* superiors that policy must be sincere. He presses for policy development through scientific rather than emotional appraisal, edict or opinion. In addition, he must impress his fellow managers with the need for progressive views, and the willingness to recognize the importance of man and his actions and reactions.

*Liaison.* An effective organization is composed of many closely knit units. Their development and close co-ordination and control occur by plan (or should, if true effectiveness is to be attained), not by chance, and policy is the first tool applied in the exercise of plan. The point here may seem inordinately obvious — and it is — but nonetheless it frequently goes unnoticed or forgotten. The point is that staffing policy (or any policy) should encourage the liaison so necessary to proper co-ordination, control, and co-operation.

Correct policy leads to procedure which operates through close co-operation between units. For example, effective recruiting effort is co-ordinated. The liaison effort extends through all operating and service units in a way that assures that the manpower people know what vacancies exist and will exist throughout the organization, and what skills are interchangeable or inter-trainable. Such liaison activity saves unnecessary expenditure of time, effort, and money, for when it exists it prevents situations where one unit is laying-off while another is seeking employees of the very skill being released.

Liaison activity involves communication, but it is more than a mechanical involvement. Proper liaison requires utilization of the many communication devices described in Chapter 5 and application of the concepts discussed in Chapter 4. A most important factor influencing liaison is rapport — rapport among members of the management team. Development and maintenance of the needed rapport depends in part upon management's attitudes toward the company, its purpose and work; and toward the workforce. We note, then, a distinct connection between the "liaison consideration" and the "management attitude" factor.

Another look reveals that the adequacy of liaison *and* management attitude appears to be a function of the adequacy of the selection and development of managers. Managers who are poorly selected and developed are likely to be incompatible. They are apt to be conflict-oriented — sources of conflict. They are likely to be *a cause*, if not *the* cause, of breakdown in the communication imperative to successful policy development and implementation.

Clearly those who develop policy and those providing policy advice should be cognizant of this recycling effect. Manpower people are constantly alert to any breakdown in liaison, management attitudes, and rapport.

**ECONOMICS.** Another factor vital to policy thinking is the issue of money. Every policy statement and resulting set of procedures and programs should recognize the importance of return upon invested or expended money and effort. Staffing is an expensive proposition, and it is difficult to measure a return upon that expenditure. Nevertheless measurement is required.

Unfortunately organizations still exist which ignore the measurement requirement. Their managers can be heard complaining about the inadequacy or costliness of policy, of manpower planning and programs. Whether such complaints are justified is difficult to determine because of the lack of measurement. What to do about their complaints is also hard to determine. True, measurement is difficult; but proper liaison and correct attitudes will at least smooth the way, helping those who seek effective measurement approaches.

In some cases determination of return upon investment is exceedingly difficult. Usually this is due to past failure to maintain the records necessary for effective measurement. In such cases, policy should demand initiation of procedure. It should require collection of the needed experience data, and experimental analysis of that data. Such an approach is far superior to ignoring the measurement requirement because of its difficulty.

**RESPONSIBILITY.** Last of the minimum considerations, but certainly not the least, is the idea that policy should require that each unit in an organization will be responsible for its acts. If one unit fails in liaison with the manpower division, that unit thus should be held accountable for its failure. If the practices of a given manager lead to a waste of money in the recruiting or selection effort, that manager should be held accountable. If the negative attitudes of a manager create ill will among employees or other managers, policy should certainly provide for his accountability.

**OPERATIONAL CONSIDERATIONS.** In addition to the general internal and external considerations, policy development requires concentration upon certain more specific matters pertaining directly

to operations. Manpower managers heed these points for they focus attention upon the fundamental implications of manpower responsibility — not only the staffing issues, but the entirety of the manpower job. These considerations fall into two sets: (1) a broad and general series of guiding points, and (2) a series of fairly rigorous concepts applicable to man and his willingness, or unwillingness, to become a part of an organization.

*General Guide Points.* The manpower manager making policy recommendations, particularly in the staffing area, considers at least the following operational points.

1. The profits of a company are related to the effectiveness of its employees, and effective employees increase the probability of continued customer acquisition and continued company life.

2. People differ in many ways; thus, a man may be good under one set of conditions but not under another

3. Unqualified workers often cause unwanted degrees of labor turnover which, in turn, tends to weaken the profit level of the company and endanger employee morale.

4. Management's obligations include the employee and the community, as well as the stockholder

5. A qualified workforce is more apt to be a contented workforce

6. A contented workforce is more apt to cooperate freely, and a freely cooperative workforce is good for itself, the community, the company, and the company's profit level.

7. Stagnation in a job does not foster cooperation. Stagnation may be the result of poor selection, which in turn may be directly traceable to poor recruitment and generally inadequate policy.

8. Introduced to a new situation, any man requires a period of adjustment.

9. Like people, one job is never completely like another job. The effectiveness of any man, even when he is well trained and highly experienced, is therefore a factor *in potential*, rather than fact, when he is first hired.

10. Satisfactory employees are not always easy to find. Company policy and company reputation can make or break efforts to secure satisfactory people. The job of recruiting and selecting a workforce is therefore related to the public relations activities of a company.

These points indicate the wisdom of attaining economic and human balance in all of management's activities — a factor important at all times when dealing with the human problems confronting a company. Policy recommendations developed with these points in mind generally call for the selection and placement of persons who are technically qualified and socio-psychologically compatible. It also suggests selection of those who recognize, in principle at least, that what is good for the company is good for them, and those who will seek actively to maintain or improve the company's position as well as their own.

*Man's Willingness* Policy recommendations of every description reflect understanding of people. Too often, however, staffing policies and procedures tend to ignore this point. One finds, for example, policies based upon a belief that all one need do is proclaim a vacancy and people will come a-running. This idea is fallacious. Available evidence indicates that in the general case there are more jobs than there are qualified people.<sup>5</sup> Even if this suggested condition were only 50 per cent true, it is imperative that recruiting efforts be designed to take it into account. It is therefore important to consider the probable reasons for an individual's decision to join, or attempt to join, an organization. Recommendations made without such consideration are open to unacceptable risk of error.<sup>6</sup>

Furthermore, people tend to consider themselves either above or below their actual potential. They also tend to consider jobs as either above or below their ego-ideal. Adequate policies and evolving procedures thus require that employment personnel work from known facts about jobs, and seek as much insight as possible into the characteristics of the people they seek to hire.

*Job and Future.* People tend to like to know where they are going or can go. One can assume in the general case that, given one situation where the future can be predicted to some degree, and another where it cannot, that the individual would be sympathetic to the former and would tend to reject the latter. Policy should lead to procedures which assure that predictability of future relationships is available to, and explained to, possible applicants. More than this, policy should establish a condition where real effort to determine predictability becomes the rule rather than the exception — *policy should foster management by science rather than institution.*

*Job and Social Obligations.* People generally do not attain complete personal fulfillment from their jobs. Ordinarily they must turn to off-the-job relationships to fulfill their feelings of personal satisfaction with their life. One can assume, therefore, that in the general case people will turn away from jobs which in some way interfere with their social (or other off-the-job) involvements, and that they will seek jobs which do not offer this interference.

From these points other more specific considerations evolve. We shall speak of them as we move into the recruitment process.

## SUMMARY

The manpower division, as a primary organizational unit, enjoys the peculiar position of directly contributing to a firm's success or failure at an earlier time, and perhaps to a more significant extent,

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<sup>5</sup>Peter F. Drucker, *America's Next Twenty Years* (Harper & Bros., N. Y., 1955), see particularly, pp. 8-9

<sup>6</sup>March and Simon, *op. cit.*, pp. 83-111, *passim*.

than any other unit (with the possible exception of the fiscal division) for its job is to:

1. Recommend policy, procedures, and programs — and oversee them — relating to the management of an organization's greatest asset — man!
2. Control the inter-organizational manpower practices.
3. Locate and select manpower competent to assure the attainment of the company's objectives.
4. Establish and control development and maintenance practices as they pertain to manpower.
5. Assure the equitable compensation of manpower.

The techniques and concepts applicable here have as their reason for existence and utilization the need to assure the presence of a totally competent staff. The presence of incompetence means eventual destruction of the enterprise.

Efforts to obtain this competency begin first with policy. Policy development requires consideration of certain external, internal, and operational factors, and policy should be based upon fact, not fancy. These considerations provide a basic framework upon which to build the tools needed in a specific case. To assure proper development of such tools, one should keep in mind the purpose of recruitment and selection efforts: *to provide the best possible potential employees, having the best potential currently available, at the right time and place, and at an expenditure consistent with expected return upon investment.*

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*Where do we find the source which may provide the right man for a given vacancy? Where are the men likely to be competent to fill a given vacancy? These questions are the constant challenge facing the industrial recruiter.*

## Recruitment

Recruitment is the positive counterpart of selection. Yoder and many others indicate that finding recruits is a positive action, whereas the act of eliminating all but the most desirable from a group of candidates makes the selection function negative.<sup>1</sup>

Recruitment is a continuing effort involving daily application. It requires special knowledge and effort. One must know where to look for desirable recruits for no longer are they readily available at the gate.

### OPERATIONAL CONSIDERATIONS

Every properly conceived program or system requires planning and control, organization and coordination. These activities depend largely upon the acquisition of information.

**JOB INFORMATION.** Job information refers to the accumulated and assimilated knowledge concerning the exact nature of work to be done. It includes knowledge of equipment, materials, methods, risks, and the like. It refers to understanding of the command and control circuitry pertinent to the jobs in question, and in some cases, reflects a knowledge of the personalities of those already assigned to the jobs and to companion positions.

Job analysis (Chapter 7) provides this information. The resulting job specifications describe the kind of individual required to handle the functions outlined by the included job descriptions.

Since job analysis presents facts as of the time of analysis, the situation may have changed. To be assured that his job information

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<sup>1</sup>Dale Yoder, *Personnel Principles and Policies, 2nd ed.*, (Prentice-Hall Inc., Englewood Cliffs, N. J., 1959), Chapter 12, *passim*

is current, the recruiter maintains close ties with the job analysis and the industrial engineering group. Industrial engineering people are in a position to supply him with current information about performance requirements and methods changes. Such liaison alerts manpower to changes in the job situation *before* rather than after the fact. A rule thus exists that recruiters should look to the results of process analysis, methods and time study, and performance ratings, as well as job analysis, in order to develop necessary job information.

**VACANCY INFORMATION.** Necessary vacancy information includes previous vacancy data, current vacancy data, and estimated future vacancies calculated over some established time span. Knowledge of current vacancies alone actually fails to provide sufficient information for truly effective performance.

Previous vacancy data provides the base for development of future estimates and for forecasting expected patterns. It also becomes a base for measuring current vacancies to determine the nature and amount of any change in pattern. Determination of change, as well as development of forecasts, enable manpower people to regulate rather than be regulated by events. For example, if most vacancies have been in a given department or on a given shift, and that pattern is changing, the recruiter, through his forecasting effort, can detect that change and be prepared to shift attention to the area of new activity.

Current vacancy data dictates the major portion of the recruiter's workload. This refers to openings to be filled now, and most of his effort is directed to this end. Economic use of time demands, however, that at least some effort be expended in developing a positive public opinion of the firm.

**LABOR TURNOVER INFORMATION.** Current vacancy information comes from manpower requisitions sent to the manpower division by other units of the firm. Data concerning past vacancies is obtained by examining previous requisitions. Both current and past data will develop also in planning conferences.

In reviewing past data, a proper sampling procedure will usually be equally effective and more economical than looking at all the data. For example, in a situation where the average annual vacancy picture involves 500 positions, with a review of five years of past data, a correct statistical sample of appropriate size taken at random from the total five-year file of requisitions should be analyzed.

Past requisition information provides a reasonable base for forecasts of future activity. A more complete base is provided by going beyond such data to include consideration of the labor-turnover pattern. The inadequacy of requisitions alone lies in the fact that often they emerge as a "rush," having been prepared only *after* the responsible supervisor has tried to get a recruit on his own. Moreover the

requisition may not establish the reason for the opening, that is, whether it is due to a new development or to a "turnover."

Proper requisition procedure can eliminate these problems. Where correct procedure does not exist, or where manpower people have reason to suspect its adequacy, the turnover picture should be studied and the forecast based upon both requisition and turnover data.

*DEMAND INFORMATION (COMPANY NEEDS)*. This refers to *need over and above currently allowed positions* — over and above the present table of organization, or the current personnel budget. In other words, the term pertains to expected changes in the company's manpower skill and quantity requirements

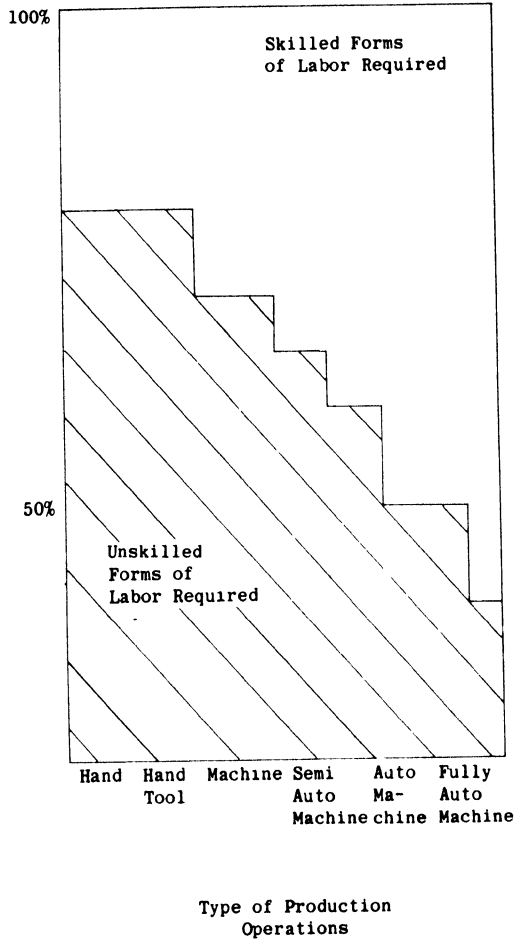
Skill requirements depend upon the product made and serviced, the processes and equipment used, the necessary administrative and analytical procedures, and the sales, research, and fiscal skills needed to assure continuance of the enterprise. With time, the product, process, and the like must change to some degree to facilitate continuance of life. The skills available also must change. As an example of changing skill patterns consider Figure 29, or note the skill alteration present as a navy shifts from guns to missiles, or from oil to atomic fuel

Quantity needs also change. As a firm expands or contracts, the numbers of people required tend to change. The increase or decrease in manpower required need not be directly proportional with the expansion or contraction of the firm's output, however, nor will quantity needs always be directly proportional throughout the organization. For example, an increase in the versatility of a communication device necessarily does not mean an increase in the number of persons needed to operate it. Or, in a steel fabrication mill which expands its capacity by 20 per cent, the workforce necessarily will not have to expand by 20 per cent or even 10 per cent.

*FORECASTING INFORMATION*. Manpower requisitions which show skill-quantity changes become useful information sources, although the data are predominantly after-the-fact. Though helpful in studying "demand," after-the-fact data provide merely the base for projection or forecast in terms of current manpower demand. Such data fail to furnish information as to expansion or contraction plans; planned changes in product, processes and the like, or external changes possibly influencing manpower demand in the future. It thus becomes apparent that recruiters must go beyond simple records.

Of great help is the previously mentioned close liaison with the other units in the firm, and keeping abreast of external factors which influence shifts in manpower skill and quantity requirements. By developing cooperative contacts with sources of employees, manpower people are, in fact, "plugging into" an external indicator of skill change and general economic progress.

Relative Degrees  
of Skill Required  
in Percent



Source: T. A. Toedt, Sept., 1960 from Department of Labor and Commerce Department reports taken from March '59 through August '60.

**AN APPROXIMATE SKILL DISTRIBUTION FROM HAND TO AUTOMATIC OPERATION**

Figure 29

*Information About Differences.* People, jobs, and situations differ. This complicates or limits the recruiting function. Differences in people affect their willingness to do certain things — to move from

one location to another, to take one job in preference to another, and to accept change. Information about such differences can be generated from personal interview, from records, or through contact with employment sources.

*Differences in Jobs.* Job titles do not fairly represent an individual's ability to perform a job, nor do they indicate the similarity (or dissimilarity) of jobs from company to company. Recruiters therefore familiarize themselves with job requirements. They learn the primary and secondary *critical indicators*, and know the fundamental activity requirements. Without such knowledge incompetent people might be recruited.

*Situational Differences.* We all realize that companies differ. Do we always realize, however, that certain characteristics of the second shift in one company may be completely different from those of the second shift in another, or that the boiler room in one may be different from that in another? Failure to recognize situational differences between firms increases the probability that the recruiter will misrepresent the company to the recruit. To what effect? Naturally public relations will suffer and labor turnover tends to increase.

The element of time often is tied in with situations. Time can work for or against the recruiter. It operates *for* him if he realizes that people, jobs, skill-quantity needs for manpower and situations can change with time, and that by working to predict such changes he can move to meet them. If he does more in the way of regulating events, he may improve the probability of supplying more appropriate people.

**PARTICIPATION EFFECT AND RECRUITING** Operational considerations include information about man's behavior. A particularly salient issue is the "participation effect." Normally, in manpower work one thinks about factors influencing an employee's decision to participate in the activities of the firm — about factors which stimulate his interest and contribute to his job satisfaction. In recruiting work (and when investigating and seeking to minimize labor turnover), however, it pays to understand those factors which contribute to an individual's decision *not to participate*. People deciding against participation may be ready to move on to a new employer. The recruiter who understands these factors, and thoroughly knows his own company, stands a better than even chance of *not* recruiting an individual who will become dissatisfied rapidly and leave or have to be discharged.<sup>2</sup>

Generally speaking, the decision *not to participate* depends upon two fairly broad sets of conditions or issues: (1) the ease of movement,

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<sup>2</sup>James G. March and Herbert A. Simon, *Organizations* (John Wiley & Sons, Inc., New York, 1958), Chapter 4, *passim*, Mason Haire, *Psychology in Management* (McGraw-Hill Book Company, Inc., New York, 1956), Chapters 3 and 4, *passim*.

and (2) the desirability of movement. *Ease of movement* breaks down to a reasonably straightforward series of "availability considerations" as follows:<sup>3</sup>

1. Availability of recognizable and at least equally satisfactory job opportunities.
2. Availability of at least equally satisfactory off-the-job conditions including housing, schools, shopping and recreation areas and the like near the other job opportunities
3. Availability of satisfactory means of movement to the other job opportunities and (possibly) financial incentive to move.
4. Availability of information of a personal and satisfactory nature pertaining to the security and life expectancy of the other opportunities. This would include some degree of information pertaining to the general economic condition of the country as a whole, as well as the other jobs
5. Availability of more satisfactory off-the-job status opportunities in the areas of other job opportunities
6. Availability of encouragement or discouragement — of encouragement to leave, and discouragement to stay.
7. Availability of personal improvement in the other opportunities in the foreseeable future

In addition to these considerations, ease of movement also is improved under conditions where the individual or his dependents have the willingness to search for new opportunities, take advantage of new opportunities, and under conditions where they have a basic need for a new opportunity.

*Desirability of movement* revolves around some equally straightforward considerations. Desirability thus depends largely upon the following:<sup>4</sup>

1. Whether or not, in the individual's own mind, he has outgrown his present job and can see no hope for advancement
2. Whether or not an individual's competency and goals have changed more rapidly than his employer's ability to meet those changes
3. Whether or not the individual can foresee improvement in his off-the-job status and extraorganizational activities in his present environment.
4. Whether or not the individual can foresee advancement in his present job.
5. Whether or not the individual's extraorganizational activities are being interfered with by his present job

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<sup>3</sup>March and Simon, *idem*, see also Bernard M. Bass, *Leadership, Psychology, and Organizational Behavior* (Harper & Brothers, Publishers, New York, 1960), pp. 307-308.

<sup>4</sup>March and Simon, *idem*. See also Albert H. Rubenstein and Chadwick J. Haberstroh, *Some Theories of Organization* (The Dorsey Press, Inc., and Richard D. Irwin, Inc., Homewood, Illinois, 1960).

6 Whether or not he feels that he is being treated fairly on his present job, particularly with reference to the way others are being treated.

7. Whether or not his present social or job environment is satisfactory to his wife and family (or seems to him to prevent acquiring a wife and family)

8 Whether or not the individual's real and felt contributions to his present job and social environment are in fact receiving recognition as judged by his peers

The recruiter who recognizes these points regarding movement and participation can prepare himself, in the manner of the salesman.

**INSECURITY AND RECRUITING.** Personal feelings of insecurity complicate the recruiting job. Individuals often fear the prospect of changing their environment and social relationships. Frequently the recruiter must overcome such feelings to acquire an otherwise capable individual whose skill is in short supply. Recruiters often also have to offset rumors concerning their firm or the area in which their firm is located. As one technical recruiter puts it. "Not only must we know the facts about the firms we represent, but we must know the 'stories' going around so as to allay the fears of our contacts."

## SOURCES

A prime operational consideration relates to sources. Although sources for potential employees appear to be numerous, there seems to be a limitation to their effectiveness.

The degree of employment existing throughout the country tends to limit the supply of manpower available through a *given* source. In part this limitation comes from technological development causing widespread amounts of skill specialization and pronounced shifts in the nature of skill requirements. The task of recruiting has accordingly developed into a more-or-less full time occupation for most industrial units of any size. It means that the recruiter must go further afield each year for potential workers.

Although the effect of the limitation is felt most severely in managerial and technical vacancies, many concerns have already found it applying to their skilled and semiskilled jobs. One Connecticut firm, for example, sends its recruiters as far as Buffalo, New York, in search of semiskilled machine operators.<sup>5</sup> Before long most industrial units of any size could be increasing their search-range substantially and, therefore, the cost of their recruitment work.

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<sup>5</sup>The long-range search which took place in World War II and again in the Korean conflict should not be considered typical of what is occurring today. The search-range now comes from technological and sociological changes.

It stands to reason then that a recruiter should have a sound working knowledge of employee sources, their merits, and methods for evaluating their contribution.

**GUIDES TO SOURCE UTILIZATION.** Several points pertain to the recruiter's use of sources.

*First*, an increasingly large number of private employment agencies specialize in the type of potential employee they furnish. The recruiter thus requires familiarity with the number and general reputation of the employment units in his search-region, and should quickly learn their specializations.

*Second*, a degree or kind of specialization has filtered into even the so-called public employment agency. Its role generally is that of the supplier of low-skill, temporary, or transient help, but care is necessary here — one should not assume that merely because an agency is a public agency its sole capability is to supply low-skill personnel.

*Third*, several of today's jobs involve skill combinations which, as yet, have not been mastered by very many people. In some cases the educational institutions do not *really* teach them. For example, where would one find a physical-chemist who is competent in Reliability Engineering? Such individuals are not being trained in our colleges and universities, and the average employment agency will not find many (if any) knocking upon its doors. The recruiter searches some other industrial unit if he expects to find such skills.

Which brings us to the *fourth* point, namely, that many of today's job skills can be located only in the plants of competitors, in related industrial units, and in the military services.

*Fifth*, managerial skills present a problem! In the current situation, we still face a shortage in management manpower — a shortage developed over the past two decades as a result of the depletion of manpower by one World War and one "police action," and by the country's vast industrial expansion and evolution. This situation has increased the number of "need" vacancies beyond the supply of qualified manpower.

*Sixth*, under certain conditions an organization might turn its recruiting effort over to an external unit such as a personnel-placement firm or some other third party. This is true particularly when it comes to filling sensitive technical positions or executive vacancies. It arises because such recruits usually have to be enticed away from another employer. The third party usually stands a better chance of making contact with such recruits — contact which protects the interests of the recruit.

*Seventh*, under no conditions should sources be taken for granted. The sources for one company usually are sources for another company. In such a case, the loyalty of a given source depends largely upon the fairness of treatment received.

The effectiveness of a source, particularly one like an employment agency, depends upon how well informed it is regarding the needs of

the recruiting firm Unless a source knows the jobs, working conditions, opportunities and the like, all it can do is provide an endless stream of "warm bodies" on the chance that some may be right for the jobs open.

*Eight*, system requires command! In the main, practitioners tend to hold that recruiting system really involves search for potential employees and little else. A particularly important aspect of recruitment lies in source-analysis, however.

Contact needs to be widespread. The more extensive it is, the greater the possibility of finding *and* attracting the desirable and desired recruit. A wide search-range, however, is expensive. Since a manager's responsibility includes optimization of return upon investment, it makes economic sense that those sources most likely to provide the best return for the cost involved should be contacted, rather than all sources indiscriminately. If every source were equally likely to supply the correct, or the same proportion of correct, recruits the point would be unimportant, but not all sources are equally likely to do so. Alert recruiters thus periodically weigh the merit of each source, they understand that time will change a source's capability.

*Finally*, a word on classification of sources is in order. Usually sources are classified as *internal* and *external*. The only observable merit to this rests upon the academic neatness it represents. Pay more attention to the general nature and value of typical sources — not to their classification.

**PUBLIC EMPLOYMENT AGENCIES** Apparently the first public employment agency appeared in Ohio in 1890.<sup>6</sup> During the next 17 years, the idea of state-supported free employment offices gradually attracted public and political fancy, and the system of free agencies expanded slowly. In 1907, the federal government entered the picture, but even as late as 1913 the system (both federal and state) lacked any real efficiency. ". . . a striking tribute to American ignorance of the country's employment needs. . ." <sup>7</sup> seems to have been an honestly descriptive statement of the situation.

The exigencies of World War I led to the creation of the United States Employment Service (USES), a division of the Department of Labor. At the end of the war, responsibility for the public agencies was turned over to the states with the USES limiting itself to supplying information and some slight financial assistance. For all practical intent and purpose, the federal public employment system collapsed.

In 1933 the Wagner-Peyser Act established the United States Employment Service as a division of the Department of Labor once again.

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<sup>6</sup>Phillip Taft, *Economics and Problems of Labor* (Stackpole Sons, Harrisburg, Penn., 1942), p. 90.

<sup>7</sup>Don D. Lescohier, *The Labor Market* (The Macmillan Company, New York, 1919), pp. 74-75.

Later, following passage of the Social Security Act of 1935, responsibility shifted to the Social Security Board; the functions of USES enlarged to include the requirement that ". . . all claimants to unemployment benefits must register with a public employment office."<sup>8</sup> Furthermore, state employment offices received a subsidy if they became affiliated with the federal system and accepted its standards.<sup>9</sup>

Following somewhat the pattern laid out previously, the entire public employment system was placed under federal jurisdiction during World War II. Although much criticism, in too many cases justified, can be levied against this, it served the important purpose of putting some semblance of order into what might otherwise have been a completely chaotic situation. As is commonly known, the system has since been returned to the supervision of the individual states.

Wherever government enters the scene one is bound to run into the problems associated with bureaucracy. The recruiter who fails to prepare himself will probably find his first encounter with a public agency something less than completely satisfactory.

In many areas these agencies vary in efficiency and cooperativeness to a pronounced degree. In one city, for example, few recruiters will utilize one office because they never can acquire even reasonably acceptable employees there. Either the type of skill asked for is not sent, the character description requested is ignored, or the individuals leave within two weeks of being employed. On the other hand, the other office in the city is used widely and has the reputation of being an excellent source for semi- and low-skill employees. This variation in effectiveness usually comes from a difference in ability of the office employees and, in some cases, the manager.

As a case in point, one (public employment) office hired a former army supply clerk as a chief interviewer. The man's only claim to ability in this field was his 20 years of military experience. He had no formal training or experience in personnel interviewing. He was given no information about the job situation in the area or the sociological picture; his only understanding of job families, occupational relationships and the like came from what he was able to pick up from people he happened to know who worked in industrial employment sections.

*Another* of the difficulties encountered by recruiters when dealing with public agencies involves the attitude of workers. Unfortunately, many workers actually shun the public office except to collect unemployment compensation. When questioned about their employability, they do everything possible to confuse the issue in order to gain time in which to attempt to gain employment on their own or through some

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<sup>8</sup>Taft, *op. cit.*, p. 93.

<sup>9</sup>Taft, *idem.*

other source. In fact, (though some may, and understandably so, doubt this) individuals have been known to pass up their unemployment compensation in order to avoid the "stigma" of the state agency. Such reactions on the part of potential employees complicate the recruiter's job — he must increase his search-range for he cannot be certain that the public agency can provide a representative sample of the available labor supply.

*Politics also enter into the picture!* On occasion the state employment office becomes a tool of some political group. When this occurs — fortunately, not often — the office finds itself forced to favor "friends of the party." The office is forced to send individuals on calls, even though they lack any of the job requisites. On the other hand, a public agency may become the "whipping boy" of a party. As such, it may find its funds limited, it may find itself forced to hire incompetents for its own staff, or unable to hire enough personnel to function properly. In either case the effectiveness of the office is severely curtailed, and the recruiter's difficulties are increased.

The foregoing annoyances are exactly that, and nothing more, in most cases today. Whatever may have occurred in years gone by, the fact remains that the average public employment agency of today usually is well run, free from political entanglements of a severe nature, a good source for semi- and low-skill labor. Its capability depends to a very large degree upon how much cooperation it gets from the companies it is asked to service.

Although some potential employees still shun the free employment office, this occurs with consistently less frequency as time progresses. Actually one reason people shun the agency stems from their belief that *a desirable employer does not utilize the agency*. Naturally, to remove this block, employers must show evidence of use.

Public agencies average out as effective sources for specific kinds of labor. The degree of effectiveness, and the specific kind of labor available through the agency, however, are matters almost completely dependent upon the specific community being served. Included in the term "community" are the people themselves, the companies in the area and their management, the unions and their representative hierarchies, the local and state political climate.

The actual success a company has with a public agency depends, as indicated before, upon how the company's representatives approach and work with the agency. As a general rule, the recruiter can assume that if he approaches the agency properly it will respond in kind. A recruiter thus can expect success if he at least does the following.

1. Furnishes the agency with job descriptions and specifications, and with necessary corrections.
2. Furnishes the agency with a reasonably accurate picture of the advancement opportunities, and keeps this information current.

3. Furnishes the agency with accurate critical indicators.

4. Periodically reviews successes and failures with the agency manager.

By approaching the agency in this manner, the recruiter enables it to function as it should — as a *screening unit*. This approach not only saves money for the company, but improves the agency's ability to operate economically.

*PRIVATE EMPLOYMENT AGENCIES.* Many condemn the private agency, and have done so for years. No doubt in the past a large number of private employment offices practiced unethical, if not illegal, procedures. No doubt some do so today. Wherever there are people we always find some evidence of error, if not malpractice. Many of today's private agencies are effective, well run, and staffed by competent people who conduct their business with acumen and honesty.

Condemnation of private agencies also stems from the more-or-less common feeling that a man should not have to pay to obtain work. Oddly enough, many who wave that flag turn right around and support the closed shop and the union hiring hall, and they have no objection whatever to the operations of the theatrical agent.

Although condemnation has bedeviled the "pay on payday" agencies, these organizations have performed the very necessary function of bringing "buyer" and "seller" together. As industrial development grew and as the population increased and moved toward urbanization, the need for organizations designed to facilitate the discovery of potential workers also expanded. This need still exists, perhaps to an even greater degree; thus we require the private, as well as the public, employment agency.

Few private agencies extend their service-range beyond their immediate community. Like the peace-time public agency of today, the typical private unit tends to supply labor from, and for, the local market. If the local market is dry, the typical private agency may be of little help to the recruiter.

Private agencies tend to avoid dealing with low-skill labor and jobs, and bottom-of-the-hierarchy placements. This is understandable since they gain a larger return upon cost by handling the higher paid personnel. The recruiter thus should not expect to find a ready source for low-skill personnel in the typical private agencies — rather, he should utilize such offices to help discover semi- and high-skill personnel, technicians, some engineering skills, clerical persons, and, in many cases, middle-management people.

Typically, private agencies have a narrow service-range, but there is a tendency toward expansion of that range. With this expansion there appears to be a concentration upon a wider degree of specialization (the occupational coverage by the individual unit tends to be increased), a fact which helps the recruiter.

Agencies specializing in technical and managerial personnel seem to enjoy an increasingly favorable reputation. In one case, for example, such an agency was contacted to locate a particular combination of technical and managerial competency. They presented the company making the request with three names. The company made its selection, following the advice of the agency. During the first three months of employment it became obvious that the man was not suited for the job. When notified of this fact the agency immediately set out to find additional potential, and at no charge. Such service cannot be found in the public agency (admittedly, one finds it infrequently in the private, but the wise recruiter will seek out such firms and deal with them).

In essence, the value of the private agency includes speed of action, freedom from local political manipulations, the probability that the agency's personnel will be more technically competent, an ever increasing service-range (in the general case), and definite specialization of service. On the other hand, private agencies are not likely to be good providers of low-skill or transient help. One might argue that private agencies are costly. This is true. Cost is a relative thing, however; thus, one balances service against cost, and realizes that indirectly the public agency is costing everyone.

**MUTUAL EMPLOYMENT AGENCIES.** Some claim that nothing new has occurred in manpower management in the past several decades. One exception to this claim lies in employment agency practice, and takes the form of the so-called "mutual agency."

These agencies are private. The fees are paid by the using company, however, rather than by the employee who acquires employment through the agency. Such agencies specialize for the most part in technical and managerial placements. Such a unit, when working for a given concern, is doing just that — it functions as *an agent* of the using company and acquires definite obligations to serve the company properly. The recruiter finds such units particularly useful not only because of the control possible through contractual arrangement, but since the using company pays the bill, much of the stigma beclouding traditional employment agencies is removed.

Another innovation concerns part-time help. Some mutual agencies establish contracts with customer firms which make the agency responsible for staffing the firm during peak load periods of the day, week, month, or year. Some contracts call for short (one or two days), and some for long (weeks, or even as much as a year) employment periods. Other contracts call for special job coverage by the agency during periods of unexpectedly high absenteeism, or during vacation periods.

Such arrangements make an agency directly responsible for a firm's manpower effectiveness. It is even possible that the agency may become responsible for bargaining with the union. Examples

of this approach may be found in many of our major cities. A typical approach is found in the New Haven, Connecticut, area where John J. Keogh Associates provide the service known as "Friday Girls." Naturally, manpower managers who work with such agencies are obligated to furnish accurate job descriptions and specifications.

**RESTRICTED EMPLOYMENT AGENCIES.** Employment units which "take care of their own" are known as *restricted agencies*. College placement bureaus, social and professional fraternities, and trade organizations fall into this category. Usually such agencies do a conscientious job. They have an important reputation to protect, and therefore do their utmost to perform a careful screening operation and stimulate good will for themselves, the applicant, and the using company.

Though not always handled by professionally-qualified personnel, such agencies are generally desirable sources for professional and semi-professional employees, management trainees, and certain highly specialized technical personnel. For example, the recruiter seeking the services of an experienced assistant to the chief inspector would certainly contact the local chapter of the American Society for Quality Control. The druggist seeking a pharmacy assistant would certainly call upon the nearest school of pharmacy and the local Pharmaceutical Society.

Cultivation of college placement officials and social and professional organizations should be a planned part of any recruiter's activities. The recruiter finds it helpful to belong to such organizations, or at least as many as possible that are related to his work interests. It also helps to develop ties with college instructors.

**PRESENT EMPLOYEES — A SOURCE.** By promoting present employees a company actually utilizes its workforce as an employment source. Such promotion tends to improve morale, or hold it at a relatively constant level. In addition, and for several reasons, it reduces the cost of filling vacancies.

1. An economic return should occur sooner in the case of a person already part of the concern in comparison with a newcomer because a promotee usually requires less adjustment time. Therefore a vacancy filled by promotion should be productive at an earlier date than one filled from the outside.

2. Since filling a vacancy by promotion leaves a vacancy at a lower level, it generally must be filled. Lower-level jobs usually cost less to recruit and to operate in terms of salary. By promoting to fill a higher level job, and turning to the outside to fill a lower level job, one reduces the cost of recruitment by shortening the period of no return upon investment.

3. Promotion tends to minimize the risk of serious error during operation. An individual who has been promoted to a new slot probably already knows company policy and procedure and those with whom he will work in the new job; he also has a fairly good idea of many of the complexities of the job.

4. The higher one goes in a company, the more sensitive the jobs become. A poor placement in a high job becomes a greater tragedy, therefore, than in a low job. If company records have been maintained properly, if personnel information is adequate, if testing is satisfactory, the chance of making a "good" selection and placement in a sensitive position is often higher through promotion than through external placement.

As pleasant as the foregoing picture appears, the coin has two sides. Filling vacancies from within has its disadvantages. It tends to emphasize inbreeding which in turn may tend to destroy initiative. Unless its people have initiative, an organization cannot expect real operational success. In addition, unless carefully handled, the system may develop into one where the "court favorites" get the "gravy." In such instances, competency often is sacrificed for political expediency. To avoid these risks, manpower people strive to assure proper development of job descriptions and specifications, personnel rating, general promotion, and recruitment policy and procedure, and they make a distinct effort to stimulate and reward initiative. Obviously, top management must provide more than mere lip-service in supporting such ventures and complete liaison with all units of the organization must also be maintained.

Family groups often attain recognition as employment sources. Basically this viewpoint is supported by the fact that over several generations of employment in one concern, a certain loyalty and identification develops and the worker and his family tend to view the company as their property. From the point of view of recruitment, this may mean that the employee and his family will avoid suggesting a "bad apple" for employment.

Recruitment costs can be reduced by utilizing the employee and his family as an employment source. No fees to agencies are needed, and persons recommended in this way may very well have a real knowledge of, and appreciation for, the company, its policies, procedures, and the like. In a sense this means that the period of low economic return is reduced and that adjustment periods could be shorter (of course, things don't always work out this way). Proctor & Gamble makes direct efforts to foster employment of family groups and friends, and the Studebaker approach also is well publicized and of long standing.

A difficulty of recruiting from this source is the rather natural unwillingness of employees to admit that members of their families,

or personal friends, are not qualified for employment in the company. Furthermore, rejection because of lack of qualification often causes hard feelings among the relative, the employee, the company in general, and the personnel man in particular. If the employee making a recommendation happens to be a line official, even a foreman, the manpower man finds himself in a most embarrassing position — he cannot be right: if the person is hired and turns out poorly, it is his fault; if he is rejected, the manpower man becomes an ogre who should be eliminated before he can break up any more social relationships; and if the employee turns out well, it wasn't because of the manpower man.

Where recruitment for managerial vacancies operates through management families (and sometimes through worker families), sharp criticism often generates in the ranks. That this criticism is not turned on itself when the practice is used for filling rank-and-file jobs is one of those peculiarities with which a person managing people must learn to deal. Probably the often heard "favorite" complaint is an easy way of expressing the fear that by filling management jobs with family, there will be an inbreeding and a reduction in opportunity for the ranks.

*EMPLOYEES AND FRIENDS.* Almost the same kind of an employment source as "family," one finds that friends of the employee may be excellent potential for the company or that they may be good recruiters for the company. The friend is apt to be viewed with a more dispassionate eye by the employee than the family. The family tie, the bias, is less apt to exist. Furthermore, family integrity is not being challenged when a friend is refused employment, or when a friend's recommendation is not taken. In fact, the employee is more apt to consider his own reputation in the eyes of the company, and the company's reputation, when questions of competency are brought up regarding a friend or a friend's recommendation than in the case of a member of his family. One even can assume, with some safety, that an employee will be more careful to recommend quality friends.

*Files, Gate, and Advertising.* Success in the use of files, advertising, and the gate as employment sources depends first upon employment policies and procedures; the adequacy of job descriptions and specifications; company reputation, and manpower development practices.

*Files as a Source.* Company files may or may not be important as an employment source, depending upon the usefulness of those files and the adequacy of personnel practice in general. It also depends upon the degree of centralization of the manpower function — obviously if every unit is busy trying to recruit its own people, no file will contain much information (except by chance) that has value to another unit. People valuable to another unit could be turned

away. Company files become a valuable source if they reflect the following information:

1. Persons who made application but were rejected due to *no vacancy*.
2. Persons currently employed who have requested transfer, and the reasons and merits thereof.
3. Persons currently employed who are ready for promotion in both the technical and the personal sense
4. Persons once employed who have left but expressed a desire to return — not those dismissed for disciplinary reasons, or those who quit through whim or with reason detrimental to the employer-employee relationship

Proper arrangement of such files requires that both *live* and *dead* files be maintained, and that they be complete with respect to technical and emotional competency, character, and physical capability. *Live* files would include current applications, current employees, and recently (within the quarter) departed employees. *Dead* files would include the records of *qualified* persons who had left the company. At the end of each quarter, departees (qualified) thus would be removed from the *live* file and placed in the *dead* file where they would remain for a period of six months to a year. Generally in only a few situations would an individual be willing to return or even consider returning after a period of a year. That might, however, become the rule instead of the exception in particularly depressed areas of the country

*Gate (Direct Application) As a Source.* This employment source probably is used more than any other. Regardless of this high frequency of use, it is not a primary source where high skill and outstanding personal qualification are key job requirements. Although many hold that this is a desirable and primary source, the fact remains that the "gate" lacks predictability and reliability except in the small community having a loose labor market, or where the using company has an excellent reputation

Direct application necessitates a relatively high cost process for sorting the desirable from the undesirable applicants. Furthermore its unpredictability generally means that much of the recruiter's time is spent on "made work." For example, one concern has depended upon this source almost completely for many years. They have an employment staff of four people — one man and three female clerks — each of these people spends more than 50 per cent of his time performing other than employment functions. Not one is a trained recruiter or interviewer, and none has more than passing competency in tests and measurements. Interestingly enough, they have averaged no better than 50 per cent good selections over the past several years.

When one considers the 50-50 success pattern, it can be concluded that money is being spent unwisely.

Direct application provides certain advantages. *First*, since the applicant approaches the company at his own bidding, one can say "no" with presumably greater ease than if he were sent by someone, particularly someone connected with the concern. *Secondly*, since the direct applicant originates the contact, the company has no obligation to him other than to treat him with dignity, respect, and kindness.

Recruiters might realize from what has been implied that as a source the "gate" may be a desirable avenue for low-skill personnel. Use of this source for other than low-skill labor does expose the company to a rather intense risk of error. This might not be true at a time when the supply of labor was greater than the need, and it might not be true in certain depressed areas of the country. As a general rule, under favorable economic conditions, high-skill labor, technicians, and managerial talent are not wandering from company to company looking for employment — they have it, and must be attracted away from it.

*Advertising.* Employment managers and recruiters who consider advertising as a source for potential employees actually focus their attention upon specific media. For example, they consider the New York Times or the "Timbuktu Tattler," rather than newspaper advertising in general, or they study and operate through national-account magazines, or specific areas of national-account radio and television rather than the general media of radio or magazine. It is true that some manpower people treat the source only generally. Those who make this error ignore their purpose, if it be to fill job openings economically.

Where the purpose in using any segment of the general source involves public relations first and recruitment second, alert manpower people consider the source in the general sense. When seeking specific types of employees, however, the source should be related to, and selected in terms of, its ability to supply that type.

The difference in ability of specific advertising media to supply a specific labor skill seems obvious. Nonetheless, many manpower people fail to heed the point — in all too many cases they budget and spend for employment advertising without studying the effectiveness of the individual source. Return upon the investment thus *may*, in many cases, become unduly low. For example, one organization has been spending an average of \$100 a week for local daily newspaper advertising (exclusive of Sunday) and about \$100 per month for local Sunday newspaper ads for approximately five years. As a matter of curiosity (resulting from disagreement with a suggestion made by an interested outsider), the employment manager made a

study and discovered that, in all probability, local newspaper advertising would provide a better return if limited to Friday and Sunday, except in emergencies. In addition, the study indicated that the total investment would be reduced even though the return would be improved.

The ability of a given medium to supply a *given skill* also should claim the attention of employment managers. For example, high-skill technicians and managerial talent are more likely to note employment ads appearing in their trade journals than in the daily paper, unless the newspaper ad is backed up by some type of feature story. If the recruiting problem in some way involves the distaff side of the house, women's magazines become a likely source. A rule appears: *the recruiter should study the type and the quantity of circulation* if he expects to function effectively.

**THE UNION — A SOURCE.** Since the McClellan Committee revealed the questionable ethics of many unions, it may seem inconsistent to find the union described as an employment source. We must remember, of course, that not all unions are guilty as described. A properly-managed union with a sophisticated and irrevocably honest leadership can — and will, if approached properly — provide really valuable assistance in the search for recruits. Honest and properly-trained union leaders have an inherent and vital interest in the effectiveness of recruitment.

Obviously, if unqualified people obtain employment, the probability of grievances tends to increase. Grievance-handling costs everyone. Where there is unqualified help, the risk that the grievance is their fault also increases. In such cases the union must expect to lose the contest, and the loss of any appreciable number of contests weakens the union's position in everyone's eyes. Bad recruitment may lead also to high turnover of manpower. Unions usually prefer a low turnover rate because it tends to improve their security. In addition, where recruitment leads to poor selection, usually there is a risk that a "rebel," or at least a relatively unprincipled group, may enter the work situation. Such people tend to cause change in the goals and *modus operandi* of the union; in fact, such people tend to increase the possibility that the racketeer element will enter the scene. Such possibilities present just as great a threat to the management as to the workers and their union. In the interest of forestalling such a threat, if for no other reason, management and labor should cooperate in recruitment and selection.

Cooperation requires that the recruiter keep the union informed as to changes in conditions, vacancy development, and the like. It requires that the recruiter look upon the union, and work with the union in the same, or nearly the same, manner that he works with an employment agency.

## SOURCE EVALUATION

A distinct uncertainty exists as to the effectiveness of any given employee source at any given time as a supplier of any given quantity and quality of labor. This uncertainty is very real, hence the effectiveness of sources should be evaluated if economical recruitment is to be attained. Without evaluation, good recruits appear by *chance*, and effective expenditure of funds occurs by chance instead of plan. In other words events would be regulating the manpower people, rather than their being managed by manpower people.

**MEANING OF EFFECTIVENESS** If manpower people are to regulate rather than be regulated by the manpower-need situation, they must apply a system of source evaluation (apply the control concept). To initiate such a system, the meaning of "effectiveness" first must be established.

This term will, and certainly should, acquire at least a slightly different meaning in every company. It even might be different for all or at least some jobs in any given company. We do not propose, therefore, to suggest a specific meaning — to do so would ignore reality. Instead our purpose is to identify at least some of the factors pertinent to *any* definition in any situation.

**QUANTITY CONSIDERATION.** From a quantity point of view, a given source's effectiveness is a reflection of its ability to supply the correct number of recruits in the correct length of time. Naturally, this so-called correct number and time must be stated in the form of a plan or goal. To measure a source's ability to conform, the plan first must be communicated. In turn, the manpower people must establish realistic standards, for a plan stated in unclear terms is as good as no plan at all. A first step for those seeking to handle recruitment properly involves creation of adequate lead-times and attainable quantity standards.

**LEAD-TIME.** Lead-time refers to the amount of time allowable between notification and actual need. Though it sounds simple, it is a complex factor. The lead-time needed will depend upon the kind of equipment, methods, and materials involved in production of the goods or services; the production schedule, and how far ahead the company really can forecast sales. It also, understandably, depends upon the nature of the labor market available to the company.

Development of lead-times, therefore, generally requires close liaison with four other groups: industrial engineering, production control, market forecasting, and the employment sources. It appears then that a major responsibility of employment people involves internal and external relations — and development of good will — for they depend upon the knowledge and help of others to accomplish their job.

**ACQUISITION-TIME.** Where lead-time specifies the amount of time a source may take to get a recruit, or that a recruiter has in which to contact a source and acquire a recruit, acquisition-time indicates how long it usually takes to acquire that recruit. Since lead-time is theoretically, and ideally, the sum of processing-time (department notification, records checking, source notification, and the like) and acquisition-time (the sources' recruitment action and dispatch of recruits to the company's employment office) — a period which enables recruit acquisition by, or before actual need — it is important to maintain time records classified by the sources used and the jobs filled. Some firms will not require this administrative aid, *but*, and this is the point, the manpower division should know what jobs are difficult to fill and should be prepared to state definite lead-times and know the probable acquisition-times

Suppose, for example, we are seeking a typical machine operator and we are located in Connecticut. The chances of acquiring such a person in a reasonably short time are very good, and the ability to adjust production assignments in the average Connecticut shop would minimize the severity of loss of one or two such people. On the other hand, if we are looking for a physical chemist, have only one vacancy, and are producing a product where the particular knowledge of such an individual was vital, lead-time would have to be high and acquisition-time would become a matter of grave concern.

**QUANTITY STANDARDS.** Quantity standards are similar in nature to those for lead-time, and their development depends upon the same liaison pattern. In the military, such standards are translated into manpower allowances in tables of organization. In industry the same translation should occur, though it frequently does not. These quantity standards are carried in manning tables or charts and become the man-vacancies budgeted for a given budget period.

In some cases lead-times and quantity standards may be fairly constant and typical to the entire organization, regardless of departmental differences. In many, however, flexibility will be required and it will be necessary to have several different standards available to meet the changing conditions. In *most* cases vacancy possibilities permit reasonably static lead-times, but the recruiter should review conditions periodically — he should expect change.

Once he establishes a base of measurement, the recruiter, employment manager, or other responsible party is in a position to challenge the quantity effectiveness of his sources. This evaluation may take several different forms — one procedure for advertising sources, another for employment agencies, and possibly a third for unions.

**QUALITY CONSIDERATIONS** Measurement of a source's quality-effectiveness first requires definition of the factors considered

important. These will tend to differ from job to job within a company and from company to company. For example, a quality employee in a steel mill differs in many respects from a quality employee in a textile mill, and an assembly line worker needs different qualities than a department head.

Regardless of these differences, which can be determined through job analysis, certain factors appear fairly constant from job to job and company to company. In our present discussion we shall refer to the factors lacking uniformity as "technical variables." In contrast, the constant factors appear to be turnover, discipline, and growth or participation.

*TURNOVER.* How long do employees obtained from a given source remain with the company? The shorter the period, the greater the probability of loss upon investment (the cost to acquire, process, and train). The effectiveness measure is number lost per person accepted from each source being evaluated.

*DISCIPLINE* How often or how severely do employees from a given source have to be disciplined? The greater the disciplinary problem, the higher the cost of employing the individual. The effectiveness measure is the frequency of disciplinary action per number of persons accepted from the source being evaluated

*GROWTH OR PARTICIPATION.* How readily do employees acquired from a given source engage in self-improvement, participate willingly in company-sponsored efforts to upgrade personnel, and the like? Conditions (equipment, materials, techniques, markets) do change, unless the prime resources of the company — men — change to meet, and preferably to instigate, favorable changes, the return from investment in the man becomes unfavorable. This characteristic is difficult to measure, nevertheless, the situation is typical to every organization and some effort to define and measure it should be made. One approach would involve the number of participants and their performance in training efforts per number of persons accepted from the source being studied.

*JOB PERFORMANCE.* How well do employees acquired from a given source perform on the job? Poor performance reduces the return upon the investment. Its effectiveness depends upon the situation, and involves such things as the quantity and quality of output, amount of waste and scrap, and the number of operator-caused breakdowns. It might thus be stated as the average performance rating of individuals per number of persons accepted from that source.

*REMARK.* Certainly other common factors exist. Those mentioned, however, appear most typical; and one can notice that, with slight modification, they can be applied as a measure of the effective-

ness of interviewers as well as the general employment system. These factors are straightforward; that is, they are easy to explain and understand and relatively easy to determine, if proper records exist. Be that as it may, how does one use them?

Obviously the employment manager can challenge source effectiveness by developing control charts. He also might combine the common factors into a general weighted index of effectiveness and make a Pareto (see footnote 11 for the following illustration #3) review of the sources against that index. Again, he might do the same with the "technical variables." He also might compare sources to a base of some industry-wide "norm."

*Value of Source Evaluation.* One hardly can discount the fact that regardless of size every organization faces monetary limitations of some kind. The real issue, however, requires consideration of "how best to expend the money available." This issue implies two things: that *how* one spends is more important than, or at least equally as important as, how much is available for expenditure, and, therefore, that one must assure an optimum return for each dollar spent. Properly applied, source evaluation assists manpower managers to assure a "best" expenditure of available money. It helps them determine which of the available sources provide the best return upon expenditure through identification of their performance. As valuable as the technique itself appears to be, however, its operational effectiveness depends largely upon the manpower records maintained, the liaison with the organization units involved, and the employment sources themselves.

**Illustration #1** Suppose that during the last six months, the recruiter hired 3 of the 27 people who applied as a result of his advertisements (11.1 per cent), 12 of the 83 referred to him by employment agencies (14.4 per cent), and 8 of the 48 people brought to him by the union (16.7 per cent). The question is, should he consider not using advertising in the future and should he consider enlarging his union sources? (Of course, it has to be assumed for this illustration that the vacancies were filled equally satisfactorily. Quality considerations are taken up in the next illustration.)

The statistical approach of analyzing this experience with a contingency table gives the recruiter a probability aid — probability assistance in forming his conclusions or making his decision. It gives the numerical significance of the apparent fact that during *these past six months the particular advertisements* used in the *particular newspapers* gave poorer results than the referrals from the *particular union or unions* involved.

From the data, this table is laid out:

C A N D I D A T E S	Source			
	Advertising	Employ Agencies	Union	TOTALS
Accepted	3	12	8	23
Rejected	24	71	40	135
TOTALS	27	83	48	158

The analysis involves computing a statistic called *chi-square*, indicated with the Greek letter chi as  $\chi^2$ . It is equal to the sum of the squared differences between the observed values (O) and the expected values (E) divided by the expected (E).

Mathematically this appears as:

$$\chi^2 = \sum \left[ \frac{(O - E)^2}{E} \right]$$

The above contingency table has 6 cells, so there will be 6 squared differences (the numerator). The O's are in the table and now we have to determine the E to go along with each. Let's do that for the O of 3 in the Advertising-Accepted cell. We shall use two facts: 27 out of 158 cases were in the advertising column, and 23 out of 158 cases were accepted. So the probability that we get a result in the advertising column is  $27/158$ . The probability that we get a result in the accepted row is  $23/158$ . The probability we get a result simultaneously in that column and in that row (meaning the advertising-accepted cell) is:

$$\frac{27}{158} \times \frac{23}{158}$$

You may be able to see why we multiply the separate probabilities to get the probability of the joint event by considering the dice analogy. The probability of a "one" with a single honest die is  $1/6$ . The probability of "two ones" (snake eyes) is  $1/36$ , since there are only 36 equally likely different outcomes with a pair of dice. "Snake eyes" is only one of these 36 different outcomes. Notice then that  $1/6 \times 1/6$  also equals  $1/36$ .

Now that we have the probability that we get a result in that cell (the Advertising-Accepted cell) which is the expected proportion for that cell, we should multiply it by the number of candidates 158 to get the number expected (E):

$$\frac{27}{158} \times \frac{23}{158} \times 158 = \frac{27 \times 23}{158} = \frac{621}{158} = 3.9 = E$$

Since the numerator represents the marginal product of that cell, the product of the marginal totals 27 and 23, we can systematize the chi-square determination by employing this tabulation

Cell	O <sup>10</sup>	Marginal Products	E	$\frac{(O-E)^2}{E}$
Adver.-acc.	3	621	3.9	2077
Adver.-rej.	24	3,645	25.4	.0772
Em.Ag.-acc.	12	1,909	12.1	.0008
Em Ag.-rej	71	11,205	70.7	.0013
Un.-acc	8	1,104	7.0	.1429
Un.-rej.	40	6,480	41.0	0244
				4543 = $\chi^2$

We notice that in the contingency table of six cells, we can still get the same marginal totals if we put any number at all in not more than two of the cells, which of course would then determine the remaining four numbers

free	free	fixed	23
fixed	fixed	fixed	135
27	83	48	158

This explanation gives us a ready way of determining the "number of degrees of freedom" for a contingency table, in this case, 2d.f.

We enter the accompanying graph with 2d.f. and a  $\chi^2$  of .4543 or approximately .45 and read a p of about 0.80. The probability is 80 per cent that these ratios are not really different, they only appear different by chance, another six months and they could well show just the opposite relative results. Conversely, the probability is 20 per cent (one chance in 5) that there is an association of the results with the source, that the biggest contributors to the total, the 2077 and the 1429, mean that the acceptances from advertising are less than expected and those from the unions are greater than expected. Since there is only a 20 per cent chance this is true, the recruiter would be foolish to favor the 16.7 per cent and demean the 11.1 per cent figure!

Suppose we had the same ratios, but much more data — as would be the case if every number in the contingency table were

<sup>10</sup>For any two by two contingency table, each O is increased or decreased by 0.5 as a statistical correction for continuity; the O's greater than expected are reduced, and vice versa. The 3 would then become 3.5, but the 71 would become 70.5, and so forth. The O's are not corrected here before substituting in  $(O - E)^2$  because this is a three by two table.

ten times greater. The reader can see, from considering what this change would do to the tabulation for computing  $\chi^2$ , that the  $\chi^2$  would be considerably larger. The recruiter then would properly conclude that the quantity effectiveness of the union source is significantly superior!

A statistical restriction is brought out by this illustration. Whenever an action-decision is developed, without planning to get more data, the smallest figure in the E column of the tabulation should be greater than 5. We had a 3.9. So our conclusion, to withhold calling the ratios significantly different unless more data support it, is also indicated by this restriction.

**Illustration #2** Getting the probability of any differences in quality considerations, as an aid to decision making, again comes from contingency table analysis. Consider tables of the form:

		Sources				
		A	B	C	D	etc.
Turnover	No leaving before 6 mos	7	12	5	8	
	No. staying more than 6 mos	80	11	15	37	

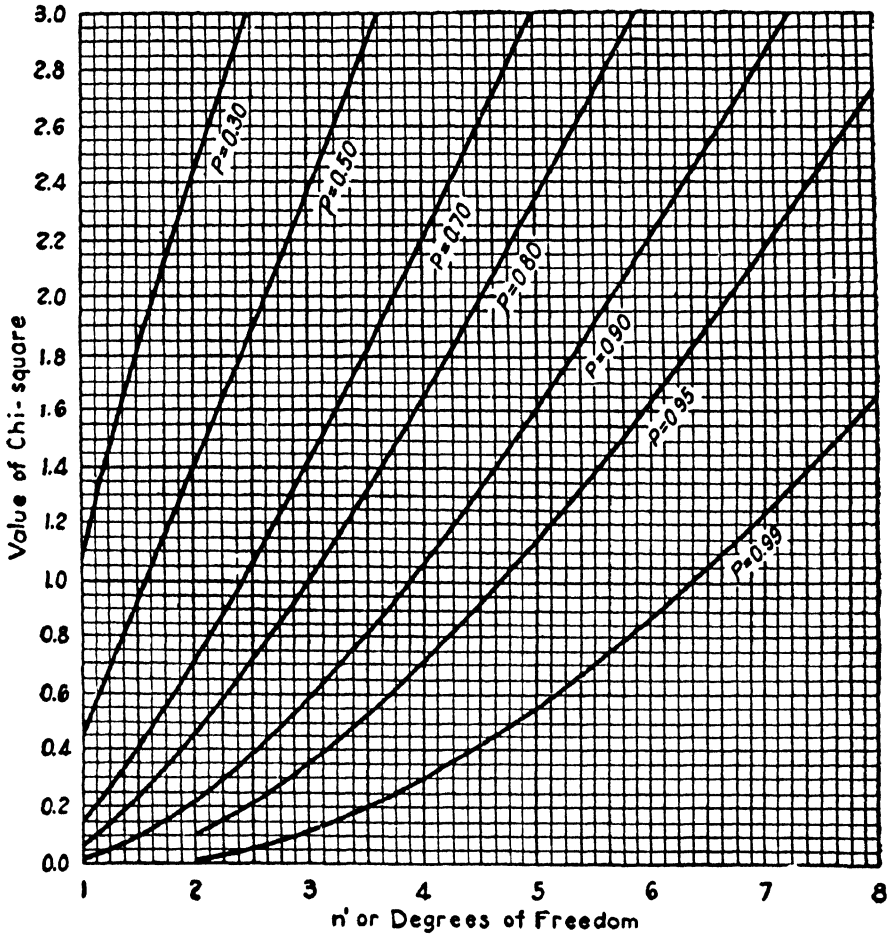
The left-side categories might instead be for discipline. number of employees receiving no warning slips, receiving between 1 and 3 slips, and receiving more than 3 slips. Note, for 4 sources and 3 discipline categories, the number of degrees of freedom for the  $\chi^2$  analysis is  $(4-1)(3-1) = 6$ . The reader should confirm this with a layout showing the free and fixed cells, as was done just previously. So the d.f. for an  $n_1$  by  $n_2$  contingency table is  $(n_1-1)(n_2-1)$ . Obviously each  $n$  must be two or greater. The two or more left-side categories of interest can similarly be selected for growth or participation, job performance, and the like.

**Illustration #3** A rather universally useful principle comes to us from the economists. a large proportion of all the wealth is concentrated among a small proportion of all the existing individuals.<sup>11</sup> When extended to a more general situation, we have

<sup>11</sup>M. O. Lorenz in his paper "Methods of Measuring the Concentration of Wealth," *American Statistical Association Publication* Vol. 9, (1904-1905), pp. 209-219, depicted the concentration of wealth with a graph, using cumulative percent of population on one axis and cumulative percent of wealth on the other. Vilfredo Pareto's "law" of income distribution was published in *Manuale d'Economia Politica* (1906) as an exponential (or logarithmic) formula. While an equation does not fit certain distributions of wealth as well as we might like, the useful principle of relative maldistribution does generally apply.

Computation Graph — Chi Square

VALUES OF  $P$  FOR VALUES OF CHI SQUARE BETWEEN 0 AND 3 AND VALUES OF  $n'$  BETWEEN 1 AND 8



By permission from, *Elements of Statistical Method*, by Albert E. Waugh, McGraw-Hill Book Company, Inc., New York, 1943, p 228

an aid to decision making — to acquiring proportionally larger returns for effort expended: most of a total effect is generally influenced by relatively few sources or causes.

TABLE 17  
CRITICAL VALUES OF  $\chi^2$   
(Applicable to situations like these of Illustration #1 and 2.)

n	$\chi^2_{.98}$	$\chi^2_{.98}$	$\chi^2_{.95}$	$\chi^2_{.95}$	$\chi^2_{.02}$	$\chi^2_{.01}$	d. f.
2	.000157	.000628	.00393	3.841	5.412	6.635	1
3	.0201	.0404	.103	5.991	7.824	9.210	2
4	.115	.185	.352	7.815	9.837	11.345	3
5	.297	.429	.711	9.488	11.668	13.277	4
6	.554	.752	1.145	11.070	13.388	15.086	5
7	.872	1.134	1.635	12.592	15.033	16.812	6
8	1.239	1.564	2.167	14.067	16.622	18.475	7
9	1.646	2.032	2.733	15.507	18.168	20.090	8
10	2.088	2.532	3.325	16.919	19.679	21.666	9
11	2.558	3.059	3.940	18.307	21.161	23.209	10
12	3.053	3.609	4.575	19.675	22.618	24.725	11
13	3.571	4.178	5.226	21.026	24.054	26.217	12
14	4.107	4.765	5.892	22.362	25.472	27.688	13
15	4.660	5.368	6.571	23.685	26.873	29.141	14
16	5.229	5.985	7.261	24.996	28.259	30.578	15
17	5.812	6.614	7.962	26.296	29.633	32.000	16
18	6.408	7.255	8.672	27.587	30.995	33.409	17
19	7.015	7.906	9.390	28.869	32.346	34.805	18
20	7.633	8.567	10.117	30.144	33.687	36.191	19
21	8.260	9.237	10.851	31.410	35.020	37.566	20
22	8.897	9.915	11.591	32.671	36.343	38.932	21
23	9.542	10.600	12.338	33.924	37.659	40.289	22
24	10.196	11.293	13.091	35.172	38.968	41.638	23
25	10.856	11.992	13.848	36.415	40.270	42.980	24
26	11.524	12.697	14.611	37.652	41.566	44.314	25
27	12.198	13.409	15.379	38.885	42.856	45.642	26
28	12.879	14.125	16.151	40.113	44.140	46.963	27
29	13.565	14.847	16.928	41.337	45.419	48.278	28
30	14.256	15.574	17.708	42.557	46.693	49.588	29
31	14.953	16.306	18.493	43.773	47.962	50.892	30

This table is abridged by special permission from Table III, of R. A. Fisher, *Statistical Methods for Research Workers*, published by Oliver & Boyd Ltd., Edinburgh, by permission of the author and publisher.

Suppose, for example, that we are evaluating recruitment costs (the effect) for the skills needed (the source categories of these costs). After gathering data on costs for coded degrees of skill, say during the past year, arrange the results in tabular form as follows.

Coded Skills	Cost To Acquire	Individuals Acquired	Cost Per Individual
1	\$15000	20	\$750
2	10000	25	400
3	8000	20	400
4	4000	40	100
5	2000	25	80
6	8000	40	200
7	6000	15	400
8	6000	60	100
9	6000	20	300
10	500	10	50

If our future numerical requirements for people might be expected to be distributed about the same, by skills, as in the past year, then we could rank our data by "cost to acquire" as follows.

Skill	Cost	Cumulative \$
10	\$ 500	\$ 500
5	2000	2500
4	4000	6500
9	6000	12500
8	6000	18500
7	6000	24500
6	8000	32500
3	8000	40500
2	10000	50500
1	15000	65500

NOTE: that

$$\frac{65500 - 24500}{65500} = 0.63$$

63 per cent of the total cost comes from recruiting 4 out of 10 skills, the most costly ones.

Now, a question may be asked: can we save money without endangering our ability to acquire the needed number of people with the required skills? Any study of that sort could be more likely productive if it were concentrated upon the employment sources, costs, recruitment methods of just those 4 skills.

If you have a forecast of the expected required number of individuals for each skill (different than last year's), multiply the above cost/individual by the quantity before ranking and accumulating the figures.

If you are looking for longer range economies (beyond available manpower forecasts), rank by cost/individual as follows:

Skill	Cost/ Individual	Cumulative \$	
10	\$ 50	\$ 50	
5	80	130	
8	100	230	Again, concentrating upon the
4	100	330	more steeply rising cumulative
6	200	530	figures:
9	300	830	
7	400	1230	} $\frac{2780 - 830}{2780} = 70\%$
3	400	1630	
2	400	2030	
1	750	2780	

In this case, 70 per cent of the cost/individual comes from 4, but not the same 4, skill categories. Thus, skill #7 is worth including in a study

Whatever we find in these selected skill categories may, of course, be of help in reducing costs in some other category. But, special studies devoted to less costly areas mean we spend more for each dollar potentially saved, we could approach a point of substantial diminishing returns!

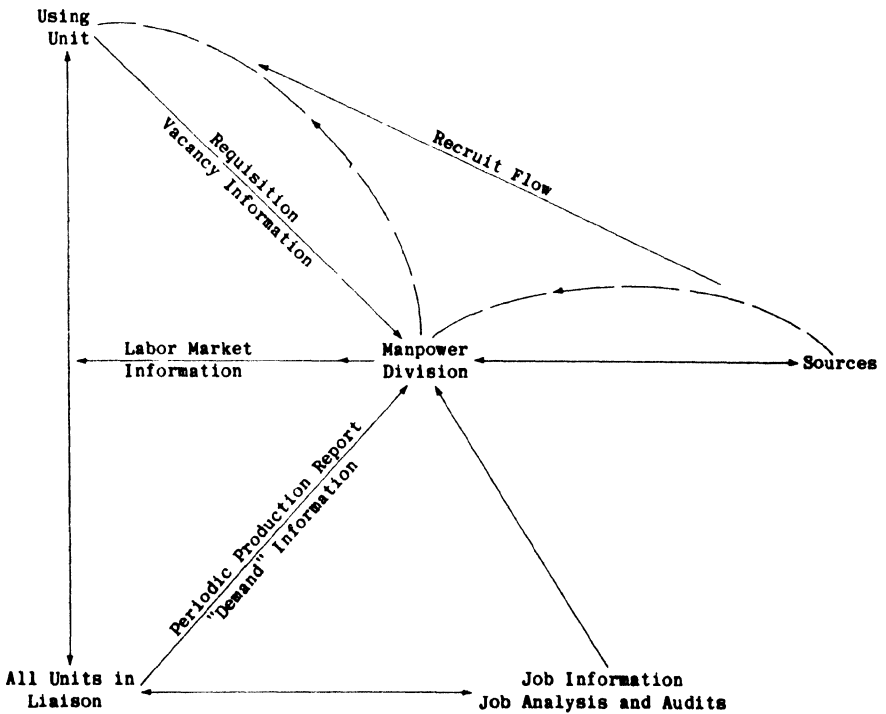
**RECRUITMENT — A SYSTEM**

Understanding the nature of sources, their identity and peculiarities, and recognition of the need for source evaluation is only part of the battle. Effective manpower recruitment requires application of a controlled system. That system properly is based upon three fundamental requirements of managerial action: that events be regulated, that there be an optimum return upon investment, and that actions and decisions take into account both present and future effects.

The actual design of such a system does depend upon the specific case, however, certain general characteristics or steps exist. In every case, the procedures followed should reflect a distinct information-flow pattern (for example, Figure 30). The suggested steps are as follows:

1. Periodic planning conference — a divisional responsibility. A conference wherein the production, sales, and manpower expectancies are laid out for the ensuing quarter, six, or twelve-month period.
2. Periodic review of source effectiveness — a manpower division responsibility.
3. Advisory contact with employment sources — a manpower division responsibility.
4. Current employee status check — a manpower division responsibility.

5. Weekly (or monthly) production conference – a divisional or a departmental responsibility.
6. Alert-contact of employment sources – a manpower division responsibility
7. Alert-contact of payroll – a manpower division responsibility
8. Manpower requisition – by the using unit.
9. Verification contact with using unit – by the recruiter
10. Authorization check with payroll – by recruiter.
11. Action-contact of employment sources – by recruiter.
12. Follow-up – a check with the using unit to determine satisfaction.



AN INFORMATION-FLOW PATTERN FOR RECRUITMENT

Figure 30

Figure 30 presents the information-flow pattern suggested by these steps. Both the suggested steps and the pattern require consideration of the factors discussed in Chapters 4, 5, and 6. As a controlled system, it will break down unless these considerations come into play.

**INFORMATION FLOW.** Information factors have been defined previously. The flow of that information is now considered. *Job information* is gathered periodically and fed into the employment section of the manpower division. Projections of data will be made frequently enough to provide a rapid handling of seasonal variations. *Demand information* is generated by the controller's office or the vice-president of the manpower function, and flows into the employment section. Job information *plus* demand information enables determination of the importance of vacancy information. *Vacancy information* is generated by the using units and moves into the employment section in terms of manpower requisitions. *Periodic production reports* originate in the production division and reflect the actual situation plus the projected production and sales data. Such reports correctly flow to the lowest echelon of management in any way involved in the development of manpower requisitions and to the employment office. This facilitates the using manager's ability to plan, coordinate, and control his activities, and helps the employment personnel in the same fashion.

**MANPOWER REQUISITION.** The requisition originates at the using level. It flows to the immediate supervisor for approval and then moves directly to the manpower division for action. In an emergency (as defined by a firm's procedure manual) the requisition properly can move directly to the employment section, but an information-copy should go to the immediate superior.

A manpower requisition is an *action paper* of a type that demands or commands performance. Once initiated, a requisition means that time is of the essence. Manpower personnel cannot *serve* if they must spend time questioning requisitions. Procedures therefore require careful development, full statement within a procedure manual, and consistent application.

**THE STEPS OF SYSTEM.** Although complex, the previously suggested steps, if properly handled, reduce the risk of error, and hence cost. The fact-gathering, the planning, the notifications recommended all serve to lessen the possibility of having two departments laying-off and four hiring, as has occurred with one concern. These steps also improve the possibility that payroll will know ahead of time what to expect, and may enable a supervisor to plan his work so that overtime can be avoided. Let us look more closely at these steps.

**Divisional Planning Conference.** The planning conference exists, regardless of its title, to assure coordination of effort, common goaling, and information exchange at the top echelons of the firm. For the manpower group, these periodic meetings of top management should provide a prediction of the expected changes in quantity and skill requirements for manpower. They also should allow division heads the opportunity to coordinate their own future actions.

The head of the manpower function *carries to* the conference the historical manpower picture — the quantitative personnel data useful in determining future manpower needs and actions. He should *carry from* such conferences the new information input necessary for a new manpower forecast and necessary to his current operations.

*Advisory Contact.* This step means a phone or memo contact with the effective sources pertinent to the existing plans, notifying them that changes are planned. Contact includes the union, particularly if that organization is indicated as being a useful source.

Advisory contacts specify at least: that they are advisory only, the nature of the expected skill and quantity needs, expected lead-time, expected wage and work-load patterns, and any changes in job descriptions and specifications pertinent to the expected vacancies.

*Status Check.* The status check is a review of the promotability and transferability of existing personnel performed at, or before, the time of the advisory contact. Such checks help maintain a policy of bringing new personnel in at the lowest levels possible and help keep company actions within the seniority rules of the labor contract.

*POST-PLANNING TOOLS.* Three tools, in addition to forecasting, are important adjuncts to correct “post-planning” and planning action

1 *Manning Table* As exhibited in Figure 31, if regularly posted, a manning table provides a running record of the employment situation<sup>12</sup>

2 *Record of Acquisition Time* As previously described, a record of acquisition time helps the recruiter to make a “hasty” estimate of his source’s capabilities

3. *Turnover and Replacement Record* Essential to all manpower planning (though still not in wide use), this report is designed to show at least the following. (A) the secular and seasonal variation in turnover, (B) the departmental turnover, (C) the ease of replacement as an effectiveness rate —

$$\frac{\text{acquisition time}}{\text{lead time}} \times 100$$

The latter two elements may be indicated as averages or medians. Plotting their change with time in a control chart adds to the information which can be gathered from such data.

<sup>12</sup>cf. Dale Yoder, H. G. Heneman, Jr., John G. Turnbull, and C. Harold Stone, *Handbook of Personnel Management and Labor Relations*, (McGraw-Hill Book Company, Inc., New York, 1958), pp. 5.41-5.43.



**PERIODIC PRODUCTION CONFERENCE.** Regardless of the exact frequency, department heads require the benefits available from periodic production conferences. Such conferences are operational, concerned with present issues more than with future changes. They can be applied as *action-coordinating steps* (the planning phase immediately preceding action).

The *employment manager* should *carry to* such a conference, or include in memoranda, the actual manpower situation. He reports on the status of existing personnel, and the probability of acquiring needed manpower, and briefs the group regarding labor-management relations. He will *carry from* the conference information concerning actual current production, sales, and service positions, and acquire the latest estimates and statements of actual condition.

**ALERT-CONTACTS.** Such contacts act as "warning orders" to the sources and the payroll section of the firm. The contact is designed to enable the source to make preliminary contact with its supply, and to allow payroll to make preliminary arrangements. The value of the payroll "alert" lies in the fact that it may prevent the "infighting" which so frequently occurs over expenditures. Many employment managers find that by alerting agencies at specific times, say on Mondays, they gain a better degree of cooperation.

**REQUISITION** In some firms this may be the only step used. Regardless of whether it is part of an effective system, or the sole procedure, the correct development of a manpower requisition demands attention to three main items: the timing, the responsibility pattern, and the minimum essential data.

*Timing.* Procedure should be based upon the acquisition-time and the lead time pertinent to the sources and the vacancies involved, or pertinent to a generally established pattern based upon analysis of past practice. In some cases a "labor pool" may be maintained by the firm. The timing would depend upon the replacement requirements determined for the pool's maintenance. The manpower division also may well be the originator of the requisition if a pool is maintained.

*Responsibility.* Normally the using unit holds the responsibility for making up the manpower requisition and passing it to the employment section on time. The immediate superior has the job of verifying the requisition. The manpower division not only processes the request, but also designs the forms, lead times, and the like. The manpower division also trains using managers in proper utilization of procedures and forms. Correction of errors is made by the manpower division *through* the superiors of those making the errors, unless direct (radial) control contact is authorized as standard practice.

*Minimum Basic Data.* Figures 32 and 33 indicate typical requisition forms. The minimum basic data normally required is as follows:<sup>13</sup>

1. Job title, number, and/or name of department making requisition.
2. Date of requisition — of levy.
3. Identification of job by code number and (preferably) by a precise statement of prime duties (assumption being that job description exists for reference as part of the operational desk-file of the employment man).
4. Number of employees required.
5. Sex required.
6. Date of need (it is often wise to specify the earliest date required and the latest date possible without delay to production; if lead and acquisition times are developed, these should be applied).
7. Rate and range of pay, and statement as to method of pay such as incentive, hourly salary, and the like unless this data is a matter of record between payroll and manpower only, or unless it is standard to the job number and therefore part of the data in the employment man's operational file.
8. Shift involved, if any; and whether the job is temporary or permanent.
9. Any specific remarks the using manager feels important and helpful in the effort to locate the right man for the job.
10. Signature of using manager, and signature of authenticator if authentication (approval) is part of standard practice.

**MANPOWER DIVISION ACTION.** Receipt of a requisition calls for three almost simultaneous actions on the part of the manpower division (the employment man, or recruiter).

1. Authorization check with payroll to assure that the fiscal division is prepared to cope with whatever change is about to occur.
2. Verification check with the superior authority of the using unit — if this is part of the standard practice. The manpower division is responsible for assuring avoidance of situations where one unit of a division is hiring whereas another is laying-off.

Properly designed, authorization and verification checks involve a minimum of time and follow a procedure defined in the firm's procedure manual. Whatever the method used — telephone call followed by inter-office memo or formal set of memoranda — a correct system is designed for two things: maximum speed of transmission and action, and maximum probability of accurate response.

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<sup>13</sup>"Recruiting and Selecting Employees," *Studies In Personnel Policy*, (National Industrial Conference Board, Inc., New York,) No. 144; Dale Yoder, H. G. Heneman, Jr., John G. Turnbull, C. Harold Stone, *Handbook Of Personnel Management and Labor Relations* (McGraw-Hill Book Company, Inc., New York, 1958), pp. 7.9 and 7.10.



Min Date Required _____		Approval _____		Dept. # _____	
Max Date Required _____		Phone _____ Signature _____		Division _____	
Sex _____	Job Identification Data			MP 1 _____	Date Issued _____
Org. Title _____	Org. # _____	Critical Factors _____		Date Rec'd _____	_____
_____					
_____					
Control Data					
Auth # _____		Vacancy Data		Labor Grade _____	
In Job _____	# Now Asg'd _____	Current _____	Expected _____	Reason for Vacancy _____	Starting Rate _____
_____		_____		Experience Required _____	Training Required _____
_____		_____		_____	_____
If Vacancy Due To New Authorization -- Date Auth'd _____					
If Vacancy Due To Discipline -- # of Report _____					
_____				Max Rate _____	Step Rate _____
Attention -- Special Considerations _____					
_____					
Signature _____					

EXAMPLES-MANPOWER REQUISITIONS

Figure 33

3. Notification of the sources. This is the *action-step* in recruiting. Notification is the step wherein the recruiter places his ads, calls his employment agencies and requests action, gets his airline tickets and takes off for the competitor's territory, calls the union, and so forth. For many an employment man, this is where his problems begin.

*FOLLOW-UP* The procedure suggested is a controlled system, hence the final action becomes re-control or follow-up. This is a delayed action, for it takes place after selection of candidates. In essence, the recruiter reviews a random sample of selection cases to determine whether sources are producing desirable recruits within the specified time.

### SPECIAL CONSIDERATIONS

The previous section outlined a general procedure which included certain considerations believed typical, or at least necessary, to an effective recruitment program. Certain particularly effective considerations stand out as missing from that discussion. They appear to be:

1. Maintenance of system.
2. System differences.
3. Legal considerations.

*SYSTEM MAINTENANCE* Maintenance of a recruitment system tends to hinge upon: (1) policy effectiveness, (2) liaison effectiveness, (3) the effectiveness of source evaluation, (4) effectiveness of lead and acquisition times, and (5) upon how well or poorly the responsible managers understand the content and implications of the theory involved in organization, communication, and control. Maintenance depends also upon the fact-knowledge available throughout the firm concerning recruitment.

*SYSTEM DIFFERENCES.* System may well differ for the several major hierarchical levels and/or between managerial, technical, clerical, and production-worker jobs. Hierarchical and job-to-job differences affect system development. They also may influence the maintenance of system.

*PROGRAM DIFFERENCES* Lead and acquisition times will differ when it comes to executive, technician, and high-skill recruitment, as compared with low- and semi-skill. Quantity need varies between these classifications, and also with changes in authorized positions. In fact, there are so many differences between the several hierarchical levels and skill needs in an organization that it may be necessary to establish two or more recruitment systems. The nature of the systems, however, will vary but little. The principles and the considerations involved will be fairly similar for any system.

**RESPONSIBILITY DIFFERENCES.** As previously noted, good management requires that each manager be held responsible for his job.<sup>14</sup> In the matter of recruitment, this pattern of responsibility is quite sensitive to hierarchy. For example, the recruiter makes the source and recruit contacts, the employment manager performs operational planning, supervises the recruiter's activities, carries on liaison with payroll and other department heads, and projects the manpower data; the manpower manager carries on the top-level liaison, participates in policy planning and development, develops or assists in development of estimates to be projected by the employment manager, supervises the employment manager's activities, and "fights the good fight" with the controller; and the manager requiring manpower is responsible for proper requisitioning of manpower and provision of certain information about jobs, equipment, and methods changes (or assistance in the development of such information). These differences in responsibility must be recognized by all concerned, and each must adhere to his own particular set of obligations or the recruitment program will fall apart.

**"e" CIRCUITS.** Recruitment usually requires utilization of "e" circuits! Such communication circuits turn on and off with the situation. They differ from time to time, and with people. One might say that their activation is as divergent as a woman's moods.

Such circuits are utilized because they may be the only practical means of: (1) getting information about impending vacancies, (2) getting information about impending changes in conditions, (3) making contact with a source, or (4) making contact with a recruit. Clearly, then, the recruiter, as well as all managers and those connected with manpower management, requires an appreciation of the importance of "e" circuits, their variability, and the theory behind their application.<sup>15</sup> Furthermore an inadequate formal specification for the use of command and control circuits leaves people in the position of having to apply whatever other circuitry may become available to them.

**LEGAL CONSIDERATIONS.** The legal structure affecting manpower management probably knows more confusion than a bride's father on her wedding day. Employment people, including recruiters, should learn the exact nature and interpretations typical of their day for the various state and federal laws restricting their actions.<sup>16</sup> Unless they do, untold trouble may develop, not only with the existing workforce, but also with the public.

Included in the legislation affecting the employment function one finds state laws applying to the employment of women and children,

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<sup>14</sup>cf. Chapter 3.

<sup>15</sup>cf. Chapter 4.

<sup>16</sup>Yoder, Heneman, Turnbull, and Stone, *op. cit.*, section 4.

and the more recent Fair Employment Practices legislation found in 16 of the 48 pre-1959 states.<sup>17</sup> Also included in this grouping are the Fair Labor Standards Act, the Walsh-Healy Act and the Norris-LaGuardia Anti-Injunction Act.

Interestingly, the existing FEPC regulations apparently do not present too great a problem to those responsible for recruitment. As Yoder points out, there is little evidence to indicate that these regulations have hampered management's efforts to acquire desirable personnel.<sup>18</sup> In fact, those sensitive to the problems of discrimination may realize that the existence of strict policy along the lines specified in such laws may help a company to acquire better personnel. Many people consider organizations which practice discrimination as bad places to work.

Regardless of the value or need of FEPC, alert managers understand that such restrictive laws interfere to some degree with the freedom of choice and action assumed as rights in this country.<sup>19</sup> Although such laws provide help to the "underdog" in times of stress, they tend to ignore the rights of man as a whole for they are developed at the behest of, and because of, the political value of special interest groups.<sup>20</sup> This argumentative viewpoint is, however, just that — a point of view. The important matter is that effective managers realize that if they do not manage properly, if they do not encourage industrial practice which not only benefits the company, but also benefits the community as a whole, then the "body politic" will step in and establish restrictive legislation.

### SOME ERRORS OF PRACTICE

At times, people well founded in the theory of manpower management commit errors in the practical situation. The following situations and comments expose a few of these errors. They are presented as examples in the hope that similar pitfalls will be avoided.

**Illustration #4** James D is a Korean veteran age 26, trained  
**Wrong Attitude** by the military in electronics, a graduating engineer, an honor student. The following conversation took place *after* he completed a job interview with a recruiter — not in a company office.

Said Jim: "I went in and this guy starts off by asking me if I think I have anything to offer the company. I know I have

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<sup>17</sup>Maurice Fulton, "An Eagles-Eye View of Plant Location," *Dun's Review*, March 1960, pp. 78-79.

<sup>18</sup>Dale Yoder, *Personnel Principles and Policies*, (Prentice-Hall, Inc., New York, 1952), pp. 124-125, *passim*.

<sup>19</sup>cf. Sylvester Petro, *The Labor Policy of the Free Society*, (Ronald Press Company, New York, 1957), see also the McClellan Committee reports.

<sup>20</sup>Petro, *idem*.

something to offer them, after all I was trained *by them* for the military and had a three-month course in 1950 and another in 1952 — just last year, during my two weeks' active duty, I spent them with the company's installation people at ———, I operated and repaired their equipment in the field. I've written my research paper on the civilian application of their product. Naturally I said: 'Sure, I've got something to offer. I've worked with and studied the product.' I started to say that in the service I'd been trained by the company but the recruiter never gave me a chance. Instead he says: 'Now don't give me any war stories; nothing you learned in the service is of any use to us!' Now that made me mad, but I held my temper. Then this guy asked me how much money I thought I should get. I told him I wanted \$360 to start (this was in 1956) and began to explain that I had a wife and that we expected an addition in September. You know, I never got a chance to explain! He laughed and said: 'You college kids make me laugh. Don't you know you aren't worth a nickle to the company for at least six months? Why you don't even know how a ——— works!' Me, a kid! I don't know how the product works! Well sir, I got up and left. I wouldn't work for an outfit that sends out people like that. I told the rest of the fellows at the house the same thing I'm telling you and not one of them bothered going for an interview."

To some of you, the foregoing may sound like a fairy story. Unfortunately, it is not, and uncomfortably, it happens too often. Obviously, the recruiter had no idea of how to approach a potential employee properly. Of course he may have been attempting a crude form of "stress interview," even so, it was handled poorly and such interviewing has little value at a time like that. A rule appears: *a recruiter must conduct himself in a manner which reflects credit upon his company.* He must arouse interest and respect in the interviewee. He must elicit the feeling that the company is a good place to work. The recruit should be able to feel confidence in the company and the recruiter. The recruiter is obligated to uncover as much salient information as possible about the recruit. A recruiter with the wrong attitude cannot achieve these things.

**Illustration #5** William L. had completed his Master's degree.  
**Recruiter's Authority** He was 34 years old, married, father of one, a veteran of World War II and Korea. He had industrial experience which included work as an expeditor, route clerk, assistant production control supervisor. His work and academic records were excellent and his military record was outstanding. He met with a recruiter for the ——— company. The recruiter told him to report to the home office on a given day, told him to report to a given person at a given time, told him he would be reimbursed for his travel expenses, and gave him what

appeared to be a duplicate of a form upon which these instructions were indicated in writing.

William complied with instructions. He arrived at the home office, found he was not expected, that the man to whom he was to report was out of town, that no one else was able to take care of him, and that reimbursement for travel in cases like this was against company policy.

An organization's employment people must be competent to act! They must have the authority to make arrangements with recruits and sources. Once made, those arrangements must be honored gracefully. If competent, a recruiter: (1) knows the significant aspects of the jobs open, (2) knows company policy and procedures, (3) has the right to make necessary arrangements with recruits, and (4) always follows up on those arrangements.

**Illustration #6** Frank R was recruitment supervisor of a large Eastern manufacturing firm. The company was seeking a graduate engineer with five years experience in the field of electronics, and interested in research. The position vacancy was a very responsible one.

Frank knew an instructor on the campus of one of the better engineering schools. He knew he was dissatisfied with his salary and the petty annoyances present on the campus. Frank called the instructor. As a result of the conversation, the instructor came to the company for an interview with the employment manager. The employment manager was impressed and offered the job to the young teacher (this action was within company policy and procedure). The instructor accepted, but asked for a two-week grace period to straighten things out. It was granted.

When the instructor arrived two weeks later to begin work, he discovered to his dismay that the job had been filled by the head of engineering. To make matters worse, the vacancy had been filled the day it developed, but no one in personnel had been informed.

Correct employment procedures cannot be carried out in an organization where company-wide liaison is not practiced — in its absence, the right hand will never know what the left is doing. The serious side issue involved in such instances is that the party *who is not* responsible for the errors which develop often gets the blame. An effect of such an error is that the company is branded in the "trade" as a second-rate outfit.

**Illustration #7** The employment manager was in a hurry.  
**Know Your Source** It was summer and the labor market was tight. A sudden opening developed on the production floor which, according to the foreman in charge, had

to be filled as soon as possible. Impressed by the apparent urgency, the employment manager called all his usual sources but could uncover no suitable replacement. In desperation he called the ——— agency although he had not used them before and knew nothing about them.

“Bottle Billy” showed up the next day. He appeared okay and was hired. For the next two-week period, before discharge, he showed up “under the influence” on Monday and Tuesday.

Certainly there is more wrong here than just not knowing one’s sources; but as the employment manager found out later, the agency involved had the reputation of being the local supplier of “Bottle Bilies.” Had he known this before he made the contact, grief could have been avoided.

**Illustration #8**  
**Work with Your**  
**Sources**

In some of the regional and home office situations one finds that a receptionist in the suite for executives may be expected to fill in during the summer months as an executive secretary. In one such office, the receptionist became ill. Vacations started and there was a doubling up of jobs.

The office manager called his regular sources and found that replacements were going to be very difficult to acquire. Finally, however, one showed up. He was dismayed! She was completely unsuitable. Investigation revealed that even though he had been dealing with these agencies for many years, they had never had to fill any of the executive secretarial positions or the receptionist job — turnover was very low. He also discovered that they had no idea of the nature of those jobs or the job specifications involved.

**Illustration #9**  
**Blind Ads**

Joe worked for the ——— company. He had been with them for three years. He was a good worker and had progressed upward each year. Joe, however, was dissatisfied. He had watched four less qualified people of less seniority pass him as the result of very obvious favoritism on the part of his immediate superior. One Sunday Joe spotted an ad in the paper for a man of his qualifications. It was “blind,” but he answered it.

Tuesday morning he was called into personnel. The employment manager handed him his letter in reply to the ad. After a long talk Joe was sent back to his department. Immediately after lunch Joe was called aside by his immediate superior and the following conversation took place.

Superior: “So, you don’t like it here! Well buddy, I got news for you; so far as I’m concerned you can get your pay on Friday and keep right on going!”

Joe: “Look, I didn’t mean any harm, I just thought it might be a better job and after all, I know that work!”

To further "blue" the already "blue haze," the employment manager came up at this point and told Joe that the position was his!

Although this situation may have turned out all right for Joe, it points out the risk involved in utilizing blind ads. Unless employees are notified of vacancies and of the ads being used, they may find themselves in Joe's predicament. Obviously, this is not good for morale and it can be bad for public relations as well as labor-management relations.

### SUMMARY

Recruiting is a positive activity. It involves search for possibly desirable manpower willing to try for employment in a firm, and search for, and evaluation of sources able to supply such people.

Recruiting is both a selling job and a problem of analysis. It involves long-range planning which includes manpower forecasting in terms of manpower quantity and quality. To be effective, both the planning and the operational phases of the system require excellent communication with all segments of the company. The manpower division must develop a well-coordinated flow of information to and from their manpower sources.

Important though recruiting is, it merely succeeds in bringing potentially effective personnel to the plant, office, or laboratory. Distinguishing between the most and the least desirable recruits and detecting and eliminating people with nonobvious deficiencies are the problems of selection.

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## Selection

Selection technique seeks to determine the probable effectiveness of those made available through recruitment efforts. This evaluation provides personal data basic not only to the hiring decision, but also to decisions regarding promotion and transfer, training and compensation, and concerning the prevention or handling of operational manpower problems.

Selection is the “core” of the staffing effort. Truly effective selection goes beyond the traditional idea of finding the right man for the current vacancy. It embraces the concept of hiring persons potentially suited for the next job in the hierarchy.

### **OPERATIONAL CONSIDERATIONS**

Policy requirements, as discussed in Chapter 9, must be implemented by procedure. Four procedural considerations pertain to the operational effectiveness of a selection system.

*FUTURE-MINDEDNESS.* Development of system and actual selection of personnel require attention to the future of the firm and the individual. The term “individual” refers to those already employed and those about to be hired.

*The company* faces unnecessary costs where selection merely seeks individuals suited for a specific vacancy. It is likely that such persons will have to be replaced or entered into a high cost retraining program as jobs change. Future-mindedness in hiring raises the probability that those hired will be able to meet change with a minimum of retraining, lost time due to socio-psychological disturbances, and a minimum expenditure for grievance handling.

Some managers believe that forward thinking is unnecessary until the fourth stage of the industrial growth cycle (see Chapter 3) is actually entered. Usually this view is both untrue and unwise. Certainly the very latest that a firm can begin future-minded action is during the third stage, the period when competition is beginning to take an increasingly significant share of the market.

*Current employees* usually suffer a reduction of output if exposed to frequent personnel changes. They wonder when they will be replaced. The fear generated tends to increase the need for disciplinary action, grievance work and the like, and efficiency suffers.

*New employees* expect goal-satisfaction from their jobs. Unless future-mindedness is incorporated into the selection process, a strong possibility exists that real goal-satisfaction is impossible for many employees. Goal attainment involves the future. If a man cannot look to the future and foresee personal progress, he may become dissatisfied. This costs money in terms of lost production.

Those engaged in selection should act with caution when they feel that the goals of a given recruit are unattainable at their firm. One concludes that *if a recruit's goals are greater than we can satisfy or help him to satisfy, it is an injustice to both the recruit and the company if he is hired*

Blocked goals cause familiar frustration patterns. Such patterns tend to lead to terminations, replacements, grievances, slowdowns and other forms of work interruptions, which all cost money. Goal-blocking increases an individual's propensity for loyalty to a union hierarchy. This loyalty can cost management through increased administrative expenses regarding check-off and the like. If one can reduce production expenses through future-mindedness in manpower selection, the cost of such a program may balance favorably against the cost of not having it.

**COMPLETE SELECTIVITY.** Future-mindedness and complete selectivity go together. Traditionally, technical competence was the sole selection criterion. Such a criterion fits in with the idea of hiring for the existing vacancy only. Logical though this may seem, as already pointed out, it fails to consider change. Complete selectivity, on the other hand, does account for change, and for the applicant's ability to progress. It requires consideration of technical, physical, and socio-psychological ability.

*Technical ability* refers to an individual's competence — to his ability to perform a given job and its related activities as they exist in an atmosphere of progress.

*Physical ability* involves obvious factors required on some jobs such as the ability to lift, carry, stand for long periods of time. It also involves less obvious factors such as the ability to stand certain levels

of noise, certain pitches of sound, and certain atmospheric conditions. It also may include more difficult considerations such as the ability to withstand sudden temperature changes or long periods of stress.

Since a manpower management goal is to keep turnover rates at a minimum, future physical capability is also important. One thus may investigate the condition of an applicant's heart, lungs, nerves, his susceptibility to respiratory infection and the like because of their relationship to his total health.

*Socio-psychological ability* refers to an individual's ability to work with and through others, to get along in the social environment of work. Employment personnel consider an applicant's personality, his ability to adjust to change, his general normalcy with respect to those with whom he must associate daily, his frustrational level, and the like. The importance of this idea lies in the point that unless complete selectivity is applied, sooner or later misfits appear and the organization faces unnecessary expense in terms of turnover, slowdowns, absenteeism, and scrap.

**RECOGNITION OF LIMITATIONS.** Certain factors limit the success of every undertaking. Manpower procedures face limitations imposed by: (1) the company, (2) individuals, and (3) situations. Although introduced in connection with manpower selection, these limitations apply throughout manpower management work.

*Company limitations* usually reflect financial, traditional, organizational, or personal factors. As a typical *personal* restriction, consider edict by higher authority. For example, there is the situation where employment and engineering personnel have discovered that job changes enable the use of women in other than assembly and inspection; that the labor market is such that males for other production jobs are becoming increasingly difficult to obtain, but top management prevents the hiring of women for those other jobs.

*Organizational* restrictions often result from some exogenous factor such as war. For example, one firm used a strict policy of complete selectivity until World War II. The emergency necessitated rapid expansion and workforce requirements outran the labor market supply. It thus suddenly became important to hire bodies and hope that minds would accompany them. Hiring standards were relaxed and training was increased.

Sometimes employment people face *traditions* which limit their ability to apply complete selectivity equitably. In one firm, certain people from a certain area traditionally have been given job preference. Then too, *lack of money* may plague manpower people. Though confronted by a low budget, effective employment managers realize that expedients can often be devised to enable proper performance.

*Human limitations* appear in many forms. Individual differences becomes an effective limitation, not only as it may apply to applicants, but also with regard to the employment personnel.

For example, few people know their own capabilities. Some think of themselves as more capable than they really are, some as less. Alert employment people understand this complexity and challenge it in job applicants. This limitation is a variable, however. People's goals and capabilities differ and change. Such changes, when they occur, may be limitations so far as the end result of selection is concerned.

*Situational limitations* exist because so many of our opportunities are made for us, are fixed beyond our immediate and direct ability to regulate them. For example, the time of year tends to determine manpower requirements in some businesses, and a person's coordinative ability tends to determine the kind of work for which he is suited. There is little we can do about these things, either directly or immediately.

#### PROCEDURE — THE GENERAL CASE

Effective selection procedure requires careful attention to system, and must be adjusted to fit the specific needs of an organization. It can only approximate the general model discussed here.

This model involves determination of abilities through interview, background check (verification of biographical statements), application of tests and measurements concerning job knowledge and ability, and socio-psychological ability or capacity, physical examination, and finally recommendation and decision. Behind these operational steps there is careful development of job information

Some authorities hold that no selection system can be based upon a uniform series of steps because of company and job differences, and that the scope of the system depends directly upon size and financial ability. How money is spent often is the most important consideration, however, money spent on proper selection may save many costly operating expenses

A carefully-conceived selection procedure is just as important to the small firm as to the large. After all, the smaller the universe, the larger the errors appear. Losses from unnecessary turnover, from scrap and waste, and needless down-time become uncomfortably significant in the small firm. Such losses can be prevented in part by good manpower selection.<sup>1</sup>

In large companies equal care is needed in apportioning funds, and effective manpower selection can minimize the risks of loss asso-

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<sup>1</sup>cf. R. S. Uhbrock, "Mental Alertness Tests as Aids in Selecting Employees," *Personnel*, Vol. 12, May, 1936, p. 231; *Studies In Personnel Policy*, No. 144, The National Industrial Conference Board, Inc., N. Y., Cecil J. Mullins, "Selection of Creative Personnel," *Personnel Journal*, Vol. 39, No. 1, May, 1960, pp. 12-13.

ciated with poor personnel placement. One concludes that the amount of money available should not be the deciding factor in determining the steps taken. The *known needs* of the company are the correct criterial

**SYSTEM DESIGN REQUIREMENTS.** System design depends upon the firm's job and administrative requirements, and the care taken in adjusting theory to practice. There are four theoretical requirements: (1) recognition of the functional needs of organization, as discussed in Chapter 3, (2) consideration of situational variation; (3) adjustment for administrative needs, and (4) assurance of order.

**Situational Variation.** Job requirements, like jobs themselves, vary from time to time, and in time, from company to company, and within company. A flexible system accounts for this variability, although it is built upon uniform or standard practice. The process thus includes all steps needed for proper determination of any set of job requirements, but *only* those steps or portions of steps needed for the given case.

Flexibility relates to the economic concept that correct system provides an optimum return upon investment. To apply every step in every selection case to exactly the same extent could mean a waste of money and time. Manpower people determine the exact variation of need from job to job and establish a procedure which assures that only the necessary steps will be taken, and to the proper extent. This requires that job analysis, company-wide communication, and full knowledge of changing conditions be basic ingredients of the system.

**Administrative Needs.** Correct procedure provides a satisfactory answer to the following administrative questions.

1. Will the step isolate the desirable from the undesirable applicants for each job family?
2. Will the step provide an acceptably correct prediction of job success?
3. Is the length of time required to carry out the step reasonable or permissible in comparison with the total time allowed and available, the significance of the data it provides concerning the vacancies to be filled, and the money allotted?
4. Are the individuals (considering quantity and quality) needed to carry out the steps available?
5. If the people necessary to carry out the steps are not properly trained, can they be trained economically in the time available before the step must be performed?
6. Is there some other arrangement of steps, choice of steps or methods or people, that will increase the selectivity of the process without reducing the expected return upon the investment?

*Order.* The universal requirement of control demands that every system or process must be orderly. Control cannot be exercised properly unless a predictable repetitive series of steps is assured. Without this assurance, confusion becomes so great that follow-up or re-control cannot be applied, communications break down, and organization exists only in name.

Caution is required! Orderliness is no excuse or substitute for rigidity. When flexibility is ignored, order results in rigid conformance to one, and only one, pattern. When the real requirements of a situation or job are ignored, and when people reject analytical attitude, the order of their systems becomes rigid.

*System and the Labor Market.* Some may argue that an orderly or uniform manpower selection process breaks down when the condition of the labor market changes. One thus might hold that during a tight market an orderly procedure results in administrative delay, "red tape" and the like taking place and blocking necessary quick action. This may happen! It can be planned for, however, flexibility of design can permit systematic approach to a changed market.

For example, hiring standards and training procedures can be tightened or relaxed as the occasion demands. In the tight market, therefore, initial hiring standards can be relaxed to facilitate rapid acquisition of the "warm bodies" available; and training efforts would be increased to make these "bodies" more effective. The reverse may occur when a loose market exists. The point is that these actions are *planned*, their undertaking is planned; it is all systematized so that no panic-buttons are being pushed.

*System Differentiation.* Design of an employment system for a specific organization, and its peculiar needs, recognizes the hierarchical differences within that organization. This is a very special case of job difference. In most cases, certainly in all but the very smallest concerns, at least two different selection systems will be required, one for exempt-payroll personnel (managerial), and one for the non-exempt personnel (rank and file).<sup>2</sup> The importance of depth in background investigation, the frequency of system utilization, and the nature of job requirements account for this difference. As we proceed to discuss implementation of manpower selection, this difference will be examined further.

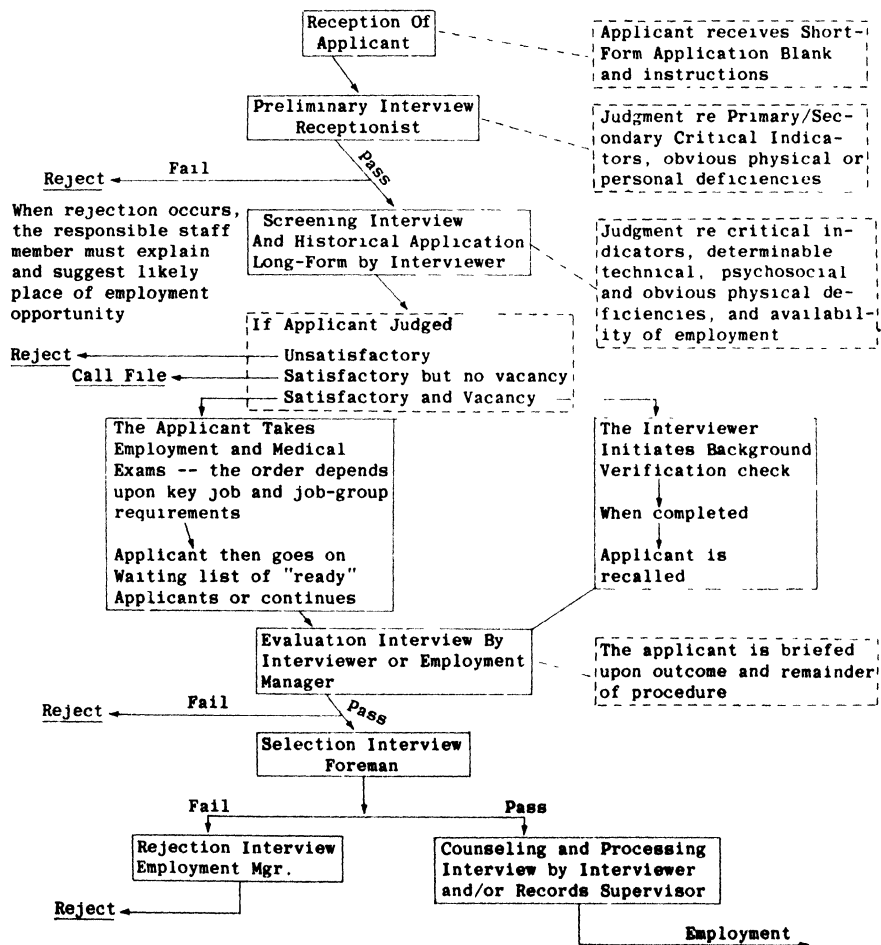
Additional differences in system may develop as one moves from production to research facilities or from manufacturing to service enterprises. Obviously, the depth of investigation normally will be far greater when dealing with technical and scientific personnel than when handling semi-skilled assembly workers; and the factors considered when selecting service representatives may differ from those considered when selecting screw-machine operators.

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<sup>2</sup>The term "exempt" refers to exemption from the Wages and Hours Law.

A *SYSTEM RECOMMENDATION*. Figure 34 presents a schematic picture of a general model for rank-and-file selection; the steps are discussed in the following paragraphs.

*Reception.* The importance of public relations has received some emphasis. This management responsibility appears again in the selection process. If an applicant arrives at the concern, expected or unexpected, he should receive every courtesy and consideration. The reception function becomes, therefore, a key function in the employment system. Here the first or second impressions will be formed



MANPOWER SELECTION PROCEDURE CHART

Figure 34

concerning the company and its personnel. Here the "ears" of the community will tune in. Here future labor problems may begin.

A well-trained individual is required as receptionist, a person selected for competence. The training of an effective employment receptionist includes the same coverage given any member of the employment group. In fact, technical knowledge of human behavior may even be more important here than to the interviewer, for the receptionist may have to eliminate obnoxious individuals from the employment stream, but in a way that will not generate animosity toward the concern.

*The Initial Contact.* Good office layout makes the applicant's first move obvious — direct contact with the receptionist. Good procedure results in courteous treatment designed to discover whether he is expected, or what his purpose in coming may be. His appointment should be verified.

An applicant may: (1) arrive by appointment, in which case he probably is making application for a specific job, (2) arrive without an appointment, but seeking a specific job, or (3) arrive without an appointment and simply be "looking for work." The receptionist's actions are guided by the arrival-fact. If an appointment was made (and the proper approach here is to insist that when a recruiter or an agency sends people into the employment office, they make appointments), the notice will indicate the specific job or job family being applied for. In that case, the receptionist presents the short-form application blank pertinent to that job family (job-group), gives the applicant concise but complete instructions for completing the form (if this has not been done already), and shows the applicant to the desk(s) where he is to fill out the form.

If the applicant arrives unexpectedly, but knows the job or job family in which he wishes to work, the same procedure is followed with the exception that no verification of appointment is possible.

If the applicant arrives unexpectedly but has no preconception of employment possibilities and no prior knowledge of the type of work for which he wishes to be considered, the receptionist should quickly ascertain his skill area(s) and make recommendations as to employment possibilities. Then, the short-form and instruction would be given.

*Short-Form.* Many organizations use just one application blank, and usually it is a so-called "long-form." A short-form saves time. It takes time for an applicant to fill out the typical long application blank, and often it takes considerable time to explain how to fill it out, or answer questions regarding the process. An applicant's time is just as valuable to him as an employee's time is to the company; therefore, it stands to reason that if time can be saved without sacrificing accuracy of response, every effort should be made to do so. Short-forms are pictured in Figures 35 and 36.

**Sample Short-Form  
Employment Application**

Name _____ Age _____ Sex _____ Married _____ Permanent Address _____ Present Address _____ Social Security No. _____ Phone most likely to be reached at _____ Name of Last Employer and Address _____ Job Title Last Job Held _____ Special Skill(s) _____ Work most qualified for _____ List any Disabilities _____	<p align="center"><b>APPLICANT DO NOT WRITE IN THIS SECTION</b></p> Action: Pass _____ Fail _____ Call _____  <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Critical Indicator Check-Off</th> </tr> <tr> <th>Primary</th> <th>Secondary</th> </tr> </thead> <tbody> <tr><td>A _____</td><td>H _____</td></tr> <tr><td>B _____</td><td>I _____</td></tr> <tr><td>C _____</td><td>J _____</td></tr> <tr><td>D _____</td><td>K _____</td></tr> <tr><td>E _____</td><td>L _____</td></tr> <tr><td>F _____</td><td>M _____</td></tr> <tr><td>G _____</td><td>N _____</td></tr> <tr><td>1 _____</td><td>8 _____</td></tr> <tr><td>2 _____</td><td>9 _____</td></tr> <tr><td>3 _____</td><td>10 _____</td></tr> <tr><td>4 _____</td><td>11 _____</td></tr> <tr><td>5 _____</td><td>12 _____</td></tr> <tr><td>6 _____</td><td>13 _____</td></tr> <tr><td>7 _____</td><td>14 _____</td></tr> </tbody> </table>	Critical Indicator Check-Off		Primary	Secondary	A _____	H _____	B _____	I _____	C _____	J _____	D _____	K _____	E _____	L _____	F _____	M _____	G _____	N _____	1 _____	8 _____	2 _____	9 _____	3 _____	10 _____	4 _____	11 _____	5 _____	12 _____	6 _____	13 _____	7 _____	14 _____
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Have you completed: Grade School _____ High School _____ Technical School _____ College _____ Have you ever been arrested _____ If so when, where, and why _____ Are you a Citizen of the United States of America _____ For what job are you applying _____	Observations _____  Most obvious positive characteristic _____  Most obvious negative characteristic _____																																

**SAMPLE SHORT-FORM EMPLOYMENT APPLICATION**

*Figure 35*

**PRELIMINARY APPLICATION FOR EMPLOYMENT FORM**

Name (Print) \_\_\_\_\_ (Last) \_\_\_\_\_ (First) \_\_\_\_\_ (Middle) \_\_\_\_\_ Date \_\_\_\_\_  
 Address \_\_\_\_\_ (Number) \_\_\_\_\_ (Street) \_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ Telephone \_\_\_\_\_  
 Position applied for \_\_\_\_\_ Date of your birth \_\_\_\_\_ (Month) \_\_\_\_\_ (Day) \_\_\_\_\_ (Year)

Do you want full time work all year? Yes No Working hours desired \_\_\_\_\_  
 Were you ever employed by \_\_\_\_\_ Co ? Yes No Social Security Number \_\_\_\_\_

**RECORD OF BUSINESS EXPERIENCE**

Time Mo. Year	Name and Present Address of Company	Position You Held	Salary	Reasons for Leaving
1. From _____ To _____	_____	_____	_____	_____
2. From _____ To _____	_____	_____	_____	_____
3. From _____ To _____	_____	_____	_____	_____

Preliminary Observations (For Interviewer) \_\_\_\_\_

**PRELIMINARY APPLICATION FOR EMPLOYMENT FORM**

*Figure 36*

Most industrial organizations have many jobs with the same basic requirements. There may be several such job-groups. They may represent one job family or several job families ("job families" was defined in Chapter 7). The short-form is designed to cover these groups.

The design of the form facilitates presentation of the applicant's identity, his ability to meet primary and secondary critical indicators, and any immediately salient physical deficiencies. The design facilitates rapid and accurate judgment by the receptionist.

*Preliminary Interview.* As soon as the applicant has made out the short-form, he should present it to the receptionist. The receptionist will handle the preliminary interview wherein the applicant either is passed or failed in terms of his apparent ability to meet the critical indicators and/or his apparent physical or personal deficiencies.

If an applicant meets the minimum specifications for employment, he will be passed on to the interviewer for the screening interview. If, however, he obviously fails to meet the minimum specifications, the receptionist has no choice other than rejection. A third possibility exists — the receptionist may be unable to make a clear determination. In such a case the applicant should be passed on to the interviewer.

*Rejection.* One of the most difficult tasks is rejection. Nothing can make it easy or pleasant. In fairness to the applicant, and to help protect the company's reputation, the reason for rejection should be explained.

There is only one honest way to reject an applicant — tell him the truth! It may hurt a little more at first, but the direct approach is the quickest, and in the long run the most generally beneficial to all parties. The approach involves five points.

1. Identify and explain the critical factors involved in the job and the job family or job-group.
2. Identify the exact reason why these factors are critical and what training or experience is required to master them.
3. Identify the applicant's deficiency and why it is significant, and suggest a means that the applicant might take to overcome that deficiency if he desires to continue to seek future employment in this kind of job. (This is a vocational guidance service rendered to the applicant.)
4. Recommend an employment opportunity where the noted deficiency is likely to be unimportant, or an opportunity where employment possibly can be acquired regardless of the deficiency.
5. Determine, if possible, and without embarrassment to either party, whether the applicant needs personal help.

In connection with Point 5, no direct offer of help is recommended except in extreme cases. It is good for the company's reputation, however, if, when help is needed by an applicant, the interviewer takes the

time to notify interested local clergy and the like. Such notification would be made after the applicant had departed, of course. Justification of this point of view does not exist in a cost accountant's handbook or an engineering manual; it rests with ethics and the community responsibility of management.

**SYSTEM AIDS.** We have spoken of the receptionist's job, but with the exception of the short-form, no reference has been made to system aids. *First*, provide the receptionist with: (1) a daily list of vacancies; (2) a list of projected vacancies — one- or two-week projections; (3) a list of employment opportunities in the area, and (4) a current and accurate list of critical job indicators, or a reception-desk job file (cards giving absolute minimum job data for each job in the company).

*Second*, provide the receptionist with a copy of all appointments made for applicants by agencies or recruiters. Memoranda will state the intended program for those applicants having appointments.

*Third*, provide the receptionist with a direct means of communication to the employment manager and the nearest security post.

**Critical Indicators** The term has been used frequently throughout the past few pages. Let us consider its meaning. Suppose we are engaged primarily in defense production. To work in such a plant one must be a citizen of the United States, or have passed a security check (in some cases). A primary critical indicator for employment in any capacity thus would be citizenship or government sponsorship. Suppose that we have an operation where all factory jobs require a very high degree of muscular coordination. For factory jobs, the primary critical indicator would be muscular coordination.

Suppose that we have a job-group, or a job family, where the first requirement is education. The education requirement would be the primary indicator. Suppose we have a job within this group or this family that involves working under conditions requiring visual acuity, and another that requires the job incumbent to climb and walk and stand for very long periods. In the first case the secondary critical indicator would require good vision, and in the second case the secondary indicator would be ability to climb, walk, and stand for long periods.

*Critical indicators thus are key job requirements.* They identify the requirements which, if not met by an applicant, mean that he cannot handle the job in question no matter how competent he may be in other ways. Such indicators may be mental, physical, or psychological in character. Figure 37 presents a type of reception-desk job file card and shows the critical indicators for the job identified by that card.

**Screening Interview.** It is possible that the preliminary interview has been taken care of by a recruiter or an agency. In that case

Job Number \_\_\_\_\_

0 - 50 01  
Chief Lab Technologist  
to  
"dead end"

**CRITICAL INDICATORS**

**Primary**    Registered under A S C P graduates of Medical Technology    Skill in bio-chemistry, hematology, bacteriology, parasitology, histology, serology, and record keeping    High skill in at least one area

**Secondary**    Familiar with supervisory and administrative procedures    Three to five years experience in laboratory work, and one to two years experience with administrative matters    Emotional maturity

**NOTES**    Job involves personal risk (health), computational ability and judgment    Diplomacy is needed    Stands for long periods    Works in the presence of unpleasant odors    Must be expert with lab techniques and equipment

From    Medical Technologist, external or internal, related  
To    "dead end"

Salary Classification    Grade \_\_\_\_\_    Minimum \_\_\_\_\_    Maximum \_\_\_\_\_

Hiring \_\_\_\_\_    Bonus \_\_\_\_\_    Retire \_\_\_\_\_

Date Audited \_\_\_\_\_

**SAMPLE JOB CARD**

*Figure 37*

the applicant would be sent directly to the interviewer for the screening interview. If this is not the case, the applicant arrives for the screening interview after passing the preliminary step. In any case, it is helpful for the interviewer to be in a position to greet the applicant by name (this facilitates establishment of rapport and is good public relations). The receptionist probably should forward the applicant's short-form or appointment to the interviewer in order that he can prepare himself for the interview.

In this step a patterned or diagnostic interviewing technique (as indicated in Chapter 5) is helpful. The interviewer develops the long-form application blank with the applicant. The form used would be historical or diagnostic in design.

The interviewer judges his applicant in terms of critical indicators and job specifications, determinable technical, socio-psychological, and physical deficiencies, and the actual availability of employment. He includes in his judgment the apparent potential of the applicant regarding future openings within the job family and/or job-group involved. Throughout the interview he seeks to uncover historical patterns of activity which might give a clue to future performance.

*The Interviewer's Choices.* Three choices face the interviewer: to reject, to accept if there is a vacancy, or to enter the applicant's

name (and record) into the call file. Rejection follows the same pattern previously described. It is important to realize, however, that by the time an applicant has arrived at *this* point, he may have been on company premises for some period of time. Even more reason exists, therefore, to make certain that rejection is handled with great care.

The *second choice*, acceptance into the remainder of the process, also requires careful handling. It is necessary to explain the nature and purpose of the testing program, the reason for the medical examination, the reason for being placed upon the so-called waiting list — the “preferred” or “ready” list. It is important also to explain the reason for any special studies to be made of the applicant. For example, in some particularly sensitive security positions, a very careful background study will be required, and this must be explained.

The *third choice* involves a decision by the applicant. He must decide whether he wishes to be placed in the call file. The interviewer must explain that system and reassure the applicant concerning its utilization.

*Call File.* A call file is an active alphabetical file of applicants cross indexed to jobs applied for, and containing the short-form applications of those qualified to work for the organization but for whom there were no vacancies when they made application. In addition to the short-form, or as part of that form, and on its reverse side, there should appear the interviewer’s estimate of the applicant’s qualifications, reason for not continuing the applicant in the process at the time of initial application, and any pertinent additional personal data acquired.

It is particularly important to reassure an applicant of the activity of the file. We are all familiar with the implications behind the comment: “I’ll call you, don’t you call me.” We must protect against these implications — the interviewer must not only protect the company, but also is obligated to protect the security complex of the applicant.

The call file is an active reference to a *specific* labor pool — it is, in fact, an employment source. Not all companies need such a file, however one should be maintained by those that: (1) have high skill, short supply jobs; (2) are located in a tight labor market area; (3) know that expansion is imminent; or (4) have a known out-of-control turnover pattern.

The file is cleared at regular intervals. Clearance means: (1) contacting the applicant at regular intervals, even though no vacancy exists, and determining whether he still wishes to be kept in the file; (2) contacting the applicant if a vacancy for which he is qualified occurs, or destroying, or forwarding to some central information agency, the file record if the individual elects not to remain in the file. If an applicant turns down a vacancy, he should be notified that his name

is being removed from the file. An interesting labor contract clause related to this procedure appears in Figure 38.

Except as provided, each recalled employee shall be required to accept the recall within forty-eight (48) hours, that is within two (2) working days, of its receipt to protect his seniority right to recall. An employee who could not be reached by direct contact in the plant or by telephone and who fails to accept notice to return to work within forty-eight (48) hours after receipt of notification by telegram or by registered mail, but who does report within the first ten (10) days after the Company sent such notification, shall be employed if a position is available, but he shall not displace any employee with less seniority who was called back in his place. If no work is available for such employee, he shall continue on lay-off until a subsequent recall or increase in the working force shall entitle him to active employment.

#### SAMPLE "RECALL" LANGUAGE — LABOR CONTRACT

*Figure 38*

No applicant's form is placed on file unless he is average or better potential. This should be explained and stress laid upon the quality and permanency of the company employees. It is important that the applicant be able to learn from the community that the company *does* fill jobs from the call file — thus the insecurity can be removed from the "don't call me, I'll call you" remark.

*Background Verification.* One of the great absurdities of modern management practice is the method employed to verify statements made by job applicants. It ranges from no attempt at verification to an elaborate system of form letters, and even takes on the aspect of an intelligence investigation at times. Strangely enough, however, and here lies the absurdity, in many elaborate systems the verification actually does not take place until *after* the applicant is hired. As a very unfortunate example, consider the following:

**Illustration #1** Pete applied for work at the ——— trucking and transfer company. The application form had many questions, among them: "Have you ever been bonded?", "Have you ever been refused a bond?", "Have you ever done anything that might make it impossible for you to get a bond?", "Have you ever been arrested?", "Do you have or have you ever had a serious injury?", "Do you have any recurrent illness?"

To each question Pete answered: "No." He was placed on his first run that night. His cargo was liquor. It did not arrive at the transfer point — neither did Pete!

The insurance company involved has seen to it that the trucking company changed its selection procedures!

Too much emphasis upon background verification may be as bad as too little. People are sensitive, they do not always understand the need for it and may go elsewhere if they discover that such verification is required. It is necessary for the interviewer to *sell* the importance of the check to the applicant.

Furthermore, verification is not always important for every job in an organization. Real depth of investigation seems of little value when hiring a clerk typist in an athletic department, but great depth seems vital if hiring a laboratory assistant in a physics lab performing research under a navy contract.

*Establishment of a System.* Four points appear important in establishing a verification system. *First*, base it upon job requirements. In general, the greater the responsibilities of the job or the greater the security risk involved in the job, the more important complete verification becomes. *Second*, flexibility is important. If investigation is blocked in one area, it should be taken up in another. *Third*, it should protect. The applicant *and* the company must be protected. An applicant's reputation and self-respect are important, thus circumspection is important. Similarly the source of information has a reputation to protect and is entitled to the anonymity allowed under the law. The company cannot afford "gestapo" tactics, for these quickly ruin its reputation in the community and, possibly, the trade. *Fourth*, if verification is necessary, it should be before-the-fact. It is absurd to shoot the horse after he has died!

*Why Verification?* One simple fact explains the underlying necessity for verification of background information: people usually need employment and in their eagerness to acquire a position they may make fiction out of fact, or forget important facts. Applicants have been known to make completely untrue statements, to tint the truth, to hide the truth and, of course, we all forget.

*Techniques of Verification.* There are many techniques of verification. Which ones to use depends largely upon the need for verification; local conditions such as cooperation between local employment managers and agencies, local enforcement groups, and upon the circumstances surrounding the applicant's information. For example, if an applicant were 50 years old and a thousand miles from his childhood home, what good would it do to attempt to check with his fifth-grade teacher?

The following Table 18 provides a brief summary of available techniques and some thoughts regarding their utility. Figure 39 shows a useful telephone checklist — a phone call in time often can save one from pretty serious errors!

*EMPLOYMENT AND MEDICAL TESTING.* Later we shall consider employment and medical testing in some depth. For the moment, let it suffice to say that while the background verification work is taking place, or starting, the applicant may be processed through the tests and exams required for the job, job family, or job-group, for which he is making application.

Following the completion of this phase of the selection process, the applicant would either continue through the remaining steps or be placed on the "ready" or "preferred" list of applicants. He would be continued if the background verification is completed. He would

**TABLE 18**  
**TECHNIQUES FOR VERIFICATION OF PERSONAL DATA**

Technique	Utility and Comment
Personal References	Most useful, applicant has no work history, personal contacts required by the job. Generally of little value because of people's tendency to avoid saying anything uncomplimentary, and people's tendency to avoid using references who would.
Official College Transcripts	Most academic transcripts reveal little other than grades and the kind of courses taken. It may take considerable time to acquire transcripts and it may involve a fee. Possibly desirable when hiring for managerial vacancies.
"To Whom it may Concern" Letters	Who wrote them? Only dependable factors might be dates and titles of previous jobs.
Military Records	In most instances the significant record is not yet available to employers. It is wise, however, to ascertain the nature of discharge -- only an honorable indicates a clear record; applicants bearing any of the others should be carefully screened.
Credit Reports	Prime use and value where vacancy requires bond or is at a managerial level, also in research and technical vacancies. Complete reports usually take from one to three weeks (or more). In communities where no national organization can be reached easily, it may be wise for the local or regional industries to underwrite development of a credit unit.

TABLE 18 (Continued)

Technique (cont.)	Utility and Comment (cont )
Police and FBI Checks	Such checks are a basic need where vacancies involve sensitive work. Too often such investigations are conducted after-the-fact. In many cases, the company will call upon, or depend upon, the bonding company to cause such checks to be made. Ordinarily the FBI will not release information directly to the company, therefore, investigation through local or state police is recommended. This type of check is recommended for managerial, technical, and research vacancies.
Previous Employers	Necessary investigation for all vacancies Method used depends upon time available, relationship with other employment people in the area, and availability of money Methods (1) personal visit -- best, but slow and costly, particularly useful regarding key management, technical, and research jobs, (2) telephone check -- next best, quickest, least expensive in terms of results over the long run, requires that check have explicit training in procedure, (3) written inquiry -- slow method, subject to great inaccuracy of results, anonymity of respondent required, fairly satisfactory if carefully designed questions or questionnaire is used
Other Employees	Not advisable unless building a new work team, and then only if personal contact or carefully designed questionnaire is used. May be effective in small communities and small concerns These comments appear to hold true for friends of the applicant
The Union	Effectiveness depends entirely upon the quality of the union hierarchy, their interest in developing a competent and compatible work team Method most likely to produce satisfactory results appears to be personal contact.
Former Teachers	The teacher may be a most dependable reference source. Although teachers tend to be objective, they often do not remember an individual, or their data may be irrelevant, and they may respond with the "that's not my job attitude" resulting from the low pay and high workload situation they face. However, it is wise to know the teachers, they can give valuable assistance

Source: T A. Toedt, prepared for a Graduate Seminar, cf. George D. Halsey, *Selecting and Inducting Employees*, (Harper & Brothers, New York, 1951); and Dale Yoder, H. C. Heneman, Jr., John G. Turnbull, and C. Harold Stone, *Handbook of Personnel Management and Labor Relations* (McGraw-Hill Book Company, Inc., New York, 1958)

Date \_\_\_\_\_

Applicant's Name \_\_\_\_\_

Person contacted \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_ Telephone No. \_\_\_\_\_

Note Introduce self by name, title and company.

1. \_\_\_\_\_ has made application here for employment  
 He states that he worked for \_\_\_\_\_ from \_\_\_\_\_  
 to \_\_\_\_\_ in the capacity \_\_\_\_\_  
 Is that correct? \_\_\_\_\_

2. How would you describe his (her) work performance? \_\_\_\_\_  
 \_\_\_\_\_

3 Why did he (she) leave? \_\_\_\_\_

4 What was his (her) salary at time of leaving? \_\_\_\_\_

5. Can you tell me something about his (her) personality? [What was he (she) like as a person?] \_\_\_\_\_  
 Attitude? \_\_\_\_\_ Loyalty? \_\_\_\_\_

6 What about attendance? \_\_\_\_\_

7 Any bad habits or traits that affected his (her) work performance?  
 \_\_\_\_\_  
 Need close supervision? \_\_\_\_\_

8 Would you re-employ? \_\_\_\_\_  
 For same occupation? \_\_\_\_\_

9 What kind of job do you feel would he (she) be best suited for?  
 \_\_\_\_\_

Signature \_\_\_\_\_

By permission, Johnson & Johnson, New Brunswick, New Jersey, 1960.

**TELEPHONE CHECK FORM**

*Figure 39*

be put on the waiting list if more time is required in which to acquire the needed background data.

*Evaluation Interview.* The applicant is recalled and briefed as to the outcome of the previous steps in the system. Two situations present themselves as likely in most cases, and a third is a possibility. *First*, the results of the background check, the employment testing, and/or the medical exam may indicate that the applicant is not suited for employment. In this case, the interview should be handled by the employment manager. He is the one who speaks with and for authority. He is the one who theoretically has the greatest experience and knowledge and is most likely, therefore, to be able to carry the interview off successfully. Finally, it is mere courtesy to have the top man in employment deal the fatal blow. The remarks concerning rejection, as stated previously, apply here.

*Second*, the results of all previous steps may clearly indicate that the applicant is potentially desirable. In this case he is briefed as to the findings and then told about the next step, the selection interview. In this briefing he is given some insight concerning the manager who will interview him, the location of that manager and how to get there, and every effort is made to minimize any fears apparent in the applicant.

*Third*, it may be found that the applicant is not suited for the job he seeks, but is suited for another job. Careful explanation again is required, and if the applicant feels that he is not interested in the indicated spot, he is given the opportunity to reject it. If he is not interested, he should not, in most cases, be put through the selection interview.

*Selection Interview* The decisive step, the point of decision, this interview is conducted by the using manager. Upon his decision rests the fate of the applicant. How should the manager handle the situation?

*First*, the employment unit provides the manager with a complete reading on the applicant — a complete profile of his strengths and weaknesses.

*Second*, armed with this data the manager makes every effort to consider the applicant objectively, with as little emotion as possible entering his judgment process. Let us remember, however, that it is the subordinate's responsibility to get along with his boss. The manager thus avoids the foolish concept that he must bend over backwards to make the applicant feel welcome if, in fact, he is not welcome. True, the manager will be tactful up to a point and courteous at all times, but there is no reason for him to be subservient.

*Third*, if the applicant is unacceptable to the manager he is quickly and courteously dismissed and sent back to the employment manager for a rejection interview. If he is acceptable, the applicant will be

briefed in his work and its dangers, and then quickly returned to the manpower division for induction processing (the first stage of which would be the counseling and processing interview).

*Rejection Interview.* The previous discussion of this topic pertains here. It might be added, however, that an individual who has gotten this far in an employment procedure, and then faces rejection, will have good reason to be disturbed. Extreme care, therefore, must be exercised by the interviewer. Vocational assistance ought to be readily available. Let the critic remember that this advice stems from a realization of the dollar-and-cents importance of good public relations. An embittered applicant can do untold damage to a firm in the community.

One additional comment: an individual who reached this point in a selection process is likely to have qualifications for jobs other than those currently open, or for which he originally applied. It is important, therefore, to be certain that the applicant has been considered for other opportunities, and given the opportunity to enter a trainee, or reserve manpower pool, if one exists.

**VARIATIONS IN SYSTEM** In keeping with the flexibility requirements of any good system, and in keeping with the need for orderliness, it is wise to study the typical variations to any system in an effort to isolate those most likely to be repetitive. Having made such a determination, include repetitive variations in the over-all system and develop separate statements of standard practice to cover them. In many instances, one finds that variation to system lacks any identifiable repeatability. Where this is true, those responsible for the operation of system must rely upon judgment rather than standard practice in deciding what to do, and when, and how.

The duality of this general observation has great significance in the proper administration of manpower selection procedure. For example, the recommended system just discussed, and pictured in Figure 35, would be improperly applied — as written — in a case of managerial selection. We therefore shall lay out a proposal to cover that general problem in the next section. Furthermore, an organization will have jobs and job-groups where great depth of background investigation is unimportant, or where it is wasteful to insist that an applicant take an intensive battery of employment tests. Let us consider some typical variations.

**Illustration #2** Analysis of the jobs in company ——— indicates that there are eight job-groups covering some 40 occupations, but involving very few significant skill variations within the groups. It also is determined that in one job-group the really significant requirements are: (1) a very high degree of strength in abdominal, back, shoulder and arm muscles; (2) a high

degree of color discriminations, (3) a better-than-average degree of muscular coordination; (4) a minimum degree of education. It also is determined that the job involved is a "dead end" job, that it does not involve a security risk of any kind, but that it does involve the risk of danger to others, and to a high degree. The analysis of the job also indicates rather clearly that an incumbent would not be in a position to interfere with the operations of others because he would be working either alone or with one of the four other persons holding a similar job.

The company established its selection procedure so that when the employment office was seeking applicants for a vacancy in this job, only very limited employment testing (performance test only) and only very limited background verification were applied, but very careful medical examination was involved. Obviously, this meant that the selection time required for filling this job was considerably less, as was the cost, than for most other jobs in the company.

Note, the standard practice write-up for the employment department included this variation to the general system as a separate procedure

**Illustration #3** In the same organization under discussion in the foregoing illustration, another job involved a very high degree of computational work, and work of a rather sophisticated level. The job also required considerable judgment of size, shape, quantity, and visual quality, and a very high degree of oral and written expression.

Analysis of jobs revealed that several other jobs involved either the same or approximately the same peculiar characteristics. These jobs were grouped into one job-group as far as employment was concerned, and when a vacancy occurred, the applicants were subjected to a much more rigorous employment testing program than applicants for most other jobs received. This, too, was written into the standard practice manual for the employment department.

When and where the employment man will have to apply judgment instead of a standard procedure depends upon so many variables that one hardly can draw any general conclusions regarding the issue. We can see the kind of thing that can happen through the following illustration, however.

**Illustration #4** Careful study of the jobs in company X led to the establishment of a general employment system and served to identify seven repetitious variations for which standard practice was established. In one such variation, it was SOP to bypass any employment testing other than a performance test, and it was SOP to give a bare minimum medical examination.

An applicant reported regarding an advertised vacancy in a particular job. He met the critical indicators and was passed on to the screening interview. Here the interviewer discovered, through questioning, that the applicant had once broken his left hip. The job in question did not involve frequent lifting, pushing, shoving, climbing or carrying, but what little there was was strenuous. Since the applicant was desirable in all other ways, and since the vacancy had existed for several days and was of a type for which there was little supply, the interviewer sent the applicant for a thorough medical examination.

You will detect the judgment variation which took place. This is the kind of thing that happens and it explains, in part at least, the reason manpower management professionals insist that interviewers must be trained to the field and knowledgeable regarding the company and its jobs.

### MANAGERIAL SELECTION — A SYSTEM

The difficulty of manager selection far exceeds that of rank-and-file selection. The nature of the job, its technical and human responsibilities, and the high cost of an error account for this difficulty.<sup>3</sup>

The task requires the constant attention of all management personnel. The quality of a company's leadership is an important consideration of all managers. Three approaches to effective manager selection exist: promotion, transfer, and external selection.

Company policy often limits the external selection activity to initial placements. In some instances no policy exists. In others the policy involves — and perhaps correctly — external selection whenever qualified persons are unavailable from within the organization.

*EXTERNAL SELECTION — THE GENERAL CASE.* The argument for and against external selection of managers actually should be isolated to a decision problem. As such, it involves weighing the pros and cons for each specific case, using as the guide policy the idea of taking from within when possible, and seeking from the outside when qualified persons are unavailable internally. On the positive side of the ledger we find that promotion and transfer tend to maintain or improve morale and make selection of the "right" individual easier, since more is known about him and he knows more about the firm. On the other hand, "new blood" brings a new lease on life and inbreeding is avoided. Furthermore, outsiders bring with them many valuable contacts, and because of non-bias-of-association, the outsider may be more capable of objectivity, at least for a while.

<sup>3</sup>cf. David G. Moore, "What Makes a Top Executive," *Personnel* Vol. 37, No. 4, July-August, 1960, pp. 8-19, also Louis A. Allen, "The Good Manager: Do We Know What We're Looking For," *Personnel*, Vol. 37, No. 1, January-February, 1960, pp. 8-15.

At this point in the text our concentration will be upon external selection. Since internal selection depends upon promotion and transfer, it is related to manpower development as covered in Part IV.

*Supervisory Selection.* Included under the heading "supervisory" are foremen, section managers (heads), assistants, department and possibly division heads (if they are not vice-presidential status), in other words those managers below the vice-presidential level. Assumed in this discussion is the management status of foremen, though admittedly many organizations fail to consider or treat their foremen as managers.

Traditionally, particularly with respect to the lowest echelons of management, the question of supervisory recruitment and selection has been handled with little planning. Frequently when a vacancy occurs there is a flurry of activity and finally the hurried and harried finger points to "George" and we simply let "George do it" In this day and age such an approach to supervisory selection represents a luxury we can ill afford. Good management and good managers realize this and seek to develop very carefully timed and systematized selection programs.

Traditionally the manpower division had little to do with the process of supervisory selection. The function was left to, or considered as inherent to, the line. Actually the problem is such a specialized matter, and involves so many hours of consideration and active search, that one hardly can expect line personnel to handle that function and still get out the work. The manpower group therefore appears to have a distinct reason for being involved. What makes this such a real problem today and why should system be so important? The following considerations may help answer the question.<sup>4</sup>

1. Good selection can improve supervision by increasing the likelihood of identifying the "right man." Improved supervision can mean a general improvement in management action

2. Management work is becoming more complex. Good selection improves the likelihood of hiring people capable of meeting increasingly complex job requirements

3. Good selection tends to uncover qualified people more readily than hit-or-miss techniques and thereby tends to improve morale, reduce turnover and scrap losses — all of which are typical under poor supervision.

4. Systematic selection impresses people with the possibility of advancement and tends to spur present employees to seek to improve their lot.

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<sup>4</sup>cf. Milton M. Mandell, "Supervisory Selection Programs: A Study of Current Trends," *Personnel*, September, 1955, pp. 107-117, Lawrence Stessin, "Managing Your Manpower," *Dun's Review*, October, 1960, pp. 95-98, *passim*.

5. Good selection tends to reduce delays and confusion in the filling of vacancies.
6. Good selection eliminates or minimizes the influence of many age-old fallacies concerning supervisory selection.

The manpower division's responsibility is about the same for supervisory selection as for rank-and-file selection. They handle the recruiting, the processing of applicants (but using superiors should become involved with the interviewing to a greater extent than in the rank-and-file system), and undertake the administration and performance of the studies needed to identify "who" are supervisors, and "what" are the included functions. Manpower performs the studies necessary to development of policy regarding the internal or external selection of supervisors, and designs and audits the selection system.

*Policy Considerations.* All previously-mentioned considerations are important here. In addition, others exist as follows:

1. Competency — what minimum competency level will be permitted as acceptable at each supervisory level and/or job?
2. Experience — what minimum experience level will be permitted as acceptable at each supervisory level and/or job?
3. Job analysis — without question, if supervisory selection is to be effective, employment people must work from accurate job descriptions and specifications. The vital first step of correct selection for any job at any hierarchical level is identification of that job — identification of who, what, how, and possibly why it should exist
4. Familiarity — the question involves the age-old problem of contempt due to familiarity. Specifically, effective policy demands careful examination of the wisdom of making an individual a supervisor over persons with whom he has formerly been associated as a worker.
5. Timing — effective policy requires development of lead-time on supervisory acquisition. It is generally poor policy to let supervisory selection wait until the vacancy develops. This increases the risk of error on the part of the new man if for no other reason than his probable lack of familiarity with the totality of the job.
6. Ability-depth — the question really is whether or not one should require broad management ability over intensive and specialized knowledge in the manager. The answer is situational — foremen require more intensive knowledge than division heads and staff individuals require more intensive knowledge than their line counterparts in most cases.

A prime issue would be to what extent should the manpower division become involved with supervisory selection. This is a situational matter in most cases, but the answer includes recognition of the responsibility pattern suggested previously.

*A Special Recruitment Problem.* Ordinarily the recruitment of supervisory personnel beyond the first level of management (fore-

man) ties in with plans for eventual elevation of the individual to some executive position. Obviously, therefore, the recruitment function tends to lean heavily upon colleges, mutual agencies, professional groups and the like. Furthermore, considerable long-range planning and analysis regarding future manpower requirements and expected manpower losses generally occurs before actual recruitment efforts. It is *even more important* to insist that recruitment *be informative* when it is directed toward supervisory or executive acquisition than when directed toward rank-and-file employment. The training of those engaged in supervisory and executive recruitment work should be such that the possibility of injury to company reputation is minimal.

*System.* Actually the main difference between supervisory and rank-and-file selection lies in the fact that the preliminary interview usually is tied in with the recruitment function. When an applicant is interviewed by the recruiter, he (the recruiter) works from complete knowledge of the job and decides to pass the candidate on to the next step, or not to do so, on the strength of the critical indicators of the job, and of the one next in line.

If the decision is made to pass the candidate on, an appointment is made and the employment office immediately notified of that appointment. Copies of the appointment memorandum are placed in the hands of the recruit much as one presents travel orders to a military man enroute to a new assignment.

The *second phase* of system involves the screening interview. This can be conducted by line officials (using managers) if, but only if, they are trained to handle employment interviewing of this kind — experience alone does not constitute training. If satisfactory, the recruit is returned to the employment section where he is briefed as to the nature and reason for employment tests and medical examination. If the candidate is not judged satisfactory he should be released with explanation.

The *third*, or testing phase is conducted under the same rules as indicated previously, that is, what is tested will depend upon the requirements of the job to be filled and the one next in line. An exception may exist in terms of the physical exam. Not many organizations make an exception, but with the existing shortage of managers, an organization can little afford to risk the loss of young blood through predictable or existing physical deficiency. The medical examination therefore should be more rigorous as a general rule than may be the case with the average rank-and-file selection.

Passage of *background verification* — which is particularly important to all supervisory or executive selection — and success with the testing program means that the candidate is returned to the using manager for placement interview. Naturally, where background verification is both intensive and extensive, there may be a considerable

waiting time. This requires explanation. It is possible that one can use the waiting period to indoctrinate the candidate concerning company policy, procedure, and product.

Variations in system occur as previously described. The likelihood of extreme variation is limited, however, in the case of supervisory or executive selection. This is true because managerial positions have a distinctly common base.<sup>5</sup> The ability of any manager to plan, coordinate, direct, communicate and control is such a real need for success in management work that this pattern of competency must certainly be challenged in selection to any management position.

Important here is the general rule that actual placement, particularly in the lower echelons of management, should be probationary, and that placement and training should be synonymous. Except in isolated cases, the training scheme properly begins immediately after the hiring decision, and ought to permit development of broad management capabilities while strengthening specialist knowledge. To accomplish this, obviously one must have thoroughly identified the nature of the work to be performed in the managerial jobs.<sup>6</sup>

The selection of supervisory personnel presents a more difficult problem than the selection of rank-and-file people, however, the general technique is relatively similar. Perhaps the only major differences will be that the recruiter is engaged in the preliminary interviewing, and that the screening interviews would be handled by line officials if they are competent (and many problems arise in industry today because such people do perform this interview even though they *are not* competent).

**EXTERNAL EXECUTIVE SELECTION.** The fabric of our society makes our industrial establishment just as important to our survival and well-being as our churches, schools, military services, and government. The future of America thus is linked with the quality of the leaders and future leaders of industry. It is no wonder then that we subscribe to the great attention focused upon leadership development in industry. Strangely, however, it is only within the very recent past that industry as a whole can be said to have recognized the importance of executive development.<sup>7</sup>

Development depends first upon selection of those to be developed. External selection of executives generally occurs at two organizational levels — the executive trainee level and the top management level. This

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<sup>5</sup>cf. Theodore O. Yntema, "The Transferable Skills of a Manager," *Journal of the Academy of Management*, The Academy of Management, Vol. 3, No. 2, August, 1960, pp. 79-86, *passim*.

<sup>6</sup>Peter F. Drucker, *The Practice of Management* (Harper & Brothers, New York, 1954), p. 320 ff.

<sup>7</sup>Drucker, *op. cit.*, p. 183; see also Alvin E. Dodd's remarks in the American Management Association, *Management News*, November, 1944.

selection system requires the same careful development as any rank-and-file program, and should be incorporated in the over-all manpower scheme of the organization – it should not be left to chance!

*Policy Considerations.* The policy requirements and considerations previously mentioned apply here, and additional matters require attention. *First*, selection must be based upon the recognition and definition of the peculiarities of executive positions. These include the following:

- 1 In relation to the whole, executive positions are few.
2. Functional success in executive work is dependent largely upon very close personal relationships. Homogeneity of viewpoint and individuality are particularly important.<sup>8</sup> Objectivity and positive action must be coupled with sensibility and cooperation. Friendliness must be tempered by impartiality. The individuals require the ability to activate the “a” and “e” circuits effectively (dependence upon informal communication should be a last resort)<sup>9</sup>
3. Development of executive talent is a long-run proposition. It is endangered by man’s somewhat natural tendency to procrastinate and by the extreme difficulty of attaching dollar values to such development, except on the negative side of the ledger.
- 4 Because of the extremely personal nature of the work and the performance of that work, the actual functions and methods often are very difficult to identify.
5. It is doubtful that any reasonably reliable and typical definition for any particular executive job can exist.
6. Executive performance is particularly instrumental in the success or failure of an organization.

The *next* point develops from these remarks: policy regarding executive selection should be tailor-made. True, many organizations look to competitors or constituent firms for policy dictum. The purpose in doing so, however, should be limited to a search for guidance. Additional policy requirements can be stated as follows:

- 1 A “pool” of executive trainees, or a selection effort, requires a foundation in careful estimates of future need.
2. External selection will be based upon dependable knowledge that qualified personnel do not exist within the organization.
3. The procedures utilized will be as scientific as possible – this dictum applies to all selection effort in an organization.

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<sup>8</sup>cf. “The Functional Needs of Organization” in Chapter 3.

<sup>9</sup>cf. Reference to these circuits in Chapter 4, see also, Joseph L. Massie, “Automatic Horizontal Communication in Management,” *Journal of the Academy of Management*, Academy of Management, Vol. 3, No. 2, August, 1960, pp. 87-92, *passim*.

4. Regardless of the need for a replacement, an applicant whose ratio of accomplishment to opportunity ranks low should be rejected.<sup>10</sup>

5. Definition of executive jobs involves consideration of the personal as well as the impersonal requirements.

*A Special Recruitment Problem.* As in the case of supervisory selection, the executive problem creates certain special recruitment considerations. *First*, because the probable best source for executive trainees lies in the collegiate structure, college placement officers and members of the professional staffs should be cultivated. Alert recruiters develop a high level of rapport with these people, a level which enables them to review academic records and whatever background information may be available prior to interviewing the candidates. That interview should be the preliminary interview.

*Second*, because top-level selection normally means "spiriting" a man away from some other organization, consultants and mutual agencies will be used extensively. This being the case, great care is required in developing effective relationships with competent agencies of this type, and their loyalty is a necessity. In addition, it becomes particularly important to work closely with such agencies, assuring their knowledge of the internal and operational characteristics of the company.<sup>11</sup>

*Third*, regardless of whether considering trainees or top-level replacements, it is particularly important to establish rapport with candidates. If even one candidate for these levels gains the impression that the recruiter does not know his job or his company, or reaches some other negative conclusion, the particular source can "dry up" over night!

*System.* Little difference exists between the system applicable here and that used for supervisory selection. Careful background verification is vital, competent interviewing is a real necessity, and effective testing and medical examination are basic requirements.

**Illustration #5** Executive trainee pools are established to groom recent college graduates, and others, as replacements for junior executives, who in turn would step into the shoes of executives leaving the company in the future. An excessive number of young trainees in a pool results in an unnecessary expenditure of money and "spends" the trainee's time ineffectively. On the other hand, if we have too few such promising men mark-

<sup>10</sup>Jackson Martindell, "The Business Executive," *Ethics for Modern Business Practice* (ed Bunting), (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1953).

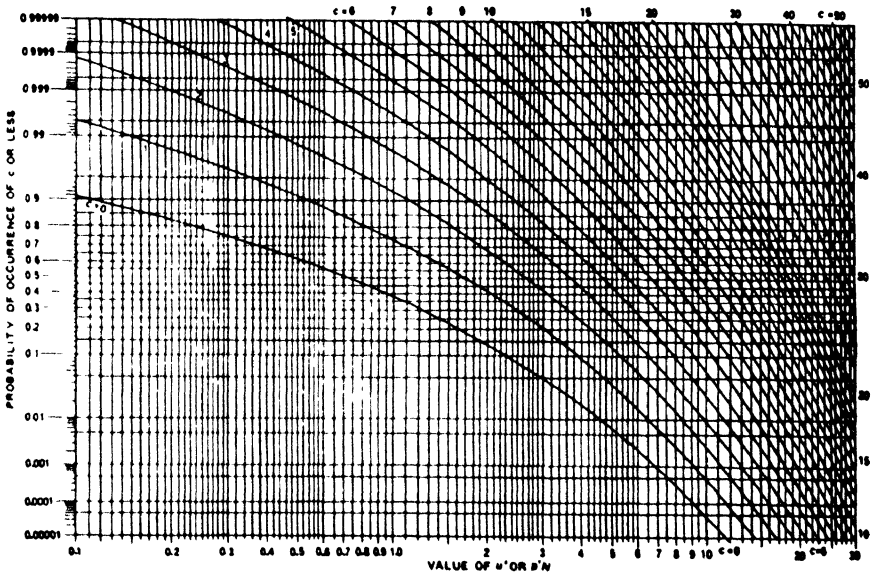
<sup>11</sup>Stephen Habbe, "What About Executive Recruiters?", *Management Record*, National Industrial Conference Board, February, 1956, Vol. XVIII, No. 2 pp. 42-44. See also Valerie Camell, "Coming - Better Service from Private Employment Agencies," *Personnel*, Vol. 37, No. 1, January-February, 1960, pp. 69-73.

ing time, we shall have to make replacements without the advantage of having sufficient time to make a good selection or reasonably assure needed training. To attack this situation effectively we need to know how many vacancies are to be expected per year

Go to past records and form a statistical table of odds to help your decision for planning unhurried replacements

Suppose you have 50 executives, and past records show that an average of 37 have left the company each year. As long as this number, called  $\mu'$ , is less than 10 per cent of the total (5, in this case is 10 per cent of 50) we can form this table from the cumulative probability curves for the Poisson Distribution shown in Figure 40. We note that when  $\mu'$  is equal to, or greater than 10 per cent of the total group, the Binomial Distribution is used instead of the Poisson (this is covered in the Appendix).

(THE THORNDIKE CHART)\*



\*Reproduced with permission from *Sampling Inspection Tables* by H. F. Dodge and H. G. Romig, published by John Wiley & Sons, Inc. and with permission, from *Quality Control and Industrial Statistics*, by A. J. Duncan, Ph.D., published by Richard D. Irwin, Inc.

CUMULATIVE PROBABILITY CURVES FOR THE POISSON DISTRIBUTION

Figure 40

<u>"c"</u> <u>vacancies</u>	<u>Probability of "c" or</u> <u>less vacancies</u>
0	.02
1	.12
2	.29
3	.49
4	.69
5	.83
6	.92
7	.96

If we have 5 men available in the pool, we see that we are 83 per cent sure we have enough. In only 17 per cent of the cases, in the long run, will we need more than 5 men per year. So, on the average, in only about one year out of five will we need a man without having sufficient time to prepare him.

A look at the other end of the table reveals that we can expect 2 or less vacancies 29 per cent of the time, in about one year out of three we will have 3 or more men too many in our pool, who, of course, will meanwhile be getting useful training in the company.

You now can see how considering both ends of the Poisson Distribution helps us decide on a strategy. Say, in this case of 50 executives, we do promote an appropriate "experienced" man to fill a given executive vacancy. His position in turn can be filled similarly, and so on down until we draw from the "executive trainee pool." Say we estimate that it takes about one year to get one or more potentially good men selected for the pool. If we keep our pool between 2 and 5 people strong we shall have —

- with 5, a 17 per cent chance of running out,
- with 2, a 71 per cent chance of running out,
- with 3, a 51 per cent chance of running out.

So whenever our pool size gets down to 3, we should have an active talent search under way. When the pool size is over 3, we should keep our doors open for exceptional men. If we reach 5 in the pool, however, a man has to be "extremely desirable" to justify our going to 6 men — the kind of man who comes along once in 12 years, if we use our 8 per cent chance of running out as a guide.

When establishing the system it is important to avoid the pitfall which traps many executives; namely, that as long as there are enough young people around, future leaders are bound to be available when

they are needed.<sup>12</sup> There is little evidence to support the suggestion that time will reduce the number of young people available. The mere presence of "warm bodies," however, in no way assures the value of the supply. It takes years to develop people to the point of competency required of an executive. One therefore must select in advance.

The competencies required of an executive often are difficult to define and always are complex. This situation increases the difficulty of determining the potential value of a candidate and necessitates the most scientific selection system available.

The picture is further complicated by the proportion of executives to trainee opportunities. The limited number of executive positions leads to a relatively high turnover in the trainee group. Selection procedure therefore must be developed in terms of both expected need and expected turnover

Promotion from within is the preferred approach to executive selection, however, there must be promotable personnel.<sup>13</sup> Obviously this means that system will involve manpower development (Part IV) and external selection. External selection has the general purpose of building up the trainee pool. Selection for this pool must be scientific; more than that, planning the size of the pool and timing its development requires a scientific approach. Illustration #5 provides an example of such an approach.

## SUMMARY

The selection of manpower is fundamental to the staffing effort. As a process it seeks to determine the most qualified persons for given vacancies and future growth from among the many applicants made available by the recruitment procedure. Modern-day selection is based upon a system of complete selectivity wherein the total competency of applicants is evaluated

The system, for both rank-and-file and managerial selection, is based upon standard or uniform steps. Although uniformity is necessary and order is a prime requirement, the system must be flexible or the job-to-job variations in requirements cannot be met effectively. Furthermore, the tools used to facilitate the hiring decision must be as scientific as possible or system will provide little better results than the hit-or-miss practices of the past. Such tools are available, and are discussed in Chapter 12.

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<sup>12</sup>Stephen Habbe, "Company Presidents View Executive Selection," *Management Record*, The National Industrial Conference Board, Inc., N. Y., April, 1955.

<sup>13</sup>(Stephen Habbe, ed.), "Selecting Company Executives," *Studies in Personnel Policy*, No. 161, National Industrial Conference Board, Inc., N. Y., 1957.

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## Diagnostic Selection Tools

The term most generally used to identify the extensive and intensive manpower selection system set forth in Chapter 11 is "differential."<sup>1</sup> This system seeks to fit a candidate first to the job for which he applies and then to other jobs where a vacancy may exist, and it focuses attention upon the future of both the company and the individual.

Such a system requires evaluation of a candidate's total competency. A person's technical, physical, and socio-psychological ability cannot be judged merely by looking at him. A better way of evaluating is required. The procedure currently available for appraising men's aptitudes, abilities, interests, and personality, and for determining needed physical attributes, involves five tools. These are: (1) a diagnostic or historical application blank, (2) diagnostic or patterned interview, (3) performance and trade tests, (4) psychological tests, and (5) medical examination.

### THE APPLICATION BLANK

The long-form application blank should support the background verification mentioned previously. Eileen Ahern identified a series of questions to be answered in the affirmative regarding the design and content of the application blank.<sup>2</sup> Four of these are as follows:

- . . . Is the item necessary for identifying the candidate?
- . . . Does it help to decide whether the candidate is qualified?
- . . . Will the information be used? How?
- . . . Is the application form the proper place to ask for it?

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<sup>1</sup>Dale Yoder, *Personnel Principles and Policies* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959), p. 238.

<sup>2</sup>Eileen Ahern, *Handbook of Personnel Forms and Records*, Research Report No. 16, American Management Association, N. Y., 1949, p. 17.

The properly designed application contains only items which, in the experience of the firm, are correlated with job success to a reasonably high degree.

The "biographical" application blank is a form designed to establish a background sketch of the applicant in terms of known success predictors and security predictors pertinent to the individual company. The form thus acts as a directional signal for the interviewer. It forces attention to particular areas of information requiring verification. A typical form is shown in Figure 41.

If the application blank is designed to facilitate the work of the interviewer — if it is part of the form used for diagnostic or patterned interviewing — two rules stand out as important.<sup>3</sup> *First*, make a clear break between the portion filled out by the applicant and the part to be filled out by the interviewer, keep the applicant's part at the beginning. *Second*, arrange the order of the application so that it coincides with the order of the personal data form entered into the applicant's file. Both recommendations tend to save administrative time and money.

## THE INTERVIEW

Chapter 5 identifies the salient considerations regarding interviewing. In the previous chapter we referred to the diagnostic or patterned interview. They appear to be the only general types likely to provide reasonably reliable results in the hands of a trained employment interviewer. The technique used should be correlated with the application blank, or be a part of it. Combining the interview and the application blank assures speed and accuracy of accomplishment.

An interesting technique has been developed by Mr. Fehlber, as indicated in Figure 42. It is directive and involves pattern. The approach has utility in technical and managerial selection.

## TESTING

Tests and testing probably enjoy one of the most controversial positions in the entire field of manpower management. Even today, many personnel people refuse to use employment tests of any kind, and resist anything more than the most rudimentary of physical examinations. It is becoming increasingly obvious, however, that tests and testing must be applied if there is to be better than a 50-50 chance of making a "good" selection.

A full understanding of the use and nature of employment tests, physical exams, and the like requires more than the information contained in a basic text; however, the fundamental considerations can be

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<sup>3</sup>Walter Dill Scott, R. C. Clothier, and William R. Spiegel, *Personnel Management* (McGraw-Hill Book Company, Inc., N. Y., 1954), p. 102.



MILITARY

Branch of Service	Date entered	Date discharged
Rank at discharge	Type of discharge (e.g., Medical, Honorable, etc.)	
Major duties: .....		
Service schools attended .....		
Disabilities incurred and percent of disability received		

PHYSICAL

Are you willing to submit to physical examinations required by Johnson & Johnson? Yes. . . No. . .

List any serious illnesses you have had during the last 10 years

Have you been hospitalized or treated by a doctor during the last ten years? If yes, where and for what reasons?

How much time have you lost from work (school) because of illness during the past two years?..

What were the illnesses?

REFERENCES

List three professional references who are not relatives or previous supervisors

Name	Address	Occupation	Years known
Name	Address	Occupation	Years known
Name	Address	Occupation	Years known

In case of emergency notify

Name	Address	Phone Number
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SECRECY AGREEMENT

Have you signed a Secrecy and Invention Agreement in favor of any previous employer? Yes. . . No. . .

If so, give their name or names.

Are you under any obligation to a previous employer, through a Secrecy and Invention Agreement, or otherwise, restricting your acceptance of employment with a competitive firm? Yes. . . No. . .

Should I become an employee of Johnson & Johnson or any of its subsidiary or affiliated companies, I agree, in consideration of such employment, that I will not divulge to others or use for my own benefit any confidential information obtained during the course of my employment relating to sales, formulas, processes, methods, machines, manufactures, compositions, ideas, improvements or inventions belonging to or relating to the affairs of Johnson & Johnson or any of its subsidiary or affiliated companies, without first obtaining the written permission of Johnson & Johnson or of the subsidiary or affiliated company by whom I am employed.

I certify that the answers given by me to all of the questions on this application are to the best of my knowledge and belief, true and correct without mental reservations of any kind whatsoever. I further affirm that I have not knowingly withheld any facts or circumstances that would detrimentally affect this application.

Applicant's signature

Witness (Company Interviewer) Date.

If you wish to give additional information, use space below ...

APPLICANTS DO NOT WRITE BELOW THIS LINE

Interviewer's Comments

Source: By permission; Johnson & Johnson, New Brunswick, N. J.

Figure 41 (Continued)

**Instructions to Interviewer**

**Preliminary - Know the company and the divisions and departments.**  
**Know the objectives of the interview and plan for them.**  
**Know the job specifications and detailed requirements.**  
**Know the man at the end of the interview.**  
**Remember, our job is to match people with jobs, and screen out unacceptable candidates.**

**Procedure - Give Information**

**Tell him about the company and its top people.**  
**Tell him about the product, the skills needed to produce.**  
**Tell him about the organization, its pace, scope, and future.**  
**Tell him about the department concerned.**  
**Tell him about the position and what is being sought.**  
**Educational needs,**  
**Experience desired,**  
**Skills required,**  
**Personal characteristics necessary,**  
**The human relationships involved,**  
**The performance expected.**

**Procedure - Get Information**

**Determine management potential.**  
**Determine technical depth.**  
**Determine past progress.**  
**Determine strengths.**  
**Determine skills.**  
**Determine attitudes.**  
**Determine weaknesses.**  
**Make up a balance sheet of the individual as you perform the interview. Go over it with him before you end the interview.**  
**Reach agreement where there is no agreement.**

**Interviewer's Balance Sheet**

	<u>Technical</u>	<u>Managerial</u>	<u>Personal</u>
<b>Strengths</b>  =====			
<b>Areas of Improvement</b>		<b>How has he developed himself for management?</b>	<b>While he is talking, appraise him on this factor. You can get information on personal improvement during reference checks, if he won't provide you with information.</b>

Source: Prepared by Mr. Arthur J. Fehlber, 1960.

**MANAGER-ENGINEER INTERVIEW GUIDE — AN ILLUSTRATION**

*Figure 42*

presented. These begin with policy and include principles, the restrictions upon success, and identification of typically available employment tests. In addition, the basic idea behind medical examination is considered. First, however, let it be clearly understood that an effective testing program is extensive as well as intensive — that is, it includes performance, aptitude, interest, and other necessary psychological testing as well as medical examination — and the program should be utilized as demanded by the situation.

**POLICY CONSIDERATIONS.** Previous discussion of policy applies here. In addition, certain specific considerations exist.

1. All members of an organization require familiarity with the functions and responsibilities of the testing section and its relation to the manpower and other divisions in the firm.

2. Effective policy and procedure is known to *all* personnel, and good labor-management relations requires that the union be at least an interested, if not a cooperative, bystander.

3. Effective policy spells out at least the following procedural points:

(A) Where testing is to be initiated.

(B) Whether testing is to be a selection tool only, or is to be applied to promotion and transfer work as well

(C) What the specific jobs are for which testing is a basic action-criterion, and what in job testing is to be used as research

4. Effective policy declares that selection is a differential process, and requires that testing be used in that light.

5. Effective policy declares that testing is a supplemental device, not a substitute for other techniques

6. Effective policy requires that adequate job knowledge exist before testing is applied, except when it is used as part of the effort to gain that knowledge. (This should be recognized as a *principle*.)

7. Testing is applied only when satisfactory standards for measuring and predicting job success or failure are developed (a second *principle*).

8. Policy should require that there be adequate physical layout for administration of tests, and that administration be uniform (a third *principle*).

Other policy requirements exist in specific cases. Interestingly, where testing has failed, experience shows that failure generally began with inadequate policy, and frequently inadequacy included failure to implement one or more of these policy statements.<sup>4</sup>

<sup>4</sup>C. Harold Stone, and William E. Kendall, *Effective Personnel Selection Procedures* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1956), Chapter 10, *passim*; George D. Halsey, *Selecting and Inducting Employees* (Harper & Bros., N. Y., 1951), Chapters IX, X, XX, *passim*; George Strauss and Leonard R. Sayles, *Personnel: The Human Problems of Management* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1960).

*PRINCIPLES.* In addition to the three principles mentioned in items 6, 7, and 8 under Policy Considerations, others bear consideration. These are of an operational nature

1. Generally, man is capable of doing more than one thing; hence, selection should be differential rather than traditional.
2. Develop and apply tests as differential tools.
3. A good test measures characteristics pertinent to success or failure on the job — pertinency should be as obvious as possible.<sup>5</sup>
4. All personnel must understand the purpose of the program and the nature of the tests. Employees and applicants will have objections to the testing program. There is no point in compounding the problem by countering objections or questions with deception.
5. Tests should be treated with caution as predictors of success or failure on a job. At present, the most reliably predictive test scores are the lowest, and people are not likely to get repeatedly low scores on a great many of the tests available for industrial use unless they have “learned” the test.
6. Use trained persons to implement the program.
7. Three issues are involved in the determination of a “good” test: validity, face validity, and reliability.<sup>6</sup> *Validity* means the degree of accuracy with which a test measures what it is supposed to measure. *Face validity* is the apparent relationship, or evident manifestation of relationship, between the test and the qualities it is developed to identify. The importance of *face* validity often is overlooked. High *face* validity means greater ease in gaining acceptance by supervisors and testees. *Reliability* is dependability or repeatability, the ability to evince the same or approximately the same results each time it is given to the same person under the same conditions.
8. Present test results in clear, concise terms. This requirement is best satisfied by utilizing simple charting techniques such as bar charts, and means that a clear understanding of the meaning of test scores is necessary. Table 19 identifies and briefly describes the pertinent terms.
9. Testing is dynamic. No testing program should remain static. Additional research is necessary at all times because jobs change, sources and applicants change, and testing is not a fully validated procedure.
10. Testing materials must be carefully secured. If tests are compromised in any way their value is lost.

The principle that test administration should be uniform or standardized is often the most neglected of all testing principles. For

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<sup>5</sup>C. H. Lawshe, *Psychology of Industrial Relations*, (McGraw-Hill Book Company, Inc., New York, 1953), p. 103.

<sup>6</sup>Halsey, *op. cit.* pp. 123-133, *passim*. Though statistically there is serious doubt as to the value of *face validity*, one must recognize the operational value of the term.

TABLE 19

IDENTIFICATION AND DESCRIPTION OF TEST SCORE TERMINOLOGY

Term	Meaning
Raw Score	The summation of the points of a completed test.
Norms	Found in conversion tables, these converted raw scores exist for each of several different groups. By use of the proper table a reasonably accurate estimate of an individual's position in a group (occupational or educational) is possible.
Percentile Scores	A numerical score indicative of the percentage of all scores made by a given group that is lower than that score. A "P" score of 70 means that 70% of all those in the group with which the person is being compared made scores lower than or equal to his score.
Standard Score	Though more difficult to explain, a better means of scoring. The percentile score is inadequate at the middle of the scale since a difference, say of five points, near the middle is not nearly so great as a difference of five points near either end. Thus, it is more meaningful to describe how much a score is lower or higher than the Mean (X) of the scores of the group. Even this leaves a weakness for mere deviation from the Mean is useless unless we know what part of the group had even lower scores. Thus, we use Standard Deviation described in standard texts on statistics. Sometimes these scores are referred to as "z" scores -- as plus or minus 20.
Combined Scores	Statistical combination of scores. Usually undesirable unless there is no material differences between positions.
Critical, or Cutoff Score	The rejection score, the score known as "passing". Setting depends largely upon the nature of the labor market. Calculation is a matter of study that is, if the scores range between 7 and 26 and the high fourth is between 25 and 40, then cutting off at the bottom of the high fourth would eliminate all but those few making 25 and 26 from the low fourth. To back such study it is necessary to have careful supervisory rating of job success and correlate between success and score, and it is necessary to know the condition of the labor market.
Critical, or Acceptable Range	Routine clerical or machine tending jobs are often boring. Thus, two cutoff scores are established. The low score -- applicants below this score probably could not succeed. The high score -- applicants above this score probably would not succeed because they would lose interest. The range between these two would be the critical or acceptable range.
ER	A record notation indicating that the applicant is an employment risk in terms of test profile and interview results.
Profile	A graphic summary of test results. A Master Profile would be a graphic summary of Selection Process results. In either case, the profile may show the relationship to the probability, or Normal Curve in terms of results, or in terms of results and known successes or failures as the case may be.

Source: Halsey, *op. cit.*, pp. 108-177, *passim*; Stone and Kendal, *op. cit.*, pp. 233-380, *passim*; Yoder, *op. cit.*, pp. 192-196, *passim*.

example, a visit to a Connecticut firm raised some doubts about their testing program. Doubt led to four return visits, and the following conditions were noted.

First visit: a test being taken by person sitting in waiting room in presence of six other people, and while floor was being polished.

Other visits: Second, same test, in waiting room, room being painted.

Third, same test, in back of manager's office next to door opened between that office and room where local "blood bank" was at work.

Fourth, different test, in waiting room, personnel manager and local union president arguing in center of floor.

Fifth, same test as first time, for same job (previous applicant failed at the job), at small desk in corner of conference room while a grievance committee meeting was taking place at other end of room.

Is it any wonder that the personnel manager said: "Testing! I don't know why we use it. It sure isn't any good!"

Unless tests are administered under standardized conditions, one tests the environment and its effects rather than the applicant.

**STANDARDIZING ADMINISTRATION.** Standardization of test administration requires three basic steps

- 1 Putting the group or individual at ease. One thus establishes rapport. To assist in gaining this atmosphere a "buffer" test can be used. A "buffer" test may be a simple test given first and used solely to get the testee(s) accustomed to the idea, or it may be merely the use of the "trial-runs" supplied at the beginning of most tests.

2. Careful following of the instructions which accompany the test. Most skilled administrators admit that the only proper way to handle test administration is to read the instructions to the testee(s) and take time to demonstrate and answer all questions. They point out that to attempt to pass on instructions from memory or to avoid demonstration or response to questions is to invite failure. The point is that the *norms* pertinent to a test usually are established on the premise that the instructions will be followed with care, if not to the letter.

3. Give tests in adequate and regularly assigned places — the same room, the same light, controlled ventilation and humidity, controlled time, noise levels, and distractions (or no distraction or noise)

**BASIC RESTRICTIONS TO SUCCESS.** Most people fear tests, regardless of their nature. Such distrust probably accounts for much of the criticism of employment tests, and also may reduce the probability of success of a testing program. A more disruptive factor, however, is the misleading or misleading of the applicant. *Proper* handling involves four factors: (1) management's attitude, (2) program adequacy, (3) capability of those administering the program, and (4) the attitudes of those being tested.

*Management Attitude.* A positive, co-operative, and favorable attitude on the part of management increases the chances for success in the application of a testing or, for that matter, any other program. The provision of mere lip service destroys the probability of success. As a case point, consider the following:

**Illustration #5** Frank R., foreman on the second shift of ——— company, was waiting for a train. To pass the time he had gone into the hotel bar. As he sat sipping his cooler, three men came in and sat down at a table behind him. As their conversation picked up Frank was able to identify one of the speakers as the company's vice-president of production. Naturally the desire to eavesdrop became intense.

The vice-president was cajoling the other two men regarding their recent installation of a psychological testing program in their concern. Among other things, he said, “. . . sure we've got one. Regardless of whether a thing is any good or not, you've got to keep up with the other fellow, and you know what ——— company did two years ago. . . .”

Do you need much imagination to figure out what Frank's attitude was? He passed the word when he got back to the plant — and how the testing program suffered!

Criticism — healthy, constructive criticism — helps develop adequate programs, but lip service merely destroys!

*Adequacy of the Program.* The distinct factors bearing upon the adequacy of a testing program are five: (1) its extent, (2) its depth and flexibility, (3) the timing of its phases, (4) the research upon which it is based and connected with its application, and (5) the physical facilities for its administration. These points will appear familiar, after all they pretty well describe the restrictions to success of any program.

*Extent* refers to the extensiveness of coverage. As previously indicated, an adequate program covers the medical, job knowledge, and psychological requirements of a concern's jobs. Such programs are costly but the long-run return upon the investment pays high dividends.

*Depth* and *flexibility* refer to dimension and permanence, that is, how deep shall we probe and shall one system be adopted and strictly adhered to. Policy, the specific skill requirements of the jobs, and the fiscal position are the prime determinants of depth. Operationally, this means that on dead-end jobs one normally would not probe very deep.

*Rigidity* or permanence in a testing program indicates that management lacks a full understanding of testing techniques. Improvement should be a constant goal. No matter how you look at it today, psychological testing techniques are far from perfect and even may be

based upon wrong assumptions in some cases.<sup>7</sup> Medical diagnostics today surpass anything existing 30 years ago. As any competent authority will quickly state, however, they also need improvement. In the interest of future economy, worker morale, and current production, it appears wise to conclude that testing should be a flexible program and under constant audit.

*The timing of its phases* should depend upon the jobs to be filled, not upon edict or emotionally devised opinion of an hierarchical authority. If the prime requisite for success on a job is finger dexterity and good health, whereas the least important factor is the ability to adjust to rapidly changing conditions, the first thing to examine would be dexterity.

*Necessary research:* the importance of research already has been mentioned. Where tests are being developed by the company, it is necessary to do so in conjunction with industrial engineering and product engineering personnel. Frequently manpower people engage in test research without considering the pattern of product, process, and job changes being planned or already taking place. In such cases the tests developed could easily have little relation to the planned or developing skill requirements or human relationships. This, of course, would be a wasteful situation.

Packaged tests (developed by academic or commercial testing bureaus) have now reached the stage of development that makes them generally safe to use. The psychologists who developed these devices have undertaken extensive validation studies. As a result, it is often unnecessary for the using company to undertake additional validation study. This is particularly true in the case of nontechnical and non-professional selection, however, caution still is required. There is good reason to believe that if tests have been validated against brief initial criterion, their validity will deteriorate in time. When using any test, including packaged tests, it thus pays to *know* the nature of the validation effort.

As already indicated, testing is not, and should not be, limited to initial selection. It has utility in selecting candidates for promotion. Where testing is used to predict supervisory potential, it is wise to undertake psychometric study to support the testing program. This can increase the validity of the findings.

Tests are not divining rods. They are beacons. They should not replace careful interviewing and background verification. They should be recognized for what they are: a significant part of an effective diagnostic selection process. Employment managers find that the more they participate with academic and commercial testing organizations,

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<sup>7</sup>Mason Haire, "Use of Tests in Employee Selection," *Harvard Business Review*, 1950, No. 28, pp. 42-51, *passim*, Strauss and Sayles, *op. cit.*, pp. 447-449.

and the more individual research they engage in, the more effective their own selection procedures become. Selection research in testing and interviewing seems to represent an important function of the progressive manpower manager.

*Physical facilities* directly affect the success or failure of a testing program. As previously suggested, unless these are standard, one tests the environmental affect. The minimal requirements of proper physical facility include privacy, comfort, equipment, and access.

*Capability of administrators* also directly affects the success of a testing program. There seems to be something about medicine and psychology which engenders the feeling in many people that: "we are all pretty good practitioners." Perhaps it is the subtle complexity of these sciences which makes us fall heir to the simple trap of assumed skill. Whatever it is, it should be avoided! The medical phase certainly should be handled by none but a skilled medical staff. The psychological and job knowledge phases should be handled by individuals competent in these fields, not by persons who have given good service over the years but are too old or in too poor health to continue in a "line" capacity.

**TYPES OF TESTS.** A basic text of this type cannot enter into a discussion of medical testing: such coverage is strictly the business of medical people. Discussion of the types of tests therefore covers those designed to expose the technical and socio-psychological competency of people. The student interested in the medical phase should consider study of the several valuable references to industrial medicine available in most libraries and consider study of basic pre-medical courses, if not actual preparation for medicine.

*Performance and Trade Tests.* Specific technical competence may be examined by one or both of two general types of tests: (1) performance tests, and (2) trade tests. Both types seek to identify what the applicant has already learned regarding given skills and particular knowledge.

*Performance* tests indicate a person's specific ability to perform certain defined and definable tasks. A typing or shorthand test, a request that the applicant perform a certain basic operation on a given machine, an appraisal of an individual's skill with a calculator or calipers — these can be considered performance tests. They indicate proficiency or achievement.<sup>8</sup>

*Trade* tests differ from performance tests in that they are designed to expose an applicant's knowledge of a given trade. In some cases, however, the two have been so combined by the using agency that differentiation is difficult.

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<sup>8</sup>Halsey, *op. cit.*, pp. 148-159, *passim*; Yoder, *op. cit.*, pp. 269-270.

As a general rule, employment people would do well to reserve the broader *trade* tests for those applicants seeking positions having an immediate or distinctly imminent supervisory responsibility. To apply both performance and trade tests to all applicants for all positions would be wasteful of time and money. It would be about as pointless as the doctor who gave a complete physical exam to each person who came to pay his bill!

*Psychological Tests.* Whereas the previously discussed tests pertain directly to immediate job knowledge and performance, the broad classification "psychological tests" refers to devices designed to investigate aptitudes, personality, and interest. Generally speaking, such tests may be identified as "speed," "power," or "spiral omnibus." The speed test has a definite time limit and usually is designed so that completion within the time limit is almost impossible. As a point of interest, note that older persons, in comparison to younger, generally are at a disadvantage in this kind of test.

Power tests, given without a time limit, tend to minimize the advantage of the younger person. *Spiral omnibus* is a term assigned tests developed to measure *more than one type* of potential (usually apply to tests of mental ability), thus the name "omnibus." In addition, the questions follow a related or "spiral" pattern. That is, questions one, three, five, and so forth may be related, and questions two, four, six, and so forth may be related, thereby making individual question scores meaningless and scoring of individual abilities difficult.

To facilitate understanding of the nature, use, and pitfalls of these testing devices, Table 20, which follows, has been prepared. The student is reminded that most books are at least one or two years old before they reach his hands, therefore, it may be that some tests indicated as not having been validated may have been validated by now.

## THE EMPLOYMENT OFFICE

Imagine walking into the employment office of a concern where you hope to obtain work and being greeted with a very curt, "Well, what do *you* want?" Or, consider your reaction to the following:

**Illustration #6** The employment office of the --- company was located in the basement of the foundry building. The waiting room was approximately 8 feet x 12 feet. In the room were three hard, straight-back chairs, vintage 1900, one bare-bulb light, a desk behind which an obviously disgruntled, gum-chewing receptionist sat reading a typical pulp magazine. On entering you are asked your business and told to wait in a churlish manner. The wait is for 20 minutes, with no explanation given even though you had an appointment. While waiting, another person enters and is accorded the same treatment. Finally,

TABLE 20

FUNCTIONAL CLASSIFICATION OF SELECTED EMPLOYMENT TESTS

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
<p><b>Mental Alertness Tests</b></p>	<p>A measure of general intelligence includes general intelligence, mathematical reasoning, spatial visualization, mechanical comprehension, verbal comprehension, verbal fluency, and english usage tests</p> <p>The exact nature of general intelligence is more a matter of academic interest. Real utility is in (1) how quickly a person can learn new duties involving mental processes, and (2) the approximate intellectual level for which a person is best suited. Note, avoid the term "intelligence test," for this poses a threat to an individual's security -- particularly those of the lower educational and social strata</p>	<p>Otis Employment Tests</p> <p>Wonderlic Personnel Test</p>	<p>Two tests (grammar and high school), a speed test in spiral omnibus form, 20 different types of questions with front page instructions and sample questions. Norms established for large number of occupations. Highly reliable. Administration and scoring easy and economical. Widely used in schools so may be familiar to applicants.</p> <p>Spiral omnibus in form, may be used as speed or power test, table furnished stating points to add for persons over 30 to compensate for age disadvantage when speed tested. An adaptation of Otis Test. To overcome morale problem of mental testing, cover describes test as one of "problem solving ability." Forms A and B emphasize verbal items but include more number and spatial items than forms D, E, and F. Personnel man has, therefore, a utility choice. Shorter than Otis.</p> <p>Forms interchangeable. Also, five forms, A and B new items, and D, E, and F selected from Otis Test. Reliable, convenient, and economical to admin-</p>

TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
Mental Alertness Tests (con't)		Tiffin and Lawshe Adaptability Test	<p>ister Similarity to Otis may be a boon to test-wise applicants Small print and type variations may confuse applicant and/or penalize older people</p> <p>Speed test in spiral omnibus form, measures mental alertness and adaptability Two forms, A and B, interchangeable Developed specifically for industrial use, has practical rather than academic terminology Brief and good "face validity " May be confusing because of "puzzle" type questions</p>
		Wesman Personnel Classification Test (PCT)	<p>Emphasizes power rather than speed Developed for employment selection Gives separate measures of verbal reasoning and one's facility in using numerical concepts through sub-scores as well as total score Wide applicability Does not penalize older persons</p>
		Oral Directions Test by Langmuir	<p>Available in Spanish Directions and questions on phonograph records A measure of memory as well as ability Best when differentiation is among people of below average mental ability Minimizes verbal fluency, writing speed, and compu-</p>

TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
	<p>Measure of clerical ability in potential. Their use is more widespread than any other type because they have been developed to identify this aptitude quickly, easily, and with acceptable reliability and considerable validity. Designed to examine perceptual, intellectual, motor, and elementary skills such as ability to add and multiply, spell and punctuate, and use English words and expressions correctly</p>	<p>Minnesota Clerical Test By Andrews, Paterson, &amp; Long-staff</p>	<p>tation. High "face validity" with adults Ease of administration and scoring Fairly wide coverage</p>
Clerical Aptitude	<p>Prediction as to success in clerical Jobs of many types Reveals the two principal elements of success in clerical jobs, that is, intelligence and aptitude as indicated by speed and accuracy in perceiving numerical and verbal similarities and differences Note most clerical jobs require about the average mental ability level for the population as a whole, but where job progression is involved, higher mental ability is frequently needed Furthermore, clerical aptitude for men usually means selection from the top 10 per cent and for women the 25 per cent of the population in this aptitude</p>	<p>General Clerical Test-Psychological Corp. Staff</p>	<p>Two parts, numbers and names. Measures perceptual speed and accuracy Indicates aptitude for simple, routine clerical work, and inspection, packing, and wrapping jobs where routine clerical aptitude is combined with manual dexterity Brief, easily administered, and scored High reliability and validity in a variety of occupations Time limits for two parts differ, allowing possible administrative error</p> <p>A complex test Is both a general and a differential test and applies to selection and promotion or upgrading of all types of clerical employees Measures routine clerical aptitude, simple mathematics proficiency, and verbal ability Gives a total score -- an index of specific job placement, and ment Carefully constructed and has wide coverage. Each part is independent thus possible to give less than the entire test. Sub-tests are separately timed</p>

TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
Clerical Aptitude (con't)		<p>SRA Clerical Aptitudes Richardson, Bellows, Henry</p> <p>(SET) Short Employment Tests by Bennett and Gelink</p>	<p>A battery of three tests office vocabulary, office arithmetic, checking test -- matching words and numbers which are keyed High "face validity" but lacking in validity data and inconvenient to score</p> <p>Developed specifically as an aid in selecting clerical personnel for banks by the Psychological Corporation as a part of a cooperative effort with the American Bankers Association Two forms for general business use, one for members of A. B. A., and one special use Battery of three tests vocabulary, actually a short intelligence test, numerical ability, clerical ability -- speed and accuracy A brief, easily administered and scored, very well constructed test Acceptable validity as predictor for clerical bank jobs -- but not on routine jobs Validity data lacking for industrial and business</p>
Mechanical Aptitude	<p>Apparently a measure of a combination of factors pertinent to occupations requiring skilled application, factors such as spatial visualization, speed and acuity of perception, and mechanical information Significantly indicative of success in skilled mechanical jobs. Fallacy to assume they are</p>	<p>MacQuarrie Test of Mechanical Ability</p>	<p>Battery of seven tests measuring manipulative finger-hand ability Visual acuity, muscular control, and spatial relations Developed in 1925, aptitude patterns for many jobs have been worked out</p>

TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
Mechanical Aptitude (cont'd)	<p>measures of manual dexterity. Only "chance" indicators of success on semi-skilled jobs, even operative jobs requiring a high level manual dexterity. Note: it is desirable to test several specific tests validating their predictive effectiveness for the specific jobs involved</p>	<p>Purdue Mechanical Adaptability Test By Lawshe &amp; Tiffin</p>	<p>Designed to identify those who are mechanically inclined. Indicates those most apt to succeed in training or on jobs requiring mechanical interest and ability. Easily scored and administered. Good "face validity." Substantial validity regarding certain mechanics jobs, machine shop apprentices, machine operators, and time-study jobs. Implant research should be applied before general adoption.</p>
		<p>Mechanical Comprehension By Bennett, Fry, Owens.</p>	<p>Four forms. AA, BB, CC, are in ascending order of difficulty, W-1 is specifically designed for selection of women for mechanical jobs. Test indicates ability to comprehend mechanical relationships. Test design minimizes effect of previous knowledge and recall of physical laws, and/or of special environment. Good validity on a number of skills. mechanical jobs, in trainee selection, skilled technical positions, and reasonably complex semi-skilled jobs. Good "face validity," easy to score and administer</p>

TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
Mechanical Aptitude (cont)	Minnesota Paper Form Board Test -- Revised by Likert & Quasha, orig by Paterson, Elliot, Anderson, et al	A measure of two-dimensional space perception ability Pertinent to performance prediction for drafting, parts and assembly inspection, packing, mechanics, factory supervisors, engineer, and technical trainees, and linotype operators Sixty-four test items preceded by eight practice items Test requires development of correct figure from a combination of parts Established validity, ease of administration and scoring, test manual supplies a great deal of validity and norm data of value	
Manual Dexterity	Minnesota Rate of Manipulation Test -- Revision By Ziegler	Measures gross-manual dexterity Useful in selecting for packing and large part assembly Test is to match-piece identical cylindrical blocks or discs into 60 indentical holes Five variations of test are provided, placing, displacing, turning, one-hand turning and placing, and two-hand turning and placing Manual contains little data on this revised material Typical of all aptitude tests in that local validation should be performed	



TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
Vocational Interest	<p>Current tests are not measures of aptitude or ability. A test indicating an individual's likes and dislikes as compared to the likes and dislikes of allegedly successful men in similar occupations. The assumption is that if the individual works in the area of greatest positive interest he will be most successful.</p> <p>Most useful in industry as a predictor of an individual's job stability. Apparently work defines the direction of a man's effort, whereas his level of achievement is indicated by his ability pattern. Note: Strong's test is evidently predictive of success in selling, life insurance, real estate, business machines, and vacuum cleaners. Best considered as aid to differential selection and promotion and transfer. Use must depend upon known validity level and research basis.</p>	<p>Strong Vocational Interest Blank for Men -- Revised</p> <p>Kuder Preference Record</p> <p>Michigan Vocabulary Profile Test By Green</p>	<p>Vocational interest inventory providing comparison with the interests of successful men in 44 occupations. Good validity for certain sales jobs. 20 years of study indicate that the type of interest measured is quite stable, of all the measures of interest this has been subjected to the greatest amount of research. Difficult to score, open to some "faking" but not as much as in other inventories. Effective for professional, semi-professional, and technical jobs, but not recommended for the trades and the like.</p> <p>Measures interest in ten occupations. The short industrial questionnaire contains fewer questions or items than the standard questionnaire and has no keys for outdoor interest or for verification. Many items are transparent and occupational norms are limited. Easy to score and administer, and relatively economical.</p> <p>This is a test. It is designed to profile a person's vocabulary with respect to eight fields. Each field is tested separately and scored separately as well as in total. In a given</p>

TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
Vocational Interest (con't)		Michigan Vocabulary Profile Test By Green (con't)	situation it may function as an aptitude measure Good for higher level jobs where specialized vocabulary is important Some validity concerning more and less successful executives and newspaper men Carefully constructed, standardized, easy to score, combines interest achievement Limited validity and norm data
Personality Tests	Designed to indicate the most elusive of all necessary job abilities, the ability to get along on the job At this time, the two general types in use are the personality inventory and the projective inventory technique Unless the services of a trained, experienced psychologist are available their use is apt to be ineffective Greatest utility at this time is as	Minnesota Multiphasic Personality Inventory By Hathaway & McKinley	A diagnostic measure of personality deviations provides fourteen scores, ten of which are diagnostic and four of which are to indicate whether the questions were understood, the frankness or honesty of the answers, and the general validity of the scores obtained Excellent construction and standardization, a large amount of interpretive and validity data available in published studies, easy to administer Slow scoring, must be interpreted by a professional psychologist  Diagnostic estimate of personality, emotional make-up, and intellectual level Referred to ten standardized ink blots, individual states freely what he sees in part of each blot or in the entire blot Cannot be satisfactorily interpreted or administered by any

TABLE 20 (Continued)

General Classification	General Classification and Comment Descriptive Comment and Statement of Utility	Test Titles	Specific Test and Comment
Personality Tests (con't)	<p>a means of identifying maladjustment Personality inventories are generally relatively easy to falsify The projective methods require long training and experience to administer properly Progress with these tools is slow Treat claims regarding general applicability with a jaundiced eye unless careful study and validation investigation are permitted</p>	<p>Rorschach Ink-blot (con't)</p> <p>The Murray Thematic Apperception Test (TAT)</p>	<p>but a highly skilled psychologist especially trained in this subject Most desirable if it can be afforded</p> <p>Another diagnostic estimate Based upon semistructured pictures sufficiently ambiguous, lacking in action, and distorted to allow the subject to put himself into the situation and mold it to meet his needs and/or fears Interpretation and administration are unsatisfactory unless conducted by highly skilled psychologist Desirable, but expensive</p>
Test or Battery Title	Remarks		
AC Test of Creativity (Harris 1955)	Useful in selecting engineers requiring ability to originate ideas Still requires work		
Guilford Creativity Tests (Battery)	<p>Word association Apparatus Unusual uses Common situations Plot Titles Consequences Gestalt Transformation</p>		
IBM Proof Machine Work Sample	Useful in selection for specific proof-machine operations		

TABLE 20 (Continued)

Test or Battery Title	Remarks
Supervisory Selection Battery Wonderlic Personnel Test Thurstone Test of Mental Alertness Guilford-Zimmerman Temperament Survey Kuder Preference Record S-O Rorschach Test King Factored Aptitude Tests	Combinations of this form have been found useful in predicting the success of individuals as supervisors. The S-O Rorschach challenges breadth of interest, perception re human elements, perception of elements typically perceived by others, and perception of elements unique to the case. Appears as an effective guide in supervisory selection, easily administered to groups, serves as good check against Guilford-Zimmerman thereby improving value of information about individual's personality and temperament, is indicative of use man makes of his intelligence and effect on use of impairments.
Remark	University and private enterprise testing bureaus and services are available now in every area of the country. The foregoing tests and remarks are meant to serve as an introduction to the availability and nature of employment and other personnel actions tests.

Source: This table is developed from. Peter J. Hampton, "Use of Rorschach Test In Selecting Factory Supervisors," *Personnel Journal*, Vol. 39, No 2, June, 1960, pp 46-48, Cecil J Mullins "Selection of Creative Personnel," *Personnel Journal*, Vol. 39, No 1, May, 1960, pp. 12-13, Robert G. Neel and Robert E. Dunn, "Predicting Success in Supervisory Training Programs By The Use of Psychological Tests," *Journal of Applied Psychology*, Vol 44, No. 5, Oct., 1960, pp 358-360, C Harold Stone and William E. Kendall, *Effective Personnel Selection Procedure* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1956), Chapters 9-13, Roger M. Bellows and Frances Estep, *Employment Psychology. The Interview* (Rinehart & Company, Inc, N. Y., 1954), Chapter 11, Harold H. Anderson and Gladys L. Anderson, *An Introduction To Projective Techniques* (Prentice-Hall, Inc, Englewood Cliffs, N. J., 1951) George D. Halsey, *Selecting and Inducting Employees* (Harper & Brothers, Publishers, N. Y., 1951), Walter V Bingham, *Aptitudes and Aptitude Testing* (Harper & Brothers, Publishers, N. Y., 1937)

the employment manager debarks from his inner sanctum, hands you both a three-page application blank and tells you to come back the next day.

Everyone is sensitive to his first impressions. If the first contact results in a feeling that this is a good place to work, that people are friendly here, that this is an efficient place, then a goodly portion of the potential public relations problem associated with employment is taken care of. The personnel associated with an employment function, therefore, must be carefully selected themselves, and equally carefully trained. But, what about facilities?

*PHYSICAL FACILITIES.* As one can clearly infer from Illustration #6, the physical facilities impress an applicant positively or negatively and with the same end result as the personnel of an employment office. No wonder the trade publications and consultants never let up on their recommendations that the physical atmosphere of the employment office be modern and in all ways conducive to good relations with the applicant. What rules, if followed, will facilitate desirable effect?

1. *Location.* To avoid frustrating the applicant, the employment office should be obviously accessible to all comers. Similarly, if the office location denies easy parking, another source of frustration exists. An individual will be disturbed if he cannot find other sections of the manpower division – the medical section, for example. Finally, if an applicant is free to wander through the production areas, the storage areas, and the like before entering the employment area, the company is exposing itself to unnecessary financial risks and, possibly, sabotage.

2. *Space Utilization.* Space is money! At this writing, cubic or square footage for industrial space may range between \$7.50 and \$15.00. Space economy thus is a major concern of every manager. Effective design and staffing of the employment facility minimizes an applicant's stay in unproductive space. Furthermore, economic sense requires every employment office to carry its own cost of operation – its own rental charge and its own labor and equipment cost.

As the size of an organization increases, the need for square footage will increase. The proportion will be more a function of the rapidity of growth and the severity of labor turnover, however, than of actual organizational size. This point lends further strength to claims that one of manpower management's goals should be to hold labor turnover within "reasonable" proportions.

Work complexity, and work flow through most offices, vary with time. It is usual for "gate" applicants to increase as the general or local economic situation leads to an increase in the supply of labor over the local demand. The fact that occasional peak loads will occur spells out the need to make at least some provision for flexibility in

the physical capacity of the employment office. Movable walls facilitate expansion and contraction as needed, and the use of general purpose rooms also helps.

If expansion must occur in order to handle a peak period, the staff must expand as well as the facility. One thus concludes that most, if not all, members of a manpower division should be competent to handle the employment function.

3. *Facility Characteristics.* Wherever people gather in fairly large numbers, and particularly where they are coming and going, noise becomes a problem. Employment offices should be designed and constructed so as to minimize the noise level — noise dampening materials should be used. In addition, light, ventilation, and temperature become important considerations. The applicant appreciates cheerful, comfortable surroundings conducive to the establishment of rapport and the successful handling of interviews and employment tests.

### APPRAISING THE SYSTEM

The importance of the control concept (Chapter 6) certainly cannot be over-emphasized, and if one is to apply this concept properly each phase of the manpower management activity requires regularly recurring audit or appraisal. If management consciously seeks to maintain correct practices, if it strives for the so-called “good management” rating, then evaluation of practices cannot be delayed until there is reasonable assurance that appraisal results will show “good” practice. The “bad” must be acknowledged along with the “good.”

The often intangible nature of manpower work makes appraisal difficult. The selection activity, though appearing on the surface to offer some straightforward possibilities of analysis, happens to involve many difficult to measure characteristics. In fact, the actual appraisal of results often is ignored or conveniently forgotten by manpower managers because of the difficulties encountered and the pressures of daily activity.<sup>9</sup>

The natural first step to evaluation requires definition of the goal or objective of the selection system. This statement of objective, if properly stated, defines the factors to be evaluated. If an objective proclaims that the selection process is to identify those applicants most likely to succeed in (or best qualified for) employment in the company, and if policy dictates that total competency of the individual is to be considered, the appraisal model is identified. What remains is to state the factors.

**FACTOR IDENTIFICATION.** The term “succeed in” or “best qualified for” employment indicates several things. *First*, the base meaning of success or best-fit must be clarified. Obviously one point

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<sup>9</sup>Stone and Kendall, *op. cit.*, p. 381ff.

included in the meaning relates to the acceptability of the applicant as compared to other applicants. In fact, this may be considered the base meaning, for unless an individual is acceptable over his competition he will have no opportunity to prove himself. *Second*, and perhaps a portion of the base meaning, one considers *time*. It appears reasonable to hold that unless those accepted for employment remain in employment for some "reasonable" period of time, the selection system is not operating economically. If high turnover exists there must be a cause, perhaps that cause is related to ineffectual employment practices. Thus the second factor is (or may be) the number of those accepted who remain in employment after (for reasons of illustration) conclusion of the probationary period. *Third*, one can define the operational characteristics of success or best-fit. For example, in a sophisticated and recommended appraisal, one considers the on-the-job rating of individuals retained or remaining in employment after the probationary period. The factors considered might be dollars of profit, production, scrap rate, absentee rate, accident rate, and grievance rate.

**MEASUREMENT.** Once the factors to be measured have been defined as indicated by the stated objective of the employment system, the manager can appraise his system. A gross, and not particularly useful, measure would be the *Selection Ratio*.<sup>10</sup> This measure reflects:

$$\frac{\text{The number of applicants accepted}}{100 \text{ applicants reviewed}}$$

Unfortunately it is particularly sensitive to changes in standards, and influenced by the supply of, and the demand for, personnel. A running record of the average selection ratios by month, quarter, or the year may provide, however, some evidence for comparative consideration of the activity of the employment group and of the level of acceptability of the local labor market. If adjusted to reflect seasonal variation (assuming there is a reasonably consistent seasonal cycle over a period of many years) such a record may be of more value; and if established to identify sources which supply totally acceptable applicants, one can include this as part of the evaluation of the recruitment process.

A *success ratio* will measure the second factor. Such a measure may be the number remaining in employment in a given period per the number accepted on probation for that same period. Results from such a ratio, carried in control charts (perhaps modified by seasonal index), measure the stability of the employment system in providing

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<sup>10</sup>Dale Yoder, *Personnel Principles and Policies* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1952), pp. 146-147, *passim*.

“apparently acceptable” personnel at least from the point of view of turnover.

A more pertinent approach is to supplement the success ratio with the performance rating ratio to those remaining in employment after the probation period or some other period of time. (One might add that the success ratio need not reflect merely the probation period as the time reference; it may go beyond, establishing a separate measure for several time periods — say a year, two years, and the like.) In order to develop such a complex measure, the manpower manager will maintain very close liaison with the using managers and will provide a valid, relative performance rating system. In addition, each accepted candidate may be rated at time of acceptance as to his likelihood of performance — likely to perform in the upper 10 per cent, the upper 20 per cent and so forth. One thus might find computations of the form:

$$\frac{\# \text{ whose performance after probation was as predicted}}{\# \text{ in employment after probation}}$$

Two additional ratios should have numerators “better than” and “worse than” predicted. Such measures may be followed with a control chart to detect a time of significant change. Also, look for any clear difference among the ratios among departments and shifts. A supervisor can have a major influence upon the ratio.

Since management engages manpower to make a profit for the company, a logical and readily recordable ratio is:

$$\frac{\text{Profit in \$}}{\text{Manpower Costs}}$$

Effective management decisions and efficient manpower will result in an improvement in this ratio plotted against a time scale. If one wants a single, over-all measure of the success of the company’s total employment system (including personnel at all levels, interactions among them), this ratio should be considered seriously. Whenever a company’s profits reflect the general business conditions of its industry, this ratio of course should be weighted by an index of those conditions.

*VALUE.* Many question the value of such complex appraisal in the face of the cost involved. The viewpoint deserves attention. Nonetheless, management should know the effectiveness of its systems. Management is entitled to a picture which indicates the causes for its strengths and weaknesses. Perhaps the better point of view recognizes the need for appraisal, utilizes those approaches economical to the case, and seeks to develop better techniques.

**SOME OPERATIONAL PITFALLS AND PROBLEMS**

Even today, manpower selection leans upon dangerously weak procedures. The attempt to assess an individual's competency involves, as we have seen, examination of records, consideration of references, and the like. In each case, the tool used is in itself subject to question and there is real risk of error when we realize that men, not necessarily trained, must apply these admittedly weak tools. Table 21, on the next page, points up some of the pitfalls involved.

**Situation #1** Politics are involved in practical situations. The young lady was personable, had money. She married Bob. Her father was a good friend of Bob's father. Bob's father was an important figure in the financial world. The young lady's father was a manufacturer.

Bob had a delicate lack of sense which was covered up by a presentable purse and naive manner, backed up by a certain clandestine wistfulness.

Bob's father didn't want him around his place of business so he talked the father-in-law into hiring him as personnel manager of one of the smallest of his enterprises.

If you were the plant manager in this case, do you think you could hope for anything more than kindness in your old age?

**Situation #2** Many personnel people are confronted with policies that go against their training. One such policy is that which prohibits the hiring of persons close to retirement age. A great variety of excuses are made for policies of this type. They include: he is too close to retirement, he couldn't do the work.

Adam Q, otherwise known as "old dad" to his friends and associates, was 52 years old. A husky, athletic man with a good health record and a lively wit, he had been employed as general foreman in a company which went out of business last year. The failure of the concern was due to two factors. (1) the owners had sold out to a "milker," and (2) the company had been squeezed dry by the new owners.

Adam sought employment unsuccessfully for six months. Everywhere he went, he was confronted with the same story, "Sorry, we're not hiring men of your age." He finally joined forces with another "old timer" and they established their own concern. It prospered!

**Situation #3** It has been said that love is blind, but that is not the only human blindness. Sometimes *experts* are blinded by their own expertness. Mr. "X" was hired as personnel manager of the company in 1949. Previously he had been employed for six years by a large depart-

**TABLE 21**  
**OPERATIONAL PITFALLS IN DETERMINING ABILITIES<sup>3</sup>**

Ability Sought	Tool or Technique Utilized	Un-sat	Sat is	Go od	Remarks
Technical	Interview			x	Good if handled by competent individuals Danger is false or misleading statements
	Application Blank		x		If properly designed. Danger is false or misleading statements
	Testing			x	Best if proper design and administration. Fear and unqualified administrator weakens value, also unvalidated or improper test
	Former Employer		x		Danger is memory and bias
	General reference by phone by correspondence	x		x	If checker trained and if references unbiased and good memory Unless reference known to employment people Danger is bias
	Military Records	x			Would be excellent if they were generally available
	Academic Records	x			What do they tell of technical ability?
Physical	Interview		x		Danger is false or misleading statements, fear of truth on part of interviewee
	Application Blank		x		Danger is false, etc as foregoing, plus usual lack of space for reply
	Medical Exam			x	Excellent if complete diagnostic exam given, person may fear.
	Former Employer		x		If he knows, may be biased.
	General Reference		x		If he knows; may be biased.

TABLE 21 (Continued)

Ability Sought	Tool or Technique Utilized	Un-sat	Sat is	Go od	Remarks
	Academic Records		x		If they tell, and if they are not obsolete.
	Military Records			x	If can get, and not obsolete
	Family Physician			x	If not biased, and will tell.
Socio-psychological	Interview			x	If proper diagnostic or patterned form used by trained person Danger is fear, misunderstanding, false statements.
	Application Blank	x			If historical form, will help investigator develop information, space, not knowing what ask specifically, fear of truth are typical dangers
	Testing			x	If validated and correct tests used Risk is fear, poor administration, improper test, etc
	Former Employer		x		If understands and not biased.
	General Reference		x		If good form used and same aforementioned
	Academic Records	x			What do they show?
	Military Records			x	If can get and not obsolete.

ment store. He held a Ph.D. in psychology He was acknowledged as an expert in tests and measurements.

His first job in the new organization was to develop a selection system. Testing was established. Careful validation studies were made of all tests used. Test results were established as the prime selection criteria.

Miss "Y" applied for employment. Her test scores indicated that she would do well in administrative and control work at the junior-executive level. Mr. "X" offered her an opportunity in the production control department. She pointed out that all she wanted

was a routine assembly job or an equally routine inspection job. She said, "I'm not interested in responsibility. I do not want to be in a position where I must make any but routine decisions"

Mr. "X" pointed out the test scores, and used other means of persuasion. She took the production control job.

In two months she requested a transfer to an inspection job. It was refused. She quit!

**Situation #4** In this particular company selection procedures  
**Don't Mother** are very well defined, techniques have been care-  
**Them** fully developed, acceptance of the utility of  
 known methods is widespread.

John, age 32, non-vet, unmarried, 5'9", weight 140 pounds, light complexion, brown hair and eyes, clear police record, was one of 14 applicants being interviewed for a job involving simple mental and physical operations, but requiring extensive face-to-face contact with other people. John's I. Q. was 112, his manner was nervous and tense. He acted as if he expected to be rebuffed.

The interviewer, Mary B who had been with the organization six years and held other job experience as well as an advanced degree in business administration (age 38, unmarried), noticed the singular dejection of this man and pitying interest was aroused in her. John was encouraged to unburden himself. He had had a total of eight jobs, all of similar or relatively similar requirements, since the age of 20. In each case he had failed.

John was in urgent need of this job. Mary passed him and urged the line supervisor to give him a chance. Although the supervisor made a sincere effort to help John succeed, it was to no avail. John failed in four weeks.

**Situation #5** He walked into the employment office with  
**A Simple Piece** seven references. Each reference identified a  
**of Fabrication** well-known member of the community as the  
 writer. Each reference spoke concisely of the  
 applicant's abilities. Three indicated that he had worked in their  
 plant and had left because of no immediate opportunity for ad-  
 vancement. This, plus the man's fluency regarding the machine  
 operations of the company, led to the immediate decision to hire  
 him.

Within the week he managed to ruin two machines and increase the scrap rate of the section to which he was assigned by better than 50 per cent. One must certainly wonder who wrote the references!

**INTERVIEWING TECHNIQUES AS PITFALLS.** Any device used to establish evidence concerning human competence by demanding maximum competency of the human using it normally will be of

questionable utility in the hands of untrained or minimally-trained people. This is, perhaps, the greatest risk involved with the application of interviewing as a selection tool (and also with the application of testing). A common operational rule in inspection work holds that the need for human judgment should be minimized if accuracy is to be maximized. Usually this rule fits the inspection problem nicely because mechanical, electrical, chemical, and electronic devices exist or can be developed which complement or replace major portions of human judgment. There are no such facilitating devices for the interviewer's use. We, therefore, point again to the pitfalls identified in Chapter 5 and remind the student that his greatest enemy to success as an interviewer may be himself.

The application of certain interviewing techniques or methods also deserves attention. Three methods in particular require consideration: (1) stress interviewing, (2) panel interviewing, and (3) group interviewing

*Stress Interviewing* The "pitfall" here is the risk of improper application, that is, the possibility of application at the wrong time or in connection with the wrong job. Before considering the risk, let us briefly examine the nature of the beast

Historically, development and utilization of *planned* stress interviewing in the United States dates back to World War II and the selection of candidates for the OSS.<sup>11</sup> As adapted to civilian industrial use, the objective of the stress interview is to ascertain the ability of a candidate to maintain his poise in the face of stress, adapt himself to emotional strain, and to determine how ready a recovery to normalcy he can make when stress is removed from the situation confronting him.

There are many possible methods of applying stress to an interview situation. One technique finds the interviewer shooting increasingly intensive and obnoxious questions at the interviewee and then suddenly reverting to the friendly, sympathetic approach, only to swing around again with additional sharp, unfriendly, barbs and probes. The interviewee is kept off balance in such a situation. At one moment he finds himself in a friendly atmosphere and the next he is on the defensive. Another technique confronts the interviewee with decisions related to the knowledge and skill he is required to have to handle the job for which he has applied. He might, for example, be put into a simulated environment with a machine or instrument board requiring his decisive control as the events to be manipulated by the machine, or overcome by the instruments, are rapidly and unexpectedly unfolded before him. Simulated flight situations are used, for ex-

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<sup>11</sup>Office of Strategic Services, Assessment Staff, *Assessment of Men*, (Rinehart & Company, Inc., New York, 1948). See also H. L. Ansbacher, "German Military Psychology," *Psychological Bulletin*, No. 38, 1941, pp. 370-392.

ample, by the Royal Dutch Airlines. Still another approach places the interviewee in the position of making a choice to do, or not to do, something unwise.

*The Risk.* An obvious risk to the use of a stress interview is the competency of the interviewer. More than this, however, is the problem of timing. In the industrial situation there are few jobs which require *really* great emotional stability and adaptability. On the other hand, most individuals entering an industrial selection system still do not fully comprehend the reasons for testing and the like, and they view anything akin to tests with some degree of fear. Certainly it is unwise to risk the negative public relations that may come from a stress interview application at a time when an applicant is totally unprepared to accept the reasons for using the device. The other problem is that of job requirement. One can find little reason to maintain that a stress situation exists in the jobs of the janitor, the drill press operator, the stock clerk, the head of inspection or the like. People resent, and rightly so, selection devices which lack any apparent face validity.

On the other hand, stress interviewing may be useful as a selection tool for upper echelon jobs, sales opportunities, and jobs where physical danger is a constant and a prime characteristic of the work. Regardless of the possible value just mentioned, and because of the minimum degree of significant data establishing validity for the method, we advise against the use of stress interviewing for most industrial positions.

*Panel Interviewing.* Typical of manpower selection processes directed toward supervisory and executive trainee selection, this method places the individual candidate "at the feet" of a panel. The procedure may be: (1) the interviewee is confronted by several interviewers at one time, or (2) the interviewee is routed from one interviewer to another until each member of the panel has had an opportunity to assess him. Normally the panels would be made up of managers who will have direct or indirect contact with the applicant if he should be selected (of course an employment interviewer would be involved, too, in most cases).

The risk here is rather simple. *First*, the members of the panel may not be sufficiently well trained in interviewing to warrant the acceptance of their judgment and, in some cases, they may not be truly competent in their own jobs. *Second*, the whole concept of moving from "pillar to post" may arouse frustration in the interviewee, particularly if he has not been thoroughly briefed regarding the method and its purpose.

When properly handled, the panel interview is a desirable tool for executive trainee and supervisory selection. It gives all those who may be involved with the interviewee an opportunity to make early

on-the-spot judgment of his qualifications, and it gives the interviewee an opportunity to make an early evaluation of those with whom, or for whom, he may work. Both parties are therefore provided with the opportunity of early decision as to whether or not they want to be associated in work.

*Group Interviewing.* This technique throws several applicants together in either a leaderless group, or a led group, in informal surroundings. The group is either given a topic or allowed to select a topic of discussion. Normally the topic will concern things about which the applicants have a fair degree of knowledge or are expected to have a fair degree of knowledge. The length of the session varies, possibly taking as much as three hours. Employment officers, managers, or others selected as raters sit in or behind the group, observing and rating the applicants. Although these raters normally do not participate in the discussion, they are sufficiently close to the group to be able to ascertain individual reactions.

Regardless of how elaborate the scoring system may be, there is always the risk that the raters cannot give full attention to the individual applicant. In addition, of course, the question of competency of raters must be raised. Then, too, one cannot expect to find many rank-and-file jobs which can be simulated in a manner allowing measurement of competency through development of a topical discussion for evaluation. Another risk particularly pertinent to rank-and-file applicants and lower echelon supervisory candidates and executive trainees is their general tendency to "clam up" under such conditions (of course, if this is what one is trying to measure, no harm is done).

Probably the most effective use of this device in initial selection is for sales, upper-level supervisory, and executive personnel. In addition, the technique appears effective in promotion and transfer work for executives, and in manpower development programs for junior executives and managers in general.

## SUMMARY

Man is the prime material of enterprise! Is it any wonder, then, that the claim is made that the staffing effort, the manpower selection activity, is a prime consideration of management? Man, not money, not the machine, not the facility, makes the base decisions as well as the original errors. Why not budget funds for activities designed to improve the possibility of selecting men least likely to make errors?

A properly-established manpower selection system exists to improve the possibility of obtaining a staff capable of excellence of production at an optimum return upon the total investment. The system depends upon an equally good recruitment program, upon adequate policy development, and upon operational steps and techniques which, though the best of their kind at a given moment in time, are kept

under constant study for purposes of improvement. These techniques include historical application blanks, diagnostic or patterned interviewing, background verification, medical and job knowledge examination, and psychological tests. The steps involved are established with flexibility in mind; and steps, techniques, and selection criteria are based upon defined job requirements rather than emotionally-based opinion.

Effective selection depends upon more than proper steps and tools; it requires the presence of well-trained personnel to implement those steps and procedures. The employment man's propensity to overlook, to ignore, to avoid decision, his ineptitude with his tools or his willingness to accept people at face value alone — these failings destroy an employment process. In addition, the physical facilities of the employment office contribute to the success or failure of manpower selection systems.

It appears, then, that the effectiveness of manpower selection depends upon the total competency of the system, just as the effectiveness of an applicant depends upon his total competency in meeting job requirements. The effective system is technically correct, it is staffed by technically, psychosocially, and physically competent people, and is located in a correct facility. The most effective selection process in the world will be useless, however, unless it is backed up by an equally effective "induction" system. All that selection does is determine potentially effective applicants and make them available to using managers for the hiring decision. If hired, they must be changed from potentially effective to operationally effective people. This begins with the induction process.

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*The induction period for the new employee is so important that many who get a poor first impression never stay for the second impression.<sup>1</sup>*

## Induction

All those interested in investment look at the profit picture, the growth of a firm, its likelihood of maintaining or improving its competitive position, including the manpower programs they hope will enhance the economic position of the organization. Excessive labor turnover represents a waste; it attacks profits. Programs which can, if properly developed and handled, reduce such waste are of interest to operating managers, board members, and investors.

*Induction* is a waste reduction program. Properly developed and applied, induction programs help minimize labor turnover. They help stop the gradual nibbling away at corporate profits typical where selection is not followed by induction.

Orientation, adjustment period, or induction – regardless of the term, the definition is the same:

the dual process of introducing the new worker to the totality referred to as the job, and of assisting him in his problem of initial adjustment.<sup>2</sup>

Actually this process “bridges the gap” between selection and training. Frequently the term is treated merely as an academic invention used to explain the transition from applicant to worker. Though there is some merit to such a view, the fact is that induction, as a procedure, enjoys a most important spot in the over-all program of manpower management.

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<sup>1</sup>Keith Davis and Wayne G. Broehl, Jr., “Let the Foreman in on Induction,” *Personnel*, Vol. 27, No. 5, 1953, pp. 408-409.

<sup>2</sup>Many object to the term “induction” because of its military connotation. Modern military induction technique is, however, as nearly a model of excellence as is possible, and is based upon sound concepts.

Importance arises because of the significance of first impressions and their relation to labor turnover. As the facts reveal, turnover is high during the first few months of employment.

### BASIC CONSIDERATIONS

The induction concept involves psychological, technological, and organizational considerations. The foremost of these appears to be the *psychological*. Both an individual's accomplishment and a work unit's effectiveness depend upon behavior. In turn, behavior depends largely upon the individual and his reaction to, and his effect upon, the stimuli within the situation(s) in which he finds himself. As Maier puts it: "Behavior now becomes the product of an interaction between the stimulus situation and the organism."<sup>3</sup> We are interested specifically in the *psychological* factor in induction because each person reacts differently to a given stimulus situation, and because it is to some degree difficult for most people to adjust to a new situation.

*Technological* consideration refers to job similarity and behavior. Jobs are seldom if ever identical. Even though a person may have done related work (or had a job carrying the same job title) in the past, a new job situation requires new reactions, development of new relationships, and the application of either new or difficult to recall old skills, or the use of well known skills but in a different manner.

In other words, jobs, like people, differ from company to company, from time to time, from department to department.<sup>4</sup> The differences affect people, and people affect the jobs. The new employee deserves an opportunity to master the idiosyncrasies of a new job. The "old" employees deserve an opportunity to adjust to the new employee. Failure to grant such opportunity provokes the risk of negative first impressions and increases the probability of unwanted labor turnover.

*Organizational* consideration refers to a man's position within a hierarchy, to his organizationally-structured relationships, responsibilities, and opportunities. Men have a perfectly natural desire to know where they are going, to whom they are responsible and for what; they need to know what to expect in return for effort expended. Such needs are related to organizational characteristics such as discipline, policy, authority, and the many other factors discussed in Chapter 3. These factors are not similar from company to company, and often they differ from department to department. New people deserve the opportunity to learn the organizational character of a new environment.

A sound induction system therefore is designed to minimize the psychological hazards of new employment, facilitate the technological

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<sup>3</sup>Norman R. F. Maier, *Psychology in Industry* (Houghton Mifflin Company, Boston, Mass., 1946), p. 18.

<sup>4</sup>cf. Chapter 3.

development of the new employee, and clarify the organizational factors affecting the new man. The reason for such a system is not paternalistic. It is a dollars-and-cents reason. Its purpose is to help minimize the cost of labor turnover.

### TRAINING REQUIRED OF "INDUCTORS"

Those responsible for the induction of manpower must freely subscribe to the concept. Furthermore, they require careful training for their responsibility. Training goes beyond the usual ritual of learning to describe company history, policies, procedures, and work. It includes rather complete consideration of the psychology of behavior.

For example, behavior not only is a result of interaction between stimulus situation and individual, but also is occasioned with purpose. A man may present a bold and blustery front to disguise an inner insecurity due to a feeling of inadequacy in a new situation. Or, as a result of past failures, his timidity may lead to overcaution designed — in his mind — to allow him more time to master technique, thus minimizing his possibility of another failure. Purpose and cause require general study, for what an individual may refer to as his reason or purpose for an act is seldom, if ever, the result of truly *free choice*. As with the blusterer or the timid one, if asked, he might claim fear of failure as his reason for his behavior. Actually, however, this might well be an erroneous statement, for the real factor behind his actions might be *need* not to fail for one or more reasons over which he has little or no control.

Clearly, these actions are associated with past and present *needs* governing in some way responses to stimulus-situation interactions. Thus we see that in the general sense a man's behavior is the result of the combination of past and present experiences, conditions, and stimuli, and the individual's "nature." With these points in mind, it is clear that the generalities regarding behavior should be familiar to those responsible for induction — as well as any other phase of manpower management.

General consideration is not enough! An appreciation of the apparent differences between employers and employees also is needed. The necessity lies in the fact that these apparent differences have a direct, though varying, effect as both stimulus situation and purpose so far as the individual is concerned. The more significant of these differences are: (1) economic, (2) social, and (3) intellectual. Let us consider them briefly.

**ECONOMIC DIFFERENCES.** For many years now, rank-and-file employees have been exposed to a point of view which, among other things, holds that there is a *real* economic difference between them and management personnel (referred to as employers). The basic tenet of the viewpoint is that labor (the worker) is interested in high

wages and management (the employer) is interested in high profit, and, therefore, the two groups are diametrically opposed because of the natural conflict between their goals. Let us examine this.

If a difference is *real*, the goals involved must be in *natural* conflict. The conflict here, however, is one of degree. After all, profit is the employer's wages, whereas wages are the worker's profit. Profit is necessary to carry on the business of business — to build the rainy day reserves, attract investors, and the like. Wages are required for the worker to carry on the business of life and save for rainy days and attract — if he has daughters — investors in the form of suitors. The differences lie in how you say what you say. Playing the game of semantics? Of course, but playing it with reasonable logic and reasoned comparison as the pawn!

How is it played by the extra-liberals who pass this gospel to the workers? They play it by using trite pieties and platitudes, and by admitting to their arguments only those reasons which meet the approval of the masses and the illogic of their case. They make no effort to point out the fact that, without profit, expansion and continued wage increases cannot take place in freedom. In addition, they make no effort to signify the importance of productivity as a factor in determining both how much a worker can get as wages, and for how long he can get it.

A *real* difference means more than existence of a goal conflict. It also implies distinct unalterable class boundaries. Is it not funny how many of those selling the economic difference story never admit that management personnel are employees too! Worse still, how many point out to the worker that he is really employing himself when he maintains or improves his productivity and, through his ownership (stock) interest and vested pension interest in the company! In fact, the argument supporting the idea of *real* difference actually boils down to a difference in the quantity of monies in the hands of each group, and in the amount and kind of responsibilities facing each group. In the last analysis even this difference is not so great; often the groups are partially interchangeable and in most cases they are totally interdependent. Such a condition clearly changes the alleged real difference to a mere difference of degree. This difference of degree *is real*, however, and should be understood by those responsible for all phases of manpower management, including induction.

**SOCIAL DIFFERENCE.** Social difference is another routine passed on to the mass public and the worker. It also is preached through inane platitudes and trite pieties which in the final analysis have but one purpose — to destroy the public faith in the *free-enterprise* system and the personal freedoms of the system. The fundamental argument here is that, because of the economic difference between employer and employee, the employee never can hope to surmount

his current social status — he is doomed to remain within the lower middle class or the lower class strata.<sup>5</sup> Furthermore, this social stagnation also is held as caused by the intellectual difference between the employer-employee classes.

The argument fails to recognize the fact that our history is filled with evidence pointing to the ability of man to move out of one social strata into another. True, this mobility involves limited numbers; but it is equally true that under *free enterprise*, or the American way of life, this happens more readily and more frequently than under any other political system.

Another facet of the argument holds that because of a lack of travel opportunity, the worker never gets to appreciate the finer things and knows only the drudgery of life. Of course this is a fallacy! Many thousands of our workers have actually traveled more widely than some employers — two wars in the past two decades, three in the past four, have put vast numbers of Americans in every corner of the earth. Contrary to the belief of many, off-duty hours are spent by many in searching, viewing, and even studying the cultures of the places in which they find themselves. The result has been a broadening of the social understanding of our manpower, a factor important to the very personal goal of breaking from one social strata to another. In addition, education has taken the place of the six-gun as the great equalizer! We are teaching our people, and they are teaching themselves how to attain the abilities requisite to social mobility. Financially, our stock ownership programs, mutual funds, insurance programs, and many other factors have aided in the acquisition of material things necessary to social mobility. Spiritually, no real difference can exist. We thus again find that the difference that does prevail between employer and employee is a difference of degree, and is nothing permanent if the individual desires movement.

*INTELLECTUAL DIFFERENCE.* About the most ridiculous idea of difference is that a real difference of intellect exists between employer and employee. True, one man may know more about some things than another, and one person, because of opportunities available and taken advantage of, may get to learn more about one thing than another. To claim more than this appears foolish!

Our industrial and academic records and our political history are filled with evidence as to the intellectual achievements of persons far from the top of the social ladder and far removed from the employer classification. What happens during growth is partly a result of the combination of individual initiative, opportunity availability and recog-

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<sup>5</sup>Sylvester Petro, *The Labor Policy of the Free Society* (The Ronald Press Company, New York, 1957), pp. 3-70, *passim*.

dition. The potential intellectual level of an individual, however, has nothing to do with employer-employee status.

*WHY THE ARGUMENT?* You may very well ask what all this has to do with manpower induction. The discussion is certainly a sociological and ideological one and not related, at least not on the surface, to the system development of manpower induction. Why, then, the argument?

It should be clear to the average student or practitioner that in today's industrial environment most workers are exposed to the problem of *dual loyalty* – loyalty to the company on the one hand and to the union on the other. Such a condition certainly must create anxiety in many and severe frustration in some. An induction system exists to minimize the problem of adjustment to a new situation, as such, it should serve in every possible way to minimize the existence and severity of frustration. Management personnel and members of the manpower staff, who understand the basis of the duality problem, may very well combat that problem with correct and frank discussions of the truth.

In addition, one notes that for many years management has shied away from open and forceful defense of the basic concepts of our national origin and purpose. This neglect has resulted in militant union structures, often more interested in personal gain for the hierarchy than in true improvement of conditions for the rank and file.<sup>6</sup> One way of straightening out this situation is by matching or beating such organizations at their own game of political indoctrination; one place to accomplish this is in the induction program.

The most important reason for the argument, however, lies in the fact that if those responsible for manpower induction do, in fact, understand the pressures being exerted upon the workforce and its new members, they may be better able to understand the possibly peculiar behavior patterns which confront them. Improved understanding tends to result in improved handling!

## POLICY CONSIDERATIONS

Induction of manpower is part of the over-all staffing program, not a separate and isolated system to be established or eliminated at the whim of some manager. Like training, induction is paid for whether or not there is a program, but without a planned program the likelihood of optimization of return upon investment is minimal. As a part of the over-all staffing program, the policy considerations discussed in Chapter 9 form a base for the special considerations necessary to proper induction programming; one realizes that the propriety of induction will depend in part upon the adequacy of recruit-

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<sup>6</sup>Sylvester Petro, *Power Unlimited* (The Ronald Press Company, N. Y., 1959).

ment and selection policies and procedures. It also becomes clear that the first specific policy requirement for induction demands a clear statement and recognition of objectives.

**INDUCTION OBJECTIVES.** A policy statement of objectives ought to fit all jobs in the concern and should certainly be recognized and wholeheartedly supported by top management. The objectives of induction involve: (1) employees and (2) the company. One wisely breaks down a statement into those matters which are employee-affecting and those which are company-affecting. A set of general statements should, however, preface and clarify any breakdown. What are these statements?

1. *The general statements* – the objective of the company's induction program is twofold, to maximize effectively the individual's opportunity to adjust, and protect effectively the company's investment in the new employee.

2. *Employee-affecting considerations* cover three base areas in the general case. Other matters may pertain in a specific case.

(A) Create a favorable attitude! First impressions count, but a glowing picture is as dangerous as a hazy one.

(B) Establish a sense of belonging! Interest must be genuinely sincere. The newcomer must be emotionally adapted to meet the disappointments and rebuffs typical of any job. This is possible only when there is a sense of belonging.

(C) Instruct the inductee adequately! Not all people want to learn, but adjustment depends partly upon sound knowledge. The barriers to a desire to learn must be removed or minimized.

3. *Company-affecting considerations* also cover three base areas common to any organization.

(A) Answer questions! Supervisory time and trouble can be saved if a new man's questions are answered quickly and accurately. People whose questions go unanswered tend toward frustration with the possibility of developing negative attitudes and conduct.

(B) Reduce future grievances! Immediate, accurate knowledge of obligations and rights, methods, and procedures reduces potential grievances and helps develop friendly relations with the supervisor. Every opportunity to reduce the probability of grievances should be taken for this decreases nonproductive expenditures.

(C) Reduce turnover! Labor turnover is expensive. Early turnover is usually due to poor induction, if not poor recruitment and selection.

Clearly then, policy recognition of objectives establishes a framework for procedure. In this case, the objectives indicate that induction

should expose the responsibility-authority patterns throughout the concern. More than that, however, it indicates the two common factors which any organization's policy and procedure pronouncements should cover. These are: (1) the responsibility-authority pattern, (2) the type of system to be adopted.

**RESPONSIBILITY-AUTHORITY PATTERN.** Determination of responsibility for induction is a tricky issue. The nature of induction makes it a "line" function. Time bothers foremen and other managers to such a degree, however, that it becomes all but impossible for them to devote *all* the attention necessary to induction matters. Knowledge and/or the ability to instruct also influence their success with induction. These points lead many companies to adopt the view that induction should be carried on by the personnel department. The supervisor is, and should be, however, responsible for the production in his department. In like fashion, he is, and should be, responsible for those factors which may contribute to, or cause, failure in his department. The employee may be that cause, and induction weaknesses may lie behind the employee's failure. Since that is the case, the supervisor is responsible for proper induction and training of those he supervises or will supervise.<sup>7</sup>

The argument against this point of view brings out the just-mentioned issues of time and ability and it is a strong argument; however, there is more to consider. If, for example, one attempts to *support* a manager completely by removing his total induction responsibility, one risks injury of his status in the eyes of the workers and other managers. An individual's status is at least threefold. *First*, it is hierarchical, or scalar — directly related to the vertical position in the organization. *Second*, it is functional — directly related to the nature of the work he performs, the scope of the effect of that work on the other members of the organization, and related to the effectiveness of his performance. *Third* it may be a reflection of his personality. Anything that minimizes the functional or personal importance of the individual tends to negate the importance of his organizational, or scalar, position and therefore tends to minimize his status in the eyes of others (or at least as *he* sees his status in the eyes of others). This minimization reduces his job effectiveness.

Only one safe conclusion appears then, for the general case: induction responsibility must be defined as *direct* and *indirect*, thereby recognizing a dual responsibility-authority pattern. Line supervision is, therefore, responsible for those matters directly pertinent to the job and the associates with whom a new employee will be involved. The manpower division is responsible for those matters indirectly concerned

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<sup>7</sup>Paul Pigors and C. A. Myers, *Personnel Administration* (McGraw-Hill Book Company, Inc., New York, 1951, 2nd ed.), pp. 159.

with the immediate job of the new employee. The manpower division thus presents policy information, company history, and other general information, whereas the using manager handles the introduction to immediate associates, job matters, plant facilities, and the like. This duality conserves supervisory time and energies without significantly threatening supervisory status. What may be more important to some, this duality provides an automatic check and balance system whereby the new man is better assured of the information and guidance necessary to minimize his problems of adjusting to the new job situation.

*THE KIND OF SYSTEM.* Effective policy specifies the kind of system to be used just as it specifies the pattern of responsibility for that system. Three common types of induction systems exist: (1) mass induction, (2) individual induction, and (3) a combination of the two.

Mass induction tends to be the cheapest system from the short-run point of view. It is so typical of the military situation, however, that even this short-run advantage may be offset by the emotional reaction of a "bad" first impression resulting from the military connotation. True, mass induction permits extensive utilization of visual and audio aids for description of company history, policy, procedures, jobs, and product. If used to their fullest extent, the cost of audio-visual aids would be prohibitive in the individual induction system. In addition, mass induction more or less forces dissemination of induction information to new employees, whereas individual induction is dependent largely upon the varying capabilities and moods of the foremen and department heads. Those charged with the responsibility of mass-induction programs are frequently rushed, disinterested, or moodily irritating in their own right. The personal attention possible through the use of individual induction thus may seem more desirable.

One concludes that for the general case a combination of the two approaches is most advisable. Combination allows minimization of the negative side of both approaches and maximization of their positive characteristics. Furthermore, by combining the methods one enables implementation of the split or dual approach to induction which previously was identified and recommended.

*THE PRIMARY OBJECTIVE.* Whatever induction policy evolves from careful study by management and through the advice of the manpower division, it must recognize and specify to the importance of considering the welfare of the individual and the company. Whatever system evolves, it should be designed to handle the psychological, technological, and organizational factors important to, and involved in, induction. Further, the induction system should meet the primary objectives as stated by Planty, McCord, and Efferson.<sup>8</sup>

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<sup>8</sup>Earl G. Planty, William S. McCord and Carlos A. Efferson, *Training Employees and Managers* (The Ronald Press Company, New York, 1948), p. 163.

Emphasis should be given to those orientation objectives which deal with mutual appreciation, the spirit of belonging and togetherness, the feeling of confidence and security. Knowledge and skills are secondary ends in orientation and should be stressed only when they form the logical context in which to build the desired attitudes.

### INDUCTION PROCEDURE

Induction procedure tends to vary from company to company. It also may vary within a given company from time to time. The condition of the labor market, the growth or contraction of the organization, the general staffing policies, and the existing labor-turnover picture of an organization influence or shape procedural variation. There are, however, certain procedural steps common to any "good" induction system and variation in them should be a matter only of degree — degree of utilization or means of implementation of those steps. These *common* steps are: (1) induction interview and processing, (2) departmental introduction and sponsor assignment, and (3) follow-up.

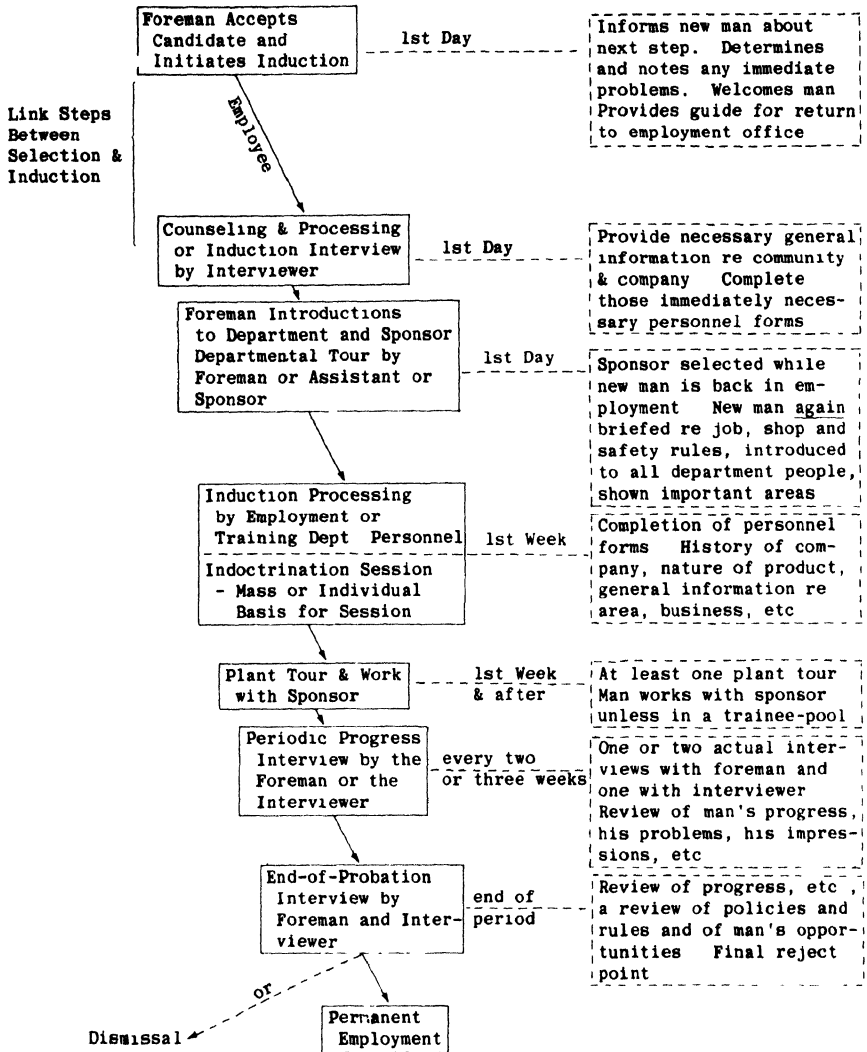
As there are common steps, there is a recommended approach. The procedure or system outlined in the following sub-sections, and represented in Figure 43, combines mass with individual induction as needed. It also shows action by both the using manager and the manpower division. Furthermore, it involves the utilization of "sponsors;" and is designed to cover several days or weeks, as the case may be, rather than one or two days of intensive and confusing (to the inductee, at least) effort.<sup>9</sup>

**INDUCTION INTERVIEW AND PROCESSING.** The last step in the manpower selection process indicated in Figure 34 was specified as "Counseling and Processing Interview." Actually the formal induction system can be considered to begin at that point. Although induction really begins with the first impression a candidate for employment gets as he enters the employment office and approaches the receptionist, it is not until the using manager decides to hire that any of the induction functions can occur. This counseling and processing interview, or *induction interview* as it is called, is the step which ties the selection function in with the induction process.

In a concern with a small personnel department, or where none exists, the induction interview may be conducted by the using manager. Where a manpower division or personnel department does exist, however, it properly is conducted by some member of the employment staff. Generally, the personnel in the employment office are better equipped to conduct interviews of this kind. They tend to be better trained in the interviewing process and generally the environment is more conducive to proper interviewing.

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<sup>9</sup>Lawrence Stessin, "Labor Relations, In-and-Outers," *Forbes*, LXII, No 7, 1951, p. 25.



INDUCTION PROCESS CHART — AN EXAMPLE

Figure 43

**THE INDUCTION INTERVIEW.** The main purpose of an induction interview is to give and acquire information. Although the issues covered in each interview differ to some degree with each new man, the following basic points require coverage in every case.

- . . Residence and transportation.
- . . . Schools and shopping.
- . . Banking and check cashing facilities.
- . . . Auto and appliance repairs
- . . . Medical and dental facilities.
- . . Nursery school and baby-sitting facilities.
- . . Church and church-school facilities
- Recreational opportunities

These are personal considerations. Not each will be pertinent in every case. Obviously the interviewer should review the selection data first and bring out the points that are pertinent, eliminating or glossing over those not significant. Furthermore, it is not enough merely to pass on information. The interviewer determines the position of the employee with respect to these issues and records any problems which may exist. The interviewer and the sponsor, as well as the using manager, should be prepared to offer sound advice regarding personal matters such as these, and be able to tell a new man where he can find help, if needed. Company handbooks, developed to include such information, are of great assistance to all concerned.

In addition to the personal matters listed, the induction interview covers the following organizational matters.

1. Personnel policies and procedures. The policies and procedures, including shop rules and the union contract (if any) should be reviewed carefully. Questions should be answered completely and honestly.
2. Company history and product. The highlights of the company's development should be covered, and a careful discussion of the nature and use of the company's product should take place.

*VARIATIONS* Additional features may be covered, depending upon the needs of the individual and the company. Furthermore, as already indicated, not all points mentioned will pertain in all cases. For example, if the new employee is an old-timer in the area, it would be inappropriate to spend much time on the first seven points previously listed. It would be equally inappropriate, however, not to query such a man about these points – even old residents of an area may need help or advice.

*USING MANAGER'S RESPONSIBILITY.* As already indicated, the induction interview should be conducted by a member of the manpower staff if such a staff exists, or by the using manager if there is no personnel group. The using manager making the hiring decision may actually start at least a portion of the induction interview; in fact, it is recommended that he start the procedure at the time of making his decision. At that time, he checks to see if the employee

has problems which may prevent him from immediately reporting for work. He also tells him what to expect when he returns to the personnel group for the induction or counseling and processing interview.

*Form.* What form will this step take? Will the induction interview be a mass event or handled individually? Wherever possible, it is best handled individually.

Some argue that induction interviews work out best if handled as a mass technique. They argue that utilization of audio-visual aids enables the use of the mass technique, and that such aids assure that the desired information reaches the new employee. They also point out that this is a more economical approach.

Where a large number of persons have been hired within a given week; where it is imperative to cut their non-productive time to a minimum; where no real significance is attached to the possibility of turnover at an early time, this mass approach appears to be justified. On the other hand, there are strong reasons for not using the mass approach.

First, the real purpose of the induction interview is both to "give" and "receive" information. People in general tend to keep their own counsel in the presence of strangers, and particularly in the presence of a large group of strangers — thus the receipt of information may never occur. Further, and because people tend to keep silent, those conducting the session may never really know if their information got across. Finally, those who know anything about the cost of producing truly good audio-visual aids, particularly moving pictures, realize it is not small.

*INDUCTION PROCESSING.* Induction processing refers to the completion of the inductee's personnel file and the handling of certain necessary administrative details. Included in this step are such matters as:

- . . . Assembly of the individual's personnel file.
- . . . Checking and completing the personal history record.
- . . . Checking and completing the medical record.
- . . . Completion and signing of the emergency beneficiary record
- . . . Completion of tax and social security records.
- . . . Explanation and initialing of disciplinary record.
- . . . Completion and signing of retirement and insurance forms.
- . . . Completion of any "free choice" items such as bond-a-week forms.
- . . . Completion of other forms such as the union check-off plan.

In some organizations this processing is, or has been, handled through the mass technique. All newcomers for a given week are brought together in a large room, the forms are distributed, a staff man instructs the group as to how to fill out the forms and why, and then

the items are gathered up and filed by the employment office clerks. Where the mass approach is not used, the induction processing is a part of the induction interview procedure.

Face-to-face contact with a skilled and knowledgeable interviewer reduces the risk of error in the completion of personnel records, and minimizes the risk of misunderstanding on the part of the inductee. It is our opinion that the possibility of handling both the processing and the induction interview on a personal, individual basis should receive serious consideration and, wherever possible, be the procedure utilized. Some argue that it is unnecessary to assemble the personnel file in the presence of the employee, that he can ask any necessary questions in a mass situation as well as in the individual situation. However logical this argument, one must admit that if the mass approach increases the risk of error or misunderstanding, it should be used only after very careful study has determined its real economic advantage.

*Variation.* Properly developed audio-visual aids may help reduce the error risk if induction processing is to be handled by the mass approach. Blown-up projections of the forms, case studies of the advantages of insurance, retirement, and the like can be used to advantage.

*Responsibility* Where there is a manpower division, induction processing is a staff (manpower) responsibility. Where no manpower or personnel unit exists, this processing step becomes the direct responsibility of the using manager.

**DEPARTMENTAL INTRODUCTION AND SPONSOR ASSIGNMENT.** Departmental introduction actually is more important in many ways than induction interviewing and processing. The interview phase of induction, particularly if personalized, serves to cover the administrative matters which might otherwise be a problem to the inductee, but does not relate him to his job or his immediate environment. This is what occurs in the second phase of the induction system — the departmental introduction phase. Departmental introduction means more than just introducing the new man to his associates, it includes at least the following.

- . Orienting the new man to his surroundings.
- . Explaining his part in the departmental *and* the over-all production picture.
- . Checking to make certain that he understood what he was told during the induction interview, and answering questions regarding the personnel records he filled out and the services and rules that were explained to him.
- . . . Introducing him to the union personnel (if any), and checking to see that he understands the contract and what it means to him.

. . . Reviewing his pay situation and his transfer-promotion possibilities.

. . . Introducing him to his sponsor.

It is important to be sure that the new man has an opportunity to tour the *plant*. Though no specific knowledge can be acquired from a fast tour, a sense of belonging can be established and generally a very useful series of impressions can be created. Furthermore, so far as the "old" employees are concerned, this allows them an opportunity to realize that the new "guy" is just that, another "guy," not someone to be feared or suspected.

When this tour should be taken is a situational decision. It may occur following the induction interview and be conducted by the interviewer. It may take place when the new man is returned to the using manager and be conducted by him, or it may occur under the guidance of the sponsor.

The *departmental* tour is equally as important, if not more so. The two points for emphasis are introduction of the new man to every member of the department, and concise functional explanations. It is desirable also to exchange personal information such as where people live, hobbies, and the like. This approach establishes an awareness of the importance of each member of the department both in the new man *and* the "old" hand. It serves to put depth into the inductee's impression of the department and its relationship to the company as a whole.

When to conduct this tour depends in part upon the situation, but a greater need exists here than in the case of the plant tour. In most cases, it is wise to conduct this tour as soon as possible after the arrival of the new man. It should be conducted by the immediate superior, the using manager, or his assistant. It is not wise to have a personnel department representative conduct the departmental tour (unless it is the personnel unit to which the man is being assigned). It is far better for the inductee to be familiarized with his department by those who are themselves familiar with it than by outsiders who have only a theoretical or very general understanding of it.

**SPONSOR ASSIGNMENT.** There has been rather frequent mention of the term "sponsor." What is its meaning? The term refers to an experienced member of a department who is assigned to the new man as instructor, guide, and counselor. The idea of sponsorship, or the "buddy system," receives open criticism as being too expensive, entirely impractical, and requiring too much supervisory effort. It has proven a highly successful technique, however, where applied in the proper spirit.

Like so many manpower management techniques, the origin of the sponsor system rests in the military and the church. Military his-

tory frequently speaks of the technique, and today's replacement approach in the army involves the utilization of teams or "buddies." In industry, the sponsor idea requires systematic application based upon the known characteristics pertinent to both the new employee and the older members of the workforce.

*Sponsor Selection.* The supervisor will maintain a fully-developed file on his people showing their residence, hobbies, sports interests, and other pertinent and personal factors. He also maintains the record of performance on the job, and as individuals reach technical proficiency he trains them in a sponsor's duties. As new people are assigned to the department, the supervisor checks their personnel data (as provided by the employment section) and assigns them to a person with apparent compatible characteristics. Special attention is directed in this assignment to residence, family development, transportation, and hobby and sports interests.

The sponsor is a part of the organization of a using manager. It is, therefore, his responsibility to select that sponsor, however, the manpower division may be of great help. The manpower unit may design the general procedure for sponsor selection and training and it may co-ordinate or administer (handle the paper work) for the using manager. The using manager cannot escape the obligation to act — his is the right to select and the obligation to train.

*Sponsor Training* Sponsor assignment is not a simple matter. Sponsors require training to meet their responsibilities, in fact, the sponsorship program correctly is considered a part of the process of promotional development. The responsibilities of the sponsor are such as to make him a "part-time" supervisor. Obviously, a supervisor makes sponsor assignments only after deliberate consideration of the capabilities and limitations of the employee. Furthermore, training of sponsors emphasizes administrative and psychological instruction. Their training also should include "how to teach" and how to interview.

*Sponsor Functions* The sponsor guides the new man through the probationary period of employment. Often, of course, the relationship continues as long as both are employed in the concern. The specific duties of the sponsor include the following:

1. Job indoctrination, where the new man does not require vestibule training, the sponsor may handle the actual job training of that new man
2. Assisting the new man in finding his way around the plant, in learning the places and people directly or indirectly connected with getting his work done.
3. Assisting the inductee in understanding services, benefits, rules, procedures, policies, requisition systems for parts, tools, and materials.
4. Assisting the new man directly, not just with information regarding the car-pool, or other forms of transportation.

In other words, the sponsor assists the new man to adjust to the totality of the job and becomes a part of the link to manpower development.

Sponsorship programs have been found rewarding. They help reduce grievances from new employees, tend to reduce turnover of new employees and serve as a means of leadership development and as a general morale builder. In some instances these programs have been unsatisfactory. Where found unsatisfactory, however, and where this finding has been analyzed, the reasons have not been attributable to the idea of sponsorship; rather failure was due to the manner in which the programs were implemented and the sponsors' lack of training. Furthermore, where such programs have succeeded, the supervisory and top management attitudes toward them have been good; where they have failed, the attitudes have been bad. The lesson, then, speaks for itself.

*FOLLOW-UP.* The third step common to any good induction system involves "follow-up." Induction is a phase of a controlled system of staffing; it therefore requires adequate follow-up as described in Chapter 6.

Even where recruitment and selection systems are completely up-to-date, there is a relatively high labor turnover rate if induction fails to include systematic follow-up. Such a procedure is personal. It involves consideration of the new employee. In its absence, the progress of the new man goes unchecked, his reaction to his job remains unconsidered, and one may even doubt that the previous phases of induction have been properly applied. We find, therefore, that follow-up provides a review of the new employee, of his actions and reactions, and is fundamental to appraisal of system.

More than this, follow-up is in itself a means of stimulating the feeling of belonging. It serves to notify the new man that he has not been forgotten, has not been left in the lurch. This is quite important to all of us. As we all know, there is no more lonesome feeling in the world than that which comes from being alone in the presence of others.

*What Is Involved.* Follow-up divides naturally into two specific phases: in-process and end-of-probation. The approach taken in both phases involves interviewing and records evaluation. Some organizations prefer to treat follow-up as an informal procedure and others as a formal one. The formalized approach seems more desirable in most cases because it tends to assure proper handling. Informal procedures tend to drift toward haphazard and incomplete handling.

Before considering the two phases of follow-up let us note a term used rather frequently in our discussion of induction and selection — "probation." In the language of manpower management, the term refers to a specific period of employment in which the new man finds

himself on trial. The trial, or probation period, is used widely by industry. Its use derives from two fundamental needs or considerations. *First*, one must admit that the tools and techniques applied to manpower selection still lack the reliability and validity necessary to a really "safe" final decision to hire as a permanent worker. *Second*, union contracts have become so rigid with respect to union security and the application of seniority that management must protect itself not only against its own "bad" selection decisions, but also against the union-imposed rule which might make it impossible to eliminate an unsatisfactory employee without costly grievance activity or arbitration.

Probationary employment periods range from a matter of a few weeks to as much as six months for rank-and-file employees. The period may be even more extensive in the case of supervisory and executive personnel. No satisfactory rule exists as a base for determining how long a period of probation should be. It is safe to assume, however, that if the period is determined through study of the job, thinking in terms of the length of time required to train an individual fully and for the individual (the so-called "average man") to reach "average acceptable production," this should provide an equitable definition of the probation period.

*In-Process Follow Up.* The in-process system involves periodic check of the inductee's production records, periodic discussion — both formally and informally, that is, at his work place and in the privacy of an office — of his performance and progress, and considered study of his trainability, co-operativeness, and the like. In part, this phase of follow-up will be handled by the using manager, and in part by the personnel group.

The foreman (or other using-manager) checks the new man's understanding of the work by watching him at work, by instructing him, and by talking with him frequently throughout the work period. In a sense, the foreman is also checking on the sponsor's effectiveness.

Once or twice during the probation period, the manpower people should send a representative (preferably the interviewer who will handle the end-of-probation interview) to the department to see if the inductee has any problems or misunderstanding that need clarification. The representative also should review the man's production record.

Both the using manager and the manpower representative handle the in-process follow-up in friendly fashion — unless, of course, there is a very serious disciplinary matter. Further, the sponsor is directly involved with "passing the word" regarding any problems the inductee may be having, and also should make an evaluation of his own. *In-process check lists* will be useful to using managers, manpower representatives, and sponsors.

*End-of-Probation Interview.* The idea of the probation period already has been discussed briefly from a management point of view. This, however, is only part of the story. The new man we have so carefully selected and placed also makes a decision that affects the company — the decision to accept the hire. He has no way of estimating the merit of his decision before he experiences the work environment. He bases his decision on his first impressions of the company, his immediate boss, the personnel people, and other workers he chances to know or meet. After he gets on the job his impressions may change. Should this happen, he may be expected to quit. Many people assume that if the new man is not happy he will, in fact, simply quit. Statistics seem to support this contention. There may be those, however, who find it difficult to quit, difficult to take such a decisive step on their own. The probation period helps such persons overcome this psychological problem. The period offers such an individual a way out, if he decides this is not the company for him.

During the selection process and again during the induction interview, the probation period should be explained to the new man. This explanation identifies the reason for the period, its length, and what the nature of the end-of-probation interview will be. Incidentally, some organizations find it helpful to furnish the inductee with an "impressions" form which he fills out during the probation period — a form designed to give him an opportunity to report his impressions of the company, the work, the supervision, the transportation problems, and the various services provided by the company.

The end-of-probation interview will be conducted under the same rules and principles mentioned in Chapter 5 and in other sections of the text where interview has been a major point of reference. In addition, it is responsive to the same pitfalls confronted in all interviews. Like the induction interview, its purpose is to give and to receive information. Unlike the induction interview, *two* negative decisions are possible: (1) the inductee may be unacceptable to the company, hence the decision to release, or the inductee may find the company unacceptable, again a decision to release (employee decision to quit), and (2) the employee may be acceptable but not as currently placed, hence a decision to transfer and a possible employee decision to quit.

In either case, the individual should receive courteous treatment, and if he requires help in making another employment contact, he should receive it. If he requires help in deciding whether to accept, transfer or quit, or whether or not to remain, advice and counsel are required. Note that an unsatisfactory probationer should not be handed severance pay and shown the door!

Often overlooked, unfortunately, is the fact that when a decision to release is made, the union ought to be completely informed of the case. Failure to so inform has resulted in numerous grievances, many

of which have been completely legitimate and finally decided in favor of the union.

*TIMING.* Many organizations rush an inductee into a multitude of harring induction activities. The individual finds himself bounced from place to place, from man to man, from interview to interview. He finds himself learning less and less and becoming more and more frustrated with each additional "exposure." Obviously, this approach is undesirable.

Equally undesirable is the one-day mass induction approach where the inductee finds himself lectured to, driven "form crazy," and exposed to "medicine-man" histories and product hallucinations. If mass-treatment doesn't frustrate him, the day's inanities will!

Correct induction follows a carefully-timed plan, and, as previously mentioned, an "easy-stage" approach. The induction interview may be scheduled for the first day, together with the departmental tour and introduction to the sponsor. The second day may bring the inductee back to the manpower division for the processing phase of the induction interview, and find him back with the sponsor in the afternoon. The third day may find him on a plant tour. The fourth day he may have another departmental tour and briefing by the sponsor. On his first payday he may be given a further briefing on financial matters by the sponsor. Sometime between his second and third (or first and second, depending upon length of pay periods) pay periods, he will be interviewed by the manpower representative in keeping with the follow-up procedure. Finally, he will experience the end-of-probation interview. An example of an inductee's "timetable" is found in Figure 44.

### MANAGERIAL INDUCTION

Generally speaking, the most expensive form of labor turnover is that involving supervisory and executive personnel. Is it not strange that, although this is the case, managerial induction often receives less attention than that of the rank and file?

*THE GENERAL PATTERN.* A management induction system follows the general pattern previously stated (see Figure 43). The departmental introduction and sponsor assignment gain in importance, however, and the familiarization efforts are broader in scope. Every effort should be made to inform the new management member of the departmental and divisional functions and responsibilities, the line and staff communication channels, and control procedures. He requires ample opportunity to recognize and understand the social structures, and certainly should be given frequent opportunity to raise questions of procedure.

Sponsor obligations are magnified. The sponsor is expected to do his level best to make the new man aware of the group relation-

<u>Date &amp; Time</u>	<u>Process or Step</u>	<u>Approach</u>
<u>1st Week</u>		
Monday A.M.	Induction Interview and Processing	Individual Employment Office
Monday P.M.	Departmental Tour and Sponsor Assignment	Individual or Group Foreman or Department Head
Tuesday	OJT (on the job training)	Individual Sponsor
Wednesday A.M.	Indoctrination Session	Mass Auditorium
Wednesday P.M.	OJT	Individual Sponsor
Thursday	OJT	Individual Sponsor
Friday	Plant Tour A.M. or P.M.	Individual or Group Sponsor (one)
<u>2nd Week</u>		
Friday A.M.	OJT except as indicated Progress Interview	Individual Sponsor Individual Foreman
<u>3rd Week</u>		
	OJT	Individual Sponsor
<u>4th Week</u>		
Wednesday A.M.	OJT except as indicated Progress Interview	Individual Sponsor Individual Employment Office
<u>5th Week</u>		
	OJT	Individual Sponsor
<u>6th Week</u>		
Wednesday A.M. & P.M.	OJT except as indicated End-of-Probation Interview and re-orientation session	Individual Sponsor Individual Foreman

### EMPLOYEE'S INDUCTION TIMETABLE — AN EXAMPLE

*Figure 44*

ships, cliques, and "e" circuit arrangements, and he needs to emphasize policy and its application. In some cases, management personnel are expected to participate in community affairs. The sponsor is responsible for guiding the inductee into such responsibilities.

Follow-up and end-of-probation interviewing are the same for managerial induction as for rank and file; however, both are magnified in importance and scope. It should be noted, too, that the inductee should be taught the induction process, for this will become one of his responsibilities when he achieves permanent status.

**A SPECIAL PROBLEM.** In many cases, managerial induction involves former rank-and-file personnel — people promoted into supervision. In this case, the adjustment problem is particularly severe.

The change from rank-and-file employee to management employee means an instantaneous shift in status. Any situation which changes black to white puts a severe strain on those involved: when that change is immediate, the strain may be all but unbelievable.

If one expects to make good management people out of former rank-and-file personnel, this strain must be recognized and the induction procedures designed to minimize it. Following are a *few* of the realities that the new management man faces, and for which the induction system must prepare him.

1. He must answer questions, and when he asks questions they must be intelligent in the eyes of others
2. His answers must be factual and in accord with current policy and procedures. Opinions, particularly when expressed to those under him, are dangerous. Opinions often are considered as admission of lack of knowledge
3. He must know where the functions of the support departments begin and end, and where his responsibilities in those areas begin and end.
4. He must understand the wage and salary program completely.
5. He must know what is expected of him and his people, what he and they can expect of the departments and divisions around them, and what he cannot expect of both these elements.
6. He must understand the nature of the coordination with the departments behind and in front of him and hence the peculiarities of their supervisors and leadmen, stewards and grievance committeemen, as well as the "pet peeves" of his boss.
7. He must fully understand his part in handling grievances. He must therefore fully comprehend any existing contract with labor. He needs to understand the personal relationships with stewards and other union people necessarily involved with him, his people, and their work.
8. He must understand the records and reports expected of him, their due-dates and flow, and when he can bypass his line.
9. He must understand his responsibilities regarding costs, and his budget obligations
10. He must understand the shop rules and the safety rules, including the particularly dangerous tasks and areas. He must know emergency procedures
11. He must thoroughly understand his authority and responsibility and that of those above and below him (both in direct line with him and in support of him).
12. He must *know* those with whom he will regularly have official contact.

One notes the important application of an equally important operational rule for manpower management: *to sell a manpower program effectively, get those who will be involved with the application of that program in on its development and evaluation.* Obviously, managerial

induction should be planned, developed, and evaluated by management; more than this, managers should be the sponsors, and inductees should be taught the system they will eventually administer.

There may be few experiences as enjoyable as those which develop in a properly-constructed induction program — one which assures the belongingness feeling, one which, in fact, makes it pleasant to be associated with one's fellow workers. Induction of management personnel *must* result in this feeling — think of the damage that can be done to a complete workforce by a manager who has developed the "don't care" or the "it's ridiculous" attitude!

### SOME ERRORS OF PRACTICE

The peculiar and often complex requirements of proper induction procedure frequently go unnoticed. Students new to the field of manpower management, in particular, find it difficult to grasp the why and wherefore of careful routine and distinct planning necessary to proper induction. Several illustrations of errors in practice may strengthen the recognition of the real importance of proper induction.

**Illustration #1** Jay C, age 48, single, was hired December 20 as a lathe operator in Department 14. During the group indoctrination lecture, held December 22, he was given various personnel forms to fill out, including a beneficiary form which he left blank

During the week of January 4, he fell from the top step in front of the shop entrance and injured his back and hip severely. He was rushed to the local hospital. He was unconscious for a period of six hours. His elderly mother and father became frantic when he failed to show up for dinner at the usual time. They notified the police Missing Persons Bureau. Shortly thereafter they learned of Jay's injury and that he was still unconscious. The mother fainted. She injured her shoulder and was laid up for a period of three weeks.

When Jay recovered, he quit the company. Before he left he sued for the medical expenses connected with his mother's injury. The company settled out of court.

Immediately after Jay's mishap the policy of merely passing out the personnel forms during the group indoctrination meeting was ended. Instead, each employee was required to check over his entire personnel file and initial it, and new men were required to fill out the forms and pass them in in such a way as to permit checking of the forms and personal explanation.

When dealing with people, it is incorrect to assume that they have read rules or completed all pertinent forms, or are aware of benefits merely because their eyes and ears have been exposed to them. One

must assure that communication takes place, one cannot assume that it takes place.

**Illustration #2** William C. was employed by the company on the first of July. He filled out all the necessary forms including a security clearance form. He had been arrested twice for speeding in a local community and entered this fact on the form

Working in the same department was another individual whose name was William D. C. He was in a particularly sensitive position, one which required absolutely positive patterns of stability and loyalty.

On July 5 the personnel department began auditing the records of the people in Department 6 where the two "Bills" were employed.

Somehow, the girl doing the auditing got William C's clearance form mixed up with William D. C.'s form. Probably nothing would have come of all this had it not been for the fact that several days later federal authority audited the highly sensitive positions in the company. Nobody noticed that the wrong name was on the clearance form in William D. C.'s file until he pointed it out after being called "on the carpet"

Human error cannot be eliminated. When files are under audit, however, the employee should be required to check and initial them when the audit is ended. This may be considered too costly or time consuming, but is it not worth the effort if it minimizes errors?

**Illustration #3** Charles went with the blank company in 1955 after a successful career in a competing firm. He went in as chief inspector. Three months after his employment he quit. His story is as follows:

"A very good and old friend of mine who represented one of the county's largest manufacturers of gauges called to see me at my request and was told that no one by that name worked there. Mind you, that was after I'd been with the outfit for three months.

"That wasn't the worst of it, however. The week before I was walking down the main aisle in the shop after having shown the general foreman how to fix a machine that had been knocking off center at regular intervals for what he thought was no reason, and I passed the 'big boss.' Know what he said to me? 'Son, get back to your machine, it's not time for a coffee break yet, it's only nine-thirty!'"

Two points appear here. First, part of the induction routine certainly should involve introduction to receptionist personnel, and follow-up

to make certain that they have the new man listed properly. Second, make sure the boss knows his managerial personnel. This saves embarrassment on both sides.

**Illustration #4** Al had been hired as assistant to the general foreman. As such, his duties included signing requests for materials, financial outlay and the like. During his first two days with the organization his boss saw to it that he met all the department and division heads and on the third day the two of them had lunch with the comptroller and the purchasing agent. On the fourth day Al was personally interviewed by the president of the company.

Four weeks after being hired, Al was required to make up the quarterly manpower estimate and the monthly manpower requisition. Three days after they were forwarded to the personnel manager they were returned with the curt note:

“Signature and name not recognized. Only authorized signatures are to be used on manpower requisitions.”

The note was signed with the personnel manager’s name. Fortunately, Al’s boss was not one to take things lying down, and Al’s feelings were substantially mollified.

You guessed it! The personnel manager did not sign the note; his personal secretary handled those matters and she honestly didn’t know Al or that Al had been hired. What’s the point? Simple – induction should include introduction to *all* who will be directly or indirectly involved with the new man and his work!

**Illustration #5** The Sinkslow Boat Works had expanded rapidly during World War II. To try to keep pace with manpower needs they had installed a mass-induction program which included a “careful” briefing on company policy, procedure, and the like. This was held every second Monday for all new employees hired during the previous two-week period, a movie on the product was shown every second Monday, and an interview on the first day of employment. The briefing was conducted by one of the company officials. A “duty roster” was made up assigning each official a specific day to handle the briefing of the new men and women.

Jack L. was the general foreman and the newest member of the management team. He usually conducted these briefings – strangely enough those scheduled by the roster always seemed to have something else that “had to be done right away.”

One sultry July afternoon in 1942, Jack came rushing into one of these induction briefings (one for which he was not scheduled), and rushed through the routine. The final topic to be covered was parking. He handled it as follows: “There’s plenty of parking

space over to the left of the main building. You new people have to get stickers from security and then you can park there. But, don't park where there is a name sign or you'll be in trouble, and there's enough trouble around here without looking for it."

With this cryptic remark he started from the room, but stopped, turned, and added as an afterthought, "And you guys might think about sharing rides because that'll save on parking space"

One can do little about another's temper, and undoubtedly even in the best of organizations there will be instances when responsible people will lose control of themselves in the face of some series of frustrating problems. Nonetheless, it is wise to establish workable induction routines which have the backing of management. In this case, there was a lack of proper system, and what little system did exist was not followed. A guiding principle concerning participation schedules exists: scalar differences should not be allowed to govern the implementation of induction participation schedules once those schedules are published.

**Illustration #6** George was found suitable by the employment interviewer. The foreman agreed to hire him — agreement was reached over the phone. George was sent down to the shop. He was given rather scanty directions as to how to get there, but he finally made it. Several times on his way, he stopped to ask directions. Each time he'd get a sympathetic or a knowing remark. By the time he reached the proper area he was almost prepared for the blast he got — which was. "Who ——— are you and who sent you!"

Inductees should be protected from this sort of thing unless it is a planned part of some "stress" problem the new man is supposed to overcome. Failure to protect against this leads to bad first impressions and increases the probability of early turnover.

**Illustration #7** In a number of plants there is an informal rule that puts new men through a period of social trial. During this period, the probationer is subjected to all sorts of indignities and humiliations, some more gross than others. On the other hand, in some plants this horseplay has been fairly well eliminated and has been replaced by a sort of comradely system of joking interspersed with serious efforts at the building of esprit.

In one of the former types of situation, a certain John R., Irish, 32, and rugged, was hired and immediately introduced to some pretty rash practical joking. He stood up under the order which sent him hunting through the tool room for a "reversing spatula,"

had him sign a suggestion blank which was later filled in by another and told the boss to "go soak his head," and notified him that as a probationer he was expected to keep all graphite droppings cleaned up. *But*, when he went to his locker that first evening and found that his street shoes had been filled with an overripe piece of Limburger, he smashed the two nearest heads and proceeded to batter his way out of the locker room. The net result: he was fired, two men were hospitalized, and two others were unable to report for work the next day

Good supervision, proper sponsor assignment, adequate employee training — these factors, in combination, tend to eliminate or minimize dangerous horseplay.

In this section we have noted some rather bad examples of induction in action. The purpose in mind was to indicate the significance of little things like time, personality, pet ideas, scapegoating and horseplay, and clerical carelessness.

### APPRAISING THE SYSTEM

Appraisal of the induction system requires the same application of control thinking used to appraise the other phases of manpower procurement. Evaluation of recruitment and selection thus is closely allied with appraisal of induction, however, induction can be studied separately.

Two considerations are basic to induction appraisal: the observable reaction of the inductees and estimation of the system's so-called efficiency. Since both in-process and end-of-probation follow-up procedures focus attention upon the progress and satisfaction of the inductee, system-appraisal ties in directly with follow-up.

*INDUCTEE REACTION.* The reaction of inductees can be measured through consideration of the data collected from end-of-probation interviews and in-process information. If the data are collected in a standard manner, responses to specific questions and certain quantitative information can be studied.

For example, one small concern uses a very simple — but formalized — approach. Every six months the personnel interviewer studies available records and completes the form depicted in Figure 45.

This is far from a sophisticated approach. It formalizes information, however, and more-or-less forces management's scrutiny of these specific factors. Clearly the belief in this case is that any decrease in expressed dissatisfactions is a good sign, any increase in the number reaching standard and earning bonus is a good sign, and so forth. As logical as this particular approach is, it is risky. Further improvement comes from statistical analysis.

**Rank-and-File Orientation  
Appraisal Form**  
- an example -

Date \_\_\_\_\_

Number Inducted \_\_\_\_\_ Since \_\_\_\_\_

#	Probationers Who	# Last Period	Per Cent		Remarks
			Increase	Decrease	
	filed grievances				
	were disciplined				
	discharged for cause				
	quit voluntarily				
	had accidents				
	reached standard				
	earned bonus				
	expressed dissatisfaction with				
	supervision				
	cafeteria				
	pay				
	hours				
	facilities				
	benefits				
	training				

**RANK-AND-FILE ORIENTATION APPRAISAL FORM — AN EXAMPLE**

*Figure 45*

**SYSTEM EFFICIENCY.** The turnover record can be used to challenge system efficiency. If, for example, one considers input as the number of individuals inducted in a given period and defines output as the number remaining at the end of probation, then the familiar  $\frac{\text{output}}{\text{input}}$  ratio can be established. Whenever this ratio is less than 0.90, you should look for a few (usually one or two) predominant reasons for such a loss of efficiency. More than likely, such causes can be identified by reasonable effort on the part of the manpower manager. This measure relates to the over-all efficiency of recruitment, selection, and induction. It can be narrowed to indicate induction efficiency by re-defining the input and output values. For ex-

ample, input may be defined as total number of probationers at the beginning of a given period, and output as satisfied probationers remaining at the end of that period. Or, the matter of efficiency can be related to productivity, scrap, and the like.

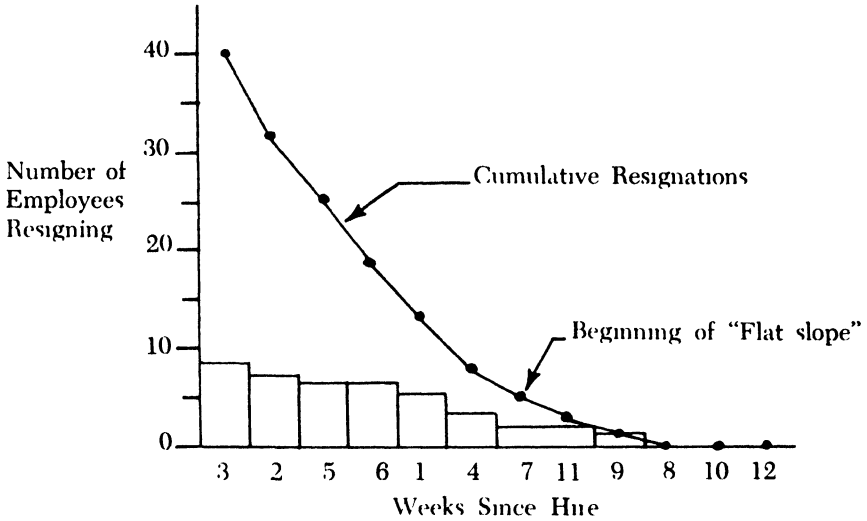
**EVALUATING SYSTEM CHANGES.** Further improvement can be achieved after the efficiency is over 0.90, but a more sensitive statistical aid is needed. The expenditure of time and money involved in developing good recruitment, selection, and induction procedure still cannot assure management that a "hire" is going to consider the company "a good place to work." As already indicated, the heaviest turnover occurs during the first few weeks and months of employment. This suggests that new employees become dissatisfied in some way or fail to meet hoped-for achievement. One arrives at the conclusion that induction procedures must be checked (or appraised) regularly to enable review of the entire process.

Alert managers realize that the previously mentioned appraisal methods seek to evaluate induction for the purpose of deciding to make changes, if necessary. Once changes are made, managers need a tool which, once applied, can continue in use and act as a general appraisal technique. The statistical *c* chart, where *c* stands for the number of new employees resigning per month, can serve well as an objective aid to guide decisions about such changes.

First, determine from past records the period during which the employee should be considered as "new." Perhaps the best way is to plot the cumulative maldistribution and select the point of the beginning of the "flat slope" as the end of the "new employee" period, thus for Company A:

For Years 1960 and 1961

<u>Weeks Since Hire</u>	<u>No. Employees Resigning</u>
1	5
2	7
3	8
4	3
5	6
6	6
7	2
8	0
9	1
10	0
11	2
12	0
	-----
	40



In this case, the first six weeks since hiring will be considered the "new employee period."

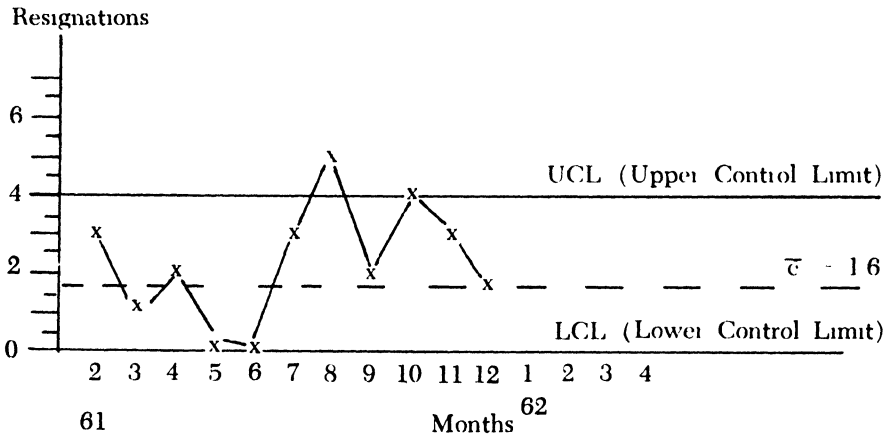
Now the *c* chart will serve as a monthly control and evaluation tool from this point on, as serious attempts are made to improve the induction activities of the company. Statistical control limits for the chart will come from the cumulative curves for the Poisson Distribution Chart (the Thorndike Chart, Figure 40 in Chapter 11). To be valid, the number of new employees leaving per month should be running less than 10 per cent of those hired. If this is not so, study the case histories and institute whatever changes should minimize repetition of the most prevalent unsatisfactory situations. (This study can be undertaken by again applying the cumulative maldistribution technique to information acquired through end-of-probation interviews, or through records such as that indicated in Figure 45.) Let us consider the experience of a small manufacturer in using this approach.

**Illustration #8** Company A applied the previous set of recommendations. They succeeded in getting the resignations in the first six weeks since hiring down to 7 per cent of those hired, then started plotting their *c* chart. The average number of new employees leaving per month was then running at 1.6, called  $\bar{c}$  (or  $\mu'$  on the Thorndike Chart).

Recommended control limits of 0.95 were selected. Thus, they should exceed the upper limit (UCL) only 2.5 per cent or less of the time, and should expect to be less than the lower limit only 2.5 per cent or less of the time when procedures have neither damaged nor improved system results. For a  $\mu'$  of 1.6, they read from the Thorndike Chart:

probability of 0 resignations,  $P_0 = 0.2$   
 probability of 4 or less resignations,  $P_4 = 0.975$

Although desirable to have the lower control limit (LCL) equal to or less than .025, it is not possible to have less than zero resignations. The  $c$  chart was therefore plotted for the next 11 months as follows.



During August 1961, Company A had five resignations of employees who were within six weeks of their hiring date. Being beyond the upper control limit (UCL), there is less than 2.5 per cent probability this would have happened unless some deterioration in the situation had occurred. Put another way, there was more than 97.5 per cent certainty that something had caused the situation to worsen.

Another equivalent sign of a significant change is more than five successive points above the  $\bar{c}$  level, the former average; by December (in the above instance) there were six successive months with more than 1.6 resignations each month.

The probability of 5 in a row above the average is  $(1/2)^5 = 1/32 = .032$ ; of 6 in a row is  $(1/2)^6 = 1/64 = .016$ . The desired .025 limit lies in between, so having 6 points in a row is significant (even if August of 1961 had not gone out of control but still had a value greater than 1.6). To continue with the case —

It was found that in July and August one new foreman was elevated from the ranks in each month. While not all the resigna-

tions were associated with new employees working for these two, their slightly more consistent difficulties in this regard apparently did cause the pair of out-of-control indications on the chart. Closer observation of their practice clearly revealed where they should modify their handling of new employees.

Another, and larger firm, Company B, had a  $\bar{c}$  of 5.1. The Thorndike Chart (Figure 40) thus gave:

probability of 0 resignations,	$P_0 = .007$
probability of 1 or less,	$P_1 = .04$
and	$P_9 = .965$
	$P_{10} = .98$

which bracketed the desired values of .025 and .975. So the LCL was set at 1 and the UCL at 9, since being beyond these boundaries would occur 0.7 per cent and 2.0 per cent of the time. A single month at zero, or six successive months below 5.1 would be significant evidence that a beneficial effect had come from some change as compared to the past situation. When this occurs, compute the new, lower  $\bar{c}$  (preferably from at least ten months of data since the change) and determine new control limits from the Thorndike Chart.

It can be seen that appraisal of system is not a difficult task. Actually, the real difficulty lies in getting responsible people to examine available records in the proper way, or in having proper records maintained so they can be evaluated. Appraisal is a responsibility of the manpower division, if there be such a unit. If the company is too small to maintain a personnel group, the responsibility belongs with the using manager. Actually, the using manager has a part in this evaluation responsibility even where a manpower unit does exist. He shares in the induction responsibility, and he contributes much of the information indicative of change and much of the insight into the causes of change. To save the using manager time and effort, the personnel group handles computations, development of necessary evaluation records, and the like. The using manager participates in gathering the personal reactions of inductees, however, and is required to study evaluation records and participate in planning designed to improve system and eliminate deficiencies.

## SUMMARY

Probably the most valuable natural resource is manpower. Any step which may conserve or aid in the conservation of manpower is beneficial to the organization involved. Induction is such a step. When properly developed and implemented, induction systems greatly reduce the severity of the adjustment problem men face when entering a new job or a new company. Furthermore, proper induction minimizes early

turnover of personnel thus reducing the drain upon profits through the manpower budget.

In reality, induction is a bridge between the selection and the development of manpower. It serves to develop proper attitudes on the part of new people by easing their adjustment problems, furnishing them with the necessary general knowledge concerning the job and company, and preparing them for extensive technical training. Without such orientation actual job training may be ineffective.

Induction can be implemented in many ways. Under existing conditions the most satisfactory induction processes include both the personal and the impersonal touch. They are based upon careful interviewing, mass or individual exposure to company history, policies, products, and the like; sponsor assignment, adequate and properly-administered records development, and a conscious effort to create a feeling of belonging.

Probably the greatest danger to the successful implementation of an induction program is the human being. Not only executive lip-service, but the moods and pressures affecting those directly responsible for the program, are involved here. The personnel man thus has a continuing job of selling the program and training and guiding those responsible for it. Top management has the responsibility of seeing that they and their subordinates are wholeheartedly behind the effort. Without this support, induction will fail and money will be wasted.

Managerial interest must not be limited to "support" of the program; it must extend to appraisal. Without correct appraisal of system there is little hope of ever really knowing whether the program is working. Without managerial cooperation in the appraisal effort, it is liable to fail. Using managers provide vital information to the personnel people who then perform the actual evaluation.

As a function, manpower procurement is incomplete unless those who have been recruited, and then selected, are effectively introduced to their jobs, their surroundings, and their constituents. One cannot, after all, escape the implications of a bad first impression. The problem of building an effective staff does not end, however, with induction.

Truly effective manpower has broad ability. Such a staff is able to grow and to handle growth. Such people are competent from the technical, physical, and socio-psychological points of view. It takes carefully-structured manpower development planning and procedures to assure the presence of such people. It is with this phase of the manpower function that we deal in Part IV.

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*Human resources in their raw state have only minimal value.*

## **PART IV**

# Manpower Development

Even the most efficient selection process will not assure that each new hire is fully capable of meeting the requirements of the job assigned. Even though the new employee has had previous experience in some other concern and in a similar job, his new assignment will have certain unfamiliar characteristics or requirements. He therefore needs development to facilitate his meeting of those requirements.

Furthermore, a new assignment resulting from promotion or transfer will necessitate development activity. Even though the promotion or transfer occurs as a result of specific experience, there will be certain unfamiliar aspects about the new position.

These two points indicate the significance of training as a manpower function, but do not tell the whole story. Manpower development goes beyond the idea of merely preparing an individual for a current assignment. The real purpose of development, the second working objective of the manpower function (see Figure 46), is to establish a system of continuing preparation of manpower for expected and unexpected change.

The development activity begins with a proper induction system. As pointed out in Chapter 13, induction bridges the gap between selection and formal development work. Once this bridge is crossed, efficient management seeks to avoid unnecessary recruitment and selection costs by making the best possible use of its manpower inventory. It accomplishes this by establishing a system of continuing manpower development.

Such a system involves carefully conceived skill training and educational work, periodic appraisal of manpower effectiveness, planned promotion and transfer, and continuing study of the organization and

its predicted manpower requirements. This portion of the text is devoted to consideration of these activities.

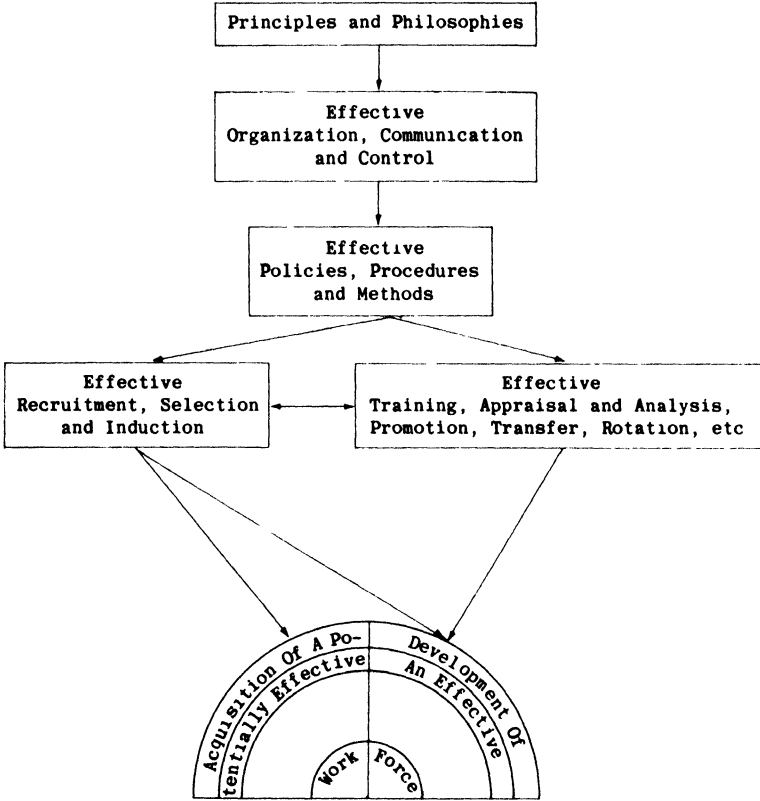


Figure 46

*The undeveloped man produces economic waste; when retained in that state, one's resources dissipate in an effort to maintain a parasitic cycle. Develop the man if you wish to avoid that cycle.<sup>1</sup>*

## Manpower Development—The Concept And the Means

Success is good management in action! Good management requires minimizing unplanned change, the making of events rather than merely awaiting what passes its way.

Industry is dynamic! Change is inevitable and must be planned for. Rarely does the *status quo* remain for any appreciable period of time. Methods change, products change, jobs change and so do people. In some cases, plan leads to change, in others, it just occurs, sometimes automatically and alone, and sometimes as the result of other changes. These facts influence the development of manpower and require management's constant attention.

### MANPOWER DEVELOPMENT — A DEFINITION

Manpower development is that phase of manpower management concerned with the recognition of, and the planning for, changes as they affect man in his relationship to the organization and its immediate and long-range environment. Manpower development thus requires consideration and manipulation of organization change, and seeks to foster correct change (development) in man. The latter is vital if an enterprise is to meet its present and future manpower requirements up and down the line — from rank and file to top executive. This again brings to mind the point that man alone, in the machine-man complex, can develop, and that the development of man is a prime managerial responsibility. Without his development, the necessary changes in equipment, product, and organization will not occur.

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<sup>1</sup>Theodore A. Toedt, from an address before the Institute for Governmental Accountants, The University of Connecticut, June, 1960.

**AN INVENTORY PROBLEM.** It may be difficult for the humanist to accept the fact that manpower development is basically an inventory problem. Just as raw materials are purchased and put *into* production, so are individuals hired into the organization *for* production. Even those hired directly into high positions may be so likened — likened to the purchase of parts, for some development has taken place prior to purchase or to the hiring. Furthermore, the average employee progresses upward much as the raw material progresses toward the finished product. Some employees, as with some raw materials or finished parts, will be found defective and removed from the progress-flow.

The manpower development function in a sense can be likened to the production line. Just as each succeeding operation on a material makes it more valuable, so the manpower development program increases the value of the employee to the organization and, therefore, to himself and the community as a whole.

### DEVELOPMENT AND GOOD MANAGEMENT PRACTICE

Over the years manpower development has been considered synonymous with training. While training is no doubt a vital part of the over-all development program, it is by no means the entire consideration.

Many firms have completely adequate training programs for the shop and clerical worker. Such programs enable the company to provide for its pressing needs — its needs for production workers, assemblers, inspectors, checkers, and others. In a very limited respect this type program resembles manpower development because it does take the worker from an unfinished to at least a semi-finished state as far as his *current* job is concerned. This is not, however, good enough. It merely develops the worker for his present assignment and whenever that work takes a significant shift in character, a re-training or a discharge and re-hiring effort takes place.

Increasing numbers of firms have, in recent years, expanded the so-called training effort to include the supervisor, the foreman, and middle management. Some have pioneered in the area of executive training and development. A few have broadened their outlook and are taking advantage of the so-called “educational” programs wherein individuals are offered the opportunity to take an extended course of study in nearby high schools, colleges, or universities. All of this adds up to training to a greater or lesser degree, but still training.

Development programs, in the complete sense, embrace not only training throughout the organization, from rank and file to executive, for both present and future jobs or positions, but also encompass motivation, self-analysis and training, promotion and transfer, counseling, evaluation, forecasting, and replacement planning.

Development programs exist as a means of continually providing the organization with competent, satisfied personnel, either from within or from outside the enterprise, to fill, with minimum development cost and maximum efficiency, the jobs required for successful operation — the long recognized requirement of having the right material (people) available at the right time and place, for a price which enables an optimization of return upon the investment.

### POLICY

As mentioned in Chapter 9, the development of any program begins with policy, and good management practice originates in the policies evolved. As with recruitment and selection of manpower, the responsibility of manpower management in connection with policy development involves the presentation of advice concerning that policy, and assistance to top management in the formulation and development of that policy. Here again, the discharge of this obligation requires awareness of the external, internal, and operational considerations affecting (in this case) manpower development.<sup>2</sup>

**EXTERNAL CONSIDERATIONS.** The external factors regarding recruitment and selection mentioned in Chapter 9 apply also to the development of manpower. These are: (1) the condition of the labor market, (2) the reputation of the concern, and (3) the attitude of the union leaders concerned. Additional factors come into play, however, for regardless of the organizational form, when considering the development of manpower both the present *and* the future, long-run aspects of manpower management demand attention.

*The Labor Market* The short-run aspects of the labor market mentioned previously have their effect upon manpower development. Other things being equal, a "tight" labor market increases the need for training newly-hired personnel since scarcity of labor tends to result in a generally poor grade of individual hired for any specific job. In a "tight" market situation, one also finds a greater degree of labor turnover at all echelons in the organization, not in just beginning jobs. The severity of the turnover in higher skilled jobs and supervisory echelons tends to depend upon the extension of the labor scarcity. As scarcity spreads the need for manpower development becomes more severe and the coverage requirement becomes broader.

Perhaps the most difficult aspect of the development function involves the necessary study of the long-range characteristics of the labor market. Forecasting is an important aspect of a complete and effective manpower development program, as it is in the field of sales. The questions to be considered include at least the following.

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<sup>2</sup>The nature of manpower development necessitates a tremendous promotional effort on the part of manpower managers.

. . . What will the labor market be five years from now, ten years from now?

. . . How well, and in what functional areas, will the available incoming manpower (raw materials and purchased parts) be trained (processed) before they reach us?

. . . In what areas of the organization must we concentrate our development efforts because of the conditions of the future labor market?

. . . How will trends in the migration of labor affect our ability to staff future production and sales programs?

. . . How will national security requirements affect (a) migration and (b) location of industry?

. . . What is the projected position of the industry of which we are a part, and how will this affect our continuing supply of manpower?

*A Special Consideration.* Management itself may establish a situation which, in years to come, can have a negative effect upon the labor market. Imagine what would happen, for example, if an organization permitted itself the luxury today of ignoring the retraining issue. Such a policy would result in a labor pool of obsolete skills within a very short period of time. Or, consider the effect of a policy which dictates that, when a new skill is required, it will be hired. Is it not fair to assume that if the market becomes tight, management might find itself confronted with a panic-button situation requiring sudden and unduly large short-run expenditure of monies to obtain the skills it requires?

Consider too the situation possible if a management, in this day and age, decides to ignore the national security issue. If we make no provision for the possible emergency disruption of our labor supply, we may find ourselves facing the same dilemma 20 years from now that we face today — a shortage of fully competent management replacements.

*Reputation.* What has been said in Chapter 9 concerning the reputational effect of an organization applies to manpower development as well as manpower recruitment and selection. Development, however, is *more* severely influenced by an organization's reputation, and has a greater effect upon that reputation than recruitment and selection. These latter are important in the beginning when the employee is first hired. His situation at the time of employment must be satisfactory to him, or at least he should feel it is the best he can do at the time. The question of whether he remains satisfied, whether his situation improves or deteriorates, however, depends to a great extent upon the effectiveness of the organization's development effort beginning, one notes, with induction.

Think of the damage done when a young college graduate — having been promised "the moon" — arrives and discovers that the

wonder of his first impression was nothing more than a glossy cover on an otherwise drab or pernicious book. As a case in point, consider the following.

**Illustration #1** John was an outstanding student. Not only had he done an excellent job academically, but throughout his entire four years he had held down a good job with a local manufacturing concern and had been able, therefore, to provide for his family in excellent fashion. In April of his senior year he was interviewed by several well-known firms. Because of his obvious superiority he found himself being "bid" for.

The organization he decided to go with promised him the following. (1) one year training program; (2) a \$25 a month increase at the end of six months, a \$20 increase at the end of the next six months, and an annual increase thereafter of not less than \$200, (3) a supervisory position within one year of his employment, (4) supervisory promotion every three years so that by the time he was ten years older he would be in the executive ranks.

This is what happened to John when he arrived! *First*, the training program lasted six months instead of a year, and in that time he actually did nothing but interview potential employees — college seniors (hardly a thing for a person hired into the engineering branch of the organization and lacking even the most rudimentary training in manpower management). *Second*, at the end of that first six months he was assigned to shipping and receiving as a rate clerk (Mind you, John graduated in the top ten per cent of his class in electrical engineering and was hired into the engineering branch of this organization. Mind too that he had worked throughout his schooling at the very work for which he had been hired.)

Is it any wonder that he quit right then and there? If you heard his story and knew the organization involved, would you recommend this organization to your students as a "good" opportunity?

**Illustration #2** Al was hired as assistant to the controller for research and development. The reason for his hire was simple. He was an outstanding student recognized by all his teachers as having a particularly analytical mind and capable of extremely competent and advanced level study *on his own*. He was hired to perform the trouble-shooting, problem-analysis, and problem-solving for the controller. He was hired as the result of personal search and decision by the controller.

The political struggle between the controller and the director of research and development was so intense that it carried down to Al. He was actually unable to do anything related to what he was hired to do. He stuck to the job for 18 months then quit.

Do you suppose he is describing the organization in terms which enhance its chances for hiring other competent young men?

**Illustration #3** For many years the ——— company, a local organization, had been known as a typically backward concern. It was subject to severe and constant ridicule by the local populace, most of whom worked there!

The company had not hired anyone for management replacement in ten years. It was, therefore, something of a surprise to have them go looking. It was equally surprising to discover that they were offering better wages than most, that the actual training outlined and actual program of development through promotion, transfer, and education were excellent. *But*, the only students that would consider working for them were those unwanted by other organizations. They, therefore, had to leave the region to hire the management replacements they needed.

Suggested here is the fact that a poor reputation will increase the cost of developing manpower. Also suggested is the possibility that a poor development program will destroy reputation. Can "good" management afford to overlook this state of affairs when it designs policy?

*Attitude of Organized Labor.* The firm dealing with organized labor "puts its head in the sands" if it fails to recognize the impact of union attitudes and policies, as well as contract provisions, on the manpower development effort. Saltonstall has this to say about the attitude of organized labor.<sup>3</sup>

Many union officials say essentially, 'our responsibility is to protect the workers and their jobs.' So far, seniority in its many forms seems to provide the best answer. At least the worker knows where he stands. He knows his order of layoff and recall and his security and pay rights in the event of transfer and promotion. 'We protect him from speed-up and stretch-out on the job. Where necessary we see that job jurisdictions are clear so that he knows what work he has a right to claim as his.'

This concentration on protection of "brother members" as a whole leads to certain frustrations for the ambitious individual who does not care to advance at the speed of the crowd. Instead of acting as a spur to productivity and broader job experiences and variety of work, many inflexible seniority arrangements tie a worker to one specific job where he must stay if he wants security. Such arrangements foster a level of mediocrity where the accepted standard of performance is the average rather than each individual's own peak performance. There is a

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<sup>3</sup>Robert Saltonstall, *Human Relations In Administration* (McGraw-Hill Book Company, Inc., New York, 1959), p. 201.

need for re-evaluating certain traditional union attitudes toward seniority of all the individual human beings whom the union represents. Rather than lowering the individual to the level of the crowd, a shift of thinking to raise everyone in the crowd to his full potential seems possible and in tune with current mature relationships between unions and managements.

On the policy level, management seeks to foster positive attitudes in union officials, attitudes which permit full and effective development of that most important "raw material" — manpower. As long as seniority remains a governing factor in promotion, retention, layoff, and transfer, a development program cannot be fully effective. (It must be granted that seniority has its place in the development picture and certainly should be *one* factor in the determination of the progress of the individual. Time is a necessary adjunct to development. Furthermore, all other things being equal — experience, ability, and the like — seniority should be applied as the "tie-breaker.") It appears, then, that effective manpower policy also fosters adequate manpower appraisal and evaluation since much of the union argument for seniority stems from the inadequacy of current and past appraisal and evaluation methods and techniques.

*INTERNAL CONSIDERATIONS.* Internal considerations have been brought out in Chapter 9 as (1) management's attitudes, (2) the effectiveness of liaison, (3) economics, and (4) responsibility. What was said in Chapter 9 also applies (and with equal force) to development. Regardless of the area of activity involved, policy, procedure, and programs are rendered ineffective if not backed up by action and continuing interest on the part of top management. Mere lip service is insufficient! A genuinely positive attitude and interest are required. Top management must take the lead! If testing is needed in the program, top management will subject itself to the procedure. If regular and complete medical examination is a requisite, top management includes itself. If the development program calls for a periodic appraisal of performance (with an eye, of course, to determination of deficiencies for correction, and of competencies for utilization), then top management again includes itself. The *fact* of management's interest and positive attitude must be obvious, and should be formally communicated to all. One is reminded that the old saw — do as I say, not as I do — has no place in management attitudes if manpower development is to succeed!

*Liaison* between line and staff units and among these units will also occur on an almost day-to-day basis if the effectiveness of a development program — or any other program — is to be achieved and maintained. Proper procedure does much to facilitate good liaison.<sup>4</sup>

<sup>4</sup>cf. Chapters 3, 4, and 6 as they refer to standing operating procedure, and procedure manuals.

Some may argue that liaison is automatic, that there is no need to "beat the drum" for this managerial function. If this were true, if the viewpoint indicated a factually realistic and generally occurring automatic practice, then why do communication breakdowns always accompany problems associated with manpower development programs? Suggested by this question is the possible fact that although every organizational unit is interdependent and appreciates it, this realization is not always put to good use. Suggested, too, is the possibility that the fact of interdependency stems from related or similar job characteristics. The consultant is apt to discover, for example, that production people do not fully appreciate the reality of the relationship between their jobs and sales or research. It often seems to escape the conscious thoughts of managers that their counterparts in other segments of the organization have equal need for, and actually do use, the basic functions or characteristics of memory, tenacity, organization, communication, control, and coordination. Each must, in his own way and in his own area (at least), apply the analytical or scientific approach to his problems.<sup>5</sup>

What is the point? Simply that manpower people will strive to assure the presence of this understanding on the part of management if they expect to have the kind of liaison needed for successful manpower development. They do not assume that it will occur!

*Economics*, the "dollars and cents," is unfortunately looked upon largely as cost or expense when it comes to manpower activities. This probably occurs because of the ease and simplicity of totaling up salaries for the manpower manager and his staff in terms of instruction, supplies, and loss of production if the trainees are taken off the job — the ease of this, as compared with establishing, and performing, a realistic calculation of the savings and production improvements deriving from manpower development. This "cost" approach tells only half a story. Methods are available for evaluation of the gains obtainable from development. These methods should be selected carefully and employed to show top management that it pays to develop manpower. Of course, if one discovers, after correct analysis, that there is no return upon investment, or that the return is insignificant, policy should dictate re-evaluation of program and the making of appropriate changes. If one discovers a "no return" situation, however, it does not stand to reason that the correct decision is to abandon development. Such a decision would be tantamount to admitting incompetency on the part of management!

*Responsibility* goes hand-in-hand with liaison. Policy necessarily fosters effective liaison, and in so doing it also prescribes the nature

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<sup>5</sup>Theodore O. Yntema, "The Transferable Skills of a Manager," *Journal of the Academy of Management*, Vol. 3, No. 2, August, 1960, pp. 79-86, *passim*.

and location of responsibility. As indicated in Chapters 8 and 9, responsibility for the performance of most manpower management activities has a certain duality about it. In part it rests with the line, and in part with the manpower division. Administrative activity, analytical work, testing and the like correctly fall within the province of the manpower unit. The various using units, those being serviced or supported, have responsibility for actual decisions, for training (in certain instances), and for certain activities as defined by the specific situation. It thus becomes apparent that effective individual performance on the one hand, and liaison activity on the other, require mutual understanding between line and staff organizations (the personnel as a whole) and between the individuals involved. This same mutuality should exist within the units. Clear-cut delineation of responsibility will do more for the promotion of mutual understanding in the industrial organization than any other single factor.

*OPERATIONAL CONSIDERATIONS.* The operational considerations specified in Chapter 9 apply here. They apply in force! To deny their application quite literally will mean failure of any manpower development program! Some additional operational matters appear, however. Policy, for example, considers such questions as the following:

- 1 Should manpower development be considered applicable to all members of an organization in equal force, or should a development program be limited to management only?
2. Should a manpower development program begin upon decision to hire, or should it begin after the probationary period ends and the employee becomes a permanent member of the workforce?
- 3 Should development programming include community activities or be relegated strictly to the immediacy of the plant?
4. Should the manpower division be the developing agency, or should each organizational unit share in the actual instruction of men?
- 5 Should development of manpower be scheduled or timed as an inflexible, solely organization-oriented arrangement (likened to a railway schedule), or should it be scheduled to the man?

*Limited or Unlimited Program.* To do more than merely train rank-and-file personnel for their current work is expensive. If expense outweighs the return upon investment, policy might dictate that development be limited to supervisory and managerial personnel. Policy would be deficient, however, if such a provision appeared without the balancing requirement that situational needs be subjected to periodic and scientific appraisal. Rank-and-file personnel may possess the necessary attributes of a good manager, a future president. Has the Horatio Alger story lost its reality? Have men ceased to progress

from the lowest to the highest ranks? We think not! At least not in our society!

*Point of Initiation.* Development of the executive or supervisory trainee begins as soon as possible after the hiring decision. Any other practice wastes time and therefore money. In addition, the inductee may become discouraged if he finds no evidence of his grooming during the first days of his employment. On the other hand, it may be desirable to limit the development of rank-and-file personnel to training for the immediate work until there is an opportunity to decide whether the individual is a truly desirable addition to the permanent staff. Effective policy will recognize this, but it will prescribe that the decision regarding point of initiation may be altered in the case of outstanding individuals.

*Inclusion of Community Activities.* A community has "ears"! The community reaction to an enterprise — whether that reaction is in keeping with the facts or not — plays a large role in determining the acknowledged reputation of the organization. Certainly the organization that sponsors community activities and encourages its personnel to participate in community affairs will stand a better than even chance of gaining and maintaining a respectable reputation in the community. (This does depend upon *how* the participation and sponsorship is carried out!) Another point warrants attention — the developing individual may find opportunity to exercise management action sooner within the community than within the company. Such a possibility not only increases the individual's experience level, but also furnishes one more opportunity of personal measurement to the company. Policy might therefore require community work on the part of employees, and such experience might be included in some way (as befits the situation) in the development program.

*Is Development an Organization-wide Function?* A categorical "yes" becomes the answer to any query of this nature! Every manager has the prime responsibility of developing his subordinates. Development of subordinates actually includes development of replacements! Not only is the manager obligated in this manner; he also is required, as a leader, to instruct. In fact, one of the foremost leadership functions is that of instruction. It is generally recognized that truly effective supervision of men involves instruction, not "snoospection." Policy correctly specifies to the duality, to the manager's part in development.

*Schedule to the Man or the Organization.* The standing rule is that policy should be flexible. However, it goes farther than a mere rule — there is reason! Development policy correctly prescribes both a timed-to-the-organization program, and a timed-to-the-individual program. Being timed to the company, a development program outlines the basic steps or phases required of all individuals for any, or each, program in existence. In addition, however, policy recognizes that

men differ, that their goals change as do their capabilities. Policy therefore provides for individual treatment. Would it not, for example, be foolish to say to *all* executive trainees, "You will spend eight years as an engineering manager!" Can't you see the success that the young man trained in psychotherapy, hired to move up into the "chief" slot of the employment counseling function for the corporation, would have in engineering – and as a manager? On the other hand, for an individual whose training is not so highly specialized, the *rule* might be an excellent thing.

It is necessary also to consider goals. Imagine how you would feel if after some ten years of planned movement in the organization you suddenly found *that one spot*, that berth you have always been looking for, only to realize that you have absolutely no chance of remaining in that position for more than two or three years. Or, consider the case of the individual whose basic aptitudes just do not include a given area – say accounting. If that individual were required to spend as much time in the accounting function as in all other functions, and if to be considered fit to remain with the organization he had to perform with the same degree of proficiency, he most likely would be eliminated before completion of his tour in accounting.

It is true that the military practice of rotating officers through command and staff experience has merit. It is true that such a policy is excellent in the industrial world. Note, however, that the military does not rotate through *branches* except in unusual cases. There appears to be no sound reason why industrial development policies should include rotation through branches of the industry, except in cases where the individual has the inherent potential necessary for this action and the personality potential that will not become unduly frustrated by it. There may be reason for using such rotation as a device to eliminate individuals either from the organization or from further development. Policy will, however, dictate that such procedures be adopted only after: (1) study of the individual, and (2) study has confirmed the reality of the need to use rotation in this manner.

*A Special Matter.* A final, common operational consideration involves the age-old question of internal or external development. The policy question may appear in the form: "Should development occur within the company, or be accomplished by utilization of outside agencies such as schools and colleges?"

There is no adequate general answer to such a question. The answer lies in the situation; correct policy statement indicates that if the area of skill or knowledge to be developed in individuals is one which is better handled by the outside agency, then the outside agency will be used. For example, if the concern is now producing nuts and bolts and has been for some fifty years, it hardly seems wise to conclude that its own personnel now suddenly can teach themselves to

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produce "printed circuits." If the area of development involves knowledge of the culture and language of some foreign country, one normally would not look to the chief process engineer to head that development effort. Again, if the matter at hand involves a distinctly improved understanding of communication, and it arises because of a discovered deficiency in communication within the organization, it seems rather unlikely that one would turn to an offender for the instruction.

### POLICY AND CONCEPT

As a concept, manpower development has long been recognized in military circles as a basic and highly important responsibility of leaders. It is only within recent years, however, that this recognition has spread to any degree throughout the country's industrial organizations. Drucker points out what may well be considered a guiding principle when he states that:<sup>6</sup>

In any major institution . . . the finding, developing and proving out of the leaders of tomorrow is an essential job to which the best men must give fully of their time and attention

Acceptance, or even consideration, of Drucker's point of view leads quite logically to consideration of the basic components of the manpower development concept. These can be stated as follows:

1. Regardless of prior skill, training or experience, no man is truly effective in a new position or job until he adjusts to it. That period of adjustment or development depends in part upon his prior skill, training, and experience, in part upon his ability to *do* and his ability to *learn to do*, and in part upon his personal characteristics. (One notes a connection here between development thinking and induction thinking.)
2. An individual's effectiveness generally is reduced if he is held in a given job for too long a time.
3. An individual's job effectiveness and his job mobility are directly influenced by, and in turn directly influence, his personal goals and his proficiency.
4. Most men seek specific "bread and butter" training and neglect general and managerial training.
5. Man usually must receive specific grooming for his future, and must be stimulated and guided toward that future.
6. Man's interest tends to vacillate unless his need for challenge is at least partially satisfied; not all men have the same need for challenge any more than they have the same goals or capabilities.
7. Man requires reward as a stimulant to continued effort, particularly as the challenge increases or the opportunity for that reward appears more remote.

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<sup>6</sup>Drucker, *op. cit.*, p. 189.

These considerations can be summarized and restructured into a statement of the general manpower development concept. This statement may appear as follows:

*To be economically useful to himself and his company, an individual must be specifically groomed to fill both present and future jobs, and encouraged and given the opportunity to progress, such grooming, encouragement, and opportunity must occur within the light of his personal goals, characteristics, and abilities.<sup>7</sup>*

**CONCEPT LEADS TO PROGRAM.** A concept as broad as that just stated leads directly along the path established by Drucker's principle. It creates the philosophical framework for the manpower development program, and it does so regardless of the type of institution involved, or of the hierarchical level considered. This broad applicability means that hourly-rated, salary-rated, and exempt-payroll personnel come under the same basic set of considerations and policies even though the details of development will vary with the jobs and the hierarchical positions involved. Furthermore, such a broad philosophical framework forces managers in general, and manpower managers in particular, to realize that when hiring, regardless of the job level involved, that action is but one of a series of manpower management functions, all of which are related and interdependent.

A complete manpower development program involves many areas of consideration and effort. It includes organization and job analysis, training, promotion and transfer, discipline, merit and/or proficiency rating, counseling, and specific and general training. Such a program is both long range and short range, both personal and impersonal. In its entirety, it reaches beyond the plant into the social environment of the employee. Clearly, then, a properly designed development program concerns itself with the physical, intellectual, organizational, and socio-psychological factors of man and that totality referred to as his job. In addition, the complete program involves —

- . . . Development of mental and physical skills.
- . . . Development and/or maintenance of proper attitudes.
- . . . Development for the present.
- . . . Development for the future.

Where does such a program begin? Actually it begins with those first impressions made during recruitment and selection. More specifically, it begins with induction, for it is there that the employee commences his period of adjustment.

Where does the program end? Actually, it continues until the individual leaves the employ of the company. Factually speaking, and

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<sup>7</sup>Note in this connection that the stated concept adheres to the statements of philosophy contained in Chapter 2.

as seen by any given individual involved in and consciously observing a well-established development program, it is a series of separate efforts which interlock and follow one upon another as each progressive opportunity arises. From the point of view of the company, however, these so-called separate efforts are part of a never-ending and carefully planned program or system.

*DEVELOPMENT RELATED TO CONSERVATION.* Manpower development and manpower conservation enjoy a particularly strong relationship, for there is little sense to maintaining or conserving that which is undeveloped! It also has a basis in the conceptual relationship between morale and development — conflict in man may be, and often is, occasioned by poor adjustment, inadequate knowledge and the like; such matters tend to impel a condition of low morale. Furthermore, the two manpower functions have a relationship bred of the connection between nonfinancial security and development — a factor contributing to insecurity in man is lack of knowledge and ability; where one finds insecurity, just as where one finds active forms of conflict, conservation becomes increasingly difficult. As a final point, many of the elements typical of development are also common to conservation — discipline, proficiency rating, and counseling, for example.

*PROGRAM REQUIRES SPECIFIC TECHNIQUES.* The manpower development concept, the relationship to manpower conservation, and the already stated requisites of program indicate that many specific techniques become involved in the satisfactory attainment of the over-all purpose behind manpower development. These are welded together into a carefully integrated whole. Effective integration depends upon understanding — each manager, and certainly each member of the manpower management group, requires a full understanding of these techniques and the language or terminology associated with them.

Four major categories are involved. *First*, organizational considerations: these involve the requirements of a firm as they relate to present and future manpower, together with the organizational means of filling these requirements. The *second* category concerns itself with matters pertaining to the individual, recognizing that the growth of the individual must be self-initiated and self-maintained. The *third* deals with the company's efforts to direct and implement the motivation of the individual so that both he and the company benefit. Generally, one refers to this as training. The *fourth* category involves measurement, or evaluation. This consideration cuts across the lines of all three previous classifications since, in order to judge the effectiveness of a program or an individual, it is necessary that there be some form of appraisal or measurement.

## ORGANIZATIONAL CONSIDERATIONS

Although many of the terms and techniques involved here have been considered, or at least mentioned, in Chapter 3, the present setting makes it rather imperative that recall be stimulated and that additional points be made. Let us consider them.

**ORGANIZATION ANALYSIS.** Organization analysis is defined as *the study of the existing and estimated future structure of the enterprise, coupled with an inventory of manpower.* It is used to determine structural weaknesses, to estimate future organization design; to classify human resources, to determine the effect of the present inventory of manpower on current structure and future design, and *vice versa.*

Clearly then, organization analysis is a process for determination of the "what," "how," and "why" of the various segments of an organization. Through this approach one asks:

- . . . What is the function of each department?
- . . . How is each organized?
- . . . Why is each organized and functioning in its current and particular manner?

The "what" and the "how" can be determined by careful study of the existing organization and by reducing the facts discovered to "black and white." Key tools of this fact-finding procedure are *organization charts* and *job descriptions*. The organization chart presents the functions and interrelationships of the various segments of the organization in graphic form. The job descriptions depict the specific duties and responsibilities of each individual job. Properly done, these two devices provide a firm foundation of fact necessary to analysis (which asks the question — "why"), to determine structural weaknesses. They also present the background information needed for estimation of future organization design, since the future organization will be merely a change (great or small) from what currently exists.

In classifying human resources and in determining the effect of manpower inventory on organization structure, two additional tools are useful: *man data* and *man specification*. Both of these tools concern themselves with information about "man" — information such as appearance and personal habits, self-confidence, attitude, judgment, organizing ability, ability to develop subordinates, education, experience, specific knowledge, and physical attributes.

Man data is compiled for each *individual*. It can be developed from existing personnel records and from information received from the supervisor and/or the person himself. When compiled, it should portray the pertinent qualities of each individual in the organization.

Man specification is compiled for each *job* in the organization. It can be constructed by analysis of the job description, together with

the organization chart. When completed, it should portray the pertinent qualities *an individual must possess in order to perform the job in question adequately.*<sup>8</sup> Human resources can now be classified by comparison of "man data" with "man specification." In like manner, the effect of the present inventory of manpower on the current organization structure, or on future organization design, can be appraised or estimated.

**REPLACEMENT PLANNING.** Replacement planning concerns itself with the filling of jobs within the organization with the most qualified personnel in a minimum time. The word "planning" is used since jobs can be filled without plan. When a vacancy occurs due to a promotion, a retirement, a separation, or because a new job has been created, management *can* attempt to recruit a suitable individual, or possibly the supervisor "happens to know a good man" who can be promoted to fill the vacancy. This method is still in common use. Experience shows that such a practice is usually slow and/or inaccurate and generally unfair.

**Illustration #1** John had been working in the blanking section of the washer department for a period of five years. His work was good, his attitude was good. The foreman of the department died of a heart attack Monday evening. Tuesday afternoon, at 3 P. M., the general superintendent called John to his office and told him that beginning Wednesday morning (the next morning) he would be foreman.

Although this was certainly fast action, John knew nothing of the duties of the foreman, nothing of the communication and control matters he was expected to participate in, little about the department, except for his own section, and absolutely nothing about the wage and salary program or incentives or quality requirements. Furthermore, there were two men in his section who were senior to anyone else in the department. How do you think this turned out?

Replacement planning can improve things substantially. By using the tools of organization analysis, the manager (and, of course, the manpower manager) can be in a position to *know in advance* whether he must "hire in" to fill a particular vacancy, or whether it is possible to "promote from within." If the latter obtains, his plan can tell him who is eligible. It need not be a hit-or-miss proposition as to the person selected. Prior comparison of "man data" with "man specification" reveals the eligible personnel! Time to fill the vacancy

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<sup>8</sup>It is recommended, in this connection, that the student reconsider the material contained in Chapter 7.

*correctly* is reduced, and prior analysis of promotable manpower tends to assure equitability of, as well as the best possible, replacement.

The question of economic feasibility always enters the picture. Will the cost of planning outweigh the saving? This question must be examined in the light of the different facets of the replacement problem. It would be wasteful to set up a comprehensive, man-for-man, replacement schedule for those rank-and-file jobs typically filled by hiring rather than by promotion. Much more can be accomplished for the available dollar in this area by sharpening the tools for recruitment and selection. As we move up the ladder and into key supervisory positions, however, a little extra money spent in planning yields great savings, not only in money, but in the speed, accuracy, and fairness of key-job replacement.

The prime tool in replacement planning is the *replacement schedule*. This schedule functions much as a railroad timetable. It can be arranged in the form of an organization chart, it contains visual information pertaining to the incumbents and their situation (such as retirement date), qualifications, and performance, together with information concerning their possible replacements such as current performance and current future promotability. Naturally, such a schedule must be kept up-to-date or it will be as useless as no schedule at all.

**PROMOTION AND TRANSFER.** Another organizational consideration pertinent to manpower development is promotion and transfer. As indicated in Chapter 3, an organization's functional needs include such elements as security and productivity. Among the factors contributing to insecurity are instability, low morale, and heterogeneity in the workforce. Thus, if manpower development is to have any significant meaning to an organization, not only must it occur in an orderly fashion, but also it must contribute to the security and productivity of that organization. Hence, the manpower development program incorporates techniques designed to bring stability to the workforce (that is, desired stability, not stagnation), to facilitate the creation of interest and positive morale; these techniques should improve the employee's loyalty to the organization and provide a basis for the creation of homogeneity of viewpoint.<sup>9</sup> A definite, well-defined system and plan for the promotion and transfer of personnel facilitates meeting these requirements.

**Terminology.** The terminology associated with promotion and transfer appears completely straightforward and readily understood. Oddly enough, however, many experienced individuals, as well as novices, misuse the related terms. To assure a common understanding,

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<sup>9</sup>Gordon S. Watkins, Paul A. Dodd, Wayne L. McNaughton and Paul Prasow, *The Management of Personnel and Labor Relations* (McGraw-Hill Book Co., Inc., New York, 1950), p. 438.

at least with the reader, the following presents the terminology associated with the movement of personnel within an organization.

1. *Promotion*: the vertical movement, the upward movement of an individual within an organization. It should occur by mutual consent. Not all people desire promotion at any given time. Additionally, not all people are equally likely to have their goals change to the same, or reasonably same, degree or at the same time; hence, one notes extreme difficulty in predicting when promotion will be desirous to an individual unless careful study of men and jobs has been conducted, and the records show the results. Promotion rewards the individual for proficiency and loyalty and enables the firm to fill a vacancy from within its ranks. Promotion must be acceptable to the individual, however, or it may work in negative fashion. Promotion properly includes increased responsibility, authority, *and* pay!

2. *"Dry" Promotion*. this can be defined as a vertical, or upward, movement with no increased compensation and/or authority. The practice is bankrupt! However, it is in common use where mere lip-service is given to good management. It disrupts morale and creates grievances and turnover.

3. *Promotional Transfer*: the horizontal movement of an individual to place him in a promotable position (On occasion this type of movement may be vertical — it should not, however, become common practice. If one notes that promotional transfers are frequently occurring as vertical, it will pay to be very suspicious of management) The movement should occur with mutual consent. It does not necessarily mean immediate increase in salary, responsibility, or authority, it exists to facilitate the training and adjustment of the individual in preparation for a possible future promotion. The reasons for this type of transfer need careful explanation to the employee: it is easy, after all, to misinterpret such action.

4. *Transfer*: transfer is a horizontal movement of an individual within the organization and by mutual consent. Transfers take place to rectify improper placement from a technical point of view or to satisfy a personal desire (by the pertinent individual) or an organizational need. Transfer *should not*, however, be used as a disciplinary device or to accommodate the laziness and ineptness of a supervisor.

5. *Economic Transfer (Promotion or Adjustment)*: any temporary movement of an individual, by mutual consent within the organization, which comes about because of a company economic need. An organization tends to resort to this form of movement in times of economic stress; thus, one may find a worker shifted from one department to another, from even one occupational family to another. The economic transfer should not improve or diminish an individual's status and seniority (although unions will often fight to make this come about), and is *not* to be considered as disciplinary action.

6. *Up-Grading*: the upward, vertical movement within a given job classification or labor grade, by mutual consent. This is a *reward*

for performance and/or seniority. Up-grading frequently is automatic with the passage of time, at least through the lower steps of a pay-range. Often, but not necessarily incorrectly, it denotes a movement associated with an individual's change in skill level. For example, employees say: "I've up-graded myself." They mean: I've improved my skill, or I've increased my value to myself and my company. When used this way, the term is personal, and directly associated with the individual's sentiment or reaction to a situation. On occasion, the term denotes movement from a rank-and-file status to a supervisory status. In such a case one must conclude that it is incorrect usage.

7. *Down-Grading*: a downward vertical movement within a given job classification or labor grade, a reduction in skill level. This is frequently a disciplinary measure. It may be used, however, as a corrective device where there is an error in initial placement. In the latter case, it should, and normally does, occur with mutual consent. Where a reduction in the skill level of the job has taken place, down-grading, with reference to job grade, is automatic. Down-grading, as regards pay, will depend upon the relationship of the pay ranges and company policy.

8. *Demotion*, a downward vertical movement within the organization. This normally results from unilateral decision and action. Mutual *understanding*, however, should be achieved! Demotion, as a rule, is disciplinary in nature, it may take place due to a structural or job change. As a disciplinary action, it should be avoided in preference to discharge. Down-graded personnel often become trouble-makers.

*Three Position Plan*. This promotion plan actually is a training technique. Originated by Frank and Lillian Gilbreth, it was described by them as follows:<sup>10</sup>

The Three Position Plan of Promotion considers each man as occupying three positions in the organization, and considers these three positions as constantly changing in an upward spiral . . . The three positions are as follows. First, and lowest, the position that the man has last occupied in the organization, second, the position that the man is occupying at present in the organization, third, the highest, the position that the man will next occupy. In the first position, the worker occupies the place of the teacher, this position being at the same time occupied by two other men, that is, by the worker doing the work, who receives little or no instruction in the duties of that position except in an emergency, and by the worker below who is learning the work. In the second position the worker is actually in charge of the work, and is constantly also the teacher of the man next below him, who will next occupy the position. He is also, in emergencies, a

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<sup>10</sup>Frank B. Gilbreth and Lillian M. Gilbreth, "The Three Position Plan of Promotion," *Annals of the American Academy of Political and Social Science*, Vol. 65, May, 1916, p. 290; also see Rossall James Johnson, *Personnel And Industrial Relations* (Richard D. Irwin, Inc., Homewood, Ill., 1960).

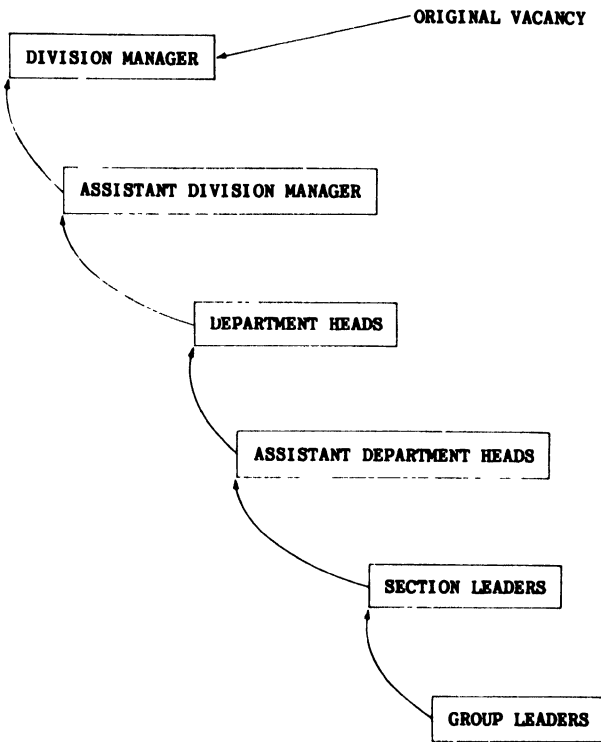
learner of the duties of his present position from the man above him. In the third position the worker occupies the place of the learner, and is being constantly instructed by the man in the duties of the position immediately above.

*Understudy System.* This is another promotion method which doubles as a training technique. The method has been used successfully by many firms following a policy of promotion from within, and has been quite effective in training supervisors and executives. Simply expressed, the plan provides for the designation of an "understudy" or assistant who is recognized as preparing to take over his boss' job when that individual vacates either temporarily or permanently. The system's most frequent application is in the executive area but it can be employed successfully at any hierarchical level. Frequently, the firm's organization charts reflect this "backup" by means of double boxes for each position where an understudy is employed.

*Promotion from Within* This manpower development policy and resulting technique or planned program is followed, to a greater or lesser degree, by all of the larger organizations and by most of the smaller ones. Its benefits can be seen readily in Figure 47. If a high-level vacancy is filled by promotion, it can set off a chain reaction resulting in promotions down the line, the number depending upon the level of the original vacancy and the number of echelons below it. Much can be said for promotion from within. There is a beneficial effect to the whole workforce when the results are observed. Loyalty, good will, interest, and co-operation are bound to be stimulated. All of this is in contrast to the feelings bound to arise when the workforce sees the "plums" constantly grabbed off by someone from the outside.

It holds true, however, that some vacancies are better filled from a source external to the organization. A firm may stagnate, and some do, from lack of new blood with fresh ideas. Some positions, by their very nature, require special qualifications not found within the organization. Then, too, a company's failure to develop a successor properly for a particular job may necessitate the external hire, because of some inherent or heretofore unnoticed weakness in the likely internal candidate, it may be necessary to hire-in.

*Promotion: Up-and-Out.* One seldom finds this tactic in any but the most farseeing organizations. Virtually any firm having real stability is bound to have employees whose abilities are being under-utilized. Unfortunately, most of these organizations count themselves thrice blessed to have persons of this sort — persons who can, and do, perform in an outstanding manner. What they may fail to realize is the fact that such people, if not able to progress at a reasonable rate if indeed at all, will either leave the organization or become disgruntled and their performance will deteriorate.



Source By permission from, Rossall James Johnson, *Personnel and Industrial Relations* (Richard D Irwin, Inc , Homewood, Illinois, 1960), p. 162

PROMOTION FROM WITHIN CHAIN REACTION

Figure 47

A few firms and military establishments make a practice of promoting up-and-out. They realize, for one thing, that such a practice opens opportunities to others down the line for advancement at a relatively rapid rate. They also recognize the favorable effect such a practice is likely to have upon the workforce as a whole. Of course, there exists the possibility of a completely reverse effect; after all, unless the up-and-out technique is carefully planned, carefully interpreted for the workforce, and equitably operated, it can be a source

of employee insecurity, and can result in the development of conflict. Another of the reasons for the application of a properly designed up-and-out system rests with managerial tactics — there are many instances when it is just plain good business to have friends in other firms (again we note the importance of properly developing and operating the system, for it is entirely possible to have enemies instead of friends in those other businesses).

*Executive Promotion.* Promotion of executives is mentioned separately because an entirely different technique from that used with the rank and file is applicable. The difference exists because of two prime considerations: (1) executive jobs are few compared to non-executive jobs, hence, the opportunities for promotion are fewer; (2) an error in selection of the promotee can be very costly to the company, far more so than in the case of non-executive promotees. Johnson indicates certain basic considerations necessary in executive promotion.<sup>11</sup> These can be summarized as follows:

. . . Seniority is a determining factor but not necessarily a very important one.

. . . Personal and operational data concerning the potential promotee should be gathered and all available sources utilized.

. . . The candidate can be challenged by assigning him to special tasks and transferring him to unfamiliar jobs.

. . . The direction and timing of promotion should be completely pre-planned and a challenge to his ability, transfers also should be planned and the gathering of data should be continuous.

. . . Great care must be taken not to inform the individual prematurely that he is being considered for, or actually placed in, an understudy position.

## INDIVIDUAL CONSIDERATIONS

Since man is not a machine and since he thinks and acts for himself, it becomes particularly important for management to include in its development program careful consideration of the fact that much of an individual's growth is a result of what goes on inside him. The best of training programs are ineffective if the individual does not want to learn. The most carefully thought out system of promotion and transfer will fail if the employees are not willing to improve and take on additional responsibilities.

*MOTIVATION.* Stimulation of an employee's interest becomes a prime concern of management. Management must be positive and active, not passive; the way of management is to get things done *with* and *through* others. If those "others" are to accomplish the necessary tasks,

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<sup>11</sup>Johnson, *op. cit.*, pp. 159-161, *passim*.

if they, too, are to be convinced of the need for active, positive performance instead of passive acceptance of events, then they must be interested, motivated in the management direction. The question management asks itself is: How can individuals be motivated to do their best?

In attempting to answer this question, the behavioral references made in Chapters 3, 4, and 6 become particularly salient and attention focuses upon morale, reward and penalty, job conditions, and the related conflict factors mentioned previously.

*Morale.* When discussing an individual's motives, reference turns to his *drives* or *needs*. Reference to his motivation or to management's efforts to motivate him thus *relates to management's efforts to recognize, stimulate, and honor his needs, and to his part in this process*. To succeed in such an effort one depends upon developing or maintaining an individual's attitude pattern — an attitude pattern which favors or facilitates motivation. The truth here appears as recognition that attitude affects response to motivational effort — *the attitude of an individual refers to his willingness or readiness to consider or to be motivated.*<sup>12</sup>

The motivation-attitude relationship relates directly to the question of morale. *Morale* pertains to a relative and complex concept. It refers to *both* an individual and a group factor, a factor similar to the rather nebulous term "health." In the organizational and group sense, the term refers to the *relations* of individuals in a group — one might say the group attitude. In the individual sense, the term refers to personal behavioral characteristics. To go one step further, the wise manager seriously considers striking the term "morale" from his vocabulary because of its ethereal nature, it appears far better to realize that motivation and attitude, the human situations arising, and the methods required, designed, and utilized to meet them are the matters demanding attention.

Regardless of the foregoing comment, morale remains a common term in the management language. As applied in the manpower development situation, the normal use refers to the attitude of the employee with respect to his job, his fellow workers, his boss, and the company as a whole. This attitude may be good or bad. It seems to be based upon the employee's beliefs, whether or not those beliefs have any foundation in fact. If, for example, the employee feels that his boss is showing favoritism (to someone else) in work assignments, promotion, or whatever, then his morale suffers regardless of the fact that the boss actually may be making the assignments and the like

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<sup>12</sup>cf. Theodore W. Newcomb, *Social Psychology* (The Dryden Press, Inc., New York, 1950), pp. 117-146, *passim*; Norman R. F. Maier, *Psychology In Industry* (Houghton Mifflin Company, Boston, 1946), pp. 38-48, *passim*.

in a completely fair and impartial manner. We note here the importance of directing attention to past references to frustration and conflict, for what obviously is happening to the just-described employee is that his frustrations or conflicts are mounting, with the potential and typically negative effect. This points up the fact that *management must not only "be" fair in its dealings with other employees, but also must give the "appearance" of being fair.* This suggests that management should make a distinct effort to assure that its acts are interpretable by reasonable men *only as being fair.*

*Reward and Penalty.* There is no doubt that a system of rewards and penalties has its effect upon motivation. The *Law of Effect* specifies to this.<sup>13</sup> Clearly, both reward and penalty have their place in the motivation picture. If an employee goes scot-free, regardless of excessive lateness or absence, there is no motivation for him to be on time or even to work at all. Furthermore, this type of situation may serve to *motivate* the group to adopt the same practice — all may increase their absenteeism and tardiness. Normally, this situation is handled by a penalty — usually no pay for time missed. Further penalties, such as reprimands, suspension, demotion, or discharge, take care of the more persistent cases

Dependence upon penalties alone as a stimulant to proper motivation will succeed, however, merely in the assurance of minimum satisfactory performance.<sup>14</sup> To achieve maximum utilization of an individual's capacities, appropriate rewards must be forthcoming and set before penalties as the impelling device! Wage incentives, bonuses, promotion based upon merit, even the "pat on the back" for a job well done, are *positive* methods of motivating the worker.

Most of us need some assistance in learning how to create a progressive situation. Since morale refers to both an individual and a group condition, the individual must have a recognizable part in the attainment of the defined and acceptable goal. Obviously, manpower development work should take this factor into account.<sup>15</sup>

*Job Conditions.* The employee's interest, and therefore his motivation, depends in great measure upon the nature of the job to which he is assigned. After all, it is the job more than any other one thing which commands his attention and efforts during the working hours. The question of whether or not he *likes* his day-to-day duties is of paramount importance.

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<sup>13</sup>cf. Chapter 6, also note again the behavioral implications pointed up in Chapters 2, 3, and 4. See, too, the works of Newcomb, *op. cit.* and Maier, *op. cit.*

<sup>14</sup>Fear or reprisal may stimulate peak performance but only until the opportunity of sabotage or some form of "getting back" appears. In connection with penalties, see the work of Maier, *op. cit.*, see also Herbert A. Simon, *Administrative Behavior* (The Macmillan Company, New York, 1949).

<sup>15</sup>cf. Milton L. Blum, *Industrial Psychology and Its Social Foundations* (Harper & Bros., New York, 1949).

In today's industrial climate, with the emphasis on mass production and its consequent work specialization, the factors of *fatigue* and *monotony* raise serious and difficult management problems. It appears that fatigue and monotony are not completely separable. If a job is monotonous to an employee, there exists a strong likelihood that fatigue will set in. As the worker loses interest in the work, he becomes mentally tired. This, it appears, causes actual physical fatigue and a resulting reduction in productivity.

Experience indicates that work considered monotonous to one individual need not necessarily be (and typically is not) monotonous to another. Consequently, part of the answer to this problem rests in the proper recruitment and selection of manpower. In most circumstances, however, this is not the entire answer since there may be more repetitive jobs than there are people who do not find them monotonous. In this case, *a program of changing work assignments frequently exists as at least a partial solution.*<sup>16</sup>

Another means of reducing or eliminating monotony is through "job enlargement." In effect, this approach stands as a reversal of the trend toward job specialization. The International Business Machines Corporation (IBM) has put this technique to good use in many of its manufacturing plants in the United States and abroad. Where operators were formerly mere "button-pushers," they now are being given the responsibility for setting up and adjusting their own machines and, in many instances, being made responsible for the control of the quality of the work produced. In this way, much of the repetitiveness of the operation has been broken up, the operator's job has become more meaningful and worthwhile to him, interest has increased, and the manpower development objectives are being achieved through greater utilization of the individual's capacities.

**SELF-ANALYSIS AND TRAINING.** Much of an individual's development is, and of necessity should be, self-motivated. The correctly motivated person, the person who wants to do a good job and who strives to get ahead (honestly), will undertake to develop on his own, with or without the company's help. Good management and good managers recognize this and lend encouragement and direction to the individual. In fact, one of the aims of a manpower development program is to encourage the worker to become increasingly interested in self-improvement and to assume more and more responsibility for his own development. Naturally, the program must do more than

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<sup>16</sup>Once again one notices that the techniques of manpower development are directly related to those utilized in the work of conserving manpower. A program of changing work assignments not only improves the competency level of the employee, it increases his "staying power" — it tends to improve his psycho-social well-being, and possibly his physical condition — if it is properly designed.

merely encourage development as such. It also must provide the necessary guidance so that the needs of the company, as well as the interests of the individual, are served.

One technique useful to management in its effort to encourage and guide an employee in self-development is that of self-analysis — a device whereby the individual can analyze himself and evaluate his own capabilities, shortcomings, and interests. Figure 48 is an example of an analysis form for supervisors. It allows the supervisor to examine his own situation and provides information useful to the manpower people in their efforts to plan development programs.

Before such a device will prove useful, the employee must be positively motivated. Unless positively motivated and reasonably free of conflict, he may: (1) refuse to cooperate, (2) furnish both himself and the manpower people with false or destructively biased information; (3) use the device as an excuse for some typically frustrational act instead of turning to the actual cause of his frustration, or (4) find the device a source of fear and insecurity — a source so strong as to drive him into the waiting arms of some ideologically parasitic group. These negative points are not raised to discourage the use of self-analysis, but to emphasize the constant necessity for full and sincere communication, the real need for a management that actively and honestly seeks to encourage and maintain positive motivation of its employees.

*Self-Evaluation Interview.* Another means of encouraging and guiding self-analysis involves provision of the opportunity for an interview designed specifically to facilitate self-analysis. Although this technique is usually employed, in a formal sense, at only the higher supervisory and executive levels, it can be, and sometimes is, used informally throughout all echelons. Basically the technique involves a series of interviews designed to encourage the individual to discuss his own strengths and weaknesses. The results from such a procedure can be employed in a manner similar to that discussed in the previous sub-section. Treated as confidential, the information received can be used as a basis for establishing a specific training or development program, at the same time recognizing the interests of the individual.

At the rank-and-file level, informal self-evaluation interviews between employee and supervisor facilitate the supervisor's efforts to guide the worker toward development activities beneficial to the individual and the company.

*Group Self-Evaluation and Self-Training.* Another technique which, though not necessarily of use in guiding the company in its development program, does facilitate the self-development of the

PART I Instructions Place an X in the appropriate box following each statement. Be sure that you read the statements as well as the "box" or column headings, and note that some statements may not pertain to you and your job	My job involves me with this matter		If discussed in an educational program it would help me	
	Most of the time	Some times	now	later
<u>1 1 Organization and Administration</u>				
General supervisory duties and responsibilities				
Organizing work and work place				
Using the principles and practices of organization theory				
Company organization and the supervisor's part in it				
Issuing orders and preparing reports				
Local, federal, and state laws affecting my job				
Determination of problem causes				
Correct oral and written communication				
Analyzing organizational relationships				
Planning my work and the work of others				
Scheduling work				
<u>1 2 The Company in Particular</u>				
The company's history and organization				
The company's policies and procedures				
The company's products and processes				
The company's competition				
The company's current economic status				
The company's markets, now and future				
The shop rules and union contract				
The company's benefits leaves, retirement, vacations, promotion and transfer, housing, insurance, medical care, credit and loans, cafeteria, nursery school, etc				
The functions of service departments such as accounting, purchasing, engineering, employment, maintenance				

**SUPERVISOR'S SELF-DEVELOPMENT ANALYSIS FORM**

*Figure 48*

Figure 48 (Continued)

	My job involves me with this matter		If discussed in an educational program it would help me	
	Most of the time	Some times	now	later
<b>1.3 Supervisory Responsibilities</b>				
Direct and effective leadership.				
Developing and improving production incentives				
Selecting or inducting the best man for the jobs				
Effective disciplinary technique.				
Training subordinates in their jobs				
Effective communication with superiors				
Effective communication with other supervisors and subordinates.				
Getting subordinates to improve their quality and quantity of work				
Improving subordinates' attitudes				
Building "esprit."				
Building and holding the confidence of others, particularly subordinates.				
Improving cooperation between my unit and other units.				
Developing assistants, understudies, and subordinate supervisors.				
Effective grievance handling.				
Gathering and reporting grievance facts				
Recognizing production and personnel problems before they become problems				
<b>1.4 Technical Considerations</b>				
The establishment of specific plans and procedures.				
The establishment of technical communication means and directives.				
Decreasing scrap and waste.				
Decreasing labor turnover and absentees.				
Decreasing accidents.				
Investigation of accident patterns and determination of causes.				
Improvement of equipment design and utilization, and of material handling.				

Figure 48 (Continued)

	My job involves me with this matter		If discussed in an educational program it would help me	
	Most of the time	Some times	now	later
Improvement of materials and vendor relations				
Cost analysis and control, maintenance of cost records, and submission of reports.				
Product inspection				
Process inspection				
Quality or production control operations				
Establishment of routines				
Job analysis or job evaluation				
Process analysis or methods study				
Work simplification				
Personnel rating, performance rating				
Special technical training (state the field or fields)				
Time study, motion study, methods study				
Layout or design work				
Simple arithmetic computations				
Utilization of statistics or other forms of advanced mathematical procedures				
Developing formulae				
Application of science (identify)				
Use of, improvement in the use of, or improvement of measuring devices or techniques				
<b>1 5 General Considerations - Improvement</b>				
Improvement in work planning				
Improvement in analyzing performance of others				
Improvement in analyzing my performance				
Improvement in computational methods.				
Improvement in communication.				
Improvement in control.				
Improvement in ability to speak in public.				
Improvement in ability to conduct meeting.				

Figure 48 (Continued)

	My job involves me with this matter		If discussed in an educational program it would help me	
	Most of the time	Some times	now	later
Improvement in a specific technical area (identify) _____				
Improvement in handling problems with the union.				
Improvement in ability to get along with others.				
Improvement in ability to recognize production or clerical errors				
Improvement in ability to handle allocation problems				
Improvement in over-all understanding of the company and its operations				

**PART II Instructions**

Please write yes or no on the blank line at the end of each statement to indicate how you feel regarding the stated question

- Do you feel equally at home in groups of management or workers? \_\_\_\_\_
- Do you feel that you are more a part of management or of labor? \_\_\_\_\_
- Do you feel management accepts you as a part of management? \_\_\_\_\_
- Do you feel management accepts you as a part of management more than labor accepts you as a part of labor? \_\_\_\_\_
- Do you feel responsible for making the decisions affecting your department and its personnel? \_\_\_\_\_
- Do you feel that you have enough authority to accomplish the duties assigned you and your department? \_\_\_\_\_
- Do you feel that you have enough opportunity to represent your personnel to your superiors? \_\_\_\_\_

Figure 48 (Continued)

PART III Instructions					
Place an X in the appropriate box after each question.					
Question	Adequate	Poor	Excellent	Very Poor	Very Good
The training I have had for my present job has been?					
The training I am getting for the job above me is?					
The training I have had for the job above me was?					
The experience I am getting in my present job is?					
My relations with my superior are?					
My relations with my subordinates are?					
My relations with the union representatives are?					

PART IV Instructions

Complete the following questions or statements as indicated Use the space provided for your answers If you feel that you need to expand your answers or if you wish to make additional statements, do so on an extra piece of paper and attach it to the form

1 List the three things you like best about your job

- A .....
- B .....
- C .....

2 List the three things you like least about your job

- A .....
- B .....
- C .....

Figure 48 (Continued)

<p>3 In addition to correcting or improving the factors listed in "2" above, are there any other steps that you can recommend to improve your job?</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>4 What is your total number of years of experience as a supervisor in this company? _____</p>
<p>5 Have you had other supervisory experience? _____ How many years? _____</p>
<p>6. If the company made a manpower development program available to you, would you be interested in taking part in it? _____ Would you be interested in taking part in it <u>on your own time</u>? _____</p>
<p>7. Are you interested in being considered for educational opportunity outside the plant? _____ Would you be so interested if it meant attending classes on your own time, and at your own expense? _____</p>

Source: Developed in 1956 as a composite of forms used by the authors.

individual as a member of a group, is the so-called "group self-evaluation." Strauss and Sayles have indicated that:<sup>17</sup>

1. The learning process necessary to the development of a group which works together effectively is facilitated if the group takes the time to examine its own effectiveness.

2. The effectiveness of such evaluation is enhanced if one member of the group maintains a record of, and reports back his impressions concerning, the success of the evaluation.

An alternate technique employs a questionnaire instead of a "process observer." Immediately following a meeting, each member of the group fills out a short form containing questions pertinent to the conduct of the meeting. The answers then can be summarized and discussed at a subsequent meeting, or merely studied by the participants individually. Both these approaches resemble the critiques so typical of the military.

One pertinent technique of self-training involves publication and distribution of a pamphlet outlining the steps a person can take to train himself. In it, by pointing out the need for leaders, the indi-

<sup>17</sup>George Strauss and Leonard R. Sayles, *Personnel: The Human Problems Of Management* (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1960) p. 257-258, *passim*.

vidual can be encouraged to pursue self-training. This is then followed by statements designed to emphasize the individual's potential and his native ability. After he has been "sold" on the fact that he has the capacity for bigger things, he is guided in the steps to be taken so that his on-the-job experience actually can become training.

Daymond J. Aiken, in a pamphlet entitled "Human Spark Plugs Wanted," first sells the worker on the need for leaders, then encourages him by pointing out his potential. He then advises the selection of a definite goal and a plan whereby the goal can be reached. As further guidance, he points out what should be learned, such as how to solve problems; he outlines a common-sense approach which can be used by the individual in developing this ability.<sup>18</sup>

Another example of self-training can be found in the so-called "J" courses, instituted during World War II. The J.M.T. (Job Methods Training) course was a means of furnishing the employee with the analytical tools with which he could train himself to analyze his own job and conceive improvements in the methods used. The J.R.T. (Job Relations Training) course guided supervisors in the means to train themselves to improve their relations with subordinates and others with whom their normal operations brought them in contact.

**COUNSELING AND GUIDANCE.** Another area in the development process which concerns the initiation and fostering of manpower development through the efforts of the individual is counseling and guidance. With some help from management and its representatives, whether line or staff, the individual can make his own development decisions and chart progress.

*Counseling.* Although this technique usually is thought of as a means whereby the worker is given help in solving current personal problems of on-the-job or off-the-job nature, it can be extended to encompass the development of the individual. A supervisor, through counselling, may be able to guide the worker in setting the proper goals for himself, since the supervisor is in a better position to know of the future opportunities for advancement within the organization. He also has a more objective view of the worker's strengths and weaknesses and how they mesh with advancement opportunities. This type of counselling can be done on an informal basis or programmed periodically. Usually, with the rank and file, it will be informal. With supervisors and executives, many larger firms tie counselling in with a formal appraisal program which seeks to guide the individual in becoming better prepared for advancement.

*Cathartic Interviews.* This technique allows the individual to "get it off his chest." Confidential interviews with a management

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<sup>18</sup>Daymond J. Aiken, *Human Spark Plugs Wanted* (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1945).

representative can help the individual to eliminate or minimize dissatisfactions standing in the way of his development. The mere fact that management is a willing and sympathetic listener to his gripes and criticisms has been proven beneficial, since it allows the individual satisfaction through the mere expression of his troubles. This type of interview frequently results in subconscious self-analysis on the part of the interviewee. Information concerning the company and its policies given by the interviewer often tends to alleviate or even eliminate the source of resentment or criticism.

*Coaching.* A special form of counselling, "coaching," is a continuous process undertaken by the individual's direct superior. In speaking of methods of developing managers, Mace says, "The most effective way of providing for the growth and development of people in manufacturing organizations is through conscious coaching of subordinates by their immediate superiors."<sup>19</sup>

Where counselling covers a broad area related generally to the individual's long-range development or his development in areas not specifically restricted to a particular job (such as tactfulness or dependability), coaching is directed specifically to his development in his current job. Coaching can be related to on-the-job training in the specific case where the trainer is the superior and the training is directed towards meeting the specific needs of the individual. The bulk of all training falls into this category.

*Guidance.* This technique, as normally employed, concerns itself with vocational guidance. It is a means whereby individuals are analyzed as to their interests, skills, and aptitudes. The results of this analysis are compared with the requirements of various occupations in order to find a line of work in which the individual is most likely to succeed. Guidance usually takes place at the outset of a man's career and is often a part of a company's induction program. Much guidance work is done in the schools and colleges, but this area is beyond the scope of this book. In manpower development, as opposed to employment and selection, guidance has its place, first as a prerequisite to effective development and second as it may be applied not to the beginner, but to the individual who has worked for a while but finds his work situation less than satisfactory. Guidance, in the latter instance, may well be the means whereby the individual is re-directed into a path where his interests and abilities can be more effectively put to use for the benefit of both himself and the organization.<sup>20</sup>

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<sup>19</sup>Myles L. Mace, *The Growth and Development of Executives* (Harvard University, Graduate School of Business Administration, Division of Research, Cambridge, Mass., 1950), p. 108.

<sup>20</sup>For a selected reference, see Lloyd H. Lofquist and George William England, *Problems in Vocational Counseling* (The Wm. C. Brown Co., Dubuque, Iowa, 1961).

## TRAINING CONSIDERATIONS

**WORKER TRAINING.** By far the major portion of training done in industry concerns itself with the rank and file. Most of the personnel of an organization fall in this category. A number of techniques commonly are used to meet the various training needs of industry.

1. *On-the-job Training.* This involves training in the specific skills required to perform the immediate job. The training (coaching) is accomplished by the supervisor, by an assistant supervisor, or by an experienced worker who is given the training task as part of his job assignment. This type of training is customary where basic operations are involved and where the worker possesses some related skill and/or experience. As previously mentioned, the bulk of industrial training falls into this category.

2. *Vestibule Training.* Generally performed away from the area in which the employee eventually will work, this type of training involves the imparting of knowledge in a specific skill for a given job. Training is conducted by a staff of instructors in a training area within the plant where production situations are set up as dictated by need. Vestibule training is customary where workers lack prior skill or experience. It is a costly method, but it eliminates production disruption and minimizes trainer-trainee distraction. It also facilitates the teaching of theory as well as practice. Because of the costliness of the setup of the training facility, this type of training is generally limited to skills for which there is a high volume, long-run demand.

3. *Job Methods Training.* During World War II, the enormous demand for mass training and retraining of manpower for war production resulted in the Training Within Industry (T.W.I.) program and its so-called "J" courses. These courses included Job Instructor Training (J.I.T.), Job Relations Training (J.R.T.), and Job Methods Training (J.M.T.). In each of these courses a simple straightforward procedure was devised so that the training could be decentralized and the maximum number of trainees could benefit in a minimum of time. The first two courses, J.I.T. and J.R.T., were aimed at the supervisor. These will be discussed later in Supervisor Training. The third, J.M.T., applies to the training of the worker, and involves a practical plan to help him develop suggestions for improvements on his job leading to safer and more efficient use of manpower, machines, and materials. The normal procedure involves a master training course, wherein supervisors and others capable of instructing first were given a short orientation in how to conduct J.M.T. These trainers, in turn, instructed groups of workers. In this way, many individuals were trained in a very short time. All trainers followed a specific procedure involving four simple steps. (1) break down the job, (2) question every detail of the job as done by the present method; (3) develop the new method, and (4) submit your proposed plan for method improvement.

Although the magnitude of training problems today may not approach that of wartime, the general procedure still is followed in many plants.

4. *Job or Shop Training.* This simply refers to the detailed "task" type of instruction as being different from the more advanced "craft" training. Job or task training embodies the teaching of specific steps in an operation of "how to measure a diameter" as compared to "how, when, and why" to measure a diameter. You might say — at the risk of being facetious — that this type of training refers to taking an individual who has no idea of the nature or use of a screwdriver or a screw and teaching him to use that screwdriver properly and recognize that screw, so that he can be placed in an assembly-line operation. This kind of training may be necessary when the demand for labor far exceeds the supply and one is reduced to hiring *normally* unacceptable personnel.

5. *Craft or Trade Training.* Although many unskilled and semi-skilled workers can be trained on the job and/or in vestibule schools, training for crafts or trades jobs such as toolmaker, machinist, and printer requires a longer time for acquisition of the requisite skills. Much of this training is accomplished through on-the-job technique wherein the trainee (apprentice) works with and for a journeyman or master craftsman, assisting him and learning the craft or trade at the same time. Eventually, if capable, he assimilates the required knowledge and is promoted to journeyman and later possibly to master.

6. *Apprenticeship Training.* In contrast with craft or trade training, this type generally is more formal and involves some theoretical work in the classroom as well as practical on-the-job training. There usually is a definite schedule and period of training involved, together with special administration of the program. Many of these programs are subject to legal control under federal and state law.

The duration of the program will vary with the needs of the concern and/or the industry, and with the requirements of the craft or trade involved. Generally, the minimum standards for such a program include minimum age of apprentice (16), length of training period (2,000 to 10,000 hours), initial wages (25 per cent of journeyman rate), and number of hours of instruction under public authorities.

7. *Part and Whole Training.* This technique is fundamental to job training and often is applied in the training of technicians. It facilitates development of specific operations skills. As the name implies, the job is broken down into its components and the individual is taught one part at a time. When each part has been learned, the whole job is practiced under supervision. As a pure technique, it would apply most specifically to persons being trained for jobs falling in the middle of the skill range. Obviously, this type of training also is applied in conjunction with other techniques in connection with high skill jobs.

**SUPERVISOR TRAINING.** This general category deals with the various techniques used to raise the capability level of persons presently in supervisory positions or to develop new supervisors. These techniques usually involve introduction of rank-and-file workers selected for upgrading of first level managerial skills and include consideration of administrative, technical, human relations, and organizational aspects, as well as trainer training. The training of supervisors should, wherever possible, precede assignment to the job for which the individual is being trained.

*Labor-Management Training — First Line.* These programs exist to facilitate harmonious relations between supervisors and union representatives (shop stewards). Usually they deal not only with the human relations aspects of this relationship but also with the specific application of the management-union contract. Frequently the program is a joint union-management venture, with the shop stewards and the first-line supervisors participating.

*Technician and Middle Management Training.* This training focuses its attention on the further development of skills, already possessed by the individual. It is, in effect, an effort to raise capability levels. As applied to technicians, it frequently is undertaken in the situation where technical training or education has been obtained elsewhere and some *retraining* or *redirection* is required so the skill will be fully usable in a given organization.

Frequently, this type of program involves a series of refresher courses, pursued within or outside of the organization, for the purpose of freshening or sharpening skills previously acquired but little used in the current job situation.

*Three-Position Plan.* This is an adaptation of the apprenticeship idea. Each individual is considered as involved in three jobs or positions: the one he is holding, the one below him, and the one above him. He performs the work of his present job. He acts as the trainer on the job before him. He acts as the trainee for the job above him. While not limited to the area of supervisory training, as contrasted with worker training and management training, the three-position plan is included at this point in the text because it is used most frequently in the area of supervisory training.

The three-position plan is a form of on-the-job training which places emphasis on the line of promotion and the triple responsibility of the individual to be not only a worker, but also an instructor and student. The student will recognize that the prime, and perhaps only, difference between this and the previously-mentioned three-position plan of promotion is the emphasis upon *training* in this case and upon promotion in the former case.

*Job Rotation.* The long-range development of the individual is the main objective of this technique. The individual is moved

periodically from job to job and department to department, but always according to a set plan. Usually this procedure is followed only after management has assured itself of the individual's high potential and is reasonably convinced that with proper training he eventually will be able to fill a top managerial position in the organization. Perhaps the best examples of the plan are the career management programs for officers in the armed forces of the United States.

A variation of this program sets up shorter-run objectives. It seeks to determine the right niche for the individual; when this has been found, the program is discontinued as far as he is concerned.

*Job Instruction Training (J. I. T.).* As mentioned previously in connection with worker training, the "J" courses of the World War II Training Within Industry (T. W. I.) program are worthy of special note because of their wide acceptance and success. Whereas the Job Methods Training (J. M. T.) course was designed for eventual training of the rank and file, J. I. T. aimed at developing supervisors, and others, as trainers. As in J. M. T., a specific formula was set up as a guide to effective training procedure. Two major phases were covered: (1) how to get ready to instruct, and (2) how to instruct.

With regard to preparation for instruction, four definite steps were taught: (1) have a time table — how much skill do you expect the trainee to have and how soon; (2) break down the job — list principal steps and pick out the key points, (3) have everything ready — the right equipment, materials, and supplies, and (4) have the work place properly arranged — just as the worker will be expected to keep it.

Four steps were then presented regarding how to instruct: (1) prepare the worker — put him at ease, find out what he already knows about the job, and get him interested in learning; (2) present the operation — tell, show, illustrate, and question, stress the key points — take up one point at a time, (3) try out performance — test him by having him perform, have him tell and show, explain keypoints — ask questions and correct errors — continue until you know *he* knows, and (4) follow up — put him on his own, designate to whom he goes for help — check frequently, encourage questions — taper off coaching as he progresses. Although this procedure usually is associated with wartime necessity, it should, and does, have important application in both rank-and-file and management development programs today.

*Job Relations Training (J. R. T.).* The third of the "J" courses emphasizes that "A supervisor gets results through people." It stresses the fact that people must be treated as individuals and lays down four foundations for good relations between supervisor and subordinate: (1) let each worker know how he is getting along — figure out what you expect of him and point out ways to improve; (2) give credit when due — look for extra or unusual performance and tell him while "it's hot;" (3) tell people in advance of changes that

will affect them — tell them *why* if possible — get them to accept the change, and (4) make best use of each person's ability — look for ability not being used — never stand in a man's way.

**MANAGEMENT TRAINING.** Management training devotes itself to top level personnel of the organization, the president, the various vice-presidents, the comptroller, the works manager, and the like. It encompasses both line and staff personnel who are "managers of managers" or are in a high level consulting capacity. As already mentioned, techniques like job rotation and the three-position plan apply to the training of top-level executives as well as to the training of middle management and lower echelon supervisors. Of the techniques which follow, the same can be said; they are included in this section because their *major* application is to top-level positions.

*Executive Training* The goal of "executive" training embraces development of replacements, backstops, and duplicates through raising the capability level of the executives being trained. Specialized training often is included in this category, the primary focus is, however, upon *broad management skills*. Planty and Freeston list four areas of general development needs of executives.<sup>21</sup> (Note the relationship between these points and the views expressed in Chapter 15).

- 1 Increased ability in self-understanding and continued growth in the understanding of others
- 2 Understanding of the dynamic social and economic forces at work in America today, accompanied by a realization of the ways in which industry influences these forces and how social and economic forces in turn react upon industry
- 3 Knowledge of, and skill in, applying scientific management.
- 4 Technical know-how in various functional specialties — sales, research, manufacturing, etc

*Multiple Management.* Probably one of the most outstanding innovations of our time as far as manpower management is concerned is the technique of multiple management. First developed in 1932 by Charles P. McCormick of McCormick & Company of Baltimore, Maryland, this technique has gained wide approval and has been applied successfully in a variety of organizations.<sup>22</sup>

Under this technique, three boards supplement the usual board of directors — a junior board, a sales board, and a factory board. These "out-of-the-line" boards meet periodically (usually once a week) to consider problems typical of their respective levels. The junior board, for example, typically is empowered to concern itself with

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<sup>21</sup>Earl G. Planty and J Thomas Freeston, *Developing Management Ability* (The Ronald Press Company, New York, 1954), p. 177.

<sup>22</sup>cf. Charles P. McCormick, *Multiple Management* (Harper & Brothers, New York, 1938).

broad company policy and practice to develop specific projects and make recommendations to the board of directors. The factory board generally receives like powers but involving matters of a more operational nature.<sup>23</sup>

In addition to providing the individual with the opportunity to "learn by doing" through group action, this plan builds morale in terms of status and top-executive association. It also facilitates selection for promotion by offering the opportunity to view action in a parallel management capacity.

The formal and typical procedure for staffing these boards provides for rotation of personnel. Furthermore, selection generally is based upon a series of carefully developed criteria even though an elective process may be used as the means of assignment. Obviously, where specific criteria exist, stress is being placed upon competency. It follows, then, that the technique itself focuses upon the training and promotion of management and emphasizes a "selective" handling of potential executives.

One cannot overemphasize the value of this manpower development technique. Multiple management serves to: (1) expose managers to problems related to, but above, their immediate sphere of interest; (2) establish a strong sense of responsibility and participation; (3) expose young managers to a broad association — it places them in direct contact with people and procedures usually far beyond their level, (4) improve their morale, and (5) improve their understanding of the nature and importance of communication and control. Naturally, such a technique has certain disadvantages. For the most part these are associated with: (1) how the individuals are selected, (2) how clearly the authority and responsibility of the boards are defined, (3) how good the leadership of the boards may be, and (4) how well top management supports, instructs, corrects, and oversees both the boards (as boards) and the individuals (as individuals).

*Educational Programs.* At the top organizational level much emphasis is placed upon training outside the plant through use of external educational facilities. In addition to the usual graduate programs in which executives are encouraged to participate, many colleges and universities offer courses specifically designed for the plant executive. Some of these operate on a weekly basis and service the local area. Some are "short courses," institutes, or seminars running anywhere from one to eight weeks. In the so-called "short courses" the executive gets away from his work environment and studies full time with others of his category from various sections of the country. Occasionally an organization establishes a program for its executives

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<sup>23</sup>cf Planty and Freeston, *op. cit.*, pp. 94-98, *passim*; Michael J. Jucius, *Personnel Management* (Richard D. Irwin, Inc., Homewood, Ill., 1947), pp. 274-275, *passim*.

as individuals, in which case it outlines a series of specific, regularly-offered college courses. These are designed primarily to broaden the individual's outlook, strengthen any weaknesses he might have, or fill in gaps in his previous knowledge regarding areas necessary to his continuing development.

*Conferences.* Much executive training is accomplished by means of conferences and staff meetings. Generally, where this technique prevails, courses in conference leadership are held so that the effectiveness of this training device can be maximized. Conferences may be of the "in-plant type," if so, the executives discuss current problems or take up specific subjects such as finance. Ordinarily the topic selected reflects a general need for understanding and improvement.

The conferences may also occur on "out-of-plant" affairs held for executives of like positions from a variety of organizations. For example, many conferences are held for discussion of specific aspects of placement by personnel directors. Usually this type of activity is sponsored by a trade association, professional society, or an educational institution.

*Community Participation.* Many companies encourage their executives to take part in civic and other outside activities. Most certainly, development at the executive level can be furthered by participation in the activities of the local town board of finance, the library association, or the civil defense council. Speeches to community or professional groups also fall into this general category. Obviously, the idea is to provide the individual with an opportunity to experience decision, organization, and communication problems different (and perhaps of a higher level) from those he handles each day. This broadening of the experience base is a real need of most management trainees.

## **MEASUREMENT CONSIDERATIONS**

In order to determine the effectiveness of any program or action, it is necessary to appraise it by means of tests and/or measurements. To determine whether a child has grown taller, one measures before and after a specific time. To determine the results of a training program it is necessary to measure also, even though the measurement process may be far more complex.

Several approaches are available as measurement techniques. One approach is through appraisal of the individual to determine his progress or the relationship of his performance to some standard. This can be done by means of merit rating or personnel appraisal, or by means of tests. The other approach is by direct appraisal of the development program itself.

*PERSONNEL APPRAISAL.* The technique of measuring the performance or potential of an individual is found under many titles.

Some of these are merit rating, performance rating, employee evaluation, progress rating, and employee rating. The purpose of the technique is the systematic collection of information regarding various traits or characteristics of the worker which bear upon the performance of his job or his advancement potential. Such evidences as the quality and quantity of his work, his dependability, attitude, knowledge of his job and adaptability usually are considered

*Uses.* While the particular frame of reference in this chapter deals with the measurement of the effectiveness of a development program, personnel appraisal frequently is employed primarily in connection with other phases of personnel administration, with the secondary use of measuring program effectiveness.

This technique is employed most frequently as an aid in determining eligibility of workers for pay increases and promotions, and as such is tied in closely with wage administration. Ratings are used also to aid in guidance and in the improvement of performance through counseling. Proper placement, subsequent to initial placement, can be aided by systematic appraisal of the individual's performance on the job. Obviously, the traits employed must be selected to suit the specific purpose of the rating. One set of traits or characteristics may serve well in appraising the individual's performance on his present job, but would be lacking in determination of his promotion potential.

*Techniques.* Many techniques are currently in use in industry for the appraisal of personnel. The most common of these follow:

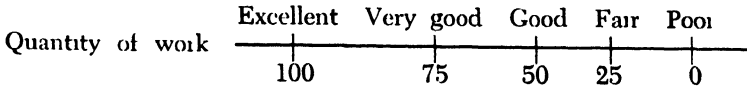
1. *Ranking* This is the simplest and most informal method of rating workers. It involves a simple placing of employees in a rank order from best to poorest. The traits considered by the rater are those which he feels are pertinent to the use to which the ratings will be put. For example, if rating for the purpose of establishing within-grade increases, quality and quantity of work might be considered heavily. On the other hand, if the rank order were being established to determine eligibility for promotion to a supervisory position, leadership, tact, and job knowledge might be considered most important.

2. *Man-to-man.* Created during World War I as a technique for rating army officers, this method involves pre-selection of definite traits to be used by all raters. The raters, basing selection on their own experience, choose officers typifying varying degrees of the traits selected. In other words, if aggressiveness were one of the traits, the rater would select the most aggressive officer he ever knew, the least aggressive, and so on. These examples would then serve as a ladder or guide to be used in comparing with the actual officers to be rated.

3. *Check lists.* A rating check list consists of a fairly large number of questions or statements relative to the performance or potential of an individual. Included in the items would be some representing a high degree of performance of a particular trait, a low degree, and

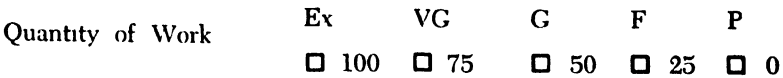
some in between. Sufficient items would be included to cover all traits upon which the individual would be rated. The person doing the rating, usually the worker's immediate superior, merely checks the items which are descriptive of the individual's performance.

4. *Continuous scales* This method also uses predetermined traits which in this case are formally weighted numerically. Appearing on a form, one trait might look like this



A check mark is placed by the rater on the scale at the position he feels best describes the worker's performance. A numerical score is taken from the scale and, when added to the scores for all other items rated, gives a total rating of the worker. The total score can be used directly or can be converted to an over-all adjectival rating such as excellent, very good, etc.

5. *Discontinuous scales* This method is quite similar to the continuous scale, except that the rater must make a choice of a limited number of degrees of performance, each having a definite and fixed point score, for example.



The discontinuous scale usually is designed with descriptive statements for each degree of performance, which the rater compares with the actual performance of the ratee. After the rating has been completed, over-all point and/or adjectival ratings can be arrived at as with the continuous scale.

6. *Forced-Choice* A relatively new method of rating, this system is composed of a number of four-statement blocks. Each block contains two statements of an apparently favorable nature and two of an apparently unfavorable nature. In actuality, one of each of these statements is definitive, whereas the other, although seeming to indicate favorable or unfavorable performance, really has no great bearing on the quality of the worker's performance. The rater is required to select two statements in each block, one which he feels is most descriptive of the worker and one which is least descriptive. This system has been designed to eliminate bias on the part of the rater. Obviously, the ratings must be scored by someone other than the rater or the point of the system is lost.

**TESTING.** Like personnel appraisal, testing of individuals usually is found in an organization for purposes other than the measurement

of the effectiveness of the development program. As a matter of fact, where used effectively, testing in itself is an aid to a good development program. Nevertheless, the secondary use of test results as a measure of program effectiveness can be most helpful in determining whether the development program is doing what it is supposed to do and how well. In dealing with the various standard uses and techniques of testing, it will be apparent how they can be directed toward the measurement of program effectiveness.

*Uses.* Earlier in the text, the use of testing as an aid in the selection process has been discussed. This area probably utilizes more employee testing than any other. However, tests frequently have been employed successfully in discovering employees who have unused qualifications which can be of assistance to the organization. They also have been employed to ferret out individual capacities for more complex and difficult tasks. The organization's training needs frequently are made apparent through testing. Carefully-chosen tests can show how workers meet or fail to meet standards which correlate with successful or unsuccessful job performance, and thus can direct the improvement of the company's development program. In many instances testing is used to supplement personnel appraisal regarding promotion, transfer, layoff, and within-grade increase procedures.

*Techniques.* Tests generally are categorized as follows: (1) interest tests, (2) dexterity tests, (3) aptitude or proficiency tests, (4) intelligence tests, and (5) personality tests. The student is referred to Chapter 12 for a description of testing techniques in these classifications.

*PROGRAM APPRAISAL.* As previously mentioned, the measurement of the effectiveness of a manpower development program might be handled in either or both of two ways: (1) through individual measurement by means of personnel appraisal (rating) or personnel testing, and (2) appraisal of the program itself. This section deals with the latter.

*Control Groups.* Some companies establish comparisons between groups of trained personnel and groups of untrained personnel to determine program effectiveness. This technique is mentioned since it is directly concerned with program evaluation as contrasted with individual evaluation. It can readily be seen, however, that the use of individual evaluation techniques (rating and testing) might be of great assistance in establishment of the comparison.

*Evaluation by Trainees.* Participants in training or development programs frequently are requested to express their opinions of the effectiveness of the program. This can be done through questionnaires filled out by the trainee during, or at the completion of, the particular course or program involved. Occasionally the firm

will prefer unguided comments. Either method can provide for a signed or anonymous comment. Trainee evaluation also can be accomplished by periodic interviews conducted by staff personnel or by the trainee's supervisor.

*Instructor Evaluation.* Another technique involves monitoring of training sessions. Representatives of the personnel department visit classes in session and, usually with the aid of a check list or an evaluation form, rate the effectiveness of the instruction. Usually rated are such items as class interest, clarity of presentation, appropriateness of subject matter, and the like.

*Morale Surveys* On a much broader base, effectiveness can be measured by the degree of general employee satisfaction or dissatisfaction found in an organization. Although morale surveys measure far more than the manpower development program, certain portions of the survey — such as questions pertaining to opportunity for advancement, job satisfaction, and the like — can provide fairly direct indications as to whether the development program is accomplishing what it set out to accomplish.

## SUMMARY

Good management recognizes and plans for change. Manpower development is a means of implementing management's plans as they pertain to changing manpower knowledge requirements and positional needs. As part of a firm's inventory, manpower must be treated much like other inventory items. Its utilization must be planned much as one would plan the use of raw material. Once the material (man) has been brought into the organization, it is the job of manpower development to see that it is "processed" through training, counseling, transfer, promotion, and the like. It must be processed in such a way that maximum utilization is achieved and maintained.

The policies established to lay out the operational parameters must cover the approach to implementation and demand recognition of the peculiarities and the differences in man.

Concept and policy very naturally lead to program. Program requires specific techniques. These techniques have been outlined in this chapter.

The planned approach can be divided into two specific areas: manager development, and rank-and-file development. In the following two chapters these separate phases are considered.

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*The numerical demand for executives is steadily growing. For it is of the essence of an industrial society that it increasingly substitute for manual skill theoretical knowledge, ability to organize and to lead, in short, managerial ability.<sup>1</sup>*

## Manager Development

If free industrial enterprise is to survive, its managers must be leaders, not merely keepers of the keys of tradition. If our industrial environment is to remain healthy its managers must lead, not depend upon an ill-fitting cloak of authority to elicit performance from subordinates.

This is the problem in manager development: to create managers who are leaders in enough quantity and of a real quality. They must be available at the right place and time at a cost which makes economic sense. This is no simple task.

The problem is magnified because nature cannot be counted upon simply to bring them into the world as they are needed. Further, it takes time to develop managers competent to lead, and the need for manager development increases as industrial organizations grow larger and as new organizations spring up in our expanding economy.

### THE NEED FOR MANAGER DEVELOPMENT

Technological advances, with automation not the least of these, force the proportion of managers to workers ever higher, resulting in a virtual "explosion" of demand for executive talent. The need is not limited to the higher echelons of management. It is every bit as acute at the level of the first-line supervisor. As production equipment becomes more automatic and complex, a decrease occurs in the demand for, and the training of, the skilled journeymen from whose ranks many foremen rise. Either a different form of training must be developed or management casts around for a different source. One important

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<sup>1</sup>Peter F. Drucker, *The Practice of Management* (Harper & Brothers, Publishers, N. Y., 1954), p. 182.

natural source of management personnel, an important group of ladder-climbers, thus is fast disappearing. A further aggravation of the manager development problem results from this situation.

Decentralization of industry has resulted in the creation of more decision-making positions in the area of middle management. It creates, in essence, several "companies" where only one existed before. Then, too, the general acceptance of compulsory retirement at age 65 creates many gaps in the executive area, and these certainly must be filled.<sup>2</sup>

Fortune Magazine has this to say:<sup>3</sup>

Perhaps the most direct pressures for executive development, however, have resulted from industrial expansion and decentralization. It is obvious that Sears, Roebuck, for instance, whose retail chain has grown to more than 650 stores since 1925, has needed more store managers. The big growth in its management has been produced not only by expansions but by decentralization of all retail and mail-order operations into five territories, each with its own administrative staff. Since 1945 the company's executive personnel has increased 60 per cent to a total of over 9,000. Of these managers, some 4,000 are included in a "Reserve Group" and 300 in a "Senior Reserve Group" in Sears' executive development plan. However, more significant than any absolute increase in numbers of executives is the fact that the growing complications of industry have sharply raised the ratio of executives to employees. At Swift & Company, for example, the ratio was one to a hundred in 1923 when the corporation had 50,000 employees; today it requires 2,150 executives to manage 75,000 employees — a ratio of one to thirty-five.

The magnitude of this continuing problem must be viewed also from the qualitative standpoint. Most firms can compete on fairly even terms with respect to markets, materials, and production equipment. The difference lies in the competence of leaders, the decision-makers who are responsible for the utilization of the factors of production.

Furthermore, there is the problem of time and experience. The industrial expansion of the past two decades and the expected expansion of the future certainly appear significant. With the physical expansion and the technological change taking place as rapidly as they are, few men find the time needed to gain experience by direct exposure to decision events. The picture one sees thus is vastly more complicated than that faced by our grandfathers or even our fathers.

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<sup>2</sup>Instead of rising, the retirement age seems to be falling as evidenced by the congressional action to equalize male and female retirement age under Social Security legislation (1961).

<sup>3</sup>From "Bringing Up The Boss," *Fortune*, June, 1951.

A need for a systematic approach to the development of managers, once they are hired, becomes a clear if not urgent matter.

**PROGRESS OF MANAGER DEVELOPMENT**

Systematic programs for manager development were almost non-existent prior to World War II. Since that time, however, there has been a steady growth in this area. A survey conducted by the American Management Association showed that in 1946 only slightly more than 5 per cent of the companies studied pursued management-development programs. In 1954 almost one-third of the participating companies engaged in this type of program.<sup>4</sup>

As might be expected, the greatest interest lies in the larger organizations; however, substantial evidence of the use of manager development plans exists in smaller concerns as well. Table 22 shows a breakdown of participation according to the size of the company. These plans vary widely as to scope and effectiveness, but the evidence of interest and action is obvious.

The use of manager development has increased since World War II, and its nature has changed as the procedure matured. At first, as indicated by Table 23, emphasis rested on developing "crown princes" to take over specific executive positions as they became vacant. Manpower people and managers in general now realize that development is a universal requirement, not just the need of a select few. At first, selection of the "chosen ones" depended heavily upon the outcome of tests hopefully designed to predict potential, and top executives

TABLE 22  
USE OF MANAGEMENT DEVELOPMENT PLANS

Number of Employees	Companies With Development Plans	
	Number	Per Cent
Under 250 . . . . .	485	17
250-500 . . . . .	384	23
500-1,000 . . . . .	478	27
1,000-5,000 . . . . .	742	29
5,000-10,000 . . . . .	198	52
10,000 and over . . . . .	197	69

Source: "How We Stand In Management Development," (Report of AMA Survey), *Factory Management and Maintenance*, August, 1954, p. 100.

<sup>4</sup>American Management Association, *Management Education for Itself and Its Employees*, New York, 1954.

TABLE 23

## A GENERAL PICTURE OF THE PROGRESS OF MANAGER DEVELOPMENT

Factors of Consideration	Early Tendency		Recent Tendency	
	Emphasized	Not Emphasized	Emphasized	Not Emphasized
<b>Initial Selection</b>				
attention to total competency		✓	✓	
attention to personality	✓			✓
attention to initial ability		✓	✓	
attention to collegiate source	✓			✓
<b>Promotional Planning</b>				
attention to specific individuals only	✓			✓
attention to general growth		✓	✓	
attention to organizational needs		✓	✓	
attention to "ideal" personality	✓			✓
<b>Testing</b>				
attention to potential	✓		✓	
attention to performance		✓	✓	
<b>Performance Appraisal</b>				
to compare one to another	✓			✓
to establish criteria for self-improvement		✓	✓	
to indicate traits and potential	✓			✓
to indicate accomplishment		✓	✓	
to find numerical evaluation	✓			✓
to determine individual's feelings		✓	✓	
<b>Actual Training</b>				
attention to depth		✓	✓	
attention to future problems	✓		✓	
attention to present problems		✓	✓	
attention to principles		✓	✓	
attention to existing techniques	✓			✓
attention to exact replacement of what now exists	✓			✓
for the select few	✓			✓
for top management problems	✓			✓
by rapid movement through many jobs	✓			✓
considered staff responsibility	✓			✓
considered responsibility of all managers		✓	✓	
attention to self-development		✓	✓	
attention to leadership		✓	✓	
attention to moral and ethical values		✓	✓	
attention to decision-making		✓	✓	

appraised the individuals. More recently the gimmicks and attention to "what might be" have given way to sound – and long recognized – principles.<sup>5</sup>

<sup>5</sup>cf. Henry H. Albers, *Organized Executive Action* (John Wiley & Sons, Inc., N.Y., 1961), 525-561, *passim*; Jack Pockrass, "Executive Development – Semantics or Substance," *Personnel Administration*, Vol. 22, No. 6, Nov-Dec., 1959, pp. 36-43, *passim*.

### PRINCIPLES OF MANAGER DEVELOPMENT

As mentioned in Chapter 14, manpower development is that phase of manpower management concerned with the recognition of, and the planning for, changes as they affect man in his relationship to the organization and its immediate and long-range environment. From the point of view of manager development, a number of requirements or principles can be set down.<sup>6</sup>

. Manager development is development of the entire management group, not merely the "promotable man."

. Manager development, like management itself, must be dynamic. It must focus upon the needs of tomorrow rather than upon replacement of what exists today — that is, today's managers, their jobs, or their qualifications.

. Manager development aims at challenging *all* to growth and self-development

. . . Manager development is a continuing process, not one to be plugged in today and shut off tomorrow.

Manager development must focus upon performance, upon accomplishment, rather than *what might have been*, or *what might be*. It is today's work that develops. The so-called "promotable ladder" is a goal, it leads to what can be attained only through proficiency today.

. Manager development is a functional contest (if it is a contest), not a personality replacement program, for there is no such thing as an "ideal" personality except for a given moment and at a given location in time.

. . . Manager development is leader development. It is development for a specific, but extremely complex, kind of work involving all of an organization in at least some manner.

. . . Manager development results in organizational development, and has as one purpose the progressive development of the organization.

Manager development is a prime responsibility of every "boss" Development of himself and development of his subordinate, both reflect accomplishment.

Clearly, therefore, "developing tomorrow's managers means in effect developing today's managers — all of them — to be bigger men and better managers."<sup>7</sup> Just as clearly, and at the risk of repetition, the objective is creation of leaders, not authoritarian drivers.

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<sup>6</sup>Drucker, *op. cit.*, p. 186, Moorhead Wright, "Individual Growth: The Basic Principles," *Personnel*, The American Management Association, Inc., N. Y., Vol. 37, No. 5, Sept.-Oct., 1960, pp. 8-17, *passim*; Sidney J. Levy, "This Way to Self Improvement," *Personnel Journal*, Vol. 38, No. 10, March, 1960, pp. 373-376, *passim*

<sup>7</sup>Drucker, *op. cit.*, p. 186.

These principles do not stand isolated from the broad concept of manpower development. In fact, the foregoing points become difficult if not impossible to apply unless those responsible for their application keep in mind the important considerations in Chapter 14. Furthermore, the policy considerations mentioned throughout the text have an important bearing upon these principles and their application. At best, manager development would be inadequate unless the totality of manpower policy were adequate.

### PLANNING FOR MANAGER DEVELOPMENT

Manager-development planning involves two major phases — long-range and short-range. *Long-range* planning involves the forecasting of executive needs as they will appear, or are most likely to appear five, ten, or fifteen years from plan inception. Needless to say, this type of estimate will hinge upon top management's answers to questions like the following:

1. Will the organization expand, contract, or remain as it is?
2. What will be the nature of the product and the process?
3. Will the present organization change? Will it become centralized or decentralized? Will the number of levels increase or decrease?
4. What will be the executive selection policy? Will it require promotion from within, hiring from the outside, or both?

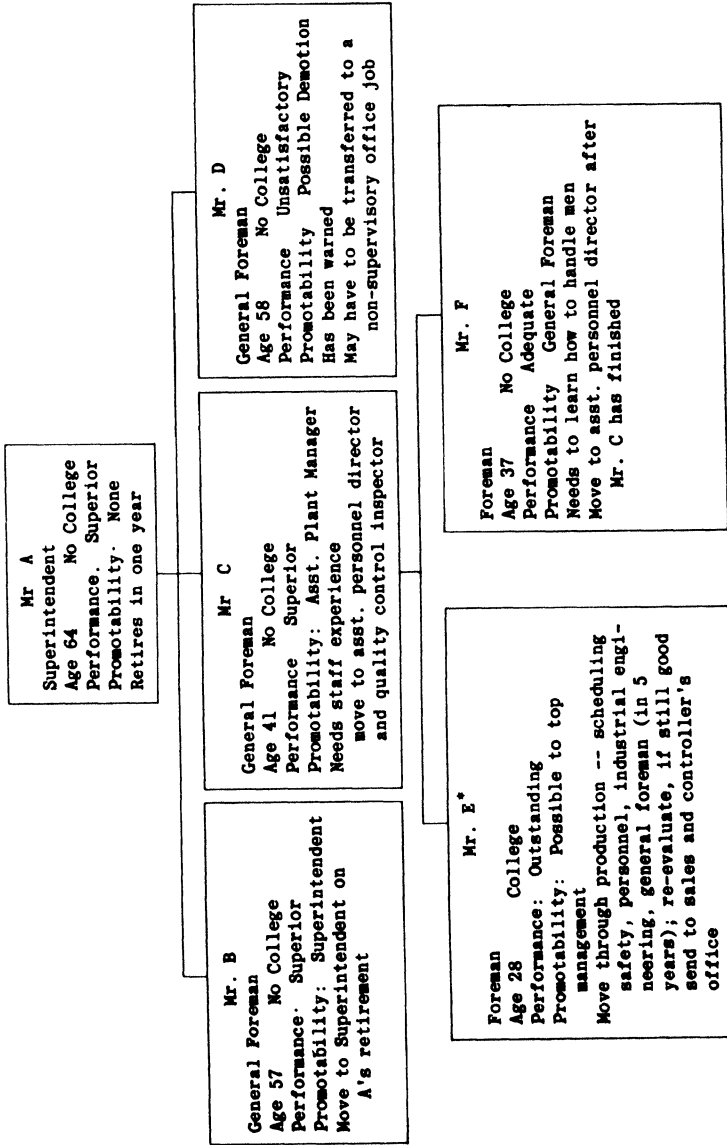
For the *short-run*, promotions and transfers must be scheduled. Since the business must continue to operate, staffing should be adequate to meet the day-to-day demands of the organization regardless of the long-range plan. Figure 49 shows a replacement chart typical of that used by many companies. As can be seen, this tool can be used for both long- and short-run planning. Another basic planning tool, as well as one useful in general administration of development programs, is statistics.

**STATISTICS IN PLANNING.** A statistical aid in handling the first two planning questions cited may illustrate the importance of statistics as a planning tool. It will be recalled that the questions were:

- . . . Will the organization expand, contract, or remain as it is?
- . . . What will be the nature of the product and the process?

These are extremely important considerations, not only from the point of view of manager development, but also with respect to worker development and the general future of the organization.

Statistical assistance can be derived from plotting a chart of the change, period to period, of a "measure of effectiveness" of the first question, and another chart of the second.



Source: George Strauss and Leonard R. Sayles, *Personnel, The Human Problems of Management* (Prentice-Hall, Inc., New York, 1960), p. 514.

**SAMPLE REPLACEMENT CHART**

*Figure 49*

For question No. 1, it may be well to plot two general results: (a) a set of curves of the number of employees in each of, say, five wage and salary levels, and (b) a set of curves of the ratio of the number of people in each level to, perhaps, the dollar value of goods produced to show any change in efficiency. For question No. 2, the measure of effectiveness might be, for the product, sales figures period by period for each product or part number and for the process, the margin between unit sales price and unit manufacturing cost, against a separate curve for each product or part number. These charts serve as forecasts when one mentally extends (extrapolates) the trend lines into the future. Such an extrapolation must be evaluated, period by period, as the future unfolds.

We note, therefore, a simple, easily understood probability evaluation of the trend or average line. One can expect that, if the average line does represent the future, half of the future points will come above the line and half below. A run of successive points on the same side of the line will raise a question as to whether the line any longer represents the developing situation. If the situation really has *not* changed, here is the probability table of the number of successive points on the same side of the line.

<u>Number of Consecutive Points</u>	<u>Probability</u>
2	.50
3	.25
4	.125
5	.0625
6	.03125
7	.015625

One thus concludes that a run of four points means that there is an 87.5 per cent chance that a change has taken place, that the forecast is no longer a good one; with five points, a 93.75 per cent chance exists that there has been a change.

Even more sensitive statistical evaluations of a forecast come from taking into account the extent of the departure of the unfolding points from the trend line. All such techniques deserve the attention of manpower managers and their subordinates, for they can be developed into invaluable aids to decision making and provide a means of placing a fact foundation beneath advice.

**GOALS.** Planning, or any resulting process or system, can seldom be effective unless the plan is established to meet certain defined

goals.<sup>8</sup> In this case, the basic "goal question" to be asked by top management is: "What should a manager-development program strive to accomplish?" The most obvious goal is that of assuring the continuity of the organization through the development and maintenance of qualified reserves to take the place of executives who move up the ladder or out of the firm. Development of the individual to meet his present performance requirements — or exceed those requirements — is, however, of equal importance. After all, only a few ever can reach the top, for there are only a few jobs at the top. It would be foolhardy, if not dangerous, for every qualified man to aim to reach the presidency. This fact, however, should not be considered a reason to reject manager development programming. An important result of correct development is improvement of the entire manager group and, therefore, of the organization as it stands.

The specific goals selected in any given instance depend upon the decision regarding approach. If the plan calls for a long-range approach the goal will be at least twofold: to develop a continuing improvement in the organization, and to assure effective future executive replacement. This means, in essence, that the plan is to make personnel and organization changes over a long period with as little disruption as possible to operations and with a minimum of conflict.

On the other hand, the short-run approach sets immediate change as the goal. It requires very concentrated effort if operations are to proceed in orderly fashion and conflict is to be kept at a minimum.

Actually, the short-run approach may create more problems than it solves.<sup>9</sup> The immediate effect of rapid changes to the organization and in the personnel is insecurity in otherwise able and desirable personnel. They tend to attempt to "get out from under" before "I get the ax." There are instances, however, when the risk involved in the short-run approach must be borne. However those cases merely point up the fact that incorrect management action in the past has led to an untenable situation.

The truly effective goal seems to be the establishment of a situation that continually improves. Manager development should reflect this objective. Organization charts and manning tables should indicate planned changes. Top management action ought to include regular audit of these charts and tables, and readjustment of plan as the situation changes.

## DEVELOPMENT NEEDS

Once the goals of a manager-development program have been established and those responsible for implementation have accepted

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<sup>8</sup>cf. Chapter 6.

<sup>9</sup>Ernst Dale, *Planning and Developing the Company Organization Structure* (The American Management Association, Inc., N. Y., 1952), pp. 131-133.

the principles, the next logical step is to determine the specific needs which must be met by the executive if the goals are to be attained. Once these needs are known, a program can be developed.

In the general sense, these needs fall into three groups: the technical, the human, and the community. Dean Donald K. David of the Harvard Graduate School of Business Administration effectively sums up the general needs of businessmen as follows:<sup>10</sup>

1. Competence in the things of business — the technical skills and knowhow needed to produce and sell; the ability to work effectively with people; and, it should be emphasized, the ability to make a profit.

2. The sincere desire and ability to make the business operation what we call "a good society." This recognized the place of people in business and emphasized the fundamental fact that American principles rest firmly upon a belief in the worth of the individual.

3. The desire and ability to make their business operation and themselves, as businessmen, good citizens.

Examination of Dean David's remarks indicates the importance of the previously-listed principles. More than that, his three points strengthen the contention that manager development is best if directed toward leader development.

The effective leader is creative. As previously noted, managers must make rather than await events, they seek to develop an effective totality from what may be only remotely related parts. This requires creative ability and leadership. Then too, an effective manager is skilled in his functions or he can neither inspire confidence nor hope to be effectively creative. Skill in function is a mark of the leader. Furthermore, the effective manager is a teacher, and he accomplishes his work with and through others. The leading of men is always largely a matter of guidance and inspiration for the purpose of mutual accomplishment.<sup>11</sup>

Clearly, the manager-development program should be geared to meet these general needs. Gearing to meet general needs, however, usually only scratches the surface of need identification. Actually, the specific requirements typical of any given organization must be discovered through analysis of that organization. One reason for the planning questions is to assist in ascertaining those specific needs. As will be seen, "prerequisites" exist as tools designed to discover or help discover those needs.

## LEVELS OF MANAGER DEVELOPMENT

Although the tendency is to speak of "manager development" as contrasted with "worker development," the fact remains that as far as

<sup>10</sup>Donald K. David, "The Human Side of Business," *Harvard Business Review*, Vol. 28, No. 4, pp. 147-148.

<sup>11</sup>cf. Roger Bellows, *Creative Leadership* (Prentice-Hall Inc., Englewood Cliffs, N. J., 1959), Parts One and Five, *passim*.

“development” is concerned, all echelons of management cannot be lumped together in one pot, so to speak. Even though all “managers” must be able to plan, organize, direct, and control, they must do these things differently depending upon their level in the organization and their assignments within that level. In addition, the attributes of experience and training which they possess at any given time vary with their place in the hierarchy. Consequently, *a manager-development program provides for fulfillment of the different needs of these various levels and at various times.*

In general, “managers” can be divided into three categories: first-line managers (foremen and the like), middle managers (department heads and the like), and top managers (company officers). Development programming will require a somewhat similar differentiation.

**FIRST-LINE MANAGERS.** Frequently first-line managers, and especially shop foremen, are selected and promoted from the ranks. Their formal education may be limited. On the other hand, they are likely to possess a great deal of experience regarding the operation of the company at their given level and are skilled in the work to be done.

With the foregoing qualifications in mind, the development program should be designed to “fill in the blank spaces.” For example, much emphasis must be placed upon leadership training, organization, problem solving, and the like. Much of the development at this level will stem from specific courses of instruction conducted either on or off the job. Some encouragement and guidance toward self-development also should enter the picture at this level.

**MIDDLE MANAGERS.** Unless hired from the outside, middle managers will come from the first-line manager’s ranks, or as is frequently the case today, from *junior-executive training programs*. Middle-manager development programs are established in recognition of the sources and the backgrounds connected with them. The non-college foreman requires a different preparation from that required by the college-trained junior executive. Opportunities must be made available to the former to broaden his intellectual interests, sharpen his ability to use the scientific approach to problems, and improve his ability to communicate.

On the other hand, the college-graduated junior executive presumably will have been acquainted with the firm, its organization, history, products, and processes during his training period. Once he occupies a supervisory position, emphasis would be placed upon his development as a leader and manager — in all likelihood, the direction of instruction will be toward the practical issues involved in the job, and self-development becomes a key to progress.

*TOP MANAGEMENT.* Development for the upper echelon positions follows an entirely different pattern than that of first-line or middle management. Presumably those considered for the top jobs already have proven themselves to be able leaders and problem solvers. In addition, they are by this time thoroughly acquainted with the company, its policies, and methods of operations. Furthermore, they have demonstrated their potential for handling greater responsibility.

Further development of top managers must be designed in recognition of their grasp of the *internal* operations of the organization, and focus itself upon the *external* conditions and situations surrounding the firm. These are the individuals who will decide upon and/or help decide upon policy. They therefore require the kind of development which enhances their ability to understand policy requirements and the sundry forces which may block policy effectiveness. Obviously, it is these men or women who will exercise the prime control positions in the organization, thus, their development must equip them to appreciate the need for, understand the nature and technology of, and the problems involved in, applying control in *every* phase of management.<sup>12</sup>

Top managers will have the *authority and responsibility* for assuring *and* demanding proper communication throughout the organization. They therefore require a thorough understanding of the nature of communication theory and communication techniques, as well as an appreciation for the behavioral problems related to the success or failure of a communication system.<sup>13</sup> These are the very people who will exercise the final operational authority regarding organization. They thus need development which refreshes or improves their understanding of the four-fold theory of organization, and they require full understanding of the fact that organization affects man and is, in turn, affected by man.<sup>14</sup>

At this point manager development becomes more and more tailor-made for each individual. Every person being considered for such positions, (like every individual considered for lower positions in the hierarchy), will have a different level of understanding of these matters. By the same token, every individual will have a different ability to accumulate and assimilate the theory and practical aspects pertinent to these matters.

Furthermore, manager development at this level requires a greater emphasis upon self-development than at any other level. This difference in emphasis is due in part to the nature of the ability differentials which tend to exist between people when they arrive in position to

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<sup>12</sup>cf. Chapter 6.

<sup>13</sup>cf. Chapters 4 and 5.

<sup>14</sup>cf. Chapter 3.

step up to top-management slots. It also is partially due to the status factors present — men at this level may be sensitive to recommendations concerning their need to learn! The importance of self-development is partly a matter of *economics* — there are so few to be developed, and the needs of these few will vary so widely, that it may be unduly expensive to establish an in-plant school-room system of development. Even coaching, internship, and the like may require real interest in self-development on the part of the “trainee” if any success is to be obtained.

### PREREQUISITES TO MANAGER DEVELOPMENT

A well thought out and complete formal-development plan requires a great deal of difficult and time-consuming preliminary work. Without it, the company may be spending good money preparing the wrong man in the wrong way for the wrong job, or may be preparing too few people to fill all future vacancies.

**ORGANIZATION ANALYSIS** At the outset, the company must determine what it *actually* has in the way of organization. The term “actually” is emphasized because, as most people realize, the organization chart one sees upon the wall (usually dated months or even years ago) tends to lack even a remote resemblance to the true condition. The truth here stems from the fact that until recently many managers did not take the idea of organization analysis seriously, nor did they turn a kindly eye upon the idea of periodic audit.

It is also necessary to determine what *exactly* is wanted now and in the future, and what is *best* for the company. Functions require proper alignment, and duplications or conflicts in responsibility (and authority) need elimination. This task cannot be accomplished overnight!

In some cases it has taken as many as ten years to complete this step. Among the basic reasons for the “time” problem is lethargy, lack of foresight, and old-fashioned ignorance on the part of top and middle management of the very basic nature of the development problem. (One might add that the real tendency to block this step appears most prevalent at the middle-management level.)<sup>15</sup>

*Organization analysis* should result in a carefully-developed organization chart which at least shows the structure to be attained eventually, if not that already in existence. Surely, organization will change to meet the exigencies of the future. Alert management seeks to estimate those exigencies and predict the organization required to meet them

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<sup>15</sup>As one consultant puts it: “I can think of only one case where the really severe blocking effort came from the top. In most every instance it has been from some middle-management individual or group.” The student will realize that the “blocking effect” discussed in Chapter 6 has a direct bearing upon this problem.

while it maintains the organization necessary to meet the current situation.

The preparation of the "advance" organization chart often is blocked because of strong personalities in "high places" as well as stubborn refusal to recognize the need for planning by middle-management people. The ideal, or aim, therefore seldom is accomplished in a short time. Nevertheless, this ideal can be the framework for the long-range development program; in fact, the long-range program absolutely requires creation of this "advance" (or goal) organization chart.

**POSITION CLASSIFICATION.** The next step involves determination of all the details concerning each managerial position, from the president on down. In essence, the firm must discover what duties and responsibilities are, or should be, assigned to each member of management, and what qualifications are required of the person who is to fill the position. Of course this includes determination of the authority and responsibility patterns involved and of the channels of communication.

These managerial positions will, necessarily, be consonant with the company's organization. The end result of this job (or position) analysis step should be a job description for every management job, together with man-specifications showing the personal qualifications required.

**MANAGEMENT INVENTORY.** The third step involves determination of what is now on hand in terms of management personnel. This is a *matching* job. It involves the appraisal of the individual relative to the requirements of his job. How well does he measure up? How does he perform? Is he well suited to the job to which he is now assigned? Is he acceptable to others, and able to accept others, and can he adapt to new situations? In essence, does he accomplish just what is expected, or does he go beyond that?

This step also involves consideration of the individual's potential. Is he a likely candidate for an eventual top-management position? Has he reached the limit of his ability? Is he somewhere in between, and if so, where?

These questions need to be asked regarding every existing manager. The inventory is somewhat similar to the periodic audit of material supplies, though far more serious because it involves that most precious of all ingredients of enterprise — man. The completion of this inventory and appraisal provides a solid foundation for the following step.

**REPLACEMENT PLAN.** The final preparation step is the development of a replacement chart, plan, or schedule (see Figure 49). This is a culmination of the three preceding steps. The organization

chart becomes the framework. The job descriptions and man specification which result from the job or position analysis spell out the detailed requirements of each position. The inventory and appraisal show the adequacy of the incumbents and their qualifications for advancement. With the completion of the plan, management is in a position to analyze its development needs in terms of magnitude, scope, and nature.

*PLAN IS NOT STATIC.* It should be readily apparent that the aforementioned preparation cannot be made once and then "filed for easy reference." It *must* be maintained constantly! As stated repeatedly throughout this text, plans change, organizations change, people change, and jobs change. The dynamic nature of business must be recognized. Once the groundwork has been laid, however, maintenance becomes a relatively easy task and does not involve undue cost.<sup>16</sup>

### **SPECIFIC MANAGER DEVELOPMENT TECHNIQUES**

Managers must be proficient as decision-makers. Their decision ability depends largely upon situational and technique knowledge gained through experience and education. "Situational knowledge" refers to the accumulated and assimilated information concerning: (1) facts about process, product, people, and environment, (2) concepts and principles related to process, product, people, and environment, and (3) facts, concepts, and principles related to management and organization in both the general sense and the specific case. "Technique knowledge" refers to the accumulated and assimilated information regarding decision-making methods.

Decisions involve communication, motivation, and dimensional change. Communication enters the picture because decisions require knowledge, flow of information, interpretation of information, and identification of what is and what is not pertinent. Motivation enters because decisions involve socio-psychological matters. At times decisions are contrary to the psychology of the maker and those affected. Wherever a decision involves people, even remotely, emotion may run high. Dimensional change refers to personal and physiological or environmental effect. Decisions usually result in a change to a system, a product, an environmental factor (such as a building layout) or a safety device and the like. They result also in some change to the location of people, or their assignments and the like.

Clearly, decision-making can be emotionally disturbing. Emotional stability and the ability to put fact before personal feelings (at the right time) become requirements for effective decision work. It

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<sup>16</sup>The truth is that the most significant cost associated with most systems is the cost of development and initial implementation. Often, however, managers tend to use the cost to operate the system as their reason for rejecting its establishment — incompetency may be the real reason for rejection!

appears that manager development must be directed toward improvement of knowledge and emotional control if decision ability is to be improved.

*GENERAL KNOWLEDGE DEVELOPMENT.* Both situational and technique knowledge are expected to be developed to some degree at the time of initial hire. The college graduate is expected to arrive with a broad or specific background in given fact, concept, and principle. As he attains maturity in the organization, he is expected to improve himself in given skill areas. In addition, he is "schooled" and "coached." As he progresses in the firm, however, he often requires very specific exposure to decision training. This may require something more than general knowledge.

*SIMULATION.* Improvement in decision-making ability is attempted through application of role-playing, the so-called case method of instruction, and business games. Both in-plant and external management training programs use these methods.

*Role-Playing.* This technique puts individuals into a "role" in a synthetic situation. The trainee is expected to play a part based upon specific background information, but without any script or rehearsal.<sup>17</sup> The part selected for the individual is one which those who conduct the role-playing hope will expose an error and the "why" and "what to do" of the error.

Role-playing is used primarily to correct deficiencies in communication technique and the handling of people. It can help a future executive (or an existing executive) understand the nature and effect of his prejudices. It can help him to improve his communication skill, and his ability to interpret the communications of others. Though useful, it is time-consuming and expensive. It requires careful preparation by the trainer and, unless he adds skillful critique, the trainee actually may gain little advantage from the exposure.

*Case Method.* Where the management trainee is placed in a classroom situation, the case method of instruction is in common use. Most management students are familiar with the case approach. The cases are developed from real or fictional business situations. They may be designed to cover some specific phase of management work or the general and broad scope of the top executive problem. Some cases will require only one decision, some a series of decisions. In some instances the case involves very distinct problems having definite solutions which can be arrived at through application of a particular technique. In other instances the cases will involve related issues and

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<sup>17</sup>cf. Norman R. F. Maier, Allen R. Solem, and Ayesha A. Maier, *Supervisory and Executive Development: A Manual For Role Playing* (John Wiley & Sons, N. Y. 1957).

have a number of possible solutions depending upon how the trainee views the information, analyzes the situation, and applies his judgment.

The main advantage of the case method is that it involves the trainee personally. He becomes responsible for his learning; he discovers the concepts or principles. This is particularly useful in trying to improve the trainee's ability to identify, comprehend, and handle complex relationships. The case method, however, can be overdone. It seems a waste of time and money to let the trainee "discover" for himself the reason that the firm must use a given pricing technique. It seems foolish to have him "discover" for himself that unity in command is a principle of organization.

*Business Games.* By far the most advanced form of simulation technique, business games are becoming increasingly popular as a management training device. The game is played over a simulated period of time, say several budget periods. It is begun by presenting full background data to the participants. From the data, the trainees develop decisions with which they must live throughout the game. As each period comes to an end, additional decisions may be required, and as a new period begins still other decisions may be necessary. The attempt is to simulate as many of the variables of a real business situation as possible and have the trainees tackle the issues as they would if the case were real.

Properly developed, the game can generate emotional pressure. It can force application of objective decision techniques (statistics, accounting procedures, and the like) and it necessitates teamwork. In fact, all the attributes of role-playing and the case method are found natural to properly-developed games. Good though this technique is in helping develop decision ability, it has distinct disadvantages. It is time consuming and costly, unless properly critiqued periodically by the judge or umpire, little may be learned, and unless the umpire carefully and constantly stresses the difference between the game and reality, the trainees may get the impression that they "have all the answers."<sup>18</sup>

*STRESS-SIMULATION.* Some management jobs require more emotional control than others. Some involve greater physiological or psychological risk than others. Developing people to fit these jobs may necessitate use of some "stress" training. One approach exposes the trainee to the experience of mounting stress in a variety of situations. For example, he may walk into his office and find himself faced

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<sup>18</sup>Excellent non-computer games exist. Some useful in both the college and the manager-training situations are: Jay R. Greene and Roger L. Sisson, *Dynamic Management Decision Games* (John Wiley & Sons, Inc., N. Y., 1959), Lowell W. Herron, *Executive Action Simulation* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1960), Stanley Vance, *Management Decision Simulation* (McGraw-Hill Book Company, N. Y., 1960).

by a desk full of problems, in which he has had no prior experience or instruction, that require immediate action. He may be pressured in his effort to resolve the problems by things like: (1) having his secretary taken away, (2) being told to complete one thing before another by his immediate boss, and just the opposite by his boss's boss. The approach is akin to the stress interview technique discussed in Chapter 12. Unless carefully planned, critiqued, and done in a reasonable manner, the trainee may simply quit!

### ADMINISTRATION OF DEVELOPMENT PROGRAM

Once the decision is made to have a manager-development program, responsibility for "making it go" must be assigned. In the case of a manager-development system, this is no simple task.

Since the very top positions in the company are involved, it is only logical that the very top personnel must take an active operational part in the program. Since the program involves man, man's typically peculiar reactions and actions require consideration. Certainly decisions regarding the preparation of top-level replacements will not be delegated to an underling. Certainly decisions regarding the time of movement, if not the fact of movement, of people to new positions will be kept secret.

Some may question the reason for secrecy, nevertheless, it is an important point. Imagine, if you will, the consequences in the case where "big mouth" Tim gets information to the effect that "old Joe" is *not* going to receive the promotion to department head! Visualize this with the additional fact that all Tim *really* knew was that someone else was scheduled for the advancement. Think now of the point that "old Joe" is not being considered for the promotion because there will be no promotion until after he has retired. Unless the replacement schedule is a close secret, all sorts of personnel problems may arise to complicate matters.

Looking at the program in another way, manager development in its broadest sense is a philosophy, a "way of life." Much of the program cannot, and must not, become routine. The higher the man is in the organization, the more tailor-made will be *his* program of development and the greater will be the emphasis upon self-development. Again, the point is made that those at the very top must actively participate in the program, on both the "giving" and the "receiving" ends.

Where does the *manpower manager* fit into the picture? Much depends upon where he fits into the organization. Is he on the vice-presidential level, or does he report to the manufacturing manager? Naturally the higher his position, and the higher the esteem in which he is held by top management, the more all-encompassing will be his administration of the program. It is a fair generalization to say that

his staff administration of the program will be relatively complete and authoritative in the case of all management positions up to and including one echelon below his own position. For those segments of the organization he exercises primary operational responsibility over the program. (This is not to say that manager development is strictly a staff function. The line organization must actively participate, and indeed will make or break the program. It will be the manpower manager, however, who will plan, coordinate, provide the expert advice, and in general keep the program going.)

At and above his own level in the organization, the manpower manager has less power. He will be a "source" person, and will implement the decisions made by others. He will act more completely as a "staff" man and not as a functional authority.

Training, at least in the lower echelons of management, is a large segment of the development program. As such, it usually is the responsibility of the training director. He, in turn, generally reports to the manpower manager. Again, as with the manpower manager, there may be a separation of the training function, depending upon the place of the manpower function in the organization. Manager training also may be conducted entirely independent of worker training, and by a different staff group. Of course, in some cases one finds that the two phases may be the responsibility of the same executive.

### **SPECIFIC DEVELOPMENT PROGRAMS**

The philosophy of manpower development, and the terminology and techniques of the field, have been established by the previous chapter. Throughout the first portion of this chapter, the general background and approach to manager development has been stated. Although this presents the fact and detail necessary for an appreciation of this phase of the manpower-management responsibility, perhaps a greater understanding will develop through consideration of some illustrations of current manager-development programs.

*ROYAL MCBEE CORPORATION.*<sup>19</sup> The outline of the Management Development Program of the Royal McBee Corporation as distributed in pamphlet form to all members of its management follows:

#### **MANAGEMENT DEVELOPMENT PROGRAM**

Royal McBee Corporation

##### *How Our Program Operates*

"Management Development" is not a new process at Royal McBee. Traditionally, most of our top managers have been promoted from within the Company. They have progressed through lower level positions, broadening

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<sup>19</sup>By permission from the Royal McBee Corporation.

their experience and increasing their capacities. Through the experience of these men and by studying the careers of similar men in many other companies some important lessons have been learned. In establishing a systematic Management Development Program we are simply applying these lessons learned from the past to our present and to our future. We hope to reduce the time consumed in the past by trial and error methods of growth and to enable each of us to better meet his responsibilities for achieving maximum personal effectiveness and for the development of others.

Fortunately, this does not require a complicated procedure. Our program requires only that we do a few simple things, that we do them well, and that we stick to them so that they become an integral part of our daily operations. The procedural steps in our system are:

Personal History Records	Individual Development Plans
Management Position Descriptions	Program Records
Performance Appraisals	

Immediately following is an explanation of each of these steps.

*Personal History Records.* The Personal History Record provides you, as a participant in management development, an excellent opportunity to bring the company's store of information up to date on your experience, education, training, accomplishments, and interests.

Annually, you will be asked to review your Personal History Record form and to supply additional information which reflects your current progress and achievement.

*Management Position Descriptions.* This is a written description of the broad functions and specific duties of your management position and provides you with a concise frame of reference to better understand your management responsibilities and organizational relationships. Not only will accurate position descriptions serve to clarify exactly what is expected of each manager, but they provide an ideal basis of clearly stated responsibilities against which performance may be appraised.

Each incumbent of a management position will receive copies of his own position description, those of his subordinates, and that of his superior. This will permit each manager to clearly orient himself with respect to the flow of responsibility above and below the level of his position. In addition, a complete file of Company-wide Management Position Descriptions will be built up at each major company location and made available for your reference.

*Performance Appraisals.* Annually, the performance of each member of management will be appraised by his immediate superior. As previously indicated, the responsibilities stated in each Position Description form the basis for this appraisal. This will insure that ratings are made on a comparable basis and that actual records of performance are reviewed rather than relying on memory alone.

Each Performance Appraisal will be reviewed by the next higher level of authority prior to discussion with the individual appraised.

The constructive purpose of the appraisal is given effect in the "Performance Interview." This is an opportunity for each member of manage-

ment, through a detailed discussion of his performance with his supervisor, to get a clear picture of how he is doing in relation to what is expected.

*Individual Development Plans* During the Performance Interview you and your Supervisor will discuss your present and long-range training and development needs. Both improved performance in your present position and eventual advancement objectives will be considered. Then, a specific plan of action called an "Individual Development Plan" will be drawn up to guide your training and growth. Industrial Relations personnel responsible for coordinating Management Development will be available to assist in formulating these plans.

In improving your performance in your present position and in helping you prepare yourself for greater responsibilities, consideration is given to what you can do on your own, what your immediate supervisor can do to provide training, and what the company can do through individual and group training programs both inside and outside the company. Individual growth does not always depend on "training" in any formalized sense. Frequently, when our attention is directed to areas where our performance should be improved in the "Performance Interview" process, we are able to effect improvements entirely on our own initiative. Coaching by our immediate superior in some aspects of job performance is often the best answer to development needs. In other cases temporary work assignments to broaden experience will be valuable. Within the scope of this program a large variety of training and development resources may be used.

*Program Records* This important phase of the Management Development Program establishes current records concerning the experience, performance, potential and progress of each member of management and provides for keeping this information up to date.

When filling management vacancies or new positions created by expansion these records are consulted to insure that all qualified personnel are considered. In addition to the records kept at your location a complete set for the entire management team of the company is maintained at Corporation headquarters so that your qualifications may be considered in filling vacancies at other locations.

### *Summary*

As you have seen in this brief description, the Management Development Program is essentially a procedure for determining important facts about Management personnel, experience, abilities, interests, strong and weak areas of performance, etc., and the orderly use of this information to plan and carry out specific training and development plans based on those facts. At the same time your management is developing specific plans for the Corporation's future growth and expansion. Viewed together, these two factors mean broader opportunity, opportunity to make more significant contributions in our present assignments, and opportunity for promotion for those who have the capacity and who develop it.

This program has been established primarily to assist you in the important job of developing yourself and others. The forms and mechanics which have been designed as aids in reaching program objectives are important, but secondary.

Staff assistance has been provided to aid you to minimize "red tape" and will be readily available when required. However, this is your program; its main objective is your development, and only your effort can make it work.

The Royal McBee program adheres to the principles laid out in this chapter. It specifies a basic policy, declares the main purpose, outlines the procedural steps, and poses the approach considered desirable with respect to those steps. As stated, the development plan is quite simple. Note, however, that the statements are an explanation for those to be included in the program. Actually, the procedure requires the careful treatment outlined earlier in the chapter.

#### *MANUFACTURING DIVISION OF JOHNSON & JOHNSON.<sup>20</sup>*

In order to insure its growth and effectiveness, the J & J Manufacturing Division has instituted a Management Development Program for all of its management personnel. The program aims to improve supervision and leadership in management positions and to develop a reserve of trained executives for future needs. It places stress on the activities that will contribute to the growth and development of the individual and the strengthening of the company.

#### I. Objectives:

- A. To provide development activities that will help management personnel to meet the growing challenges of their jobs and to progress within the Manufacturing Division in accordance with the policy of promotion from within.
- B. To develop greater breadth and flexibility in management personnel.
- C. To develop the abilities of each executive to handle higher level responsibilities.

#### II. Administration:

The program will be administered by the Management Development Committee consisting of the Production Manager, the various Plant Managers, the Director of Training, and the Manager of Personnel Relations.

A special function of this Committee is to review all management openings in the manufacturing Division before such positions are formally posted. The Committee decides whether the job is to be filled by transfer or rotation or by promotion from within the organization. In either case, members of the Committee suggest to the Plant Manager, who announces the opening, the names of supervisors who, on the basis of merit as indicated in their performance reviews, seem qualified for the job. The Plant Manager is guided by, but not obliged to accept, the recommendations of the Committee. In any event, where a promotion is involved, he will follow the established practice of posting the job opening and interviewing applicants who

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<sup>20</sup>By permission from Johnson & Johnson.

apply independently, as well as those who are recommended by the Committee.

### III. Operation of the Program:

The Management Development Program provides for a systematic appraisal and a continuous improvement of the total management force of the Manufacturing Division. In addition to individual and group development activities, the program includes the following steps.

- A. Recruitment of men of high potential for management into the Manufacturing Division.
- B. Determination of short and long-term organizational needs of the individual mills and of the Manufacturing Division.
- C. An annual audit and evaluation of the present management force

### IV. Phases of the Program:

The program is divided into three phases. The Orientation and Intermediate phases of the program involve personnel brought into the Division as Trainees. The Advanced phase of the program involves every member of management throughout his career with the Division.

#### A. ORIENTATION PHASE

1. Twelve to eighteen-month program for selected trainees recruited into the Manufacturing Division for future management positions
- 2 Recruitment.
  - a. Qualified trainees will be recruited from within the Company if available. When trainee positions open up, they will be posted within Johnson & Johnson and its affiliate companies.
  - b. If it is necessary to go outside the Company, trainees will be recruited from the colleges. Preference will be given to recent graduates who possess the training, character and potential that will enable them to move into the ranks of management
- 3 Selection:
  - a. Initial screening is the responsibility of the Manager of Personnel Relations.
  - b. Final selection is the responsibility of the Management Development Committee. Each applicant will be interviewed by at least three members of the Committee, who will ask the Manager of Personnel Relations to be present in an advisory capacity. The final decision to hire will be made by the Committee as a whole.
  - c. The manager of Personnel Relations will inform each applicant that he is accepted or rejected for the program.
4. Qualifications:
  - a. Age: 20-30
  - b. Sex: Male

- c.* Education and Experience: College degree or equivalent. Academic class standing and participation in college activities will be seriously considered. Summer or part-time employment in industry is a favorable factor.
  - d.* Appearance and Health. A general impression of neatness, poise, alertness and good health is expected of the candidate.
  - e.* Self-Expression. The candidate is expected to express himself clearly and forthrightly.
  - f.* Personal Qualities. The Committee will look for evidence of ambition and initiative, of creative and analytical thinking, maturity, leadership, and managerial potential
5. Training Program.
- a.* The successful candidate will be trained in a three-part program of 18 months duration during which he will be exposed to essential manufacturing experience. These areas are.
    - 1 The Staff: six months in Cost, Quality Control, Maintenance Engineering, and Production Control in an integrated manufacturing unit
    - 2. The Line. six months in a supervisory production position which fulfills the conditions that he actually would have under his supervision a sufficient number of persons and that the work done be subject to true operational conditions.
    - 3. Optional. six months in Industrial Engineering, or as an assistant to a Plant Manager
    - 4 The trainee should be placed where the experience he receives is such as described above, regardless of titles or categories of jobs available, also, the order in which these three parts are experienced should be flexible.
  - b.* The objectives of this training are.
    - 1. To familiarize the trainee with as many of the production departments as possible
    - 2. To enable him to learn the policies and techniques of various line supervisors and to get practice in the supervision of a manufacturing department
    - 3. To enable him to learn the functions of staff departments in the Manufacturing Division.
  - c.* The Committee will determine when and to what position each trainee moves.
  - d.* During the tenure of this training, or until the time that the trainee enters the Advanced Phase, each trainee will be assigned a Sponsor. Sponsors are selected by and appointed from members of the Management Development Committee, and are entrusted with the over-all responsibility of overseeing both the job experience and personal

- growth of their charges. They will contact their trainee from time to time to time, and be available to the trainee at all times, to insure that the work that the trainee is assigned to affords him the personal growth necessary to his success with the company (For a more detailed listing of Sponsor's duties and authorities see "Responsibilities of Sponsor for Manufacturing Trainee").
- e. The Director of Training is responsible for the initial orientation of the trainee. He is also entrusted with the overall responsibility, but in a secondary capacity, of overseeing both the job experience and personal growth of the individual trainees.
  - f. In addition, the Director of Training will formally interview the trainee at 3-month intervals, during this phase, to evaluate his progress and to receive from the trainee a written analysis and critique of the program as he has experienced it. A record of this critique will be submitted to the individual sponsor, and, in turn, to the other members of the Committee. Whenever the trainee is transferred from one department to another, the Director of Training will sit with him, his new supervisor, and his Sponsor to review his progress in the program. (For a more detailed listing of the Director of Training's Duties see "Responsibilities of the Director of Training for Manufacturing Trainees")
  - g. Also, at 3-month intervals, during this phase, the trainee's immediate Supervisor will formally evaluate his progress and performance. The rating will be guided by his own observations and the trainee's work experience record. A copy of this evaluation will be transmitted to the Director of Training who will then forward it to the trainee's Sponsor and to the other members of the Committee. The Sponsor will be guided by this evaluation in his periodic interviews with the trainee.
  - h. The trainee's Sponsor is responsible for the on-the-job training of the trainee, but the trainee will report directly to the Supervisor to whom he is assigned at any given time. He will be assigned various projects that will give him a broad but intensive and realistic experience in the activities of the mill.
  - i. The Director of Training, in consultation with the Plant Managers, will draw up a check list of the information and skills the trainee is expected to acquire during the Orientation Phase. It is expected that his job assignments will cover all the items that appear on the check list. Prior to transferring to another department, the trainee and his Supervisor will initial those items on the list that both believe have been adequately covered. It is the

responsibility of the Sponsor to see that the trainee has had the experience indicated. (See "Manufacturing Trainee Check List.")

6. Completion of the Orientation Phase:
  - a. The trainee is eligible for a merit increase six months after, and again twelve months after, he begins the Orientation Phase of the Program. Thereafter, he is subject to the general salary policy with respect to merit increases.
  - b. All merit pay increases for trainees will be given on the basis of merit alone, no raises are to be given automatically as such. All raises to all trainees, however, will be effective as stated, (see part a, above) and in this respect, will be considered uniform.
  - c. After six months, the Plant Manager may recommend, for the Committee's approval, that the trainee is ready to move to the Intermediate Phase of the Management Development Program. If the Committee approves, he ceases to be called a trainee and is given the title of Production Supervisor, or one of equivalent status. The Committee, if at all possible, will, at this time, assign the promoted trainee to a mill other than the one to which originally assigned.
7. Emphasis of Direction.
  - a. The Orientation Phase of the Program should be considered as a non-rigid program. It does have form and structure, but, the advantage of this part of the Program lies in its flexibility, its non-adherence to any absolute and arbitrary rules of fixed periods of time, its acceptance of any trainee as soon as he matures and when the need has occurred for such action.

## B INTERMEDIATE PHASE

1. A program for trainees, now carrying the title Production Supervisor, or one of equivalent status, to provide a variety of specialized training and experience.
2. The Production Supervisor may be in charge of a production unit or be delegated special projects. In general, he will be rotating in those activities not already experienced as outlined (see IV, A, 5, a,) and in those positions that will provide for his further managerial development.
3. He will participate in the Fundamentals of Management Institute if he has not already done so, followed by other group training activities that will develop his technical, administrative, and human relations skills. In addition, he will be given the opportunity to visit outside plants, attend professional meetings and conferences, and engage in other activities that will contribute to his over-all development.

4. During the Intermediate Phase, the Production Supervisor will be periodically interviewed and evaluated and become subject to, at the regularly scheduled period, the Annual Performance Review (see IV, C, 1, c).
5. At any time during the Intermediate Phase, the Production Supervisor will be eligible to bid in on posted jobs in line or staff supervision within the Manufacturing Division. When appointed to such a job, he becomes a member of the regular management force and is eligible to participate in the Advanced Phase of the Management Development Program. Henceforth, his status and opportunities are precisely those of any other management member of the manufacturing division.

C ADVANCED PHASE

- 1 A broad and continuing Management Development Program available to all members of the management force, including those with the rank of Production Supervisor. The program consists of four elements.
  - a *Organizational Analysis.* To determine the short and long-range manpower personnel needs of the entire Manufacturing Division, the analysis will be made periodically by the Production Manager in consultation with the Plant Managers.
  - b *Preparation of Precise Up-To-Date Job Descriptions.* To determine the responsibilities for each management position, and the qualifications of the man who is to fill the position, the description will cover.
    1. General Duties
    2. Specific Responsibilities and Authorities
    3. Relationships
    4. Man Specifications
 (For a more detailed explanation of job descriptions, refer to "Job Description Instruction Sheet")
  - c. *Annual Performance Review.* Each supervisor to be evaluated by his immediate superior (e.g. Plant Manager, Production Superintendent, or Department Manager) aided by the Director of Training.
    1. The purpose of the Review is to appraise the Supervisor's strengths and weaknesses, assess his potential, determine the development activities that will improve his present performance, help him keep pace with the increased demands of his job, and prepare him for future assignments.
    2. At a scheduled period, annually, the Director of Training will sit with each reviewing supervisor to assist him in appraising the performance of his subordinates. The Interview will attempt to cover every facet of his job

- according to the duties outlined in his job description. (See part b above). The evident strengths and weaknesses of the subordinate will be analyzed and he will be appraised in terms of his mastery of his present job, his readiness for promotion, and specific essential for advancement.
3. This review will be sent to the supervisor for his approval. If, after reading the review, the supervisor wishes to make any changes, he will notify the Director of Training and the latter will amend the review to the satisfaction of the supervisor.
  4. When the review is received by the supervisor, he will arrange to discuss his evaluation with the subordinate whom he has appraised. The supervisor will tell the subordinate what has been said in the appraisal, and then the two will agree upon a program of activities for the coming year which will be beneficial to the development of the subordinate. These activities will be listed on a separate sheet, which will be attached to the original review. Both the supervisor and the subordinate will sign and date the review and return it to the Director of Training. Along with this review, the subordinate should send a written statement of the subordinate's reaction to the review and a duplicate copy of the activities recommended for the coming year.
  5. A final version of the Performance Review (with the names omitted) will be coded and prepared by the Director of Training, in duplicate. One copy will be retained in the Training Department files, the other copy delivered to the Plant Manager indicated.
  6. After the Reviews are completed in a particular mill, they will be analyzed and discussed by an Audit Board consisting of the Production Manager, the Director of Training, and the Plant Manager of the mill. The purpose of this Board is fourfold: (1) to provide an audit of the entire management force of the present organization, (2) to help plan for anticipated changes or growth in the organization, (3) to provide a check on the thoroughness, accuracy, and fairness of the evaluations, and (4) to inform how well each supervisor is carrying out his responsibility for the evaluation and development of his people.
  7. Approximately six months after each evaluation is completed, the Director of Training will interview each subordinate with his supervisor to follow up on the recommendations made for the man's development in the Performance Review. At this time, the Director

will advise on specific programs available within or outside the company that suit his development needs. A descriptive catalogue of the programs available within the company has been furnished to the supervisors.

d. *Development Activities.* On or off-the-job programs designed to help each supervisor to perform at the top of his potential on his present job and to prepare him for advancement within the Manufacturing Division. These activities will vary with the needs and abilities of the individual supervisor. The opportunities within the organization for broadening the experience and stimulating the growth of executives are limitless. Imagination and careful planning will create many devices in addition to such activities as

1 Johnson & Johnson Group Development Activities.

—Participating in development courses or seminars currently conducted by the Johnson & Johnson Institute of Management. For example

Advanced Management Senior Management Seminar, Union Contract Interpretation, Selecting Management Personnel, Problems of Personnel Appraisal and Counseling after Appraisal, Business Economics for Executives.

And, such courses as General Management Principles, patterned after the A M A Management Course, Communications, Conference Leadership, Public Speaking, and, Work Improvement.

2. Outside Development Activities.

—Attending Johnson & Johnson conferences of various divisions (e.g. Manufacturing, Personnel, Controller, Sales).

—Attending Seminars or Workshops sponsored by American Management Association and similar organizations

—Taking academic courses at Rutgers and other local universities (See Financial Assistance for Education, Standard Personnel Practice #18).

3 Informal Development Activities:

—Participation in Task Forces or Project Committees composed of members of definite departments to study and solve specific problems.

—Participating in Job Rotation Program

—Handling delegated assignments to be completed under the guidance of the superior.

Johnson & Johnson's program follows the same careful design found in the Royal McBee system. It goes further, however, and establishes

a distinct "level" differentiation. Furthermore, this procedure makes an active effort to apply the participation concept by the establishment of the Management Development Committee. This committee of managers is quite likely to assure managerial action and interest. Since these managers are immediately concerned with the success or failure of trainees from an operational point of view, the technique emphasizes their responsibility for that success or failure in the development sense.

In this approach, staff and line responsibility is rather clearly defined. There should be little confusion as to who is responsible for what. The phasing of the programming also is clearly defined and helps to minimize confusion. Another point to note is that accomplishment receives full recognition.

### PROGRAM EVALUATION

The final test of any program is: Does it work? Is it successful? Manager-development programs are no exception. The major difference between this particular type of program and most others lies in the nature and complexities of its objectives. If we wished to evaluate the success of a course designed to improve certain motor skills, our task would be easy — measure performance prior to course attendance, measure after completion, and consider the gain or loss of motor skill. Determination of attitude change, or skill in handling grievances, however, is a horse of another color.

Regardless of the difficulty of evaluation, management will not long support any program which cannot be proven worthwhile. Difficult or not, the process of evaluating the manager development program must be undertaken.

An excellent treatment of this problem was given by Planty and Freeston as follows in answer to the question, "How Can a Good or Successful Program of Executive Development Be Recognized or Evaluated?"<sup>21</sup>

The ideal way to answer this question would be to list a series of standards by which any program of executive development could be evaluated. A standard is a criterion of excellence that is accepted by common consent, however, and in that sense there are no real standards in the field of development. Until training men agree upon what is good and what is not, we must rely upon criteria which really are not much more than opinions. The following are the opinions held by the authors: (Parenthetical remarks by authors)

1. Any good program of executive development must have as its primary objective the growth and improvement of human beings. (Note

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<sup>21</sup>Earl G. Planty and J. Thomas Freeston, *Developing Management Ability* (Ronald Press, New York, 1954), pp. 416-418.

how this requirement is met in the preceding examples.) This means that at least half the effort, and preferably more, must be devoted to such fundamental learning activities as workshops, case studies, role playing, guided experience, conferences, rotation, counseling, lectures, etc. Inventories, evaluations, and plotting of futures, which dominate some management development programs, are aspects of executive *auditing*. Although useful and even necessary, they do not constitute executive *development*.

2. Executive development involves the education and improvement of capable, experienced adults, many of whom are mature, eminently successful, and fixed in their ways of thinking and doing. This work therefore is difficult, complex, and time consuming, and demands the services of qualified specialists. As a result, any successful program requires the full-time service, within the organization, of at least one educator, psychologist, or line executive who has specialized in the field of development and knows how to get results. (Note the application of this point in the previous examples, particularly in the Johnson & Johnson case.)

3. Any good, successful program encourages and helps executives to broaden their understandings and increase their skills, and in doing so leads them to assume increasing responsibility for their own improvement. This leads them to rely less and less upon the director of development and his planned programs, and more upon their own understanding of their needs and abilities. At the same time, they may demand more service. This comes in the form of requests for the staff training men to develop programs for them and give advice and counsel on plans and programs which they develop for themselves. (This point is either stated or implied in each of the examples. Self-development, like self-discipline, is a basic requirement of those who lead.)

4. Executive development, if it is successful, leads to promotions from within. Once a program passes the experimental stage, therefore, management should find less and less need to go outside for supervisory, executive, technical, and even professional people, and should fill more and more important positions by advancing people who have followed programs of development. (This point is one of the first remarks in the Royal McBee program and an obvious intention in the Johnson & Johnson program.)

5. Successful development cultivates open-mindedness toward change and a willingness to examine and try out new and possibly better methods. This does not mean that new things are accepted just because they are novel and old ones rejected because they are old. Rather, there is a wholesome balance between respect for stability and willingness to give it up for new and demonstrably better things.

6. Development succeeds only when it enables executives to meet today's requirements and also prepares them for the future. Meeting present-day requirements means that each person masters the best ideas and procedures that prevail in his department and firm while the

course of development is in progress. Preparation for the future goes further — it brings into the company good thought and practice not already there. To do this, development seeks to broaden vision, increase understanding, and add to information, on the premise that modern management is always interested in improving or replacing what is now good in preparation for a better tomorrow. (Improvement today leads to improvement tomorrow; each previous example recognizes this relationship.)

7. A good program of executive development results, not merely in the progress of a few men, but in sound growth and increasing success of the entire business. In other words, it enables the management team to meet the profit requirements of the owners, the social and citizenship requirements of the community and the individual needs of all its employees.

In our opinion, any program of executive development may be called successful if it meets these seven requirements. We doubt, however, whether rules can be given for a more precise evaluation.

Can we, for example, say that a program which gives 75 per cent of its time and effort to fundamentals is necessarily one fourth better than one that gives 60 per cent? Are all programs conducted by one full-time specialist to be rated as equal, and are those with two specialists necessarily better than programs that get along with one? Unless such questions can be answered with yes — and they can't be — it is obvious that evaluations must be relative and subjective, and can apply only to individual programs in individual companies.

### A SPECIAL PROBLEM

Consideration of the broad set of issues involved in the development of managers raises a touchy and often overlooked point: the wife! In management circles the distaff side of the house often is equally as important as the male to the success and welfare of the company. The wife who understands this becomes an asset to the concern as well as her husband, whereas the wife who fails to understand this can do untold damage to both. A text of this type is not the place to enter into a lengthy discussion of this matter; in fact, there is little concrete evidence as to the correct way to include the wife in the development procedure. The student should note, however, that once he starts to climb the management ladder, and particularly if and when he is considered for assignment to an overseas post or a position at some small-town branch of his company, his wife will be considered by the management before, during, and after that assignment. One might well imagine, therefore, that the tacit suggestion to the embryo manager of men is to seek to apply the "self development" concept to his spouse as well as to himself. Further, the manpower personnel responsible for the initial growth of the junior executive should assure his recognition of this important issue, rather than keep it hidden.

## SUMMARY

Effective manager development comes about only through plan. It requires the full and active support and participation of top management. It is structured to meet present as well as future needs — needs of the individual as well as the company. It should be established with the point in mind that the higher one moves on the management ladder, the more development depends upon “self development.” Furthermore, it is important to realize that one pays for development whether a program exists or not!

The *basic objectives* of manager development are: (1) to improve the current effectiveness of managers in their present jobs; (2) to assure the existence of reserves at all hierarchical levels, and (3) to assure that these reserves will be proper in quantity *and* quality. The benefits obtained by those who actively pursue these objectives have been ascertained. They include: (1) a greater and more general awareness of the importance of organization, planning, communication, and control at all levels, (2) clarification of authority and responsibility at all levels and in each job on each level; (3) greater recognition of the importance of performance, and more general acceptance of the idea of performance as the real interest of every manager, in both terms of the accomplishment of currently assigned work and as the judgment base for promotion and transfer, and (4) improvement of the likelihood of continuance of the enterprise because of improvement in the manpower replacement patterns.

*Responsibility* for manager development is partly a *self-responsibility* and partly the obligation of every superior to every subordinate. One thus expects to find that, like effective labor relations, effective manager development is the business of every manager. Manpower management personnel serve as advisors, coordinators, analysts, and in many instances trainers.

*Appraisal* is the key to development. Unless people know what is to be developed, their development of themselves and others will become a hodgepodge, and success will come from *chance* more often than not. Appraisal involves two major issues: (1) judgment of current performance, and (2) judgment of capacity to advance. Where the *key to development* is *appraisal*, the *key to appraisal* is *accomplishment* — what has the individual accomplished and how; what can be estimated regarding his future accomplishment.

Development of manpower is in fact a *control system*; therefore, it cannot be construed as a “one shot affair.” It is a continuing program. Follow-up, feedback of information, and constant analysis all are important to the success of the program and to the morale of those involved in the program. The man who has no idea of his progress, no reason to feel that he is making progress, is apt to become frustrated and a willing seeker of “greener pastures” elsewhere. Clearly then,

one of the prime tools involved in the program is interviewing. Skill will be required by superiors in this manpower technique, and the manpower group will be the likely teacher.

Manager development will be of little value, however, unless a carefully-established program of rank-and-file development also is being conducted. Some may feel that the two are separate and distinct. In a sense they are — the nature of the materials to be digested by the developpee, the design of the program, the kind of instruction — these tend to differ radically. On the other hand, the purpose of development is the same. Appraisal becomes the key to development and performance the key to appraisal at the rank-and-file level as well as the manager level. Further, unless the management group is backed up by equally competent, or more competent, subordinates their own competency will be wasted. It is with these points in mind that we turn to Chapter 16.

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*A company pays for training its workers whether it plans that training or not, for the worker will learn even if he learns the wrong methods; such learning is a more expensive form of training than a properly-established program.*

## Worker Development

The development of an effective workforce is a dollars and cents necessity. Furthermore, as pointed out in Chapter 14, a proficient management group is crucial, but the engine can no more run without fuel than it can without spark plugs. Effective worker training is just as much a part of the manpower-management function as is manager development.

### **MANAGER VS. WORKER DEVELOPMENT**

Worker development differs from manager development only in place of emphasis. Both involve a certain amount of training, perhaps more in the case of the rank and file, and both involve education — learning activities and concepts not directly related to the technical or mechanical performance of the job. One expects, of course, that manager development will involve more “education” and worker development, more training. Development in the broad sense, however, whether for manager or worker, encompasses a greater area than mere training and education, as has been brought out in Chapter 14.

In one sense, worker development predates manager development because the training of the rank and file has been practiced and recognized as a necessity for many years. Until fairly recently, manager development, including training, was strictly informal, limited in most cases to the brief on-the-job instruction given by the individual’s predecessor as he moved up the organizational ladder.

On the other hand, if emphasis is placed upon the word “development,” it safely can be said that manager development preceded worker development. That is, it was more apparent, in the case of managers, that mere training was not enough to insure an adequate inventory of qualified managers for the present and for the future.

Consequently, organization planning and emphasis on promotion policy and formal programs of self-development found earlier application with regard to the manager than in the case of the non-supervisory employee.

Today, the dynamic technical progress and the severe national and international competition make it apparent that the development concept is as important with respect to the rank and file as it is to the manager. The two efforts therefore become as one, in the broadest sense. Progressive management requires that manpower managers give equal consideration to development of workers and of managers, though the purposes and the areas of attention may differ.

### PRINCIPLES OF WORKER DEVELOPMENT

If top managers can be brought to recognize the need, and if they can develop an appreciation for the principles involved, worker development programs may be adopted and applied successfully. Manpower managers are responsible for advising top management of the need, and for at least offering a reliable picture of the principles.

Recognition of the fact that the emphasis in worker development, as opposed to the development of the manager, is placed upon training indicates that the principles of worker development might well be expressed with major emphasis upon the principles of training. The following set of principles, long recognized and well established, are written from the standpoint of *training*.<sup>1</sup> Consideration clearly indicates, however, that they apply equally well to the broad concept of *development*.

1. *Develop in terms of individual differences.* The differences in people must be acknowledged. The speed with which people learn, the time at which a certain individual should be trained, the detail that should be taught — these and many other factors differ from person to person. Individual differences involve one's background, education, job and social experiences, and interests. The development of the worker must take differences into account.

2. *Develop for the defined job requirements.* Attention is directed to the importance of job analysis, the manpower manager should turn to his job descriptions and specifications to determine the knowledge and skill requirements of the job(s) for which the training or development is to be given. If the organization lacks a realistic job analysis effort, the manpower people will need to institute such a program. The definition of the job specifies the training needs of the job. These may be "skill" or "knowledge" needs, or both.

3. *Develop in terms of the "needs" of the job.* Do not confuse manual requirements or needs with mental requirements. Development efforts differ in each case, as does the learning process.

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<sup>1</sup>Dale Yoder, *Personnel Principles and Policies* (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1959, 2nd Ed.), pp. 355-357, *passim*.

4. *Develop by plan.* The process of developing the worker should be based upon application of certain basic "learning" ideas. The program thus would be established in a way designed to minimize distractions to the trainee and maximize his opportunity for attention. The skills and knowledge passed to the trainee ought to follow an orderly pattern from the simple to the complex, from the concise or obvious and known facts and techniques to the nebulous or unknown. That which is being taught must be studied and broken down *if possible*. Some things can be taught only as a "whole" whereas other things are best taught in stages. One notes that the staff specialist found in the manpower division is best suited for determination of such differences. That which is to be taught should be studied to determine whether the need is accuracy or speed or a combination thereof. Whatever is to be taught — accuracy or speed, parts or the whole, simple or complex — it is necessary that the reasons for the importance of the points be specified. It is not enough to merely say, "Do it this way." In addition, some procedures require *paced* learning and some do not. The trainee should not be forced to *cram* knowledge or skill that should be assimilated gradually. *Example and repetition enhance learning.* The trainee must be subjected to both; however, some individuals require more of one and less of the other, hence the plan will take into account the individual differences of the trainees when possible. It is, for example, wasteful to expose a person to numerous examples when one would suffice.

5. *Develop through motivation.* One recalls that self-development is generally the most effective and important form of development of workers and managers. Self-development must be motivated. It is, after all, much easier to do nothing than to subject one's self to the harassment of learning. Man, being what he is, often seeks the easy way out. He therefore must be motivated toward development.

What motivates one individual may not motivate another. Workers, like managers, should be studied to determine what motivates them. In one case, the opportunity for advancement may be sufficient. In another, the idea of advancement may be a threat to the individual, and offer a reverse or negative motivation. The opportunity to improve status, the chance to participate more fully in the larger or more complex phases of the business may be the motivational force. Whatever the force is, it must be determined. To this end, one uses tests and patterned interviewing as well as so-called morale study to discover work-force motivations.

6. *Develop through participation.* Most trainees react favorably to situations where they take an active part in the teaching-learning process. For example, one of the most difficult things to accomplish at the worker level is to change their competency from manual to mental. In at least one case this was accomplished quickly and effectively by showing them what they needed to know and why, and then setting them into the role of teaching the new competency. Through

the careful application of end-of-period critiques, errors were identified and corrected.

The three-position training plan (identified in Chapter 14) is another means of assuring this active participation. So, too, is the idea of Multiple Management, but great care must be exercised in applying this technique to the rank and file for it may create status problems.

7. *Develop those deserving and desiring development.* In most cases the only place where it is economically sound to train everyone is at the induction point. Job and company orientation and initial basic skill training should be given to everyone, but everything beyond should be given only those who require it, deserve it, and desire it. If, for example, there is no plan to promote Henry, then there is no point to preparing him for a job three steps beyond his present level. Or, if Henry studiously objects to promotion at this time, there is no point in training him for promotion at this time. If the job to which Henry is to be promoted requires nothing that is not already a part of his inventory of skill and knowledge, there is little point in wasting his time and company money in training him for that job.

8. *Development of others accomplished by competent trainers.* Two points exist here: (a) trainers should be carefully selected, and (b) trainers should be trained for their work. Regardless of a man's position in an organization's hierarchy, if he cannot teach he ought not be permitted to participate in the training program. Few, if any, are "born teachers." The Training-Within-Industry program of World War II clearly demonstrated the importance and need for assuring that those charged with worker development be competent as trainers.

9. *Development methods must suit the development needs.* No one teaching method appears to be suitable for every teaching situation. Although it is true that active participation is an almost universal necessity, the means of participation tends to differ from case to case. For example, development of skill in running a lathe is not effectively handled through a lecture. The group discussion and blackboard drill will be less effective in teaching final assembly operations than actual job demonstration and practice. On the other hand, the use of cases, group discussion, and actual role-playing are particularly effective in teaching proper manpower management.

Understanding these principles and applying them are two different things. As is almost invariable, application begins with plan — the development of workers must be planned.

## PLANNING FOR WORKER DEVELOPMENT

There is no great difference between planning for worker development and planning for manager development. In both, provision has to be made for the short run and for the long run. Workers need to be developed to perform with maximum effectiveness on their present jobs. They also require preparation to step into the shoes of the higher

man when he leaves his job. The show must go on! The plant must continue to operate regardless of the loss of any given employee(s). This is the short-run picture. Companies have recognized this aspect of development for many years; hence, a basic part of the development plan involves preparation of the individual for his immediate job and for the one next on the hierarchical ladder.

### GOALS

Every plan or program is developed in terms of goals, and so it is with worker development. The specific goals of worker development depend upon the nature of the particular firm discussed, and upon their own particular problems and aims. These must be determined, and are determined as a result of the forecasting which is part of the planning phase. Some will, of course, try to establish the goals first; they seek to set their goals by ivory-tower thinking instead of analysis through forecast and study of the current picture. The *best* that can be said of such an approach is that it probably will give a false picture and probably should be avoided by manpower managers.

On the other hand, there are certain general goals which tend to apply to any organization where worker development is recognized as a requirement. These can be listed as follows:

- . . . . To produce a perpetual inventory of workers fully qualified to meet the production and quality standards of the organization.
- . . . . To develop and maintain a supply of replacements capable of promotion or transfer to fill vacancies as they develop.
- . . . . To eliminate spoilage, waste, and damage.
- . . . . To reduce accidents and industrial illness.
- . . . . To improve morale and stabilize the workforce.
- . . . . To encourage worker self-development.
- . . . . To improve the probability that the organization is enabling the worker to meet his personal goals.
- . . . . To improve the organization's ability to maintain and improve its competitive position.

### REQUIREMENTS OR NEEDS

When the goals of a worker development program have been formulated, the organization must compare its actual situation with the desired situation. In other words, how far is the company now from attainment of the goals it has established? If careful attention has been given to the planning phase of the development, and all of the prerequisites referred to on pages 441 through 451 of Chapter 15 have been completed, this comparison can be made.

The comparison serves to point up the specific requirements to be met — the deficiencies to be overcome — by the development program. As an example, one specific goal outlined by the company might be

the reduction of spoilage and waste. The personnel inventory made as part of development planning may indicate a general deficiency in quality consciousness among workers. The need then becomes apparent for a training program designed to develop quality consciousness to the end that spoilage and waste will be reduced.

Not all needs indicate a training program as a means of satisfaction, although a large portion will. Some needs require establishment or modification of promotion policy. Others may involve counselling and guidance; still others may require the encouragement of self-development among the workers.

The following excerpt from "Training Manpower" tells of the experience of one large organization in this respect.<sup>2</sup>

Take the experience of Esso Standard Oil, whose over-all training problems before the war were handled by one staff man in New York. Esso foremen were exposed to the J. I. T. program during the war, but they did not make much use of it. Then in 1946 the company made a study of its post-war manpower situation and found that the foremen did not know what the training needs of their departments were. So Esso's training program began not with training but with planning whom to train and what to teach.

The foreman's first job was to make a careful inventory of each worker's qualifications and potentials, and place him in one of five groups: retiring within five years, qualified in present job and trainable for promotion, needing extensive training, needing some training, limited potentials. Then the foreman analyzed their training needs for the next five years, with the result that Esso's workforce was revealed to be in much worse shape than management had realized. Not only were many skilled men soon to retire, but wartime training had made too many specialists and too many operators who weren't fully qualified in all the requirements of their jobs.

Clearly such a set of conditions cannot be presumed to exist in only isolated cases; just as clearly, such conditions do not arise merely because of wartime exigencies. In fact, it is safe to conclude that any organization that has failed to insist upon an inventory of its personnel might find — if it performs such an inventory — a similar condition. With this in mind, it stands to reason that training needs stipulate more than worker development for immediate operational efficiency. It stands to reason that *needs* include future consideration, that the issue of retirement and replacement is present, that the matter of changing technology is present, that the matter of changing economic conditions is of interest, and that the changing structure and process of organization also must be considered.

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<sup>2</sup>From "Training Manpower," *Fortune*, April, 1951.

**NEED DETERMINATION.** The prerequisites referred to in Chapter 15 bear directly upon the determination of *general needs*. They also have a bearing upon the determination of *specific needs*. The training director charged with "worker development" responsibility may, however, require more routine or day-to-day methods for keeping abreast of the training requirements at the worker level.

*Need Determination – General.* Determination of the general pattern of future requirements at the worker level lends itself to two broad approaches: *external* consideration and *internal* consideration. External consideration means that the training director will keep in constant touch with the steps taken by other companies – both competing and noncompeting. It also means that he will study the progress being made at various universities and colleges engaged in research into the technical and managerial future of industry.

Internal consideration requires attention to the following: *First*, current and specific needs and the reasons therefore; *Second*, the comparison of individuals in terms of known capacities, and known skill and knowledge requirements in the field; *Third*, the job descriptions and specifications of present jobs must be considered in terms of general requirements. For example, one notes that the machine operator being groomed to handle an automated operation will have to be capable of rapid reading of instructions and excellent retention. Again, in a situation where quality control work is being brought closer to the operator, that operator will require some upgrading in his arithmetic comprehension. *Fourth*, if the training director studies the specific needs, he may discover that some are general. They may be general in the sense that they appear in every section of the plant, or they may be general in the sense that they exist now and will continue to exist for many years.

*Need Determination – Specific.* Specific needs are determined in much the same fashion as general needs. The wise training director associates the two and approaches the determination effort with the realization that while seeking the one, he must be on the watch for the other. The methods generally associated with *specific need determination* include the following:

1. Conscientious study of the trade literature regarding training steps currently in practice, and the reasons therefore.
2. Routine contact with supervisors concerning the progress of *new* employees – the purpose being to discover their immediate deficiencies.
3. Routine review of the progress of trainees. This is best handled by considering their progress reports on the one hand and, on the other, by giving *them* the opportunity to express their feelings concerning their strengths and weaknesses.

4. Review of the records of those promoted and successful, as compared to those promoted and unsuccessful.
5. Review of *exit* interview data, particularly that pertaining to discharges for cause and quits due to dissatisfaction with some definable factor such as "failure to be promoted."
6. Periodic review of the training requests coming from line supervisors. Special attention should be given the *repeat* requests.
7. Training conferences with executives, supervisors, shop stewards, and members of the engineering staff. In addition, the use of questionnaires to employees concerning their attitudes toward training and personal progress may throw light upon training requirements and deficiencies.

**DETERMINATION OF NEED PRIORITY.** Individuals often will have more than one specific deficiency. The man who lacks quality consciousness, for example, also may have a relatively high accident frequency pattern. Examination of the accident pattern may indicate that his attitude is negative toward his work or that he just does not know how to work safely. Obviously, in such a case, these deficiencies (quality consciousness and carelessness) should be corrected; but which comes first?

**SELF-DETERMINATION OF DEFICIENCY.** Will the worker recognize his own deficiencies? It would seem that this is a moot point: some will recognize certain types of deficiency in themselves whereas others will recognize other types. A better point to raise is how to improve the likelihood that an individual will recognize his own deficiencies. There are several possible aids. *First*, the training director or the supervisor, or both, may give the individual the opportunity to express his feelings concerning his progress and his strengths and weaknesses. They actually may assist him to recognize his deficiencies by leading him through a patterned interview designed for this purpose. *Second*, where individuals are rated periodically, the supervisor should review with the worker the specific failings noted. *Third*, provocative descriptions of training programs and educational opportunities may be posted on the bulletin boards. *Fourth*, supervisors must actively encourage subordinates to improve themselves.

### ADMINISTRATION OF PROGRAM

Among the *needs* considered when planning for worker developments is the organizational requirement. Sometimes, through oversight, manpower managers (and managers in general) fail to realize that if a worker development program is to be established, this decision, in itself, creates an organizational issue — the administration of that program. As is true of manager development, the basic responsibility for worker development rests with the line supervisor

or manager. His acceptance or rejection of the program, and the effectiveness of his handling of it will cause it to succeed or fail. In the final analysis the line is responsible.

*THE TRAINING DIRECTOR.* Repeated emphasis of the "line responsibility" may lead to questions as to the need for a training director. Actually such a director is the representative of the manpower chief. It is he to whom staff responsibility is assigned.

He holds the major planning responsibility, advising the line either through the head of the personnel function, or directly, but with the full knowledge and approval of the chief of manpower. The director of training works with line supervisors in the planning of training, relieves them of administrative detail, and the like.

The training officer handles the co-ordination of all phases of training for the manpower division and the line. His co-ordinating efforts are company-wide. Such effort is beyond the scope of most line supervisors. The director's co-ordination work includes translation of the needs of the line into a workable and fully implemented program. Once established, the director represents top management, or the head of manpower, in seeing that it is properly carried out.

Training directors are usually selected because of special knowledge and skill in the broad concepts of education and instruction. They also receive, or should receive, very complete instruction regarding the procedures — technical and administrative — used by the firm and concerning the problems faced by the firm. Training personnel thus become the "expert" advisors within the manpower group, and also may become the expert teachers of specific subjects. Line people seldom have the time to become expert in either regard.

Because of special training and experience, and due to wide organizational contact, the director of training becomes the ideal person to handle research related to training needs and techniques. He also may work with employment personnel, or alone, on development of tests and measurements. The training officer of a firm thus becomes not only the staff assistant to the line, but also the staff expert within the staff.

*REASONS FOR PROGRAM FAILURE.* Most managers, regardless of their hierarchical position, agree that training or development of the worker is a vital necessity. The practices of most large organizations bear out the contention. Frequently, however, rank-and-file training (and manager training) is relegated to a minor position. In fact, many organizations still limit training to on-the-job experience — often through a very hit-or-miss assignment of an individual to a piece of work with a brief statement of how to do it. Why does this condition exist when the literature is filled with advice to the contrary and managers in general agree with that advice? Several reasons are apparent.

1. *Supervisor Status* – Supervisors often resent any effort of the manpower group to help with training. They look upon training as their responsibility, theirs alone. They feel that their status is threatened when manpower people step in. To overcome this, top management must take a positive stand regarding the division of responsibility for training.

2. *Timing* – The typical attitude in small and medium-sized firms is that time can be used only for actual production. It is never possible to take time out for training. During expansion, all effort is centered upon the immediacy of meeting quotas. During contraction, all caution must be exercised regarding the dollar, and unnecessary expenditure must be avoided. In either case, if training is applied it tends to be either a hasty on-the-job variety, or some form of ill-conceived “mass” training.

3. *Trainees* – There are two sides to this issue. *First*, new employees usually start at the bottom where little skill and little training are required. What little is demanded can readily be given by the supervisor and can be supported by a careful induction program. Once this minimum is attained, the employee may resent further training and reject the idea of being a trainee, particularly if he cannot see any immediate application for the knowledge to be given him.

As time progresses, newcomers develop themselves in their specific assignments and gradually reach the point where they can handle the next higher job in their area to their satisfaction. This set of conditions appears to minimize the number of trainees present in an organization. A fault exists, however, the worker never learns how to instruct others, how to look for better methods, and probably never learns anything of future value until the future is upon him.

*Second*, in small and medium-sized firms (particularly if labor turnover is at a reasonable level), there may be very few new employees in any job at any given time. This makes it difficult to develop a training program. Furthermore, it may be that openings appear so infrequently, and in such a random fashion, that one cannot plan development of workers for any but the most general types of activity.

4. *Trainers* – it is almost universally true that the trainer is his own worst enemy. Originally, if worker and manager development programs are deficient, it is because of the incompetence of the instructors. If incompetence is not a problem, the number of trainers available often is. Again, one notes that in the small and medium-size companies, management often demurs at the idea of taking a skilled individual and assigning him a training responsibility. During expansion management feels it cannot spare the man; during contraction management feels it cannot afford him.

5. *Measuring Success* – Every manpower activity should pay for itself. It is not enough to say that such is the case; it must be proven. This requires measurement of success. There can be no denying the fact that the measurement of the actual dollars and cents value of training is difficult. Often, this difficulty leads top management to the costly

decision that "training is not worth the effort." How incongruous this situation is! The need for development is so real, but so are the issues serving to block recognition of that need.

## TRAINING

Since training is such a large and important segment of worker development, it might be well at this point to examine various aspects of this function. As has been previously mentioned, the basic responsibility for worker development lies with the line supervisor or manager. This truth has particular effect regarding training.

Certainly training is one of the most important (if not *the* most important) responsibilities of a supervisor. Almost every contact he has with his subordinate involves training in one form or another. Although the training director may set up an over-all program, conduct training research, advise on techniques, furnish training materials, and perhaps supervise some formal classroom training, the instruction, in the main, should be the job of the supervisor. This is true even in the case where vestibule activity exists. This philosophy is brought out clearly in an outline of the characteristics of training programs made by Harry L. Wellbank as follows:<sup>3</sup>

1. Training programs and materials must fit into the daily routine of the supervisor. He should not consider them an interruption of his work. They should not be so artificial that he has to remind himself to use them or follow them.

2. They must *grow out* of the needs and purposes of the company. They must be a *natural outgrowth* of the present policies, routines, and traditions of the company. They must not be imposed on existing practices. *Good training programs can usually be developed by studying and formalizing the present effective practices within the company.*

3. The supervisors who will use training materials or programs should take part in their development if training is to *grow out* of present practices. Each supervisor will be able to contribute good ideas and so will feel not only a responsibility for the materials, but will also assure the company that the materials have grown out of the company. The experienced and competent supervisor is in the best position to know how to improve the productivity of his unit and to have suggestions for related units

4. The things which are developed must be truly supervisory tools and not administrative tools. In other words, they should not be policy statements or operating manuals.

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<sup>3</sup>Harry L. Wellbank, "A View of Employee Training and Executive Development," Proceedings of the 21st Annual Ohio Personnel Institute, Ohio State University, May 12, 1960, p. 41.

It appears, then, that the training of personnel is no desk-and-chair operation. It is a hard and realistic process requiring actual tools and approaches. Worker training, like manager training, should be tailored to the organization involved. Those responsible in any way for the success of the program must therefore realize that their work involves job study through consideration of (or development of) job descriptions and specifications; that standards of performance must be developed; that when off-the-job training is involved, standard training times must be established, and that standards also must be established which specify the amount of time an individual has in which to develop. Furthermore, schedules are required and standard instructional practices are required, but must be applied with the individual differences of trainees in mind. Such requirements make the training of workers a complex rather than a simple procedure.

### **SAMPLE PROGRAMS**

As previously indicated, worker development should be tailored to the specific requirements of the given organization. Some managers "buy canned programs," this is true, but today's alert managers avoid this practice. Figures 50, 51 and 52 are presented as examples of existing programs.

### **PROGRAM EVALUATION**

Worker development is a costly undertaking, particularly in the broad sense suggested in this chapter. Top management often resists establishment of such programs unless they can foresee a reasonable return upon the investment. Manpower managers must therefore find ways of showing the economic value of development efforts. It is through evaluation that value can be shown.

What factors ordinarily should be considered when evaluating the success of a worker development program? Obviously, the factors selected should relate in one way or another to the savings or cost reductions attributed to worker development.

Should one conclude, however, that the following ten categories of savings will automatically come from a sound worker development program? Not without specific study to back up such a conclusion! However, more people will agree than will disagree that potential savings are in the form of the following.

- . . . Improvement in the quality and quantity of production.
- . . . Reduction in scrap and waste for specific operations.
- . . . Reduction in the frequency, severity, and repetition of accidents.
- . . . Reduction in the time involved in accomplishing a job, or narrowing of the time range for accomplishing a job.

Technical Program -- Technicians

1. Drafting -- Product (skill)
2. Drafting -- Equipment (skill)
3. Design -- Product (skill and knowledge)
4. Blueprint Reading (beginners)
5. Technical Writing -- Product and Process

-- 4 instructors --

Shop Training Programs

1. Experimental Machine Training
2. Sheet Metal Apprentice Training
3. Inspection Apprentice Training
4. Production Training (machine operators)

-- 2 instructors --

Staff Program -- Management Trainees

1. Research and Preparation of data
2. Publication and Utilization of data
3. Equipment Control and Scheduling
4. Communication
5. Trainee Selection and Assignment

-- 2 instructors --

Administrative Training Programs

1. Foremen -- Shop and Experimental
2. Inspector Group -- Vendor, Operations, and Assembly
3. Graduate Engineering Group
4. Orientation Program New Employees
5. Salary Supervision

-- 3 instructors --

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Training Program Outline  
Non-Supervisory Personnel  
-- Chemical Industry

1. Orientation -- first week of employment, handled by training department.
2. Departmental Operations -- second week of employment, handled by department foremen.
3. On-The-Job Training -- second through sixth week, assigned trainer
4. Operations Retraining -- as required, handled by assigned trainer.
5. Advanced Programs
  - A. Process and Product Development -- as required prior to promotion
  - B. Drafting (Process and Product) -- all new employees hired in this field
  - C. Technical Writing -- all new employees hired in this field.
  - D. Chemical Engineering -- as required.
  - E. Advanced Operations Retraining -- when assigned to a new unit.

TRAINING PROGRAMS SUBJECT TITLES  
AIRCRAFT INDUSTRY AND CHEMICAL INDUSTRY

*Figure 50*

. . . Reduction in the time taken by an operator to make the established standard and an increase in the number of operators who make standard.

. . . Reduction in the time it takes individuals (not new employees) to learn new jobs, methods, or in the time it takes them to adjust to and master new systems.

. . . Reduction in the number of inspectors required in inspection.

A Metal Trades Company

<u>Program Titles</u>	<u>Remarks</u>
1. Primary Assembly 2. Sheet Metal Work 3. Machine Operations 4. Production Scheduling and Dispatch 5. Tool Design 6. Inspection 7. Timekeeping	In this organization, every new employee hired to any of these departments is given the required training. Before being placed upon the job or promoted to the job, the trainee must be capable of fully acceptable and meet standard performance.

A Poultry Products Company

<u>Program</u>	<u>Remarks</u>
Phase I -- Egg Breaking and Separation Candling Packaging	Every new employee is required to take that phase which applies to the job for which he was hired. As the employee is advanced from one job to another, he is retrained in the new job.
Phase II -- Poultry Grading Plucking and Cleaning Quartering and Slicing Packaging	
Phase III -- Equipment Handling Equipment Maintenance	

**TWO VESTIBULE SCHOOL PROGRAM OUTLINES**

*Figure 51*

- . . . Reduction in the number of discharges for cause, particularly for matters such as incompetency.
- . . . Reduction in the number of quits, in labor turnover in general.
- . . . A general improvement in the relationship between direct and indirect labor costs and income, or a reduction in unit costs; and in general a better utilization of equipment, material and labor, and improved competitive ability.

It is *possible* that potential savings will automatically accrue as outlined — *but it is not inevitable!* It all depends upon what, in a *particular* firm, are the controlling reasons for less-than-maximum output, quality short of the required level, employee griping, scrap and waste figures, labor turnover, competitive troubles, and less-than-efficient use of equipment, material and labor. In many firms, in-

Phase I -- Probationary Period

1. Orientation -- Training Department
2. Press Operation, hand -- Foreman, pressroom
3. Press Operation, automatic -- Foreman, pressroom
4. Makeup and Knockdown -- Foreman, typesetting
5. California Case -- Foreman, typesetting
6. On-the-job Training in assigned job
7. Progress Review

Phase II -- Pre-promotion

1. Retraining in press operation
2. Retraining in care of type
3. Press Maintenance and repair

Phase III -- Pre-promotion

1. Retraining in maintenance and repair
2. Proofing and Correction
3. Color Application

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NON-SUPERVISORY TRAINING — A SAMPLE PROGRAM —  
PRINTING TRADES

*Figure 52*

creased worker development may have no, or only a slight effect, on some of the ten factors mentioned.

Determination of savings should follow a pattern as follows. *First*, make an estimate, as factually as possible, recognizing that it may have to be a very "rough" estimate at first, of the amount or possible return to the company of better results in each of the ten areas. *Second*, from an analysis of the relative contribution of several causes to each of these ten (see Chapter 13 for the principle of maldistribution of causes versus effects) see where manpower development can be expected to influence a major portion of these categories of savings. When it is a vital cause, then embark upon a training program with the expectation that a "measure of effectiveness" (see Chapter 15) will show significant gains. If such an analysis shows other factors are in control, however, work on them rather than on worker development, or worker development alone.

How does one separate how much of a contribution to the effect comes from each possible cause? The only objective way is to conduct a statistically-designed experiment.

**RISK IN EVALUATION.** Implied in the foregoing is the point that training may not be the cause of improved cost relationships, or

may not be the only cause. D. L. Kirkpatrick points out that ordinarily evaluation of training is handled through consideration of "results."<sup>4</sup> He also points out that numerous attempts at evaluation exist where objectives and results are thought to be, or actually have been, specific. He continues by indicating that even though *other* factors might have contributed to success or improvement, training usually is considered the prime cause when results have been challenged.

The risk of assuming that training is the cause, when measurement indicates its value, lies in two specific points. *First*, if training has not been *the* cause, or *a* cause, of improvement an expensive program is retained. The monies expended may be wasted unless the true, or other causes also are brought under control. *Second*, if other causes have led to cost and other problems, but trainees and trainers have been led to believe that training was the key, then when problems continue, even though training continues, those responsible for training may be considered incompetent — with the expected results. Furthermore, those receiving the training may adopt the "what's the use" attitude.

**USE OF CONTROL GROUPS.** The question of how to consider the factors raises issues related to measurement. Suppose, for example, that the quantity of production increased in some given period of time by two per cent, suppose this followed a training effort. Would it be correct to say, *per se*, that the increase was due to the training? As indicated by the above comments — no! Even if such additional factors as change in equipment, standard, material and the like were isolated and determined not to have any bearing, a rise of this amount might be "insignificant." For improvement in worker performance to be important, it is necessary that it be "significant." The term "significant" is used in the statistical sense. For improvement in worker performance to be attributed to the worker development program, that improvement must be not only significant, it clearly must *not be* the result of other factors.

These points indicate that evaluation should be based upon comparison with the performance of a "control" group, if possible, and that under no conditions should the training director fail to consider engineering and economic changes. Control groups must be established carefully. For example, unless the untrained (control) workers have duties and responsibilities similar to those of the trained people, the two groups are not comparable. Then, too, it may be exceedingly dangerous to defend a development program on the strength of a small

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<sup>4</sup>D. L. Kirkpatrick, "Techniques for Evaluating Training Programs: Part 4, Results," *Journal of American Society of Training Directors*, Vol. 14, No. 2, February, 1960, pp. 28-32.

sample of employees. Certainly only one measurement of success is not satisfactory — periodic audit of success is necessary.

*BEHAVIORAL CHANGE THROUGH TRAINING.* Kirkpatrick cites some significant studies to gauge behavioral change through training, among them the Lindholm Study, the Blocker Study, and the Tarnopol Study. He offers the following guideposts for training officers in making an evaluation of a training program in terms of behavioral changes.<sup>5</sup>

1. Appraisal should be systematic.
2. On-the-job performance should be considered before and after training.
3. Appraisal of the individual should be made by those with reason to *know* his performance.
4. Appraisal should (as mentioned previously) be handled through a statistical study.
5. Appraisal should be timed to permit the individual the opportunity to use his acquired knowledge
6. Control groups (or individuals) should be used wherever possible — one notes that the trainee's before-training performance can be considered as "control" data when compared to his after-training performance.

*EVALUATION A CONTINUING AFFAIR.* Evaluation is a continuing affair. It is, in essence, a procedure which follows the control concepts laid out in Chapter 6, and must be applied periodically. This will be facilitated by utilization of control charts depicting group performance. In addition, simple line or bar graphs can be used to indicate progress over periods of time. In the sophisticated evaluation system, the training director also may maintain a progress record which indicates seasonal influences and the trend of progress. These may be kept in terms of the type of training, the specific worker groups, and may be developed for individual key workers.

An important point bearing upon worker development is the overall cost. The cost of such a program may not be compatible with the general economic condition of the firm. Even though analysis may indicate valuable results from such a program, the acquisition of those results may have an embarrassing effect upon the profit and/or break-even position.

Evaluation of training has by no means reached a state of perfection. Management's increasing interest in the effectiveness of its training expenditures, however, has led to three schools of thought,

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<sup>5</sup>D. L. Kirkpatrick, "Techniques for Evaluating Training Programs: Part 3, Behavior," *Journal of American Society of Training Directors*, Vol. 14, No. 1, January, 1960, pp. 13-18.

or attitudes toward evaluation. According to L. K. Randall these basic divisions are as follows.<sup>6</sup>

. . . "Negativists" — these people claim evaluation is impossible, unnecessary, or both.

. . . "Positivists" — these are the folk who refuse to accept any evaluation under any conditions unless it be a "scientific" evaluation.

. . . "Frustrates" — these are the people who realize that evaluation is inevitable and necessary, but as yet they have found no definite method for accomplishment.

To this latter group we address the comment that statistically-designed experiments must be developed if evaluation is to succeed. Furthermore, both the effort to develop such experimental systems and to evaluate training must be handled on a continuing basis. Success in either case will not come from an on-again-off-again approach. It must be planned; it must be scheduled.

#### **SPECIAL PROBLEMS — TECHNICAL**

In addition to cost and evaluation, other technical problems are associated with worker development. These will vary with the organization under consideration. There are, however, certain problems of a general nature which require attention.

**RETENTION.** It is not unusual for people to forget approximately 50 per cent of what they have learned 30 days after being taught. This causes some training directors to overtrain employees in the hope that they will retain more, and for a longer period. On the other hand, this tendency to forget leads other directors to insist upon refresher programs. Both approaches raise questions of cost, status, and attitude.

**THE TRAINER.** There is danger that those selected as trainers actually will be chosen as a means of getting them out of the operational area. Then too, if the trainer is not taught effective teaching, his work may be of little or no value. In general, the trainer would do well to follow the approaches set forth by the Training Within Industry (TWI) Division of the War Manpower Commission during World War II. He should prepare himself by: (a) developing a time table indicating how much skill the trainee is expected to have by certain dates, (b) breaking down the job so that the important steps are clear, and picking out the key points; (c) making sure that he has the right equipment, materials, and supplies, and (d) arranging the workplace properly.

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<sup>6</sup>L. K. Randall, "Evaluation: A Training Dilemma," *Journal of American Society of Training Directors*, Vol. 14, No. 5, May, 1960, pp. 29-35.

He ought to then follow a routinized procedure involving the following steps. *First*, prepare the worker. Put him at ease; state the job and determine the extent of the worker's existing knowledge or skill; get him interested and in the correct position (if this applies). *Second*, he presents the operation. He should tell, show, and illustrate or demonstrate each important step, one at a time. He will stress the key points. He must maintain his patience, instruct clearly and completely, but be careful to limit himself to what the trainee appears able to assimilate. *Third*, the trainer will give the trainee the opportunity to perform. The trainee explains the key points as he performs them. The trainer ascertains that these points are understood. *Fourth*, the trainer should follow up.

The trainer learns to avoid certain disturbing personal characteristics or face the risk of failure. He avoids an air of superiority. He does not bully the trainee nor is he sarcastic or unduly caustic. Patience is a necessity. Impatience is avoided since it tends to shake the trainee's faith in himself. Furthermore, the trainer will be tactful and avoid any tendency toward indifference.

**TRAINING LOCATION.** The question arises: when should vestibule or off-the-job training be used? Vestibule training facilitates concentration. It removes the trainee from distractions and can be structured to provide maximum comfort. On the other hand, it may rob the trainee of the opportunity to feel what he is learning in relation to the normal work environment. Then too, the shock of being dropped into the hubbub of an operating unit, after the peace and comfort of a vestibule situation may stimulate quits, absenteeism, and accidents. It would appear, then, that *if the actual working conditions can be reproduced*, vestibule training would be useful. Furthermore, if the skill or knowledge to be mastered is very detailed and complex, if the instruction is detailed and requires uninterrupted attention on the part of the trainee and the instructor, vestibule training might be considered mandatory. In addition, if time is of the essence, and a large number of persons must be trained at one time, vestibule training may be a necessity.

**TRAINING TIME.** It is neither unusual nor unreasonable for managers to complain about the time it takes to train workers. Many jobs involve a combination of tasks which have little or no relation to each other or actually are combinations of several jobs. This is particularly true in small concerns or organizations which have a limited volume of repeat orders. Such jobs are difficult to train for, and require considerable time to master.

Work simplification and job specialization should be applied when possible: this is basic management teaching. One reason for this, and from the worker development point of view, is that it reduces training time.

*RHYTHM AND PACE.* The ability of the worker to develop a work rhythm is often overlooked, so too is the importance of teaching rhythm to the worker. Wherever an operator faces hand or machine work involving deft motions, he should develop a rhythm. For example, in hand-feeding a printing press, the operator must develop a rock and swing and a lift and fall including motions of the body, arms, wrists, and the like or face one of two possibilities – injury or low production. A sense of rhythm is helpful to straw-bosses and supervisors in general. Every machine has its own “beat.” The ability to recognize and distinguish the various beats helps the supervisor and the worker to know when something has gone amiss. Managers, and particularly training directors, would do well to introduce teaching techniques designed to facilitate the development of rhythm in workers.

One purpose of training is to improve the quantity of output. Improvement in the pace is involved. Rhythm development tends to result in an improvement in pace. Problems exist, however. If an operation is paced by a machine which cannot be speeded up or slowed down, it may be exceedingly difficult to teach the pace and rhythm without endangering the learner. Clearly, in the interest of safety, the training director should investigate the possibility of developing dummy equipment for initial training.

Where the production rate is paced by the operator, the problem of developing proper rhythm and pace becomes a motivational issue. Interest must be stimulated. The worker must discover the advantages of proper pace and become aware of the dangers of improper rhythm. It is important on both counts to make sure that the trainee has a clear understanding of the work standards expected and of the time expected to be involved in learning and reaching that standard.

*VERSATILITY AND CHANGE.* If an organization is dynamic, if its technology is undergoing continuous change, its workers will need to be versatile or face layoff or discharge. If an organization has a distinct seasonal production pattern, producing one thing at one time of the year and something else at another, the workers may require versatility. Wherever versatility is required, the employees must be willing to accept change. Training directors should give special attention to this need. The time to prepare workers for change, and to begin the development of versatility, is before they become established in their jobs and develop proprietary feelings about them.

Many organizations face the problem of a sudden need for a versatile workforce. They may have operated for many years without having to consider methods or equipment changes, and unexpectedly they must make a drastic overnight change. In such instances, unless the manpower management group (including the training director) has been kept abreast of long and short-run plans, training for the needed change and versatility will be a painful and often barely suc-

cessful affair. In these cases, the manpower group requires time to plan for the needed training. The training director should have the opportunity to begin preparation of the workforce several months prior to the actual change.

*EXPANSION.* Companies engaged in expansion, particularly the development of branches, may require "nucleus" or "cadre" work units. Such work units may have two responsibilities: actual production at a limited quantity level, and training of the regular workforce. Personnel selected for such work units obviously must be skilled teachers as well as workers and managers. Their training becomes a special problem. They will require training in many different jobs and in the art of teaching.

*FLYING SQUADRONS.* Flying squadrons may be developed in large or small plants to handle operating or training problems. Those selected will also require special training. They will need the ability to handle many different operational problems. They may even require "problem solving" ability. In most cases they will also require at least some teaching ability.

*RETRAINING.* The need for retraining arises from several factors. *First*, technological change leads to this need because, as equipment becomes more advanced or as production processes change, the worker must be upgraded, laid off, or discharged. Technological unemployment can be defined as unemployment arising from a technological change which demands skills not possessed by the worker, and which therefore renders the worker unsuitable for employment. Too often a company will fail to realize that it could retrain many of the employees laid off as a result of technological change. Not every employee affected by a change in equipment or process can be retrained, but many can. The problem is to plan the technical change and the training so that when change is ready for installation, the retraining is completed or nearly so. Another facet of the problem is cost. In some cases it will be cheaper to search the labor market for personnel possessing the new skill, and lay off or discharge the current employee. In most cases involving semi-skilled workers, however, retraining is likely to prove cheaper than recruitment, selection, and induction — the problem should be analyzed before action is taken.

Training designed to offset technological influences, whether it be internal or external to the company, often involves a greater degree of learning and teaching of mental competency than manual skill. As technology advances, the work tends to move farther away from manual skill and closer to mental skill. Unfortunately, there is an old saw about teaching "old dogs new tricks." Many training people take this to heart and hold that you cannot teach an old hand the new technology. Every year, however, we at the University of Connecticut

(and on many other campuses throughout the country) see "old hands" turning up at the technical institutes, we see them learning new and completely foreign competencies, and learning them well.

*Second*, retraining arises as a result of chain promotions. If a high skill job opens up, the man below frequently is given a crack at it. This, of course, establishes the chain reaction mentioned in Chapter 14. The problem is that many managements refuse to plan for this. Often the company avoids preparing a worker for such moves until the move occurs. The result is that the worker feels insecure, the management gets impatient before he masters the skill, and many times a quit, layoff or discharge results. This could be avoided by the use of the three-position training system described in Chapter 14. Furthermore, special classes can be run to prepare specific employees for such moves. Both the Wage-Hour Law and the Smith-Hughes Act permit such classes if they involve the learning of skills not currently typical of the workers' jobs.

*Third*, another factor leading to retraining needs is age. As we grow older, our physical, and to some extent our mental, capacities diminish. The worker who has passed his prime may no longer be capable of doing bull-work. The choices facing management are: retrain and transfer, discharge, or a third, and often dangerous choice, do nothing. Supervisors and manpower personnel consider the cost of retraining and transfer as against that of discharge and replacement hiring, and against the risk of a high cost accident.

Age enters the picture in another way. Many employees do not want to retire. In some cases, management permits them to remain as employees but transfers them (or demotes them) to some other job. The worker must, of course, be retrained.

Wherever retraining is to take place, there should be careful trainee selection. Any other approach would become too costly. Testing should be used in this connection, as should analysis of factors such as the learning rate on other jobs, the apparent ability to adjust to new conditions, the production and quality record of the employee, and the like.

**LEARNING CONSIDERATIONS** Professional training directors and effective managers at all levels realize that one of the most important human problems related to training involves "learning." This entire chapter has been designed in the light of what commonly are termed the "principles of learning." Beginning with the fourth point on page 474 these so-called principles have repeatedly been woven into the discussion. Let us now briefly examine the matter of learning more specifically.

To begin with, learning and retention are fundamentally related issues. The ability to learn and to retain vary from person to person, from time to time, and situation to situation. Both vary with each

person through time and according to the situation. This set of relationships is a key principle in leadership, learning, teaching, and, in fact, wherever one person must accomplish work of some form through some other person. This pattern, plus the points following, in a sense defines the continuum of human problems which complicates efforts to develop and administer effective training — whether we speak of worker or manager training.

In addition to the pattern of variation indicated, one can point to five broad conditions or characteristic considerations in a sense definitive of an individual's ability to learn.<sup>7</sup> *First*, how well a person *can* learn is a socio-psychological matter. The ability to learn is a motivational affair; it depends in part upon one's willingness to learn and in turn upon how the teacher, and others associated in the relationship, influence the learner. In this connection, it becomes clear that ability will depend in part upon:

- . . . The individual's feeling of security.
- . . . The individual's emotional stability and general physical and psychological condition.
- . . . The individual's feeling of association — how he sees himself in the role of student, how he views himself in respect to the tasks or mental accomplishments he is expected to learn, and how he views his present and future opportunities and personal relationships *if* he learns.
- . . . The individual's belief that the effort is worth the reward
- . . . The individual's opportunity to participate — people must participate in the development of their learning and the learning process itself (help the student teach himself, give him at least some opportunity to teach himself).
- . . . The individual is motivated more readily and for a longer time if he knows his progress.

Other points exist which explain or indicate the importance of the socio-psychological aspect of learning. Training directors require familiarity with all such points and endeavor to pass such information on to the managerial personnel who actively participate in manpower training.

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<sup>7</sup>"Learning" has become a topic of wide interest. Some particularly useful references are: C. H. Lawshe, *Psychology of Industrial Relations* (McGraw-Hill Book Company, Inc., N. Y., 1953), Chapter 6; Mary Amatora, "Forced Learning May Be Harmful," *Understanding the Child*, Vol. XXVI, 1957, pp. 8-12; S. T. H. Wright and D. W. Taylor, "Distributed Practice in Verbal Learning and the Maturation Hypotheses," *Journal of Experimental Psychology*, Vol. XXXIX, 1949, p. 529; William McGehee, "Are We Using What We Know About Training?" *Personnel Psychology*, Vol. XI, No. 1, (Spring 1958).

*Second*, how well a person *can* learn is a physiological matter.<sup>8</sup> That is, man's physical condition influences his mental condition and *vice versa*. In many ways the socio-psychological considerations depend upon the physiological. (One of the evils of our time is that basic and fully interdependent disciplines are held separate in the literature and the classroom, as well as in the industrial environment. This separation has its effect upon the learner as well as the teacher, and it is not a happy one.) Man's physical condition in part determines what he can learn to do, particularly in the manual skills. Furthermore, those who lack certain physical capabilities might compensate by vastly improved development of certain other physical and/or mental capacities. In addition, the physical socio-psychological makeup of the individual in part determines his qualitative and quantitative ability to learn.

*Third*, how well a person *can* learn is an environmental matter.<sup>9</sup> A controlled environment facilitates learning. Controlled, in this sense, follows the basic tenets of control thinking laid down in Chapter 6. Attention must therefore be directed toward several points.

. . . The actual physical character of the environment influences the ability to learn. Light, heat, air-flow (ventilation), humidity, noise and the like require attention. Excessive humidity, for example, tends to reduce one's ability to learn.

. . . Distractive elements should be removed from the environment; however, what distracts one may not distract another. Further, some tasks, some types of effort or mental application, are normally carried on in the presence of distractive factors. In such cases learning ought to be conducted in a similar environment. One notes that troops are taught the procedures of war in an environment designed to simulate war.<sup>10</sup> When applying the idea of removing distractive elements, one thus must consider not so much what is distracting in learning as what will be distracting when the trainee seeks to apply his learning.<sup>11</sup>

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<sup>8</sup>Additional theoretical foundations can be found in: H. L. Kingsley, *The Nature and Conditions of Learning* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1946); G. A. Kimble and E. A. Bilodeau, "Work and Rest as Variables in Cyclical Motor Learning," *Journal of Experimental Psychology*, Vol. XXXIX, 1949, pp. 150-157; Karl W. Deutsch, "Mechanism, Teleology and Mind," *Philosophy and Phenomenological Research*, Dec., 1951, pp. 185-222.

<sup>9</sup>cf. William J. J. Gordon, "Operational Approach to Creativity," *Harvard Business Review*, November-December, 1956, pp. 41-51.

<sup>10</sup>Simulation of environment becomes increasingly important as technology shifts more and more from manual to mental skills. The greater the concentration requirement, the more important is full preparation of the trainee — including familiarity with expected environments.

<sup>11</sup>For several years, seniors have been deliberately exposed to planned distractions during examinations. Feedback indicates that this *may* increase the immediate utility of these people to industry.

. . . Fear of the unknown and already familiar habit may interfere with learning. These psychological matters may be related to environmental factors. Thus the environment of learning and the environment of work following learning must be designed with the human and his physical, psychological, and sociological nature in mind. For example, the machine operator taught to remove incoming material from a conveyor will do better at first than the operator taught to go through the same motions, but on a dummy conveyor. When the trainee is exposed to the moving conveyor he may panic. Again, the man being taught the maneuvering of a "new" crane may learn the new and different control layout easily, but in a moment of stress he may revert to habits formerly learned and reach for the wrong control lever. Accidents happen this way. Purchase or development of new equipment should be handled with thought to old habit patterns!

Many additional points could be raised concerning the environmental aspects of learning. Training directors and managers in general should certainly be more than familiar with each and every specific characteristic (call them principles, guide points, considerations, or whatever).

*Fourth*, learning is in part a function of communication. The trainee with a low communication capability finds it difficult to learn, particularly with respect to advanced mental or advanced mental-manual skills.<sup>12</sup> Training efforts require development based upon the communication concepts laid down in Chapter 4. Habits frequently require unlearning; resistance to change needs to be overcome, and social acceptance needs to be assured. These and many other points require communication to and from the trainee if he is to learn and to want to learn.

*Fifth*, learning is, in a sense, a natural life event. Such a point signifies that learning is enhanced in the presence of organization. Nothing in life has much meaning unless there is organization associated with it. The T.W.I. and J.I.T. programs of World War II were founded with this (among other things) in mind. The experienced teacher and the experienced student realize that when instruction is organized, learning is facilitated.

*Learning Curves.* Learning curves already have been mentioned. At this point, let us restate that those engaged in training, at any level, will find it helpful to develop learning curves for the various

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<sup>12</sup>cf. E. D. Adrian, *The Physical Background of Perception*, The Waynflete Lectures (Clarendon Press, Oxford, 1946), Sir Frederick C. Bartlett, *Remembering: a Study in Experimental and Social Psychology* (Cambridge University Press, London, 1932); G. T. Buswell, "Fundamental Reading Habits; a Study of Their Development," *Supplementary Educational Monographs*, No. 21, 1922. N. E. Miller and John Dollard, *Social Learning and Imitation* (Institute of Human Relations, Yale University, New Haven, 1941); and R. A. Davis, *Psychology of Learning* (McGraw-Hill Book Company, Inc., N. Y., 1935).

skills they are expected to teach. Each individual will have his own curve, but a relative-standard curve can be established for many tasks. Such standards may prove useful in measuring the individual's progress.

*Learning and Training.* One thing stands out: whether man learns or not pretty much depends upon his desire for new knowledge. This suggests that if training is to succeed at *any* level, the trainee must be motivated to accept — or better still, to avidly desire — that training. He must be motivated to learn. More than that, everything about the learning function must be so designed as to meet the social, psychological, physiological requirements of men regarding learning, and the environment must be conducive to learning those matters deemed and accepted as necessary.

### SUMMARY

Formal or informal training occurs at all levels of an organization. It occurs whether or not planned and whether or not recognized and evaluated. The danger of the unplanned and unevaluated training is that people will receive the wrong information at the wrong time, and that the cost will hinder rather than foster the continuing development of the organization as a whole.

One of the problems associated with worker and manager development relates to the "holding of the workforce." Quite a few companies find that they are the *training ground* for other industrial units. This is particularly true of large concerns. The problem is that, once trained, the employee — management trainees in particular — begins to look for a better opportunity elsewhere. He may do this because of the feeling that his chances for advancement are too remote to suit his goals, or because of some dissatisfaction with the technical, organizational, or financial aspects of the environment. In any case, should the quits become significant, the problem will have a distinct and significant bearing upon the fiscal position of the firm. Obviously, therefore, manpower managers must give attention to the problem of conservation of manpower as well as the development of manpower. Part V, which follows, is devoted to this conservation matter.

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*As a people we spend thousands of dollars and hours on the conservation of things — why not on the conservation of people!*

## PART V

# Manpower Conservation

Man is a resource. His economical utilization is a prime management responsibility and one of the obligations of the manpower manager.

Until now attention focused upon the acquisition of manpower and development of an effective workforce. The aim was to obtain and promote the growth of a staff having a homogeneous viewpoint but an unstifled initiative, a team whose real strength rests in its ability to recognize opportunity and act upon it decisively and in unison; a team selected for, and developed to, a high point of technical, physical, and psychosocial competence. Now attention shifts to holding that workforce, to its conservation.

The conservation of manpower brings into play one of the “working objectives,” as indicated in the accompanying diagram, Figure 53. The conservation effort has to do with the maintenance of the physical and psychological welfare of manpower. Each of the considerations involved relates in some way to the welfare of both the individual and the organization and pertains to the elimination or reduction of conflict and environmental risks.

Conservation is no eleemosynary gimmick, it is a hard-headed approach designed to improve the economic position of a company and its people. It seeks to eliminate, or at least minimize, the profit reducing effect of accidents, unwanted labor turnover, and employee unrest.

Such an aim requires more than isolated techniques, whim-developed approaches, or benefits established because “the Jones Company did it.” Programming is required. Careful planning through study of the situation and its requirements is needed, and control must be exercised.

Conservation work involves the physical and psychological maintenance of the workforce and the labor relations activity. It is with these specific areas that this portion of the text is concerned.

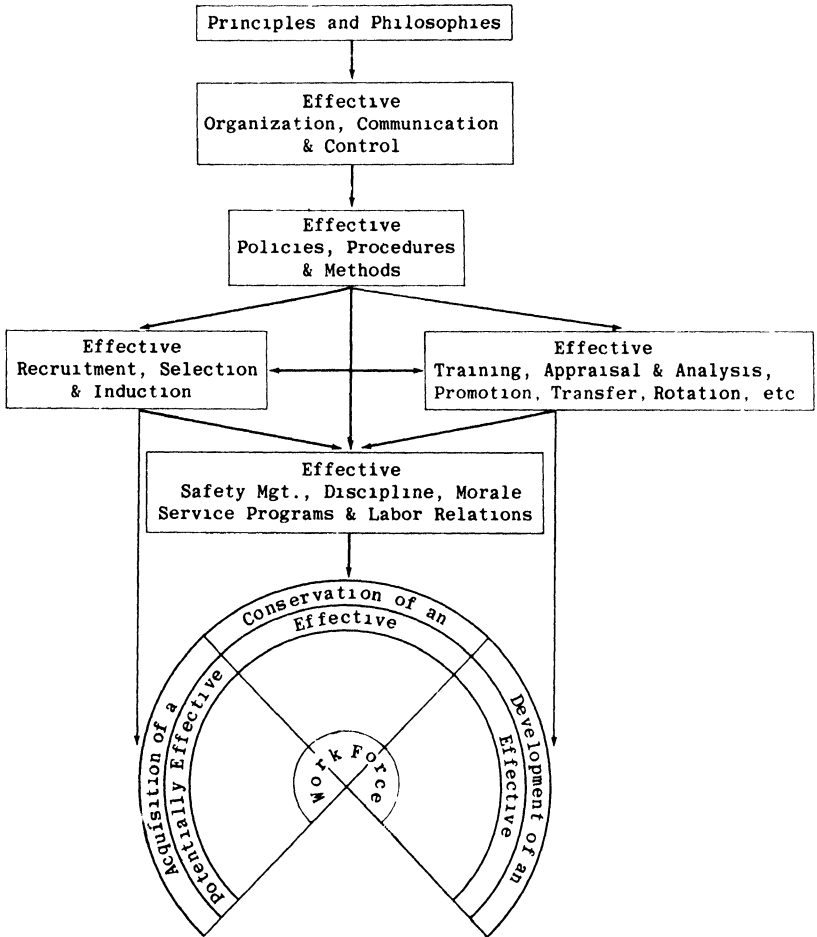


Figure 53

## Manpower Conservation — Purpose, Policy, and Program

In his first annual message to Congress, Thomas Jefferson pointed out that, "Agriculture, manufactures, commerce and navigation, the four pillars of our prosperity, are the most thriving when left most free to individual enterprise."<sup>1</sup> Today, and perhaps this has always been so, though often unrecognized, the conservation of an organization's manpower is one of the crucial functions of free enterprise. The holding together of a workforce, the maintenance of its energies, have much to do with the economic success of enterprise.

The conservation problem relates directly to the supply and demand situation. Though we read of unemployment, the general supply of "qualified" manpower is not enough to keep up with the ever-increasing demand. The census projections, reports from the Office of Civil and Defense Mobilization, and periodic reports by economic analysts all indicate a manpower shortage for many years to come.<sup>2</sup>

The shortage pertains to specific age groups from which we draw our future key technical and managerial talent. Since 1956 key industrial, military, government, and education people have stressed this problem and the need for positive action to meet it. What does this mean to the specific industrial manager? Simply that conservation of an existing competent workforce is a necessity in terms of the manpower costs involved in losing, and then replacing, competent people, and in terms of the shortage of qualified manpower.

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<sup>1</sup>Thomas Jefferson, First Annual Address, 1801.

<sup>2</sup>cf William G Torpey, "Conserving Our Technological Manpower," *Personnel*, Vol. 37, No. 2, March-April, 1960, pp 61-67, Peter F Drucker, *America's Next Twenty Years* (Harper & Bros., Publishers, N Y., 1957)

## DEFINITION

As stated in the Introduction to Part V, *manpower conservation* is that phase of manpower management concerned with the maintenance of the physical and psychological welfare of the workforce. It is a planned, multiphasic approach designed to reduce or eliminate unnecessary manpower costs, and to remove or minimize sources of conflict which contribute to the development of unnecessary manpower costs.

## THE PURPOSE OF CONSERVATION

Manpower conservation is no altruistic game played because of some deep-seated humanitarianism, or to disguise some demoniacal tendency of "capitalistic management." Manpower conservation is an economic necessity. It is needed by, and beneficial to, the organization, the economy as a whole stands to gain when industry develops conservation programs. The naked purpose behind this manpower management activity is *cost reduction*.

*WHAT IS INVOLVED.* Managers who seek to minimize manpower, production, and productivity losses try to establish economic production. They are looking for a favorable cost-income relationship. The lessons of the past, as well as the research of today's social scientists, teach us that truly economic production depends upon a freely co-operating workforce. In comparison with people who have a positive motivation to work, who want to work, who give willingly a little more than is really expected, or who are *lead*, those who are *driven* to work may work, but not economically.

A pattern suggests itself. *First*, determine the reasons for manpower and production losses. *Second*, determine the concentration of those reasons, that is, which ones appear as the most important. *Third*, study the available or designable techniques most likely to minimize or eliminate these causes; *then*, adopt them and insist upon a periodic audit of success. Behind such a pattern necessarily will exist certain distinct policy considerations, recognition of certain fundamental factors, and an understanding of evaluation procedures useful in determining what should be included in a program.

## POLICY CONSIDERATIONS

Once again the policy considerations found in Chapter 9 apply. Additional matters, however, attain a special significance. Once again the approach includes external, internal, and operational factors.

The definition of manpower conservation is the basic policy purpose. To state the *primary goal* of a conservation program, the definition can be rephrased as: *to achieve the physical and socio-psychological well-being of the workforce necessary for the attainment of the desired degree of economic production.*

Such a statement directs attention to the fact that employee well-being and the economic position of the company are related. It implies that the ability of a firm to conserve its manpower depends upon its economic position; the know-how of its management, the attitudes of the workforce and its leaders (be they union or non-union), and the attitude of management toward the workforce and the business in general.

*EXTERNAL CONSIDERATIONS.* Policy development demands consideration of the labor market. This is true of all policies relating to manpower. In this case, the point of consideration is not so much the quantity as it is the quality of the supply. A complex generality exists and demands attention.

Where the high skill individual may take pride in his work, and may readily co-operate when his skill receives overt recognition, he still is likely to be difficult to hold if the labor market is such that high skill people are in great demand. On the other hand, it may be more difficult to get low skill personnel to co-operate, but they may be more willing to remain with the company even though the labor market reveals a fair demand. Their attitude may be: "Why change? I'll be no better off!"

Regional practices of competing and noncompeting firms also require attention. If, for example, it is common area practice to give three-week vacations, a company will find it difficult to hold a workforce if it seeks to maintain a two-week vacation pattern. If annual or semiannual company parties are the regional practice, the firm which seeks to avoid or break from this practice will find increased employee problems of some form, possibly increased grievances, absenteeism, or turnover or slowdowns.

Local politics also affect company policies and practices. Though no real trends appear, it has happened that when an organization and the community politicians become entangled in tax arguments or other forms of conflict, the employees become restless. The situation may degenerate to such a degree that absenteeism increases because people begin looking for work elsewhere. Imagine the employee reaction to a public statement by a politician: "Okay, if the XYZ Company doesn't like it, let them move elsewhere!"

These points all signify the same thing: conservation policy should demand that a constant and carefully analytical eye be kept on the community, the regional industrial practices, and the quality demands current in the labor market. Obviously, a second point is that conservation policy and resulting practice will, of necessity, be flexible.

*INTERNAL CONSIDERATIONS.* As in Chapter 9, management's attitudes, the union attitudes, the economic condition of the organization, and the production practices in general come into play.

The impact or reason for consideration differs, however, from that applicable in former chapters.

*Management Attitudes.* Conservation programs tend to fail if "lip service" legitimately describes management's approach. This should be obvious! The point often missed is that many causes of conflict between labor and management are in no way related to "lip service" — often the cause is as simple as bad communication. For example, management frequently assumes that the rank and file understand the reason for certain demands upon them when, in reality, they do not. The lack of understanding is a basic reason for some form of production loss.<sup>3</sup>

Another matter is management's willingness to buy "package deals" rather than analyze cause and effect. One is reminded that if the cause of the accident rests with a poorly-designed piece of equipment, no "poster campaign" can remove that cause. Or, if the real cause of labor turnover in a given department is related directly to the poor supervision exercised by the foreman, no campaign in the plant newspaper, designed to show the fiscal benefits offered by the firm, will change that foreman's behavior.

Manpower conservation policies therefore must demand active participation of the entire management team in whatever conservation programs are developed. Furthermore, effective policy requires periodic audit of program and analysis, instead of so-called experience-judgment, to determine cause and effect relationships.

*Union Attitude.* A shop steward excluded from development of a conservation program or technique probably will buck that program or technique. The union is sensitive. Within the plant the union is jealous of its status. If it is not consulted, negative attitudes develop and conflict arises.

It is no abrogation of management prerogatives to permit union people to help plan conservation programs. On the contrary, management may be at such a distance from the average employee that his views cannot be known or even determined except through the assistance of the union. For example, we hear much about the evils of paternalism. We wonder, however, at this so-called evil when sometimes the very same programs offered under paternalism are sought by the union. Of course, the evil of paternalism lay in *how* the programs were established, *why* they were established, and *how* they were carried out.

Union attitude should be considered in another light. Unions generally are adamant about seniority, particularly in low-skill situations. This often rigid and unreasoned bias frequently provokes or

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<sup>3</sup>cf. Chapter 2, the management "misconceptions" all have a direct bearing upon conflict and consequently upon manpower conservation.

perpetuates dangerous conditions. Suppose, for example, that for many years a particular process has been so dangerous that, even though not necessary from a production point of view, two men have been assigned per machine. Suppose a breakthrough suddenly occurs and the risk is removed from the operation by the development of a new machine. Suppose installation of the machine will not improve output levels enough to warrant the expenditure, but management decides it is worth spending the money if the risk of accident will be removed. Suppose that in order to break even in this case, management must reduce the work teams to one individual per machine. Management cannot demand that the union exercise analytical, unbiased thinking, however, policy can dictate that the union hierarchy will be instructed as to the reasons, the gains, the problems. It can foster participation of this kind in the hope of spurring the union to more co-operative activity.

*Economic Condition.* Manpower conservation costs money! The cost is high and the return is particularly difficult to measure with any accuracy. It is no wonder then that conservation techniques and programs suffer first when the company's economic position begins to deteriorate

Although this pattern seems logical and correct, it lacks wisdom. Some manpower conservation practices may lend themselves to this on-again-off-again treatment, but most do not. In fact, the very time when cost-cutting devices are most needed is the time when general economic conditions are the worst. If thorough but costly accident analysis work results in the removal of accident cause, more money is saved than would be saved by eliminating the analysis.

Another point arises: it is still difficult to predict accurately the exact life cycle of many pieces of equipment. It seems wise, therefore, to have policy require that all safety and health devices be so amortized as to enable immediate replacement at the time of expected wearout, and to facilitate immediate replacement following unexpected breakdown. Such a policy requirement is not a manpower issue, however, it is of interest to manpower managers.

*Production Practices.* Some managements are spoken of as "bleeders" — and rightly so. Some managements merely fail to see that the "good old days" were not really so good. The "bleeders" practice archaic production methods as long as possible, wringing every last dollar-dripping out of the sponge. The "old liners" tend to use old methods as long as they can because they lack the know-how to do better and they resist change. Archaic or "bleeder" practices cause unnecessary loss of manpower and minimize profits and the likelihood of continued life.

**OPERATIONAL CONSIDERATIONS.** The operational matters discussed in Chapter 9 apply here. In addition, conservation policy will

depend upon: (1) what is required, (2) where it is required, and (3) when the requirement should be met.

*What Is Required.* The cost of manpower replacement may run from an \$18.00 paperwork charge to a total processing cost ranging from \$300 to \$1,400, and in some cases much more. When an accident occurs, the direct and indirect cost may average approximately \$2,000.<sup>4</sup> Even a simple arbitration case may cost more than \$1,500; a slowdown resulting from employee unrest can cost much more. Adequate policy requires that there be programs to minimize or eliminate such costs and recurring analysis to determine program needs and effectiveness.

Effective conservation procedures need to be preceded by satisfactory recruitment and selection policies and procedures and correctly established manpower induction and development. Furthermore, a completely adequate compensation program is needed, one which assures, so far as possible, the equitability of wages and salaries.

*Where Required.* This issue relates to the question of scope: shall conservation be considered a rank-and-file problem, a management problem, or both? Usually it applies to both management and the rank and file. In some circles the need for management conservation is not recognized. Policy thus should clearly state that conservation is the business of every manager from the lowest to the highest echelon.

*When Required.* Manpower conservation is a continuing effort. Adequate policy recognizes this. It also directs attention to the fact that a variation in intensity may be required as the economic condition of the company and the nation change and possibly if certain process changes occur. In addition, policy may be required to provide general direction to conservation applications if there are location changes.

Intensity-variation is related to the severity of the risks inherent to a process. Variation in conservation effort thus may appear from job to job and from time to time. For example, one job out of many may be particularly risky. It will require intensive safety work. Or, at some particular time of the year, a given job may be more dangerous and require greater conservation effort.

*Operational Liaison.* Adequate policy emphasizes the existence and active utilization of correct liaison — correct control communication. One cannot hope to implement any manpower conservation practice successfully unless all units in any way involved have the right to direct, rapid, unencumbered communication with each other concerning conservation matters. An SOP or procedures manual facilitates both correct circuit utilization and development of proper liaison.

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<sup>4</sup>cf. Roland P. Blake (ed.), *Industrial Safety* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1953, 2nd ed), p. 22, Rollin H. Simonds and John V. Grimaldi, *Safety Management* (Richard D. Irwin, Inc., Homewood, Ill., 1956).

## THE GENERAL CASE

The importance of avoiding “canned” manpower conservation programs cannot be overemphasized. The importance of analyzing requirements and auditing success cannot be overstressed. A so-called general case does exist, however; that is, a more or less common model, or set of conditions, appears and can be used as a guide to understanding the probable nature of a manpower conservation effort. This general case focuses attention upon several factors: (1) the already stated general purpose; (2) the dependency pattern of such programs, (3) the practices most likely to be required in the majority of organizations, (4) the responsibility pattern for those practices, and (5) the typical basis for measuring the need for and the success of such programs.

*GENERAL DEPENDENCY PATTERN.* Consider the confusion possible if one attempted to correct a housekeeping problem, such as oil-puddled floors, without first contacting the plant engineer or maintenance foreman. Or, consider the problems in a situation where accidents are being caused by a process which could be changed to minimize or eliminate them if engineering would just act — consider this in the light of the fact that, since engineering won't act, some member of the health and welfare section of the manpower division takes it upon himself to act! The rule holds that the *manager must not violate the proprieties of his job and job relationships*. Control circuits thus must be maintained and operated correctly at all times; staff advice, backed up by technical competence, should be treated as a “demand request.”

Another pattern affects the success of conservation efforts, that is, the competency of the manpower personnel. Note the results obtained in the following instance.

**George** George had been shop steward for nearly ten years. He had dealt with management in a severe and often rough manner; but he had gained management's respect for he could keep his people in line — what he said went, whether they liked it or not.

George had worked for the organization for 16 years. He had little education, no experience in any organization other than his union. His nickname clearly indicated what his constituents thought of him. Employees with enough nerve to speak up indicated that, although no formal accusations had ever been lodged against him, George would deal with dissenting subordinates with whatever means were near at hand — sometimes, allegedly, with the handiest piece of hardware.

The assistant director of labor relations retired. Management decided to give the job to George. The common excuse for this

act was: "After all who else around here can keep the men in line the way he can?"

The record indicates that shortly after his promotion the quit-rate increased, grievances increased, and the general aura of conflict became quite obvious.

In truth, successful manpower conservation work requires a peculiar combination of know-how on the part of those manpower people charged with the responsibility — not George's kind of know-how. They need the respect of the rank and file as well as the management team. Their competency must be such that they are readily accepted when they seek to teach members of management, engineers, and union stewards. The nature of conservation work requires that manpower people have a good understanding of psychology, physiology, and engineering (which George certainly did not have). They also must appreciate equipment and process problems and design, and the fundamentals of layout and economics. Such a complex knowledge pattern suggests that these cannot be narrowly expert people; in fact, it suggests the need for a "team" of experts, and often this is exactly what is established.

*THE GENERALLY-REQUIRED PRACTICES.* Manpower conservation practices lend themselves to a threefold classification as follows.

- (1) Physical Conservation Practices.
  - . . . Accident prevention and control
  - . . . Medical service
  - . . . Recreation programs
  - . . . Social services\*
  - . . . Fatigue control\*
- (2) Psychological Conservation Practices
  - . . . Employee self-expression program
  - . . . Vacation program
  - . . . Academic program
  - . . . Fatigue control\*
  - . . . Morale analysis
  - . . . Employee self-services\*
- (3) Labor-Management Relations Practices.
  - . . . Contract negotiation
  - . . . Published, lived-up-to layoff, discharge, and discipline procedure
  - . . . Grievance machinery

\*Classification of these practices seems to be interchangeable. One notes that social services may be employee self-services; that so-called fatigue control has both a physical and a psychological connotation.

Successful conservation programs usually include most of the foregoing. Sometimes additional practices are found or the arrangement differs, but the underlying requirement is always *good supervision*. This grouping provides a common format of activity. We shall discuss these three areas in the remainder of this (Part V) portion of the text.

### **NEED DETERMINATION**

Repeatedly we have warned: "Do not adopt manpower programs or practices simply because it is the thing to do." A need must present itself; it must be defined and its importance studied in comparison with the whole situation before manpower programs are initiated.

Manpower conservation is no different. Conservation efforts cover three areas. Need determination therefore requires investigation of evidence concerning those areas. One thus considers the physical, psychological, and labor-management factors. Evidence of physical needs can be determined through study of accidents, absenteeism, and turnover. Evidence of psychological needs usually shows up through study of turnover, absenteeism, grievances, and possibly accidents. Evidence of malfunction — and conflict arising from that malfunction — in the area of labor-management relations can be discovered through study of grievances, turnover and absenteeism, possibly accidents, and disciplinary records. Obviously, some degree of evidence regarding all three conservation areas can be turned up by study of the same factors. Furthermore, morale analysis might provide evidence concerning the physical as well as the psychological sources of plant conflict.

The need-determination requirement draws attention to certain related considerations. As a general rule, conservation work should focus upon basic human needs before becoming involved with any frills. For example, the need for proper lunch facilities and diet is usually more important than a program of scholarships for employees' children.

A sometimes forgotten point is that need is regenerative. It remains until the cause of the need is removed. Mere installation of programs does not necessarily remove need. Furthermore, if the benefits of conservation work are not mutual, the need may intensify. One concludes that conservation programs should be of long-term mutual benefit to management and worker.

### **SUCCESS DETERMINATION**

Apparently the degree of free co-operation in an organization determines to a large extent the effectiveness of its operations. If therefore one can ascertain the approximate amount of co-operation freely present, then a fair indicator of conservation success has been estab-

lished. One approach is to study morale. It often is assumed that a "high" morale level is indicative of free cooperation. Other things being equal, effective production also should be present. Participation can be studied. Individuals who freely participate in company and community-related activities can be assumed to be freely co-operative and expected to produce effectively. Again, where employees willingly tackle emergency problems, free cooperation seems to exist and effective work can be expected. This approach is not definitive enough, however, and is based entirely upon generalities which often are not founded on fact.

Reasonably dependable assurance that economic production is resulting comes only from the study of concrete factors. The approach involves study of labor turnover, accidents, absenteeism, the quality and quantity of production, the quantity of scrap and waste, and cost. The technique which suggests itself is to study the before-corrective-action data as compared with the after-corrective-action data. If a significant improvement exists, one safely can assume that conservation efforts have paid off.

*Remark.* More attention will be given these appraisal problems in the following chapters. The purpose of discussing need and success determination here is to focus attention upon the fact that policy should dictate that such measurement will be made, and that the approach to be taken is not a simple matter of looking at the information required by insurance companies or governmental bodies or other external agencies.

## SUMMARY

Development of manpower conservation policies is the business of every manager, particularly manpower managers. Activation of conservation practices and programs is likewise the business of every manager and of manpower personnel. In essence, this phase of the over-all manpower function seeks to maintain or improve the well-being of the entire workforce; it seeks to remove or minimize conflict stimulated by physical, psychological, or labor-management deficiencies in the firm's operations. It is an economic necessity, not a set of programs developed because of anyone's "goodness" or interest in the "happiness" factor. Manpower conservation work seeks to reduce manpower and production losses and to hold together a competent workforce. In short, it seeks to maintain the strength of enterprise.

Correctly-developed procedures are based upon study of need and audited periodically to determine their continuing value. Too often, in practice, organizations merely "buy" a "canned" program and then assume it has value. Frequently this results in unwarranted expenditures of large sums of money.

Conservation practices cannot succeed in isolation. Unless supported by effective employment, development, and compensation poli-

cies and practices, conservation efforts tend to be of little value. These efforts cover three areas. Let us turn, in the next chapter, to the matter of physical conservation, then to the psychological, and then to the issues involved in labor-management work.

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## Physical Conservation of Manpower

An individual's physical condition affects his attitude toward his work and his companions, and influences the quality and quantity of his production. These factors affect the profit picture of his firm. The importance of his physical condition is, then, a matter of economics.

Physical conservation work has a wide scope. It embraces every feature of the working environment in any way related to man's physical condition. The work involves: (1) accident prevention and control (safety management), (2) medical service; (3) cafeterias or food service; (4) transportation; (5) recreation; (6) housing; (7) the problems of light, noise, humidity, color, and (8) problems related to fumes, dust, and temperature.

As a guide to its work, and to assure effective, organized programming of the physical conservation function, the manpower division requires a carefully developed set of policies.

### **FACTORS AFFECTED BY PHYSICAL CONDITION**

When it comes to actual operations, man's physical condition directly influences the following "control" factors. Each of these factors is important to managers, including manpower managers.

1. Labor turnover
2. Absenteeism
3. Accidents
4. The quality of production
5. The quantities produced
6. The number and nature of grievances

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<sup>1</sup>The Bell System's Safety Creed, American Telephone and Telegraph Company (by permission).

*PHYSICAL CONDITION AND TURNOVER.* Most people realize that frequent and severe accidents contribute to an unwanted and possibly large amount of labor turnover. Most perceive that an individual injured so that he no longer can perform the required work must be transferred or discharged. Few people miss the point that, as man deteriorates with age, his ability to do certain kinds of work diminishes and the likelihood of discharge increases. Furthermore, a man's production drops if he is unwell, and continued ill health may be handled by discharge. Additional points exist which illustrate the possible turnover problems.

1. If the job threatens or appears to endanger his physical welfare, the individual's sense of security is threatened. Other results are that his job effectiveness becomes questionable and he is encouraged to seek employment elsewhere, or his family demands that he quit!

2. If a person finds himself in close proximity to a severe accident he may consider a change in employment. His thought may be: "Perhaps I'm next, I'd better go elsewhere!" Or, pressure to get a different job may be brought upon him by his family. This possibility reflects the indirect effect of another's physical problem upon the turnover picture.

3. When an individual's physical condition deteriorates, he may be the direct cause of the turnover of others. For example, fellow workers may become frustrated by the fact that they are "carrying" him. They may be unable to have him eliminated from the scene, hence, *they* may leave the scene, or the reverse may occur. Management may discharge a man whose physical condition has deteriorated, and his fellow worker(s) may quit because they think management's action unfair.

4. Socio-psychologically, physical deterioration often makes a person a problem to himself and others. Working conditions which would not bother a 40-year old in good health may very well be the root-cause of aggression or some other frustrational tendency in a 55-year old. Such tendencies upset the socio-psychological stability of work units. Discharge may result, or fellow workers may be so profoundly affected that they quit or must be discharged.

*PHYSICAL CONDITION AND ABSENTEEISM.* If a poor selection has been made, the new man may be physically incompetent to handle the job. He will have to be eliminated one way or another. A poor selection may result in the individual's absenting himself quite frequently *before* he is eliminated. Such absences cost money. There are other typical relationships.

1. The job may cause a deterioration of the man's physical condition. If so, the individual may absent himself while seeking medical care.

2. Although a selection may have been good, time plus the nature of the job may activate an old illness or injury. Again, absence must be expected.

3. Physical condition, sex, and absenteeism are naturally related. What may not be understood is that female employees may tend to cycle together. This would naturally increase the absentee problem. (See Figure 54)

4. Training may not prepare an individual properly for the actual work required. On occasion such a situation leads to a physical problem — although no accident may develop, the job may tire the person — he may absent himself specifically to rest. This may be related to bad selection, it may also, however, be related to improper training or improper engineering of the job.

Number of Female Employees				Two Month Time Blocks	Number of Coincidental Absences Per Time Block	Repeat Coincidental Absences
Start	Quit	Add	Total			
--	--	--	10	--	2	--
10	1	1	10	1	2	--
10	4	6	12	2	3	2
12	2	6	16	3	2	2
16	0	0	16	4	4	3
16	1	1	16	5	8	6

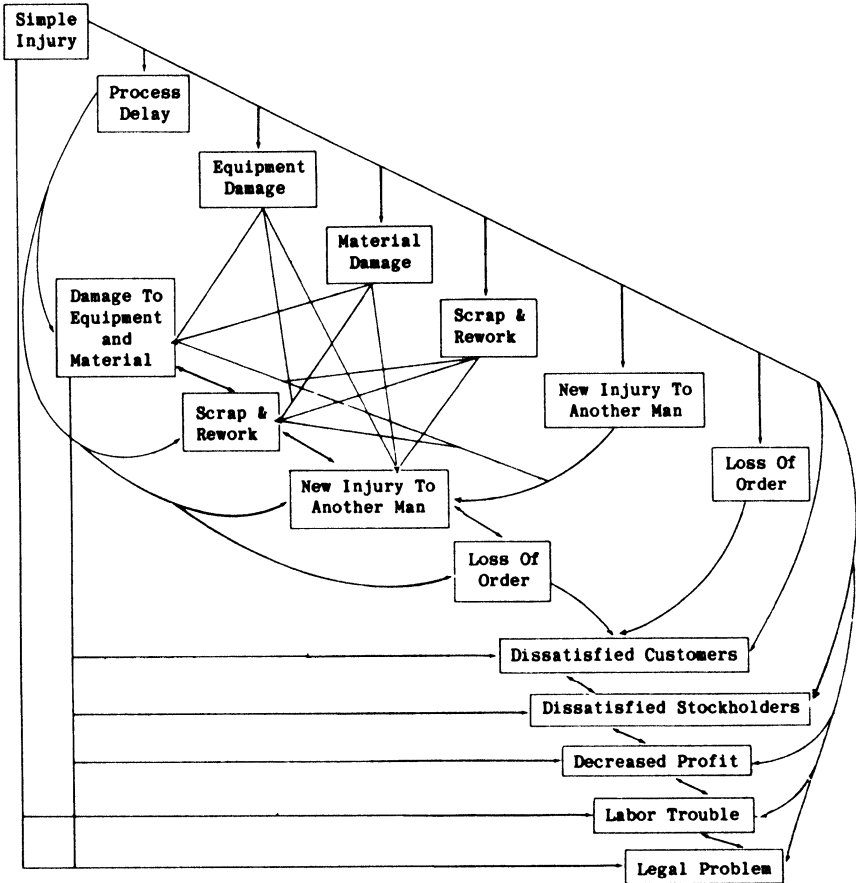
Note No conclusions are drawn as to cause and effect. It seems reasonable, however, to believe that "blocks" 4 and 5 substantiate medical authority comments that a tendency toward sympathetic cycling exists.

## RESULTS — PILOT STUDY OF COINCIDENTAL ABSENTEEISM AMONG FEMALE WORKERS IN A "SERVICE" DEPARTMENT (1960)

Figure 54

**PHYSICAL CONDITION AND ACCIDENTS.** Individuals who lack the physical competency required for a job, or whose physical condition has deteriorated so they can no longer handle it properly, will be more *prone* to accidents than those physically competent unless, of course, the job has been adjusted to take the physical problem into account. Then, too, if the job causes a physical deterioration in the person, he tends to become more prone to accidents. Again, although a physically incompetent individual may not have an accident himself, he may cause a co-worker to have one. Figure 55 suggests some possible results from one simple injury.

**PHYSICAL CONDITION AND QUALITY.** If poor quality of production correlates with inadequate physical condition of an em-



Note This represents only some of the things that can occur as a result of one injury and some of the action and reaction paths. One injury is apt to generate a chain of events which can be stopped only by some counteraction. Good supervision, proper engineering of jobs and processes, and the like could prevent most such events from starting in the first place.

A POSSIBLE RESULT PATTERN OF ONE SIMPLE INJURY — AN EXAMPLE

Figure 55

ployee, unsatisfactory selection practice usually is blamed. In many cases poor selection may be, in fact, to blame; sometimes, however, this is not the case.

Originally the selection may have been good; however, a change in the quality standards and the production process may be made without any thought to the individual's physical ability to meet them. In such cases, one expects to find a reduction in the production quality

and possibly an increase in accidents. Furthermore, as age creeps up on the individual, his physical condition may decline and cause his production quality to diminish unless the job is adjusted to meet his reduced competency. These same remarks pertain to *quantity of production*.

**PHYSICAL CONDITION AND GRIEVANCES.** Management's failure to correct unsafe operations leads to grievances. When jobs endanger them, employees seek corrective action through the grievance process. There is another side to the coin, however. The individual who knows he is in no physical condition to handle a job may seek to divert attention from his own incompetence by using the grievance process to draw attention to some "substitute" problem — real or unreal. Studies and statistical proof merely support the conclusion that if physically incompetent persons are selected into an organization, the grievances increase.

### **JOB, ENVIRONMENT, AND PHYSICAL CONDITION**

Each of the factors mentioned involves nonproductive costs. If a firm's money is tied up in this way, its opportunities to invest in productive functions, equipment, and the like diminish. To avoid that eventuality, physical conservation programs are installed. Such programs put the burden of knowledge upon the manpower manager.

**THE JOB AND PHYSICAL CONDITION.** Changes in jobs, technical innovations and alteration of raw materials lead to, or actually create, changes in the physical demands and risks facing man in his work environment. It thus is not enough to know what the demands are and what people's abilities may be at some given moment in time — it is not enough to depend upon a system of job analysis to provide evidence of the existing physical demands of jobs. A continuing program of process analysis, methods study, and the like also is required and should be conducted with *reduction of the physical deterioration* or drain upon man as part of its purpose.

This requires several things of the manpower manager. *First*, that he conscientiously work to assure a proper liaison with the industrial engineering (and often the process and product engineering) group. *Second*, that his staff be developed to assure their ability to recognize an opportunity to improve jobs, as well as to recognize those jobs needing improvement. *Third*, that he gain rapport with the "line" managers — particularly foremen — in order to improve the likelihood that they will voluntarily provide information related to both needed improvements and possible means for making them. *Fourth*, that he elicit the support of the controller and the top echelon production people in fostering the continuing effort to remove or minimize the physical risks associated with the jobs (he thus becomes

a "path-clearer" for the industrial engineering group). *Fifth*, that he make every effort to enlist the co-operation of the union — often "labor-saving" devices and techniques are the direct means used to improve the physical-risk situation, and the union typically resists such devices or techniques.

**PLANT ENVIRONMENT AND PHYSICAL CONDITION.** Man's physical deterioration can be hastened by a poor work environment. In fact a plant environment can, in a short time, drastically affect even those in truly excellent condition at the beginning of their employment. Concentrations of toxic fumes, inadequate lighting, improper sanitation, and other factors influence an employee's condition. If either job or environmental changes requires a retraining of personnel, the manpower manager will have a direct responsibility. The same is true if change leads to alteration of wage formulas and the like. As far as actual environmental conditions are concerned, his responsibility is advisory.

### ACCIDENT PREVENTION AND CONTROL

Often referred to as "safety management," accident prevention and control enjoys a particularly important place in the hierarchy of manpower management practices. After all, "Every wage earner is concerned with health and safety,"<sup>2</sup> this includes managers as well as rank-and-file personnel. The fantastically high costs of industrial accidents stir their interest and action. Such costs are nonproductive and have a diminishing effect upon profits. "Seat-of-the-pants" or opinion-fostered programs attack the problem, but success is largely a matter of chance unless a studied control system is applied.<sup>3</sup>

**BASIC PRINCIPLES** Alert managers realize that the prevention and control of industrial accidents and environmental hazards has an extensive as well as an intensive effect.<sup>4</sup> Not only the company but also the community feels the effect of accidents. A single disaster to a single company may reach out and strike at the economic position of the state and even the nation. It is no wonder, then, that safety engineers often seem to be "torch bearers" as they speak of principles.

Some of the basic considerations are as follows.

1. The safety of the employee is a company and a community responsibility.
2. The safety of the employee has an impact upon the company,

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<sup>2</sup>Robert Morse Woodbury, *Worker's Health and Safety: A Statistical Program* (The Macmillan Company, New York, 1927), p. 3.

<sup>3</sup>cf. Rollin H. Simonds and John V. Grimaldi, *Safety Management* (Richard D. Irwin, Inc., Homewood, Illinois, 1956), Roland P. Blake (ed) *Industrial Safety* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1953).

<sup>4</sup>Woodbury, *op. cit.*, pp. 3-16, *passim*.

the community, and possibly the region or nation; that impact extends to the family and the co-worker; it involves *both* the physical and the psychological condition of the employee, his family, and his co-workers.

3. There are some hazards which are so serious, at least in potential, that cost is no issue when elimination is considered.

4. Preventive effort is required wherever danger, the risk of accident, or the actual existence of hazard is found.

5. Prevention is more important than correction: it is wiser to take steps to prevent the fire than to worry how to put it out once it is started

6. Prevention depends upon determination and elimination of cause.

7. Determination and elimination of cause demand attention to general causal patterns, study of past events to determine specific cause patterns, continuing analysis of existing conditions to enable immediate identification of newly developing hazards.

8. Preventive measures normally should be selected in terms of *both* effectiveness and cost.

9. Prevention requires constant surveillance and enforcement.

10. Every employee has some responsibility for the prevention of accidents and the elimination of environmental hazards. Responsibility becomes more extensive, however, as the hierarchy increases and more intensive as it decreases<sup>5</sup>

11. The manager is responsible for his losses! Unless the exception principle is at work in an organization, and unless the full implications of span theory are recognized, this statement of principle will be relatively meaningless.<sup>6</sup> Furthermore, this comment can be restated as: the guilty should bear the cost! *No manager can escape the responsibility for accidents.*

**ORGANIZATIONAL CONSIDERATIONS.** The situation identifies the organizational factors to which management should direct its attention. Certain fundamental points require attention, however, regardless of the company, its product, its location, and the like. The questions of responsibility, type of organization, and nature of authority cross into every company.

*Responsibility.* It is a principle of safety management that *accident prevention and control is everyone's responsibility!*<sup>7</sup> Even the machine operator, the floor sweeper, the stock clerk, and the switchboard operator have a responsibility for safety. The principle also indicates that the supervisor, the department head, the top executive, and staff personnel have a responsibility for safety. This relationship

<sup>5</sup>cf. Chapter 3.

<sup>6</sup>cf. Chapters 3, 4, and 6; also Peter F. Drucker, *The Practice of Management* (Harper & Brothers, New York, 1954), Chapters 12, 23, 25, and 27, *passim*.

<sup>7</sup>Simonds and Grimaldi, *op. cit.*, pp. 61-64, *passim*; Blake, *op. cit.*, pp. 319-321, *passim*.

merely reflects an extension of organization and control theory. As the hierarchy increases, the nature of safety responsibility becomes more extensive. We find, therefore, the following set of conditions.

1. The individual employee is directly responsible for his conduct and for the degree of safety with which he carries out his assigned tasks. That responsibility is limited, however, by the training and supervision he receives, by the adequacy of the methods, tools, and equipment given him to accomplish his work, and by the adequacy of his environment.

2. The supervisor is responsible for proper instruction and follow-up, proper supervision, and for assuring that the correct tools and materials are used, and that equipment maintenance is at least satisfactory. He is responsible also for the timeliness of recommendations concerning improvement of methods, process, and environment and for his subordinate's performance — that is, should he detect incorrect procedure, he should make "on-the-spot" correction. Furthermore, these comments extend upward to include each manager and his responsibility for each subordinate manager or immediately subordinate worker.

3. The foregoing points indicate that safety responsibility is *both* a line and a staff responsibility. There thus will be a line authority as well as a staff authority in the management of safety. In each "line" (whether the unit involved is a support, an action, or a service organization) each immediate superior will have command authority over the acts of his subordinates, consultative authority with respect to his peers, and advisory and "demand" authority regarding units external to his line.

4. It therefore stands to reason that although subordinate managers are, and must be, held responsible for the safety of their operations, top management must actively support the subordinate in his efforts to attain and maintain safe operations. This further suggests that all managers must realize that accident prevention and control is a "demand" function. Prompt action is mandatory when they are confronted with a situation demanding attention to safety.

5. The complexity of this responsibility picture indicates that although the "guilty should be responsible for their acts," the individual worker *who* has an accident may not be to blame! Before fixing responsibility for a given accident or industrial illness, one should carefully study the pattern of responsibility in the given hierarchy as well as the exact nature of the accident.

6. The staff responsibility for safety management is, in itself, a complex matter. Where a manpower division exists, ordinarily it will be administratively responsible for safety management; it must meet this responsibility by establishing careful and complete liaison with the existing company engineering units.

7. Finally, and regardless of the fact that safety management fits into the staff hierarchy, the director of the safety effort should have full authority to shut down operations, and he should be fully aware that this is a basic responsibility of his job.

*Organization.* The size of a firm, the nature of its production processes and its products, the type of facility housing the process, and past experience combine to become the prime determinants of the kind of organization used to handle safety management. Instances will exist where no safety director is needed. One can conclude that there is no universally acceptable theoretical model for safety management. *One cannot conclude, however, that the line organization can escape responsibility for safe operation.*

There are three types of safety organization: the pure line, the staff, and the committee. Of course there are variations; perhaps one of these variations eventually will become the accepted general model.

In the purely *line* setup, the chief executive and each of the top-production managers become the safety experts. They are charged with administrative as well as functional responsibility. They analyze, correct, and enforce. This approach sounds workable. It appears on the surface to be the least expensive approach. However, this is seldom true even in small organizations. The prime weakness is a natural one — namely, the operating manager is ordinarily so very busy with the problems of getting out production that he has little time for anything else.<sup>8</sup> As a result, his preventive efforts usually occur after-the-fact; his knowledge of accidents, their causes, patterns, and the like develops as a result of accidents. This indicates that he is incurring manpower and production losses which may be unnecessary, though his alert action may mean that little repetition will occur.

Where safety management leans wholly upon *committee* action, the same negative comment may apply. True, properly established and managed committees perform effectively in many cases (one usually discovers that where this is true, it is because the committee exists as a part of a carefully designed line-and-staff type arrangement). Committees are notoriously hesitant when it comes to making “hard rock” decisions. They frequently spend more time worrying about the “order of things” than about the cause of things, and committees *lack* command authority.

**Illustration #1** At hospital X a new building had been erected. The main hall, the entrance lobby, the main elevator bank, and the main stairwell came together in one huge cross. The safety committee (composed of the heads of each division and one member of each major sub-unit in the hospital) had been in existence for many years. Most of their time was spent investigating accidents to determine the *status* of the injury (whether the individual was guilty or not). Some work was done to attempt to

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<sup>8</sup>cf. Chapter 8.

discover what caused an accident. In two years of observation, however, only one instance of actual accident prevention and control was noted. As an example of the kind of "cause" missed because of the typical actions of the so-called safety committee, note the following.

The observer (trained to be sensitive to cause) immediately noted the risk situation present in the design of the previously mentioned hall-lobby-elevator-stair situation. Observation quickly indicated that this one location was the scene of anywhere from five to twenty "light" collisions a day. Occasionally a "heavy" collision would occur (in one case resulting in a broken leg). Why did the so-called safety committee fail to detect this risk area? Why has nothing been done to minimize the risk?

**Illustration #2** Hospital Y was a perfectly stunning example of modern design. A clean, smooth-of-line structure, it had every desired modern convenience. The doors to the main lobby opened automatically, *but*, inside those doors there sits imbedded in the spotless floor a death trap, in the form of a very attractive mat. Obviously the mat is designed to wipe one's feet upon. The trouble is, this mat is designed with openings in the composition webbing — openings just large enough for a woman's high heels to get into, and just small enough for them to stick. Observation on a random basis over a one-week period supported the conclusion that this was a risk-area. Out of 35 women observed entering the building, 21 became emmeshed. Of the 21 caught, three broke their shoe heels, two fell, one twisted an ankle badly enough to require treatment in out-patient, one dropped and smashed a gift, two fell into other visitors, and one sprained a wrist requiring out-patient. Why did the safety committee in this case fail to do something about this risk?

The purely *staff* organization may perform more effectively than an organization based entirely upon committees, and it may be as effective as the line organization. Because of the usual authority problem,<sup>9</sup> however, the person in charge may find it impossible to enforce safe action.

*Recommendation.* It appears that the organization most likely to succeed for safety management combines all three of the base techniques. There is a safety director who reports to the vice-president of industrial relations (or manpower manager), the line managers are held responsible for the safety of their operations, and there are committees to aid in the over-all preventive activity. Furthermore, but only if the situation warrants, there is a "team" of specialists to

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<sup>9</sup>cf. Chapters 3 and 8.

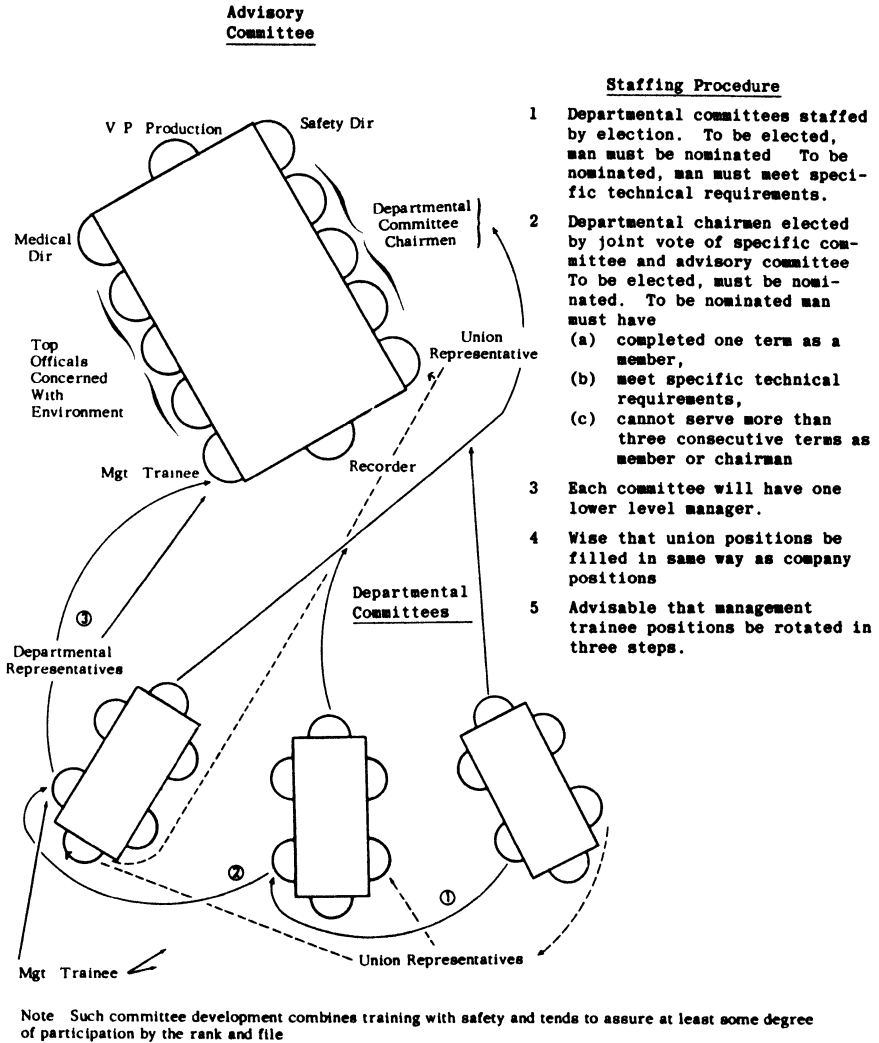
perform very technical analysis and investigation. This form of organization is recommended. Let us look at it more closely.

*The Safety Director* — he is the “staff” expert; the analyst of events and procedures; the co-ordinator of preventive activities; the liaison with the insurance company and the state; the advisor to top management regarding policy development affecting safe practices, and the manpower representative to engineering and production in the development of safety procedures, layouts, and general operation. Obviously, this individual should be more than a technical expert. He must be a salesman! He must be accepted by, and in turn able to accept, the line managers and the engineering personnel. He must be at ease with top management and able to convince them of the wisdom of his recommendations. Such a complex set of requirements indicates that the individual needs a sound foundation in the mechanics of production (he must at least be able to speak the language and understand the problems of engineers and production personnel). In addition he requires a careful grounding in the behavioral sciences; he must not only influence the work and decisions of others but also understand the actions and reactions of others. His prime purpose is *to make all employees conscious of the importance of safety* — conscious to the point where safety becomes inherent to the operation, and to the production performed by every employee.

*The Line Managers* — in principle as well as practical fact, the line manager is inherently responsible for the safety of his operations. This same comment holds true for engineers and maintenance personnel, in fact, for every manager in every “line,” be it an action (line) or support or service unit. Theirs is the right and obligation of command; it is also their right to demand assistance from the safety director, and their obligation to utilize his advice.

*The Committees* — their design and function depends largely upon the actual situation. Their basic purpose is the stimulation and maintenance of co-operation and interest in safety. The real strength of safety committees lies in the fact that through them the individual employee participates in the safety program as something more than the recipient of safety orders. Several possible committee structures are rather widely applied. A design (see Figure 56) which appears reasonably functional, while assuring practical participation by numerous employees, includes the following:

1. *Advisory Committee* — chaired by the vice-president of production, the works manager, or the general manager, as the case may be, this committee is staffed by the top line and staff officials whose jobs typically have a direct bearing upon safety. The group also includes representation from the union hierarchy, the safety director and the director of medical service. The safety director functions as the expert consultant to the group. (In the case where a doctor is part of the company’s organic staff, both he and the safety director may be included.) The group pursues three specific activities: (a) de-



**SAFETY MANAGEMENT COMMITTEE STRUCTURE**

**AN EXAMPLE**

*Figure 56*

termination of steps needed to promulgate effective programs — steps which top management may consider as advice regarding policy development, (b) periodic evaluation of the over-all plant safety performance, and (c) consideration of enforcement procedures. In gen-

eral, this committee serves in an advisory capacity to both the top operating manager(s) and the safety director and as a communication media for both the safety director and the top operating officials.

2. Departmental Committees — established as an “out-of-the-line” unit within each department, these committees bring the safety message home to operating personnel and may function as the investigating units for accidents within the departments. The committees are chaired by the representative to the advisory committee and staffed by selected or elected members from each section within the department. It is wise to consider the inclusion of at least one union official in each such committee.

Although these committees have specific assignments involving investigatory power, their existence in no way lessens the obligations of line managers or the safety director. Furthermore, the following four operational guides should be kept in mind when the committees are formed: (1) the membership should include those with the knowledge pertinent to the problems it will handle, (2) the committee should be as small as possible to get the required work accomplished, (3) its scope of activity, nature and extent of authority, and procedures should be reduced to writing, and (4) committee action should not exceed these formally-recognized limits.

*The Team of Experts* — a large number of industrial organizations have such complex processes involving so many accident and health risks that they seek the active assistance of specialists in their fight to gain and maintain safe operation. In some cases, these experts are internal (or organic) to the organization. In some, they come from the insurance organization(s) servicing the company. In still other instances, both the outside and the inside experts are utilized.

Many insurance organizations maintain special departments staffed by individuals whose mission involves analysis and recommendation — analysis of the customer's operations and recommendations to improve the safety factor. Five companies maintaining such staffs are the Liberty Mutual, Lumberman's Mutual, Hartford Accident and Indemnity, Aetna, and Employers Mutual of Wausau. In addition, many insurance organizations maintain highly effective research facilities and personnel. They conduct experimental studies designed to establish accident-cause patterns as well as devices to reduce or eliminate hazards of all sorts.

*Authority.* There can be little question regarding the authority of line managers; obviously, it is their right to command. Safety directors, however, are another matter. *The actual authority held by any given safety director is governed by the situation* — it develops in terms of the hazards and production processes, not as a result of a theoretical reference to “staff” personnel! In other words, there are situations where a safety director will have the right of command.

For example, if he is making a tour and discovers through the use of testing equipment that the air contains an excessive and extremely dangerous toxic level in a given plant area, *he should have the authority to order the production manager in charge of that area to close down or evacuate.* If the manager of the area is allowed to act in accordance with his own "experience" or allowed to reject the safety director's suggestion, a new workforce may be required in a short time. A great many industrial disasters have resulted from failure to listen when a safety director spoke!

### ANALYSIS

One key to effective accident prevention and the elimination of health hazards is analysis — analysis of cause and effect; analysis of mechanical and non-mechanical causes, and analysis of the single, chain, and multiple-chain effects of accidents. As this realization strikes home, others also appear. For example, (1) both physiological and statistical analysis may be necessary, (2) analysis may be necessary to combat the misconception that "the safe way is the slow way," (3) although a means for reducing hazards may be available, analysis may be required to ascertain whether the cost is warranted, (4) required analysis may demand the attention of more than one unit in the firm, and (5) the records and studies required by law and insuring organizations may be totally inadequate for internal control.

*ANALYSIS OF WHAT?* Equipment, material, design, or environment deficiencies can cause accidents and health hazards. Psychological factors also can be a cause. The production processes, raw materials, equipment, and tools require study to determine their safety characteristics. When industrial engineers study work loads, when process engineers study the process, when plant engineers consider the layout or plant facilities, and when raw materials are being reviewed for possible change, the safety aspects are included in the study. Similarly, since people and their actions and reactions to themselves, their environments, and each other play a part in the cause and effect pattern of accidents, the psychology of the employee should be considered. This includes the general "morale," the individual frustration levels, and accident proneness.

*PREVENTIVE ANALYSIS.* Prevention is the real goal. Continuing, planned study serves to uncover hazards *before* they become causes of accidents. One thus applies preventive analysis when the following practices occur.

1. Analysis of the concentration of fumes, dust, gases, and vapors in work areas — media: air, urine, and sputum sampling.
2. Analysis of toxicity of machine or chemical process outputs — by area and personal monitoring via air, urine, sampling and by special environmental monitoring devices.

3. Analysis of ventilation, humidity, and temperature. All three factors often cause accidents or illnesses. Not only is study made to determine initial adequacy of the factors, but checks are made via special monitoring tools designed to maintain a continuing record of rates

4. Analysis of processes, materials, and equipment to determine their dermatological characteristics. Many industrial situations facilitate the incidence of dermatitis, causing or supporting the growth of fungus and contributing to or creating painful lesions and the like.

5. Analysis of radiation resulting from processes, materials, and equipment. Both area and personal monitoring must be used to maintain a proper analytical check upon radiation.

6. Analysis of noise and light levels. Many accidents are a result of excessive noise, insufficient light, and so forth; employees' health often is impaired one way or another by the same factors.

7. Recurring methods or process analysis to see that the "right" methods are being applied and to seek better ones.

**ANALYSIS — WHERE?** As already indicated, analysis can be handled through area or personal monitoring or both. Furthermore, analysis can be undertaken at the workplace, through records of accidents and near accidents, process changes, turnover, and the like. Personal checks generally require that the individual present himself for periodic medical examination.

**"NEAR ACCIDENT" ANALYSIS.** Often considered a military technique only, the value of analyzing "near accidents" is rapidly achieving recognition by industry. Basically, this is an after-the-fact, but preventive, approach to safety management. Those who "almost" have an accident are required to report the circumstances. The situation then is studied. Environment, equipment, action-conditions (what was occurring, how, when, where, why), and the complete physical and psychological condition of the individual(s) are investigated thoroughly. The value of all this is lost unless apparent causes are removed — which may mean replacement of people, equipment, or material or change in policy, procedures, or methods.

Tied in with analysis of the "near accident" is the issue of hidden hazards. The A. C. Spark Plug Division of General Motors Corporation has adopted a motivational approach to this matter. As reported by H. S. Sharp in "How to Uncover Hidden Hazards in Your 'Safe Plant,'" *Management Methods*, Vol. 17, February 1960, (pp. 97-101), the approach is to expose and dramatize the risks involved in seemingly "little" errors and encourage people to accept, meet, and exceed certain distinct standards of safe practice.

**AN ANALYTICAL PATTERN.** Proper handling of the statistical phase of safety analysis requires that one keep in mind at least two points. *First*, since accidents may occur because of people and/or

because of things, it pays to study both — not only after an accident, but before. *Second*, an accident or an illness may result from factors indicative of unit-to-unit variation, time-to-time variation, and/or unit-to-time variation, one may find that a human force is impelling the non-human factors. The kind of accident records one keeps thus can aid immeasurably in helping prevent recurrence. Perhaps, for example, punch press “A” figures in twice as many accidents as we see associated with similar punch press “B.” It would pay to compare, by an on-the-spot intensive investigation all the evident and not-too-evident differences about the situation at the two presses. It was the unit-to-unit difference in the figures that stood out, thus suggesting the investigation.

Unfortunately, too many plants keep their summary (control) records in such form that identification of the specific machine involved does not stand out — if it is even available in the recorded background supporting data. Alert manpower people realize this and seek to correct the problem through skillful liaison with engineering and controller personnel.

Another unit-to-unit difference could be the accident record of the first *versus* the second *versus* the third shift — all working on the same product with the same equipment or group of machines. Direct comparisons can be made if the “opportunity for the occurrence of the event,” to borrow a statistical phrase, is equal.

A difference between the number of accidents in January through June compared with the July figure may show the last point to be out of control on a “c chart.” (See Chapter 12) Such a result would mean that there is sufficient evidence to justify an investigation of the difference in the situation during July.

A combination of a particular group of operations at one time may be significantly different than another group at another time. The statistical method for evaluating such a unit-time association is the contingency table described in Chapter 10

It is inefficient to go “witch-hunting,” looking for causes of real or suspected differences that may well be the natural result of the interplay of many causes inherently present in the working environment. Changes do occur that can be controlled if attention is paid to those differences that are computed to be statistically significant. Manpower’s safety people should maintain significance records.

## COMMON CAUSES OF ACCIDENTS

Accidents, like illnesses, do not occur unless there are a subject, an agent, and a specific environment. Like illnesses, accidents vary among people, in time, and among people in time. The question of prevention and control (and analysis) therefore is approached much as the doctor would approach a case. One applies diagnostic patterns

and establishes an SOP for the diagnosis of accident and illness. Naturally, the beginning point is to learn the causes of typical accidents. In a text of this kind these causes can be touched upon only; to get into the detail requires specialized treatment.

*THE BASIC CAUSE* Lurking behind 90 or more per cent of all industrial accidents and illnesses one finds *inertia on the part of management and the individuals involved*. The truth of this view lies in the fact that most accidents and illnesses can be prevented.<sup>10</sup> Accidents do not "just happen."

*COMMON CAUSAL PATTERN.* Just as there appears to be a basic cause, there is also a common-cause pattern. It involves two broad classifications. (1) behavioral causes, and (2) environmental causes. Generally speaking, behavioral causes *tend to lead to the unsafe act*. That is, if the behavior is negative, the act tends to be unsafe. Again in the *general sense*, the environmental causes *tend to make any act unsafe*. An improper environment makes it exceedingly difficult for the individual to avoid unsafe action even though his behavior is positive. If both behavior and environment are negative, one *expects* accident or illness to result, but positive behavior may keep the individual from illness or accident even though the environment is negative. (A man can get out of a burning building, he can walk through a mine field.) On the other hand, in the presence of a positive environment but negative behavior, there is a reasonably high expectancy of illness or accident.

*Behavioral Causes.* Five general causes seem common to most situations. Other more specific ones may, of course, appear in a given case. The common factors are as follows.

1. Improper Attitude — the supervisor, the employee, or both are not interested in safety; they mock it, ignore it and consider it great but the business of everyone else. The manager who seeks to uncover evidence of this condition looks for symptoms of frustration. He watches for aggression, regression, fixation, repression, and resignation.

2. Attitude Change — the initial attitude of the supervisor, the employee, or both, may be correct, it may be positive; but as time progresses it make take on negative characteristics. If top management does not support safety, if opportunities to improve procedures and the like are ignored, and if safety committees become mere social gatherings or ego-building devices for managers, negative attitudes will develop almost certainly.

3. Inadequate or Improper Knowledge or Skill — the person who does not know how to do the job safely will not do it safely except by chance.

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<sup>10</sup>The authors have yet to see or hear of an accident that could not have been prevented. This view is shared by the National Safety Council and just about every safety engineer and officer who has ever written on the subject.

4. Physical or Mental Defect Plus Improper Selection and/or Development — if an individual is physically or mentally incompetent for the job, his behavior tends to reflect frustration as well as incompetence. The combination tends to result in unsafe behavior

5. Management — often improper attitudes and attitude changes in employees reflect similar attitudes (and inertia) on the part of management. Furthermore, if an employee lacks training or has been improperly placed, this is not the fault of the employee

What can be done to eliminate or minimize the risk of negative behavior? *First*, correct selection and induction. People must be selected in terms of their total competency, and provided with the opportunity to adjust. *Second*, manpower development is required. People need training for their jobs and for the next jobs they are likely to be assigned — it is dangerous to assume that a new employee (new to company or to job) does, in fact, know how to do the job. *Third*, supervision must be supervision, not “snoopervision.” The supervisor at every level must teach, guide, and correct. *Fourth*, discipline must be firm but fair. Supervisor and superior must work together and see that safe procedure is enforced, even if this means fighting a union hierarchy. *Fifth*, the manpower division should provide counseling service. An individual’s frustrations may be such as to require counseling that cannot be given by his immediate superior, and a union contract may make it impossible to discharge or transfer the man. *Sixth*, correct manpower tools and techniques are required. Job analysis will support selection and training, selection will involve pre-employment tests and physical examinations, and periodic physical examinations will be mandatory, particularly in jobs or areas where environmental danger is great.

*ENVIRONMENTAL CAUSES* There are at least nine basic or common environmental causes of accidents and industrial illnesses. They are as follows.

1. *Unsafe Material* — many of today’s raw materials and items used in product testing are dangerous, some are toxic, some radioactive. Some are dangerous in their incoming, raw state and others become dangerous as value is added. The obvious safety requirement is proper labeling and protection. Although not responsible for these functions, the safety director may be responsible for recognition of the danger and advice regarding its elimination

2. *Unsatisfactory Safety Devices* for equipment, material, and the like. The unguarded “bus bar” or “brake,” the inadequately guarded press, the grinding wheel with shield removed and other examples appear in too many plants. Elimination of the danger requires proper inspection and supervision. In addition, problems may be due to design; therefore, safety personnel should be consulted before equipment is

installed, blueprints are okayed, and purchase contracts are authenticated.

3. *Defective Material or Equipment* due to use or abuse frequently lurks behind accidents. Worn-out cutting tools, gears, controls, cracked hoods, broken oven doors, fatigued material and many related factors cause accidents. For example, in one plant the exhaust hood over the cyanide bath functioned improperly. The absentee rate on that job was high and so was the turnover rate. People simply got sick, but no one did anything about it until a consultant (working on something entirely different) became curious.

Then, too, material may have been improperly worked at a previous work-station. It may arrive with flaws. If so, safety is reduced in the next operation. Frequent inspection by specifically trained personnel who utilize special measurement devices to detect factors most likely to cause accidents and illnesses helps eliminate this source of danger.

4. *Material and Equipment Defect* due to faulty design or construction, inadequate for the assigned work, makes it difficult or impossible to do that work safely. Have you ever tried to drive a screw with a screwdriver too large for the slot?

5. *Unsafe Process* — the only thing to be done is design protective features into the process. For example, a cyanide bath is unsafe, thus exhaust provisions must be built into the process. The reduction cells (cryolite baths) used in aluminum production certainly are unsafe, but engineers long ago designed the equipment to remedy the problem. Where a process is unsafe, however, more than design of safety features must be considered. Correct procedures and rigid enforcement must exist.

6. *Unsafe Housekeeping* including improper shelf construction, bins and racks, inadequate aisle marking, grease on the floor, oily rags and scrap of various sorts lying around and many other features are typical. Also included is the too often neglected sanitation factor, which applies to washrooms and service areas such as cafeterias (how many cases of absenteeism are directly traceable to the uncleanness of eating utensils?). Control over this cause involves many considerations: (a) proper plant and process layout, (b) correct maintenance and housekeeping procedures; (c) adequate inspection, (d) adequate maintenance of housekeeping equipment and materials, and (e) proper facilities.

7. *Improper or Inadequate Lighting* — if you ever adjusted a machine improperly, and had the work shatter because you could not see, you know the importance of proper lighting. Avoiding the hazards associated with improper lighting requires careful design and maintenance, and correct supervision and top-management action. Engineers are to be consulted about illumination levels, and in highly sensitive areas, at least, there is regular inspection with a light meter to make certain that illumination levels remain as planned.

8. *Improper or Inadequate Ventilation, Humidity, and Temperature* — when it's hot, when dust and fumes hang heavy, you do not work efficiently. Inefficient operation tends to be unsafe operation. Ventilation, humidity, and temperature control are engineering matters.

Careful engineering action is required, otherwise accidents can be expected.

9. *Improper or Inadequate Dress* — included here are loose clothing in the presence of fast-moving machinery, low-hanging hair, soft-toed shoes, no gloves or the wrong gloves, and many other inappropriate items of apparel. Management must enforce rules regarding proper dress. In some cases, the correct apparel should be provided by management. In all cases, careful study is required to make certain that apparel will not cause accidents.

*A tenth factor can be added — noise control!* It is not possible to say that noise, of itself, does or does not cause accidents or directly affect work performance. Continued and extensive noise, a regular exposure to a decible count in excess of 80 to 90 decibles, seems to lead to hearing loss. Impact and impulse noise (as accompanying drop-forge action or explosions) appears to increase the degeneration rate of hearing. Encroaching deafness can be detected by the individual and his supervisor. People tend to hide, or try to hide, such developments, however, and the risk is that before detection an individual's reduced hearing may lead him into an accident or cause him to contribute to another's accident. Ultrasonic noise is another matter. Ultrasonics may actually cause bodily harm to man. Industry's use of ultrasonic devices is increasing. Naturally the possible effects must be guarded against.<sup>11</sup>

People can adapt to noise, however, it seems wise to protect against possible negative effects. The protection can be gained through: (a) absorption at the source, (b) the use of baffles and sound absorbers; (c) acoustical treatment of facilities, (d) isolation of processes, and (e) utilization of attenuating devices such as ear plugs.

**ACCIDENT PRONENESS.** An issue difficult to explain and handle is accident proneness. Accidents do not happen, nor do they distribute through a plant, by *chance* alone. Study of the behavioral and environmental factors causing accidents leads to this conclusion. Furthermore, a small concentration (but a concentration nonetheless) of accidents in a given firm may center upon a very few persons.<sup>12</sup>

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<sup>11</sup>cf. A. P. G. Peterson and L. L. Beranek, *Handbook of Noise Measurement* (General Radio Company, Cambridge, Mass., 1954), M. S. Fox, "The Wisconsin Story of the Industrial Noise Problem," *Noise Control*, Vol. 1, No. 1, 1955, pp. 74-76, 89, Ernest J. McCormick, *Human Engineering* (McGraw-Hill Book Company, Inc., N. Y., 1957), pp. 180-220. See also, "Silence is Golden in Some Offices, In Others, Music Hath Charms on Output," *Business Week*, Jan. 16, 1960, p. 67, and Richard S. Uhrbrock, "Music on the Job," *Personnel Psychology*, Vol. 14, No. 1, Spring 1961, pp. 9-38.

<sup>12</sup>cf. Norman R. F. Maier, *Psychology In Industry* (Houghton Mifflin Co., Boston, The Riverside Press, Cambridge, 1946), Chapter 16, pp. 347-350, *passim*; William P. Yant, Chairman, Committee on Research, U. S. Department of Labor, Bureau of Labor Statistics, *Proceedings of the President's Conference on Industrial Safety*, U. S. Government Printing Office, Wash. D. C., 1949.

In other words some individuals are more likely to have accidents than are the majority of their fellow workers.<sup>13</sup> There must be something about these limited few which makes them more susceptible to accidents than most people.

Whether to look upon accident proneness as a cause of accidents, or consider it as overt evidence of some clearly negative combination of behavioral "cause" factors, offers interesting possibilities. Available research, as well as practical experience, suggest that Maier's views are correct. He pointed out:<sup>14</sup>

"The accident-prone individual is always susceptible, but how often the accidents occur depends upon accident opportunity."

Some individuals undeniably will be more susceptible to accidents than others, and one cannot escape the important connection between "proneness" and accident cause. *The fact, however, that a greater degree of susceptibility exists in one person than in another is, in itself, not necessarily a matter of chance!* There must be a reason why one person's "proneness" exceeds that of another, there must be a way of determining who usually is susceptible and of discovering this prior to employment or change in job assignment. Attention might well focus upon these two points, for it is clear that one or more of the previously mentioned behavioral causes of accidents are likely the underlying cause of an individual's proneness, and the presence of negative environment, or behavior patterns, on the part of co-workers may "trigger" that proneness.

Although there is doubt that current techniques can measure or discover an individual's susceptibility, and although there is doubt that proneness is anything more than a convenient statistical reference to an individual's frequency pattern, the following tests indicate susceptibility to accidents as well as serving as predictors of potential job performance.<sup>15</sup>

- . . . Sensory-motor tests
- . . . Emotional stability tests
- . . . Tests of perceptual speed

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<sup>13</sup>Maier, *op cit*, p. 349, cf. T. N Jenkins, "The Accident-Prone Personality," *Personnel*, American Management Association, Inc., N. Y., Vol. 33, No. 1, July, 1956, pp. 29-32, *passim*.

<sup>14</sup>Maier, *op. cit.*, p. 350. cf. E. M. Newbold, "A Contribution to the Study of the Human Factor in the Causation of Accidents," Industrial Fatigue Research Board, 1926, Report No. 34, p. 74. Also, J. Tiffin, *Industrial Psychology* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1942), F. J. Harris, "Can Personality Tests Identify Accident-prone Employees?" *Personnel Psychology*, Vol. 3, No. 4, Winter, 1950, pp. 455-459.

<sup>15</sup>Maier, *op. cit.*, pp. 351-357.

**FATIGUE AND ACCIDENTS.** As defined by Maier, fatigue appears as "a reduction in the ability to do work because of previous work."<sup>16</sup> Because of the distinct connection between off-the-job and on-the-job experiences, ability to do work may decrease due to previous "experiences" as well as previous work — the implication being that what transpired both on and off the job within a reasonable period of time will have a bearing upon the employee's fatigue level.

Fatigue has both physical and psychological characteristics. An accident may result from behavior directly or indirectly impelled by physical exhaustion, from psychological exhaustion or some combination of the two. An individual fatigued in any sense can be expected to behave in a manner which at least increases his susceptibility to accidents. If a negative environment exists, he may succumb to its risks, if his behavioral tendencies are in some way dangerous, exhaustion will minimize his ability to manage himself. An individual who is fatigued is more difficult to supervise, guide, or correct.

Elimination of fatigue-contributing factors within the work environment becomes an important part of the over-all effort to prevent and control accidents. Significant in this respect is the work of industrial, process, and plant engineers, the medical staff, the industrial psychologist, and those charged with supervisory development<sup>17</sup> The work involved takes two basic forms: effort to design safe and minimally fatiguing procedures, and effort to assure proper behavior of all employees.

### OUT-OF-PLANT SAFETY

No doubt many feel that what happens to an employee off company property is of no concern to the company. The feeling is, to say the least, naive and in all too many cases an expose' of general managerial incompetence. *The importance of out-of-plant safety work by management is directly proportional to the out-of-plant risk exposures faced by employees* In an area where traffic control and highway nets are classified as superior, the need for management attention to "safe driving" is less than in areas where these factors are poorly handled. An organization using organic transportation (its own trucks) will require extensive safety management in the area of safe-driving practice. Though it may seem entirely too paternalistic to some, in a community where the typical housing is "low grade," management will need to devote attention to such matters as: "How to handle fuses," "how to patch a roof," and the like. Let us consider a few illustrations of the effect of out-of-plant accidents.

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<sup>16</sup>Maier, *op. cit.*, p. 271.

<sup>17</sup>cf. Chapter 8.

**Illustration #3** John A. was repairing his power mower. He got his "good right toe" caught under the housing and sliced off by the blade. He was out of work for 42 days. The company did not replace him, they felt this would have been unfair. When he returned to work, he was able to give only a half day's work for a week. The effectiveness of his work for the following two weeks was about 50 per cent. When he returned to work the first day was marked by a reduction in the production of his department by something close to 40 per cent (after all, everyone had to talk it over with John).

The company estimated the financial loss to them as something close to \$480.

**Illustration #4** Four employees went hunting. Three of the four were highly skilled technicians, the fourth was their immediate superior, a senior engineer. The engineer was killed when he slipped and fell over a rocky precipice and one of the technicians was badly injured (to a point where he would never be able to work again). This situation resulted in a loss of an experienced engineer of a specific training which was particularly difficult to obtain in the existing labor market, the technician was of the same classification. On top of this, the company estimated that the financial loss to them (in terms of lost production time while seeking replacements, lost training time because of having to make replacements, lost administrative costs, and the like) was something in excess of \$3,700.

**Illustration #5** William D. was seriously injured while crossing the street in front of the local bank. The intersections in the particular community were unprotected. The loss of this man caused a serious production shortage (because of its sudden occurrence) and, in turn, led directly to the cancellation of an important contract by an old and valued customer.

These examples are exceptions; they are selected because of their obvious and serious impact. If one considers the effect of simple out-of-plant accidents, however, the kind that happen every day, it becomes clear that the manpower and production losses management may face can be serious. What should be done to combat such problems?

1. *Relate out-of-plant to in-plant safety work.* The safety director, the line managers, and the safety committees should take an active part in making employees conscious of the need for safe practice in everything they do, not just the activities related to their jobs.

2. *Co-operate with local authorities,* particularly in efforts to control highway accidents, improve pedestrian flow around the plant, and eliminate intersection dangers.

3. *Co-operate with insurance carriers*, as they are equally interested in safe out-of-plant habits. When management and the "carriers" join together on out-of-plant safety, local and state politicians have a tendency to listen with "both ears."

4. *Enlist the aid of the housewife* in both in-plant and out-of-plant safety work. One of the successful techniques involves the use of a simple safety contest run on a weekly basis, with a small, but useful, monetary prize to the winning housewife.

## KEY FACTORS IN SAFETY MANAGEMENT

Safety work embraces certain key factors typical of any control effort. In the general case, these are as follows.

1. *Identify and state the objectives* Will we concentrate upon in-plant safety alone, or will we work to improve the out-of-plant practices as well? Is our purpose merely one of company economics, or do we recognize the importance of safe practices to the employee and his family and co-workers as well?

2. *Organize for safety.* Safety will not take care of itself; an organization must exist. The responsibility and authority must be defined and enforced, and the line must accept its responsibility

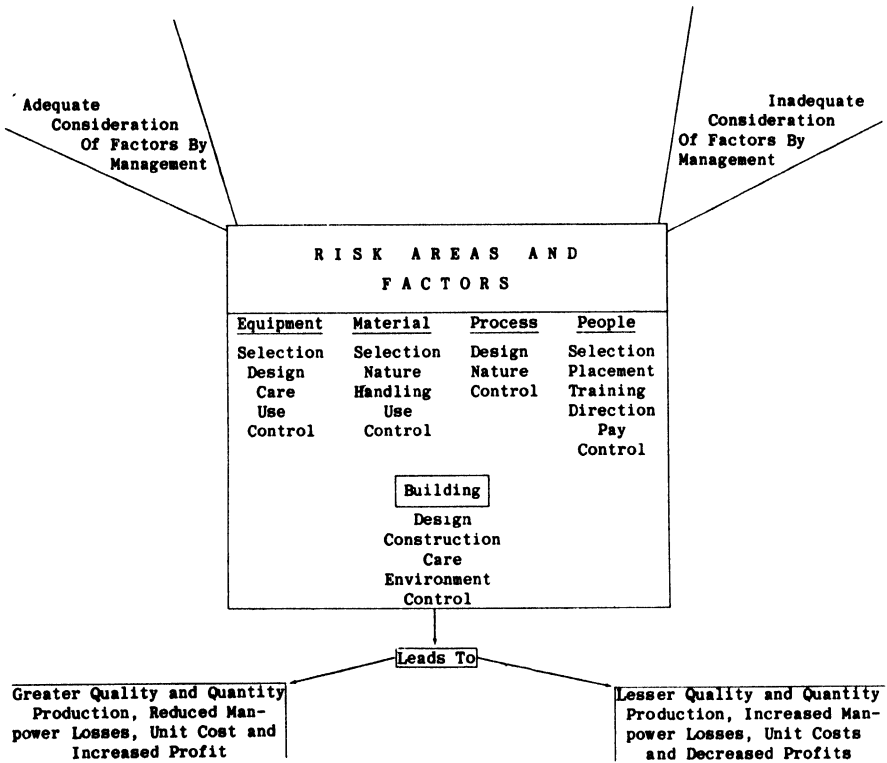
3. *Determine the areas of risk.* Those charged with safety management must locate the potential sources of manpower and production loss; they must investigate before as well as after the fact. The work of accident prevention and control of environmental hazards thus involves engineering, medical, and psychological knowledge and action. Figure 57 shows risk relationships involved in the general case.

4. *Eliminate the areas of risk.* If an intersection is an area of risk, one must either eliminate the intersection or design a means of controlling the flow of traffic through that intersection. If risk is toxicity, then the cause of that toxicity must be removed or the output of fumes and the like must be entrapped and removed from the environment. In some cases the importance of removing cause *will be so great* as to warrant expenditures of *any* sum.

5. *Train personnel.* Safety practice results from a combination of factors: technical competence, physical competence, and psychosocial competence. It is a reflection of the adequacy of equipment, methods, materials, and layout. Obviously all personnel require training to assure that whatever their jobs — actual production, product design, equipment maintenance, plant layout — they will be conducted in a safe manner.

6. *Establish a system of inspection.* Conditions, as well as people, change. Inspection detects those changes and functions as the first phase in correction of bad practice or deterioration of conditions.

7. *Establish a system of records and reports.* Identification of risk areas, training requirements, and changing conditions, development of corrective steps, and elimination of risks depend heavily upon comparison of events and the like. Information therefore must be preserved, transmitted, and studied. Records and reports serve this purpose.



SELECTED GENERAL RISK AREAS OR FACTORS RELATING TO SAFETY

Figure 57

8. *Appraise performance.* Are the objectives being met? Are we as successful as we had hoped to be? These and other questions demand that there be appraisal. Furthermore, before intelligent decisions to add to, or subtract from, a safety program can be made, one must know the facts. Appraisal enables the knowing and facilitates the decision processes.

9. *Enforce and reward.* It stands to reason that the Law of Effect will pertain here as in every phase of manpower management. Part of the safety effort thus should involve careful study of the best methods for enforcing and rewarding safe practice. Individual and group prizes for safe practice should be considered. On the other hand, safety involves everyone and an individual or a group which intentionally or unintentionally exposes others to needless risk should bear the consequences.

## APPRAISAL

Changing conditions, changing personnel, in fact the natural occurrence of change, require that management examine the results of its safety efforts. What are the factors requiring attention, and what approach should be taken?

**FACTORS INVOLVED.** Actually the factors to appraise stand out quite clearly if one considers the basic goal of safety management. Certainly the reduction or elimination of manpower and production losses implies, if it does not directly state, that appraisal should focus upon *frequencies*, *severities*, and *costs* — how else can one approach the issue without becoming entwined in a web of confusing and only possibly pertinent interrelationships!

Although the factors stand out with clarity, thought indicates a need to question the “what” of each factor, that is, frequency of what? All accidents, certain accidents — can we afford to question or include in appraisal every splinter or bruised knuckle? The American Standards Association establishes the general criteria applicable here.

**WHAT TO APPRAISE.** Appraisal technique requires that the specific concern be able to measure its performance against its own past performance and against the common experience of organizations engaged in like work. The factors measured should be commonly applicable to each company. In recognition of this need, the American Standards Association defines precise standards for measuring frequency and severity.<sup>18</sup> Furthermore, because the base of measurement must be not only common to industrial organizations but reportable, only those accidents and illnesses most likely to be reported are included in the over-all “standards.” With this in mind, the factors are applied only in terms of “lost-time” (or by ASA preference-disabling) injuries. These, in turn, are classified as follows:

1. *Work Injury* — injury arising from and during employment; the term “injury” embraces both disease and disability caused by the work, the environment to which an individual normally would not be exposed except within the employment situation, and the exposure which is typical of the work done<sup>19</sup>

2. *Lost-time (work) Injuries* — include the following:<sup>20</sup>

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<sup>18</sup>“This material is reproduced from the American Standard Method of Recording and Measuring Work Injury Experience, Z16.1-1954, copyrighted by ASA, copies of which may be purchased from the American Standards Association, 10 East 40th Street, New York 16, N. Y.”

<sup>19</sup>*Ibid.*, p. 6.

<sup>20</sup>Simonds and Grimaldi, *op. cit.*, pp. 32-33, *passim*. Note, included in group (B) — loss of, complete loss of use of: both eyes, one eye and one hand, arm, leg, or foot; or any two extremities not on the same limb; hand, foot, leg, arm. Not included in (C): repaired inguinal hernia; loss of fingernail or toe nails, tip of finger with no bone involvement, teeth, and disfigurement.

(A) Deaths: Death resulting from work injury regardless of how long after the injury was sustained (for classifying purposes).

(B) Permanent Total: Injuries estimated as preventing future gainful employment. The term is useful in statistical appraisal, however, not all persons who attain this classification remain in it — artificial limbs and the like can be obtained and make the once-unemployable person employable again.

(C) Permanent Partial: Injuries involving loss of, or permanent impairment in, the use of portions of the body (unless the injuries incurred in a given accident put the case in the above class).

(D) Temporary Total: Injuries whereby the injured party cannot perform his regularly-assigned work or any regularly-established job which he could or would normally be assigned to or capable of doing, during any one or more normal work period subsequent to the time of injury. Decision regarding the employee's ability to perform rests with the authorized company physician. On occasion a person so injured will be assigned some special work (work of therapeutic value); this fact will not be construed as "regular or normal" work.

3. *Medical-Treatment Cases.* These are not considered as "lost-time" cases. They are usually subdivided into "doctor's" cases and "first-aid" cases.

The "death" and "lost-time" categories should be used when making comparison of your company with a national average or some other specific company or industry. The base of such measurement must be standard, and clearly this norm group establishes that standard. For purposes of internal control, however, one can include *all* three classes of injuries. In order to do this, however, management must raise its own standards of supervision, training, records-keeping and reporting, and must provide good medical services. Also necessary is the complete co-operation of the union and, of course, the rank and file.<sup>21</sup>

**FREQUENCY RATE.** By definition, the frequency rate is the number of lost-time injuries per million man-hours worked. In common usage, the formula appears as follows:

$$\text{Frequency} = \frac{\text{Number of lost-time injuries} \times 1,000,000}{\text{Number of man-hours worked}}$$

When preparing insurance-carrier reports, or reports requested by governmental agencies, all that normally is required is preparation of

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<sup>21</sup>The importance of good labor-management relations and adequate manpower development stands out in this connection; the need for properly instituted communications cannot be denied.

this rate on an organization-wide basis. For internal control, it is desirable to maintain the following comparative analyses:

1. Frequency by department
2. Frequency by type of injury
3. Frequency by season and/or year
4. Master-frequency against all three or four of foregoing

One also should realize that *straight* frequency, or frequency in terms of normal man-hours (or standard) worked for the given department, or frequency in terms of expected man-hours lost for given injury patterns may be used

The typical frequency rate (shown by formula) is useful in comparing the over-all success of the organization from year to year and with other like organizations. Such measurements can be handled by comparisons of *trends* or by actually computing the *gain* or *loss* per year.

The internal usage of frequency (not the standard "rate") is very useful in pointing out the trouble departments, the concentrations of injuries by type, and the like. Such information is particularly helpful to those who seek active management of safety; it enables them to identify the areas where attack upon the problem is needed and most likely to be rewarding.

**SEVERITY RATE.** By definition, the severity rate appears as the number of days charged for lost-time injuries per million man-hours worked. In common usage, the formula appears as follows:<sup>22</sup>

$$\text{Severity} = \frac{\text{Total days charged} \times 1,000,000}{\text{Number of man-hours worked}}$$

Within that formula, the "total days charged" reflects the *standard*-time charges for deaths and permanent disabilities, plus the actual lost days resulting from temporary total disabilities, for all injuries occurring during the period covered by the rate or report. The American Standards Association has established a table of specific time charges for various injuries.

This rate is particularly useful in making over-all appraisal of the organization's safety management, in comparison of organizations on an over-all basis, or for comparing the total yearly success on a year-to-year basis. To examine success for the purpose of internal control one should develop severity in terms of departments, types of injuries, and the like.

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<sup>22</sup>Discussion of both severity and the frequency rates appear as in Simonds and Grimaldi, *op. cit.*, pp. 39 and 35.

It is important to note that frequency and severity figures may be carried in *control charts* (see Chapter 13 on "c" Charts). This possibility allows manpower managers, as well as other interested managers, to see where they stand and predict where they are going with considerable ease.

**MEAN SEVERITY.** Manpower managers, particularly when dealing with insurance companies and their own controllers, may wish to know, or pass on, information regarding the mean (average) severity of injuries. This can be accomplished by dividing the severity rate for the period by the frequency rate for that same period.

**COST.** From the point of view of internal control, the maintenance of a record of the cost of injuries and/or lost production becomes important. Care is required, however, when using cost information to gain the co-operation of the union in safety work. Although cost reduction is extremely important to management, there is every reason to believe that many unions in today's industrial environment have little interest in operation costs.

Accident prevention and the control of environmental hazards involve two basic cost classifications: the cost of insurance and a lump total of uninsured costs. The insured costs stand out with clarity, they reflect cost data immediately available in the controller's files or in the files of the manpower manager. Uninsured costs reflect the following:<sup>23</sup>

1. Wages of uninjured workers who lost time because of the accident.
2. Repair, replacement, maintenance costs resulting from accident.
3. Wages paid for working time lost by injured worker, other than workmen's compensation payments
4. Overtime costs necessitated by an accident or illness.
5. Supervisory wages for the time supervisors are tied up in accident-or illness-necessitated activities.
6. Wage cost due to decreased output of an injured worker following his return to work; the output loss during his period of inefficiency, measurable by comparing previous (before accident) output to present.
7. Training cost for new worker.
8. Company's "uninsured" medical costs — for medical service in plant or by special physician and the like.
9. Cost of investigating and processing — cost of management and clerical time in actual investigation and in handling administrative details.
10. Other costs typical to a given case such as rental of replacement equipment, loss of contracts or orders, lost sales, and the like.

<sup>23</sup>Simonds and Grimaldi, *op. cit.*, pp. 85-98, *passim*; also *Accident Prevention Manual* (2d Ed.; National Safety Council, Chicago, 1951).

Obviously each accident or illness will involve one or more of the listed classes of uninsured costs. The problem of developing total cost for a given period, therefore, requires summarization of the insured cost and the cost of each class of injury in terms of uninsured cost. To the three classes of injury listed previously, there should be added a fourth class, that of "no injury." The no-injury class is involved because, regardless of non-reportability or no lost time to the "injured" party, there may well be specific uninsured costs because of time, confusion, and the like involved in such things as "John's getting a bruised knuckle."

It is important to consider the possibility of maintaining a cost record which indicates the concentration of accident and illness costs by department and perhaps by season. Such information is of considerable use when planning manpower-management activities, new layout, new processes and products, and in challenging the over-all management effectiveness. Furthermore, cost data may also be carried in control charts, thereby providing ready warning of movement of costs out of control (away from budget prediction). In addition, one should seriously consider determining the *most significant types of accidents in terms of frequency, severity, location, and cost*, and using this information in developing budget requests and deciding where to concentrate control efforts (see Chapter 13 for the way to plot a maldistribution, Lorenz curve).

It may seem that undue time has been devoted to the matter of safety management. It is the opinion of the authors that safety is of such importance as to demand the special attention of every manager and certainly of every manpower manager. The engineering, building design and construction, product and materials, equipment, and facilities involved in the company's production directly influence the nature of accidents and industrial illnesses.

## HEALTH

The physical well-being of a workforce is a dynamic factor. Man's physical condition varies with time, his job, and as a result of his off-the-job activities (or inactivity). Medical-service programs exist for the following purposes: (1) to facilitate efforts to determine the physical condition necessary in employees to carry out required work effectively and safely; (2) to determine the present physical condition of employees, thereby facilitating efforts to keep abreast of the physical competency of the total workforce as well as the individual; (3) to help the employee as well as the company — the employee by providing him with periodic information and authoritative advice concerning his condition, and thus in some measure helping him psychologically as well as physically — the company by providing, so far as is possible, a properly conditioned workforce, thereby improving pro-

ductivity; (4) to facilitate safety management by aiding in determination and elimination of environmental hazards; (5) to assist both the company and the employee in reducing or eliminating unnecessary costs arising from unexpected (and possibly incurable) illnesses,<sup>24</sup> and finally, (6) to treat injuries and illnesses.

These purposes of medical service indicate the organizational needs or relationships involved. Medical-service activity facilitates manpower selection, promotion, and transfer, it supports safety management, and facilitates the work of production managers. The medical-service director therefore requires communication linkage with each of the operating, supporting, and servicing branches of the firm. Although the safety director will report (in most cases) to the medical-service director, the safety director will require his own direct channels, because he operates in non-medical areas.

**BASIC PRINCIPLES.** The common medical-service principles or program considerations are directly related to those of safety management. They are as follows.

1 Employee health is the business of the individual, his supervisor, and top management

2. Employee health is important from an economic as well as a human relations point of view.

3. The community is affected by the physical well-being of a (local) workforce.

4. There are some threats to the health of employees so serious as to warrant correction or protection regardless of expense.

5. The hazards to health should be discovered and eliminated in as scientific a manner as possible. Assumption and opinion should give way to fact and the effort to determine fact should be continuous.

6. Health requires unending attention (so long as there is life), thus medical-service programs should be continuing rather than sporadic.

7. An individual's health reflects both intensive and extensive force (a finger may be paralyzed, intensive, an entire body may be totally paralyzed, intensive and extensive, an individual may have a severe "common cold," extensive), thus, both intensive and extensive action are required of a medical-service program.<sup>25</sup>

**FUNDAMENTAL FEATURES OF PROGRAM.** Aside from the system and organization requirements covered in Chapters 3, 4, 6, 8,

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<sup>24</sup>cf. "What Companies Pay For Medical Services," *Management Record*, Vol. 17, No. 4, April, 1956, pp. 132-138, *passim*.

<sup>25</sup>It should be obvious to the reader that the authors have no liking for "first-aid-kit" medical-service programs, nor do they believe that economic conditions can properly be used as an excuse to avoid correct programming.

and 10, the following special requirements must be met if there is to be a correct medical-service program.<sup>26</sup>

1. Statement of the objectives as seen by top management — obviously top management must give active support
2. Communication of the objectives throughout the organization — the objectives must be accumulated and assimilated by all personnel.
3. Organization — the director of the service will report directly to a member of the top-management team, preferably the vice-president of industrial relations (manpower management, or whatever the title may be) The service should be established in conformance with sound organization principles as well as the recommended procedures set forth by the Institute of Industrial Medicine and the American Medical Association.
4. Organization — the staff will include unquestionably qualified physicians, surgeons, technicians, and possibly attendants The staff should be headed by a physician or surgeon or by an acceptable (to the the medical personnel) and professionally qualified (hospital) administrator (Small organizations are not expected to have fully developed organic-medical departments The small concern can develop cooperative medical service with other local organizations or the nearest community hospital )
5. Organization — facilities and equipment, where necessary and economically feasible, the company should maintain complete dispensary or hospital facilities (and will *always* maintain adequate emergency facilities) In this day and age it is important for management to think beyond the immediate medical necessities The ever-present threat of attack looms as a basic reason for management to consider seriously the possibility of associating itself with local Civil Defense plans and activities.
6. Administration — regardless of the size of the actual facilities, medical records will be required and must be maintained under competent supervision
7. Examination — both pre- and post-employment examinations of personnel should be routine Although even today few organizations maintain any strict policy or procedure regarding post-employment physicals, the approach is not only wise but in a fully-developed system of manpower management it is mandatory Though many alternately laugh at or condemn the military's physical requirements and examinations, industry ought to give very careful consideration to the concept behind the action.
8. Analysis — a correct medical-service program finds the staff working with safety personnel, engineers, psychologists, (internal or

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<sup>26</sup>cf. W. E. Powell, "Basic Requirements for First Aid," *National Safety News*, Vol. 71, No. 1, January, 1955, pp 28-29; also, Ethel M. Spears, "Company Medical and Health Programs," *Studies in Personnel Policy*, No. 96, National Industrial Conference Board, New York.

external to the company), and production managers in a continuing effort to uncover health and accident hazards.

9. Enforcement — a fully-developed medical-service program will find emergency authority placed in the hands of the director or specific members of his staff — authority inherent to their capacity which allows them to “shut down” an operation if their judgment indicates the need. In this connection, if one wishes to avoid the unpleasantness so frequently associated with “bad” judgment, management must provide: (1) the most up-to-date inspection and testing equipment, and (2) properly qualified personnel.

*OPERATION OF THE PROGRAM.* The purposes of medical service indicate the operational requirements of a medical-service program: to facilitate selection of manpower; locate and correct (or assist in the correction of) hazards, provide personal service to employees, and handle the treatment of injuries and illnesses. These points indicate that, in the broad sense, a medical-service program, to be effective, must operate as both a *preventive* and a *curative* function.

Curative operations involve treatment of injuries and illnesses and/or transportation to hospitals and the like. Curative work is after-the-fact. It is far less important to management than preventive action. Production and fiscal losses are avoided through prevention.

Preventive work includes pre- and post-employment examinations, identification and elimination of hazards, and efforts to educate the employee *and his family in matters* pertaining to their health.<sup>27</sup> The work often requires close liaison with local medical authorities and public health people.

*THE SMALL COMPANY.* It is completely understandable that small firms cannot have fully developed organic medical service. They can, however, develop co-operative arrangements which, in the final analysis, provide the same complete service found in large internal (organic) services. A number of concerns may pool their resources and hire a competent medical staff, construct a centralized clinic, purchase and operate one or more ambulances, and share completely adequate inspection, testing, and laboratory equipment.<sup>28</sup> Small firms may also develop agreements with local hospitals. Medical personnel are no more interested in letting preventive industrial medicine go untouched than they are in permitting an epidemic of influenza to go

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<sup>27</sup>A particularly excellent example of the complete organic medical-service program will be found in the practices of the West Virginia Pulp and Paper Company; United Aircraft also has a very complete service.

<sup>28</sup>An excellent example of the kind of thing possible can be found in Hartford, Connecticut, and is known as the “Hartford Plan.”

unchecked. Management cannot blame lack of interest by medical people as a reason for not developing effective medical service.<sup>29</sup>

**SANITATION.** Small or large, every firm requires sanitary facilities *better* than those demanded by law. Public health regulations vary from state to state; management should consult the United States Public Health Service and/or the Institute of Industrial Medicine. Medical-service units not only should inspect and present advice (and perhaps make demands) regarding sanitary facilities but also should maintain a careful inspection procedure over food-service, washroom, and work areas, even to the extent of co-operating with local public officials outside the plant if it is deemed necessary by those officials.

**LEGAL CONSIDERATIONS.** The cost of accidents and industrial illnesses is great to management and the individual, in both monetary and psychological effect. Modern practice has made at least some segments of the problem a matter of public interest because of past failures under Common Law.

Germany first took legislative action in this field in 1884. England, however, held to the Common Law approach until 1897. In this country the Common Law doctrine was maintained throughout the nineteenth century.

*The Common Law Approach.* Under the Common Law doctrine passed down to us from England's Middle Ages' courts, the following held true.

. . . Employers were required to provide a reasonably safe environment.

. . . Employers were expected to run their businesses safely — to establish safe practices and procedures.

. . . Employers were obligated to hire competent people. Having met these stipulations, the employer could then make the following defensive claims if challenged by an injured employee

1. *Assumption-of-Risk Doctrine* — the employee accepted the risks inherent in the work when he agreed to work for the employer, hence the employer was free of responsibility if the employee was injured.

2. *Contributory Negligence Doctrine* — the employee contributed

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<sup>29</sup>It would be completely ridiculous as well as unethical for the authors to attempt to cover the technical aspects of industrial medicine — this is the business of competent medical personnel. For those interested in technical literature, consider the following:

William F. Gafafer, *Manual of Industrial Hygiene*, (W. B. Saunders Company, Philadelphia, 1944), the journal titled *Industrial Medicine and Surgery*, published monthly by the Industrial Medicine Publishing Company, Chicago, Public Health Service Publications. Consider, too, the numbered journals and papers put out by the various medical schools and state medical associations.

to, or was directly responsible for, his own injury because of neglect or careless action, hence, the employer was not responsible.

3. *Fellow-Servant Doctrine* — the injury was caused by a competent “fellow worker” hence, the employer was free of responsibility.

This Common Law approach gradually was converted to statute law in the form of “employers’ liability laws” (employers’ liability acts). Kansas established a statute in 1874 which denied the “fellow-servant” claim to the railroads. It was upheld in 1888. Other state legislation, however, found rough going. In 1902 Maryland established a statute applicable to mines, quarries, public utilities, and municipal work. It was first declared unconstitutional but later, in 1914, the federal court upheld its constitutionality. Kansas passed another piece of legislation in 1903. Related to Workmen’s Compensation, it imposed distinct safety requirements to be met by industrial concerns. In 1908 Montana sought to attack the problem but its legislation was held unconstitutional. In 1910 New York state established voluntary and compulsory statutes. The compulsory act was found unconstitutional. Following the declaration of constitutionality of Indiana’s legislation in 1915, the laws of New York, Iowa, and Washington were upheld by the federal courts in 1917. Although the federal government had enacted legislation in 1908, it was not until 1917 that all states and the United States government began to take firm steps toward more-or-less standardized practice in this area.

*Common Law Conversion.* The shift from Common Law to statute law was due largely to the complete inadequacy of the Common Law approach. In many cases employees who were actually injured through no fault of their own received no compensation. In some instances men receiving similar or equal injury during the same accident received different compensation. Statute law was therefore developed.

*Statute Law Failure.* The resulting “employer’s liability acts” failed for several reasons. *First*, the courts became crowded with employee claims; the crowding caused painful and expensive delays. *Second*, court expenses often led employees to settle out of court at less than they should have, or they simply gave up; hence, many found themselves wards of the state because of inability to handle their own economic needs. *Finally*, employers faced the constant risk of excessive judgments and in many cases funds which might have, or should have, gone to injured employees were used up in legal and court fees. The net result was pressure to establish uniform procedures open to a minimum variety of interpretations. Out of this came the so-called Workmen’s Compensation Laws.

*Workmen’s Compensation.* By 1941, only one state, Mississippi, had no compensation legislation. Federal and state laws developed in an effort to remove past inequities associated with industrial acci-

dent and injury costs and payments. All states and the federal government now have legislation of this type — federal laws covering federal personnel, longshoremen, and harbor workers, state laws covering state and private enterprise personnel. Regardless of views to the contrary, the fact remains that uniformity and protection of all parties are needed in handling this industrial accident and health problem. The Workmen's Compensation approach provides for this need to some degree. Furthermore, it helps shift management's attention from challenging the cost of compensation in individual cases to challenging the reason for, the total cost of, and the related effects of, accidents.

Under the Workmen's Compensation approach the following hold true: (1) the responsibility for the accident ceases to be significant to the compensation problem, (2) the cost is not distributed in terms of the responsibility, (3) all serious injuries are made compensable; (4) employers hold the compensation responsibility, (5) benefits are standardized; (6) court action is avoided if possible but is permitted, and where required the "red tape" is minimized, and (7) financial burden is usually assigned through insurance carriers.

Not all compensation laws are the same and not all industrial personnel are covered. Three principle limitations exist: (1) each state tends to identify covered industries in a different manner; agricultural and domestic personnel commonly are not covered, (2) the various states identify the types of accidents, injuries, and illnesses covered, and the identification tends to differ at least to a limited degree, (3) some states limit coverage in terms of the size of the industrial unit. Most typically, this limitation depends upon the number employed, and (4) most laws establish "waiting periods," but these are not typically of similar duration. They range from one to fourteen or fifteen days. Waiting periods mean only one thing, that the employee must wait until he receives payment. They do not mean that he will not receive it, nor do they mean that hospital bills and the like will remain unpaid. In many states the law specifies that if disability lasts beyond the waiting period, the employee will be paid for the waiting period.

Although the aim was to develop uniformity in handling employee claims, it can be seen from the foregoing that we still have failed to attain this goal. In fact there is a difference of approximately \$8,000 for the loss of one eye between certain states; there appears to be no logical explanation for this wide variation, and it stands as a supporting argument favoring those who hold against the Workmen's Compensation technique. Alert management and union representatives repeatedly strive to correct the situation: perhaps time will help!

*Second Injury Rules.* Insurance costs related to compensation coverage generally are based upon experience. The cost to the company thus will vary with the frequency-severity pattern of accidents,

injuries, and illnesses resulting from, or associated with, their operations. In an effort to minimize the impact of this condition, employers have succeeded in having "second-injury" rules established in most states. Such rules hold the employer responsible for only that portion of a disability which is, in fact, the result of work in his (the employer's) plant. In other words, if a partially-disabled individual is hired and if he is further injured, the employer becomes responsible for only the injury or the effect of the injury just sustained. If a man has lost an eye and now loses the other eye, the present employer thus is responsible through his insurance carrier for loss of the second eye only.

A real need exists for greater uniformity in the handling of industrial accidents, injuries, and illnesses. As things now stand, this need is not being met. Managers should, however, exercise great care in deciding what corrective action to support. Probably the best answer to the compensation issue is *to eliminate the need* for workmen's compensation. One might even say that the issue demanding management's attention is not uniformity in compensation laws and rates, but uniformity in the engineering of jobs, the training of people, and the hiring of people in order that the risks of accidents, injuries, and illnesses can be eliminated. Such a goal would be in keeping with the concept of "good" management, for it focuses attention upon "making events" rather than upon establishing methods of easing the impact of events waited for!

### FOOD-SERVICE

Man's diet directly affects his physical condition and, therefore, his ability to work effectively at his assigned tasks. Furthermore, where an employee eats during his mid-shift break has a bearing upon what he eats, whether he returns to work on time and in condition to work effectively, and whether he will be fit to work his next scheduled shift. Each of these points warrants management consideration because it identifies factors influencing the company's economic position.

What and where he eats is important to the employee for economic as well as health reasons. Furthermore, man's diet plays a causal role in his general outlook, where he eats, what he pays, how long he waits, and the distance he must travel also affect his outlook and in turn his willingness to co-operate in the production effort.

The importance of food-service programs thus is related to economic and personal reasons, all of which directly pertain to the conservation of manpower. The commonly-accepted objectives of most food-service programs found in today's industrial environment include the following points when put into formal terms:

- . . . To minimize absenteeism.
- . . . To minimize accidents resulting from diet impelled physical deficiencies of employees.
- . . . To minimize tardiness.
- . . . To maintain and improve employee health.
- . . . To maintain the productive ability of manpower
- . . . To lessen fatigue or the risk of fatigue.
- . . . To remove one more source of employee frustration.

These objectives should not be treated lightly. The specific situation requires study, for as realistic as the objectives appear, in some cases the cost of food-service will not be justified.

**NEED FOR FOOD-SERVICE.** Certain distinct factors indicate the need for food-service programs and identify the type of programs desirable in the given case. These factors generally include the following:

1. *Plant Location* — the plant located miles way from any approved (by public health officials) eating facilities usually will require a food-service program
2. *Plant Size* — the smaller the organization the smaller the food-service requirement. In companies employing minimum numbers of personnel — under 50 — the benefit usually is far less than the cost.
3. *Commercial Facilities* — even in populated areas, the commercial facilities may be unacceptable in terms of sanitary considerations, numbers of establishments as related to potential users, average price as related to employees' ability to pay. In such cases, management may find it necessary to provide food-service
4. *Nature of Work* — often the kind of work done necessitates special attention to workers' diets (particularly if ethnic preferences normally lead to improper diet)
5. *Time Available* — although management may take corrective action, the time available for mid-shift eating may not be sufficient to permit an employee to travel any distance to eat. Some claim that the "half-hour-for-lunch" idea is incorrect. Though the claim has merit, it must be remembered that time is money and unproductive time (whether a man is paid for it or not, the machines are idle) produces nothing but sunken cost

**IN-PLANT VS. OUT-PLANT SERVICE.** In-plant service includes cafeterias, mobile-food carts, and snack bars. In-plant service can be handled directly by the company or the facilities can be turned over to a catering firm. Out-plant service includes arrangements with local vending-machine caterers, operators of mobile-food units, and possibly restaurateurs in the area.

In-plant facilities may charge employees full cost; common practice, however, supports the conclusion that management should seriously

consider the underwriting of the space and equipment costs, allowing the dietician or caterer to charge only the actual cost of food preparation and handling. Such an arrangement not only holds prices at a minimum, it also provides management with greater control over the practices of the caterer.

Out-plant service also may be underwritten by management for the purpose of gaining better control over service. A mobile-unit operator, for example, may be guaranteed a minimum "take" per week in order to assure high quality service and the presence of that service at the right time and place.

A final point deserves mention: the food-service activity may of necessity include an educational effort. In some cases, the local labor market is made up of ethnic groups whose dietary practices are traditionally inadequate from the point of view of good health. In these instances, a continuing educational effort may be required to encourage employees and their families to adopt better eating habits. The point is that what is good for the employee's health is in fact good for the company's business.<sup>30</sup>

## TRANSPORTATION

Two reasons support transportation programming: the need to reduce the likelihood of accidents, and the need to minimize the psychological problems facing employees. The radius of mobility typical of today's workforce is large. It is not uncommon to find employees living 30 and even 70 miles from their jobs. The majority of the residents of Coventry, Connecticut, for example, work in one of five other communities ranging from eight to twenty-eight miles distant. Employees traveling such distances are exposed to the risk of accident, and travel costs them money and, hence, worry. Often the traffic problems during rush hours cause nervous tension which in turn may lead to accidents and psychological disturbances that may result in absenteeism or labor turnover.

Transportation plays a vital role in determining a firm's ability to acquire and hold a satisfactory workforce. Distance, road conditions, transportation and parking facilities all are considered by people making a choice of where to work, or whether to remain.

**PROGRAM ACTIVITIES.** The exact features of a transportation program depend upon the needs determined through analysis of the case. In general, however, several distinct courses of action can be taken by a manpower group. *First*, direct co-operation with local and

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<sup>30</sup>cf. *In-plant Food Management*, published monthly, 320 East Ohio Street, Chicago, Ill. Also see Geneva Seybold, "Personnel Practices in Factory and Office," *NICB Studies in Personnel Policy*, No. 145; National Industrial Conference Board, New York, 1954, pp. 49-50 and 101-102; "How to Make the Company Cafeteria Pay Off," IRN Special Report, *Industrial Relations News*, June, 1960, pp. 45-48.

state traffic, highway, and public utility commissions may exist. *Second*, they may assure the availability of protected parking areas. *Third*, they may provide transportation service by:

- . . . Operating or underwriting a private transportation system.
- . . . Establishing "car pools."
- . . . Underwriting existing commercial transportation.
- . . . Developing some combination of the foregoing.
- . . . Either arranging work hours to meet existing transportation schedules, or seeking a change in those schedules. One should also keep in mind the need for co-ordination with other nearby organizations in order that work hours are staggered so a traffic jam does not become routine.

**RECREATION**

Just as man's physical condition is influenced by his diet, so too, is it influenced by his recreational habits and opportunities. The old saying that "all work and no play makes Jack a dull boy" has some real meaning in the industrial environment. Parts of "fatigue" control, physical conditioning, and psychological ease are dependent upon recreation.

*PROGRAM ACTIVITIES.* Recreational activity can be athletic or cultural. Each of these can be developed as wholly organizational — involving the employees of the company only — or they can be community related — handled in conjunction with some community program or developed as a mutual effort. Wherever possible, it seems wise to incorporate *both* approaches.

Athletic programs may include all sports. Cultural activities may include the arts and crafts. In recognition of individual differences, it seems correct to recommend that where recreational activity is developed as part of the manpower-management program, there should be both athletic and cultural activities.

*OPERATIONAL CONSIDERATIONS.* Regardless of what recreational activity is adopted, general rules apply.

1. Participant activity is more effective than spectator.
2. Effective activities are based upon employee desire, and they deserve an active part in development and administration.
3. Recreational opportunity should be available to both sexes, with choices wide enough to meet medically-established and employee-expressed need.
4. Recreation is a year-round requirement.
5. Where practical the family should be included.

6. Recreational activity should be possible during "free work time" — either active or passive recreation should be available and existing facilities should be used rather than some special facilities.<sup>31</sup>

### HOUSING SERVICE

Some contend that housing service is related more to the psychological than to the physical well-being of the workforce. Be that as it may, unless man is properly housed, his physical *and* his psychological conditions may suffer.

As practiced today, this service is not paternalistic in the traditional sense. A correctly-established program fills an economic need. It helps the company obtain and hold desirable personnel. It helps the employees fill one of their basic needs. It may be an important determinant of community attitude toward the company. One therefore concludes that it has at least some influence upon the firm's profit structure.

*PROGRAM ACTIVITIES.* Housing service usually is thought to refer to "company housing." True, in some cases company housing may be needed, and therefore becomes an integral part of the program. Aside from the possibility that a company may find it necessary to maintain a housing project of some proportion, the following activities are a natural part of housing service.

1. Administering a rental or "search" service — rental service provides employees with information concerning rents and sales. "Search" service pertains to overt effort to locate rent and sale properties and is conducted with the aid of real estate people. In some cases employees may use these services to rent or sell properties or to contact real estate people for this purpose.

2. Arranging for mortgage loans or appointments with loan sources.

3. Arranging for housing when an employee is to be away on company business for an extended period (not to be confused with hotel or motel arrangements made by the secretary for her boss). This is the service needed when an engineer or fiscal agent is required to be at a customer's plant or a branch unit for several days, weeks, or months.

4. Administering an executive or cadre service — when employees are being moved from one location to another because of a shift in plant location, or expansion of facilities, the "home" organization assists them by locating possible housing in the new community.

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<sup>31</sup>cf. *Handbook For Recreation Leaders*, Publication 231, U. S. Government Printing Office, Federal Security Agency, Washington, 1948; Jackson M. Anderson, *Industrial Recreation: A Guide to Its Organization and Administration* (McGraw-Hill Book Company, Inc., N. Y., 1955); and *Recreation*, published monthly by the National Recreation Association, 8 West Eighth Street, New York City.

*OPERATIONAL CONSIDERATIONS.* Housing service is not a *must* to every organization. Whether it exists or not depends upon the conditions facing the organization and its people. A firm located in an extremely congested area often needs housing service. A company moving to completely new territory, or about to move into an area known for its poor housing facilities, needs this service.

A *SPECIAL PROBLEM.* Plans to cope with emergency housing needs are becoming increasingly important. The risk of enemy action plus the ever-present threat of natural disaster make it important for industrial and business firms to co-ordinate with Civil Defense officials in this matter. Plans should be kept up-to-date. They should be related to area-evacuation and plant-relocation programs. In communities where the authorities are lax, it may even be wise for management to take the lead in planning emergency housing and evacuation — wise, if management hopes to continue operation in the face of emergencies.

### ENVIRONMENT MANAGEMENT

Safety management, medical service, and environment management are so interrelated that one cannot be discussed without including the others. In fact, the term "environment management" reflects the environmental side of safety and health activity. Furthermore, the three topics are of as much interest to industrial, plant, and process engineers as they are to manpower managers and medical personnel. Clearly, then, these units require close and continuous liaison.

To facilitate environmental management, it pays to centralize the manpower aspect of the three functions. With this in mind, the suggested organization places functional supervision in the hands of the medical director or the safety director — the medical director where a fully-developed medical establishment exists, the safety director where the company depends upon contract or co-operative medical service. Responsibility for the maintenance of the liaison effort rests with this manpower unit.

*ENVIRONMENT MANAGEMENT — MEANING.* The term refers to: (1) the development and maintenance of facilities where light, noise, color, humidity and temperature, fumes and dust, conduction (heat and electricity) and their associated problems are properly handled; (2) the situation where the facilities' adequacy is reviewed periodically, and (3) the case where needed changes are made.

*OPERATIONAL CONSIDERATIONS.* Some hold that environment is a responsibility of the "line." Operating managers devote their major attention to daily production routines, however, rather than so-called secondary factors (secondary in their eyes until convinced otherwise). If management of the environment is to have meaning some unit must be charged with the function as a primary effort, hence

the function becomes a major part of the medical service or safety group. Why is this work important?

1. Disease can be caused or intensified by inadequate light; improper ventilation, temperature, and humidity; unsanitary washrooms and eating facilities; certain fumes and dusts.
2. Accidents can be caused or intensified by these factors and by noise and improper color.
3. Color, light, noise, dust, temperature, and the like can lead to, or intensify, the feelings of frustration present in employees. This may lead to or intensify: (A) labor turnover, (B) absenteeism and tardiness, (C) accidents, and (D) negative motivation.
4. The environment can lead to production losses.
5. The environment can be a direct source of grievances.

**THE MANAGEMENT STEPS.** At least three distinct steps are involved in environment management. *First*, determine the nature of the risks involved. In what way is color a risk — are there valves requiring distinctive marking; are there walls requiring no-glare paint? *Second*, determine whether or not the risk exists. Inspect and determine if the valves are properly marked; find out if the fumes are toxic, and to what degree; is there a process which results in a high degree of radiation and is it being controlled? *Third*, attack the risk condition.

The action required depends upon the nature of the risk involved. At this point there are no "general" rules of action.<sup>82</sup> Furthermore, where to act depends upon the nature of the process and the building. Where to act and what to do, therefore, require area-to-area study: (the requirements in one plant area differ from those in another); process study (one phase may be dangerous, another may not; in one plant area an otherwise safe process may be dangerous); and product, raw material, and equipment study.

### ORGANIZING FOR PHYSICAL CONSERVATION

Emphasis is placed on the fact that the physical conservation of a workforce is the business of everyone, line and staff alike. This duality is difficult to handle. Attention to organization, communication, and control theory can result, however, in correct programming and smooth operation. The salient recommendations are as follows.

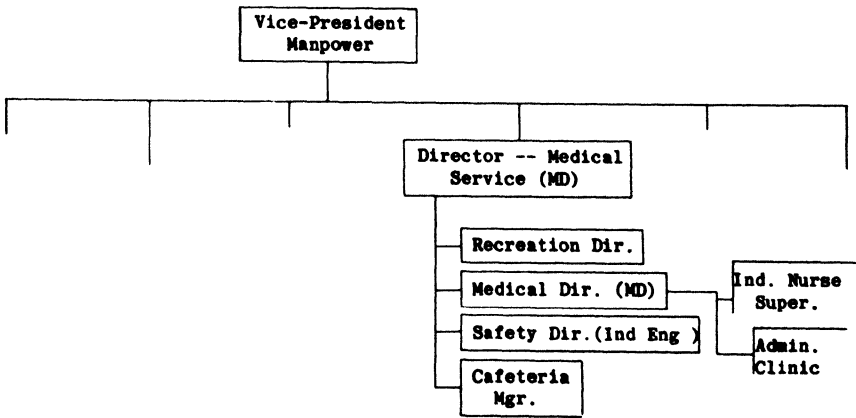
1. *Definition of Objective.* Success requires clearly-defined objectives, known to all, bearing top management's active and insistent approval and implementation.
2. *Establishment of Responsibility and Authority.* Success requires that each hierarchical level and each line, support, and service

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<sup>82</sup>cf. Ernest J. McCormick, *Human Engineering* (McGraw-Hill Book Company, Inc., N. Y., 1957).

unit *know* its specific responsibility and authority. Policy will require that those charged with direction of safety and medical work have the *inherent* and *unalterable* right to shut down operations deemed unsafe, and reject or remove those considered physically incompetent for a job. In addition, the point of origin of, and the responsibilities involved in, maintaining and effectively using liaison require clear definition – and top management must insist upon adherence to procedures.

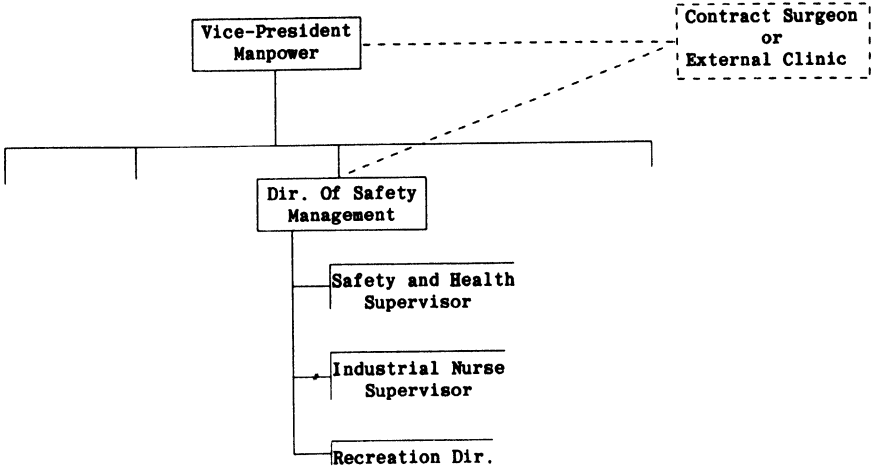
3. *Centralization and Reporting.* Correct operation is facilitated by centralizing the safety and health aspects of conservation. The director will report directly to the vice-president charged with manpower management. Where a complete medical-service program exists, Figure 58 applies; where medical service is handled through external sources Figure 59 applies; and where no manpower division as such exists, Figure 60 applies.



MANPOWER DIVISION — SAFETY AND HEALTH ORGANIZATION, POSITION IF MEDICAL SERVICE INTERNAL

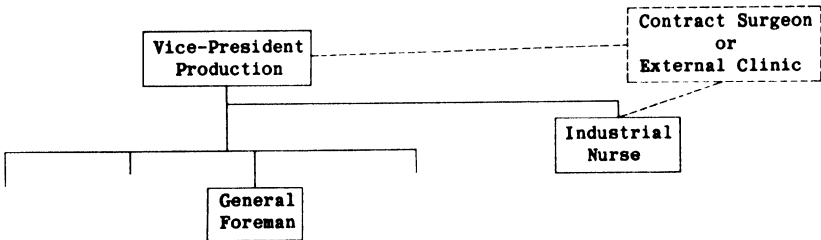
Figure 58

4. *Appraisal.* System-appraisal is fundamental to success. Top management therefore requires scientific and regularly recurring inspection of operations, environment, and community conditions relating to employee safety. Reports stating current status, recommended correction and the like are forthcoming *as needed and* on a minimum of a quarterly base. Furthermore, because of the definite importance



MANPOWER DIVISION — ORGANIZATION WHEN MEDICAL SERVICE EXTERNAL

Figure 59



MEDICAL SERVICE — NO MANPOWER DIVISION

Figure 60

of out-of-plant safety, liaison with local and state authorities will be maintained.<sup>33</sup>

**SUMMARY**

The physical conservation of manpower is an economic necessity. Manpower and production losses originating because of man's physical

<sup>33</sup>Review of 35 annual reports of manufacturing firms (1961) revealed that 28 considered out-of-plant safety important enough to discuss as a portion of their over-all manpower work.

condition are costly. Usually, however, they can be eliminated or at least minimized by proper management action.

Several points require consideration when undertaking the development of physical conservation programs. In fact, these points might be thought of as the key considerations.

1. No program or specific technique should be adopted unless study of the situation demonstrates an existing or very real potential need.

2. Conservation of manpower is both a line and a staff responsibility. Although the line has real obligation, the manpower division, (when one exists) has the inherent administrative, co-ordinative, investigative, and control obligation through its safety or medical-service unit.

4. Manpower losses lead to production losses which lead to profit deterioration.

5. Some hazards to health and safety, some housing needs and transportation problems are so severe as to warrant expenditure of money regardless of direct returns.

6. Some production hazards are so severe, and the difficulty of detecting abnormal risks so great, that specialists are needed to detect and correct the conditions.

7. Technical training of supervisors and employees improves safety records.

8. As environment, materials, and processes are improved by engineering action, safety and health problems become more a matter of human relations, and the importance of effective manpower management increases.

9. Part of physical conservation requires planning and cooperation with Civil Defense authorities and local and state highway authorities.

10. An organization's size is no real deterrent to effective medical service.

11. Effective physical conservation programs can strengthen the company image in the eyes of the community.

12. Man's physical condition affects his psychological condition and vice versa. Physical conservation work thus is directly related to psychological conservation of manpower.

This last point indicates that programs designed to conserve manpower would be incomplete if they neglected the psychological considerations described in Chapter 19.

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*Man's willingness to produce what is required is as important to its production as his ability to produce; in fact, unwillingness may explain a significant portion of inability.*

## Psychological Conservation Of Manpower

Effective production depends very considerably upon the ability, the skill, and the *desire* to accomplish the required work effectively.<sup>1</sup> The “desire” to work reflects the same dependency upon efficient management action as that reflected by skill and ability, and “desire” reacts with ability and skill.

### PSYCHOLOGICAL CONSERVATION

The term “psychological conservation” of manpower, as used here, refers to those functions and considerations related to the maintenance and development of the employee’s desire to co-operate freely and to work effectively. The purpose of psychological conservation of manpower is *to minimize the conflict exposure faced by the employee in the work environment with a view to reducing manpower and production losses which arise in the presence of conflict.*

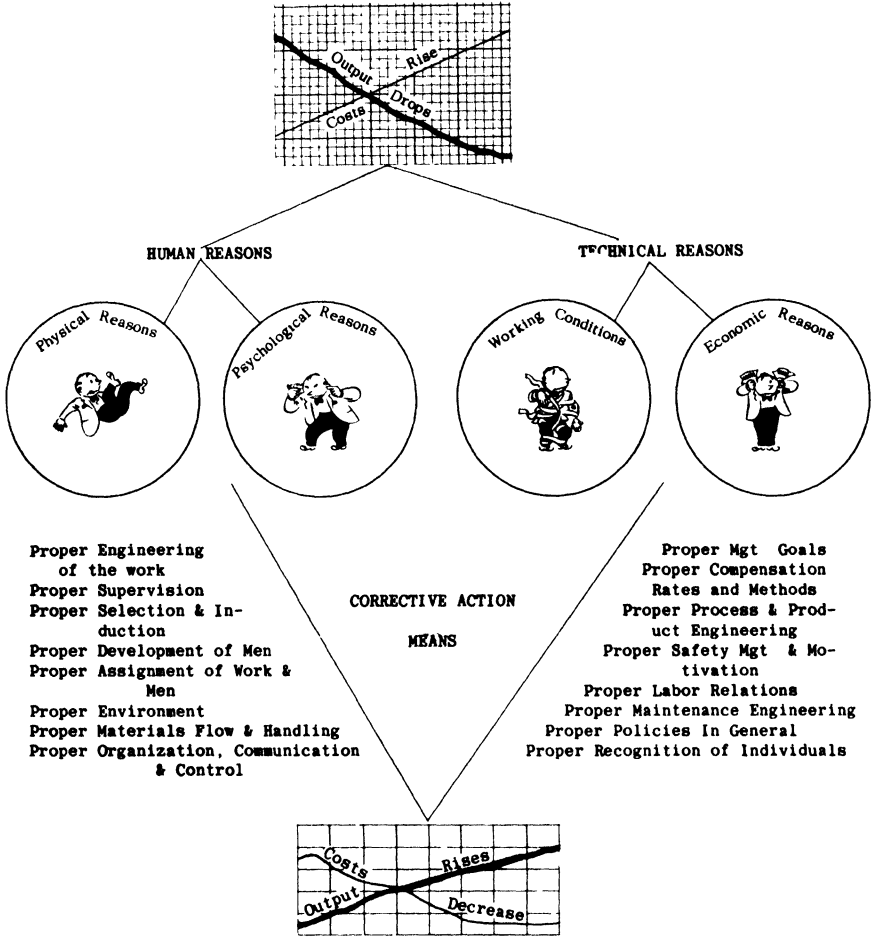
There is nothing of welfarism or paternalism in efforts to maintain or develop the psychological ease of manpower; nor is there anything dishonest or smacking of exploitation. The output-cost relationship, so real here, is depicted in Figure 61.

**CONSIDERATIONS AND FUNCTION.** The minimum considerations and functions involved in effective psychological conservation include the following.

1. Recognition of the impact of fatigue, monotony, and boredom upon the employee.

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<sup>1</sup>C. H. Lawshe, *Psychology of Industrial Relations* (McGraw-Hill Book Co., Inc., N. Y., 1953), p. 331; also Harry W. Karn and B. von Haller Gilmer, (ed.), *Readings in Industrial and Business Psychology* (McGraw-Hill Book Co., Inc., N. Y., 1952).



OUTPUT AND COST RELATIONSHIP —  
A CONSERVATION POINT OF VIEW

Figure 61

2. Recognition of the importance of good supervision to the employee.
3. Recognition of the importance of "employee wants" to the employee and in the matter of effective production.
4. Recognition of the importance of employee services.
5. Recognition of the nature and significance of labor turnover, absenteeism, and tardiness, and the importance and techniques of minimizing their frequency.

Together with these points, which constitute the areas of interest in this chapter, an additional point bears repetition in the interest of emphasis.

### PSYCHOLOGICAL-PHYSIOLOGICAL INTERDEPENDENCY

Man's psychological condition depends in some measure upon his physical condition and *vice versa*.<sup>2</sup> This realization supports the conclusion that in general the matter of attaining psychological conservation of manpower requires *two* broad approaches: a physical or engineering approach, and a human relations approach or, if you wish, the application of sound management and leadership practices.<sup>3</sup>

**INTERNAL SIGNIFICANCE.** The importance of a "freely co-operative" workforce rests with the fact that one can expect such a staff to produce in a manner which optimizes the return upon the invested capital. In addition, such an employee group is more likely to innovate or invent, thereby improving the possibility of remaining dynamic.

**EXTERNAL SIGNIFICANCE.** A "freely co-operative" workforce has a positive effect upon the "ears" of the community. When the town "knows" the company to be a happy and safe place to work — a place where men are treated as men — then people's interest in working there goes beyond the mere "need to get a job" Furthermore, such a firm is likely to have the stability necessary to attract investment capital.

### FATIGUE, MONOTONY, AND BOREDOM

As indicated in the last chapter, fatigue has both a physical and a psychological pattern. Its causes may be physical exertion or psychological reaction — usually both. Proper engineering of the job, processes, or immediate environment reduces the former. Development of a positive work atmosphere (as shown so long ago by the Hawthorne observations) minimizes the latter. Management, in its attempt to conserve manpower, must be concerned with both.

The psychosomatic aspects of fatigue can be seen in the shop. They occur when job requirements exceed the employee's ability and skill or when the employee is unchallenged. In either case *desire* diminishes. Under the first condition, tension and frustration appear. Where the second is true, monotony and boredom result.

Monotony and boredom can, for all practical purposes, be considered the same. The only *difference* is the frame of reference. The

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<sup>2</sup>cf. *Industrial Medicine and Surgery*, published monthly by the Industrial Publishing Company of Chicago.

<sup>3</sup>cf. Milton L. Blum, *Industrial Psychology and Its Social Foundations* (Harper & Brothers, N. Y., 1949), Norman R. F. Maier, *Psychology In Industry* (Houghton Mifflin Company, Boston, 1946), Chapters 14 and 15.

*job* is monotonous, but *we* become bored; individual differences manifest themselves. What is boring to one may be the opposite to another. Monotony reduces the *desire* to work, while fatigue reduces the *capacity* to do work.<sup>4</sup> Where motivation is low, fatigue will be higher.<sup>5</sup> Boredom is complex. It goes beyond the gates of the plant. It involves basic psychological factors within the individual and environmental factors within the home as well as an actual dislike for the nature of the work itself.<sup>6</sup> All this suggests that: monotony which may arise because of a disliking for, or a growing disgust with, the work results in a reduction of motivation;<sup>7</sup> the reduction of motivation with respect to one (the work) environment may be due in part to a carry-over of minimal or negative motivation from another (say the home),<sup>8</sup> and the complex of motivation and monotony may, at least, hasten the advent of low productivity.<sup>9</sup>

**MENTAL FATIGUE VS. MONOTONY.** Fatigue tends to make a muscular and/or mental appearance. *Mental fatigue* has a physiological characteristic. It is the reduction in mental or nervous capacity to perform.<sup>10</sup> It may be a form of neurone-circuit interference related to a temporary or partial destruction or "using-up" of the circuitry's physiological and/or bio-chemical structure. The involved "tissues" may require a rest, and until they get that rest, their ability to work is minimal and therefore ability to work is reduced. Notice for example the "mental tiredness" you feel as you "cram" for an exam; you do not experience a parallel muscular tiredness.

Monotony, on the other hand, reflects how the individual views what is to be done. Fatigue, whether mental or muscular, tends to provoke a progressive reduction in the ability to work. Monotony tends to produce alternate "ups-and-downs" in production with, of course, a downward trend discernible.

**IMPORTANCE TO THE MANAGER.** Managers who appreciate the implications of fatigue can be expected to understand the importance of motivation. They therefore more readily support conser-

<sup>4</sup>Maier, *op. cit.*, p. 271, cf. Thomas Arthur Ryan, *Work and Effort* (The Ronald Press Company, New York, 1947), Chapter 9, *passim*.

<sup>5</sup>Maier, *op. cit.*, p. 302, Lawshe, *op. cit.*, pp. 208-215, *passim*.

<sup>6</sup>Ryan, *op. cit.*, pp. 196-207, *passim*; W. T. Floyd and A. T. Welford (eds.) *Symposium of Fatigue*, (H. K. Lewis and Company, Ltd., London, 1953).

<sup>7</sup>Blum, *op. cit.* p. 240; Ryan, *op. cit.* p. 197; Patricia Cain Smith, "The Curve of Output as a Criterion of Boredom," *Journal of Applied Psychology* Vol. 37, No. 2, April, 1953, pp. 69-74, *passim*.

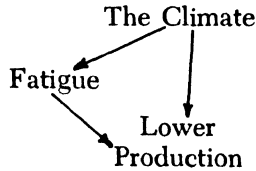
<sup>8</sup>cf. Floyd and Welford, *op. cit.*, E. G. Chambers, *Psychology and the Industrial Worker* (The Cambridge University Press, Cambridge, England, 1951); Lawshe, *op. cit.*, pp. 211-215, *passim*.

<sup>9</sup>Maier, *op. cit.* pp. 211-215 *passim*.

<sup>10</sup>*Ibid.* p. 302; J. Stanley Gray, *Psychology in Industry* (McGraw-Hill Book Company, Inc., New York, 1952), pp. 247-264, *passim*.

vation efforts. The effects of fatigue which hold the greatest practical interest for managers and manpower personnel include the effect upon output and the effect upon organization.

*Fatigue and Output.* Just as the attainment of output fatigues the employee, the fatigued employee affects the output.<sup>11</sup> The diagram following indicates the setting involved.



Thus it appears that:

. . . Fatigued employees have a lessened ability and/or desire to produce effectively and co-operate freely. Their work tends to increase unit costs.

. . . Fatigued employees have an increased propensity toward accidents and errors. The quality of their production tends to diminish and increased unit costs result.

. . . Fatigued employees are less able to attend to detail. Inattention to detail may minimize the effectiveness of plans and planning, communication and control efforts, and interfere with a salesman's ability to approach the customer effectively. In any case, where we find fatigue, we also find (or tend to find) increased unit cost or decreased income.

*Fatigue and Organization.* In the general context of etiological (cause-effect) examination of fatigue, one treats fatigue as an effect rather than a cause. As events unfold, however, it becomes evident that an "effect" may, in the future or evolving case, function as a cause in some new or expanded relationship. The alert manager thus recognizes that something about the totality of the work environment may cause, or help to cause, fatigue in man, may cause, or help to cause, a lowering of production, which may be contributed to by the fatigued man. In turn, this condition may reduce the effectiveness of organization. Both the fatigue already present, however, and that generated by having to attempt to improve production, plus the fact of lower production, may lead to generally reduced organizational effectiveness.

<sup>11</sup>cf. Lawshe, *op. cit.*, pp. 211-228, *passim*; Ryan, *op. cit.*, pp. 203-208; R. L. Kahn, "The Prediction of Productivity," *Journal of Social Issues*, 1956, No. 12, pp. 41-49; Hannah Arendt, *The Human Condition* (University of Chicago Press, Chicago, 1958).

Out of this theoretical approach, there appear certain practical matters important to every manager. For example:

. . . Fatigued individuals tend to be absent frequently, to be late and to quit. This increases staffing problems, and tends to result in decreased quantity and quality output.

. . . Fatigued individuals are more susceptible to emotional problems, more prone to conflict and frustration. Such individuals are difficult to supervise; they are apt to take issue with any little remark; they are more likely to file grievances in large numbers. Where a workforce is generally in a fatigued state, the need for extensive programs to improve supervisory technique increases. Manpower selection activities are likely to increase and the cost-income relationship to deteriorate.

. . . Fatigued individuals may deteriorate physically and/or psychologically far more rapidly than those who are not fatigued. The end result of such a situation involves management in economic considerations related to cost and income.

One method useful in efforts to assure recognition of fatigue, and in establishing criteria for action by engineering, medical-service and safety-management personnel is to establish a "standard table" of fatigue characteristics. The task can be performed by: (1) joint review of equipment, layout, procedures, and the like by the engineering and medical and/or safety personnel — the purpose is to identify "possible" fatiguing factors; (2) observation of the employee, with specific attention to evidence of "apparently" abnormal reactions and actions; (3) interview of the employee to determine his reactions to procedures and the like and his impressions regarding his feelings of tiredness, and (4) joint conference to establish the "fact" as against the "fiction" of observations, interviews, and subjective conclusions. One also can extend the interview portion to require that every exit-interview cover the matter of fatigue.<sup>12</sup>

*FATIGUE REDUCTION.* Although the needs of the situation will govern the actual design of any fatigue reduction program, it is important that every program have at least some basis in the following more-or-less common approaches. These basic points do not, however, constitute a "canned" program.

1. Fatigue reduction is related directly to the prevention of accidents and the elimination of environmental hazards.
2. Efforts thus begin with a study of jobs and environments, and job analysis and process analysis become basic to fatigue reduction.
3. Fatigue is related to the individual as well as the job and environment, hence correct selection procedures will help minimize

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<sup>12</sup>cf. Lawshe, *op cit.*, p. 214; Blum, *op. cit.*, pp. 241-242.

fatigue effects by providing personnel more likely to be suited to the jobs, and personnel to whom jobs can be adjusted more easily. (Let us not forget that in today's environment not only must people be placed according to the job, but jobs must be kept under constant surveillance in an effort to adjust them to the people.<sup>13</sup>)

4. Since, in at least one respect, fatigue reflects the employee's degree of training for his job, manpower development tends to aid fatigue reduction efforts. This can occur in at least two ways: the employee learns the "best" way to work, and therefore learns to conserve mental and physical energy; the managers and engineers involved learn the best ways to perform necessary work and learn the human factors contributing to fatigue, and this helps them to supervise and devise work in a less fatiguing manner.

5. The engineering, medical-service, and psychology applied to safety management can be applied also to fatigue reduction, thus assuring correct speeds of operation, correct light, correct height of work stations, and the like which may reduce fatigue as well as increase safety.

6. Monotony can be broken by the utilization of external-distractors (music, rest periods, shifts in assignment)

7. The relationship of monotony and fatigue with motivation suggests that motivation may be improved by expanding rather than contracting job requirements (remembering, of course, that if the employee's capacity is over-challenged, his motivation will diminish).

8. Monotony may result from a failure to understand the importance of assigned work, hence, educational effort designed to improve the employee's understanding may improve his motivation and reduce his boredom.

9. The relationship between monotony and motivation indicates that supervision plays an important role in reducing fatigue, hence efforts to improve supervision may be effective as an indirect means of reducing monotony.

In essence, then, fatigue reduction depends upon a fully-developed program of manpower management. It requires proper differential selection, proper manpower development, and an effective safety management program.<sup>14</sup>

## SUPERVISION AND PSYCHOLOGICAL CONSERVATION

Supervision and the psychological conservation of manpower become co-dependents because of the problem of conflict. Very often,

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<sup>13</sup>Frederick Herzberg, Bernard Mausner, and Barbara Block Snyderman, *The Motivation to Work* (John Wiley & Sons, Inc., N. Y., 2nd Ed., 1959).

<sup>14</sup>J. K. Lauemann, "Job Enlargement Boosts Production," *Nation's Business*, Vol. 42, No. 12, December, 1954, pp. 34-37; Dwight G. Baird, "How Job Enlargement Cuts Absenteeism and Overtime," *American Business*, Vol. 24, No. 7, July, 1954, pp. 10-12, Lucein Brouha, "Fatigue - Measuring and Reducing It," *Advanced Management*, Vol. 19, No. 1, January, 1954, pp. 9-19.

how the supervisor handles the subordinate results in conflict between the two. The same result may occur because of the employee's treatment of, or response to, the supervisor. As a situation unfolds, conflict itself may become a cause of evolving events. The generated conflict, and/or the behavior of the parties may lead to quits, accidents, work stoppages, and the like. The behavior of the supervisor may change, but the generated conflict may remain as part of the behavior of the subordinate. In turn this may establish a new relationship between the subordinate and some receptor of his actions which generates new conflicts; or the strength of the conflict generated by the previous relationship may be such as to prove to be a cause of some future action by the subordinate.

Numerous combinations of relationships are possible instead of one simple, standard cause-effect pattern. Carefully maintained records of personnel actions have shown, for example, the following points, each representative of a different situation.

. . . A quit; conflict generated by supervisor's refusal to listen to what later proved to be a valid complaint and explanation.

. . . A fight with a supervisor, a discharge; behind it, conflict within the subordinate generated by a situation not related to that superior-subordinate relationship. Conflict both a cause and an effect.

. . . An accident. Employee emotionally distracted, reacting to two events; one on the job two days previous, one off the job pertaining to a union problem. In point of time, conflict is a cause. Excluding time, conflict is both cause and effect.

The genesis of conflict and fatigue is relative. The manager seeks to maintain a conflict-free work environment, just as he strives to develop processes which do not contribute to unnatural or unnecessary fatigue.

*SUPERVISOR-SUBORDINATE RELATIONSHIP.* The superior-subordinate relationship is of prime concern to managers. The pertinent questions become the following. In what way can a superior give rise to, or prolong or intensify conflict? What can a superior do to facilitate efforts to conserve manpower, particularly in the area of psychological conservation? By answering one question, the answer to the other appears quite naturally. We therefore consider certain sources of conflict.

1. *Knowledge.* The superior who lacks real skill in his job becomes a source of conflict. The subordinate soon discovers whether his boss knows, or does not know, has the physical and mental ability or does not have it. Subordinates tend to develop insecurity in the presence of incompetent superiors. They tend to "go around" the boss, to listen with "one ear," to lose respect. These conditions are indicative

of developing or intensifying conflict; turnover, absenteeism, tardiness, and accidents increase.

2. *Staffing.* Supervisors have some part in the selection of their subordinates. Failure to carry out that part properly may mean the presence of incompetent subordinates. The supervisor must co-operate fully in the over-all task of manpower selection, placement, and training. He must prepare requisitions properly and make the hiring decision in terms of the job at hand, striving to match a man's capacity with the work he will be required to perform.<sup>15</sup>

3. *Instruction.* The superior who commands, demands, or levies edicts when the situation requires careful and considerate instruction is the superior who is creating conflict. Probably one of the most significant aspects of the management job is that of instruction. The good supervisor is a teacher. He does not do the work for the subordinate. He guides, assists, and teaches.

4. *Listening.* Conflict often is caused by the superior who refuses to listen. Subordinates have problems — some personal, some related to the job — and they have ideas and opinions. The superior who seeks to avoid conflict takes the time to listen.

5. *Participation.* The good supervisor allows, in fact seeks, employee participation in goal accomplishment, he establishes a relationship which encourages subordinates to express their views regarding goals and means of attaining them. If a service is being designed for the employees' benefit, they are encouraged to manage or participate in the management of that service. If a piece of work is to be done, the employee is encouraged to recognize the why, the when, the where, and develop or help develop the how; he then is allowed to go ahead and do it without being "snoopervised."

6. *Recognition.* If an employee is rewarded for ideas, for excellent performance, for overcoming a particular problem, the superior is taking a step designed at least to minimize conflict development in that employee. Even if the reward is a simple recognition, a statement before others (particularly in front of other superiors), the supervisor is taking a positive and correct step toward instilling motivation in that employee.

7. *Discrimination.* A discriminating supervisor recognizes the differences among subordinates. He notes those who perform outstandingly, who seek to co-operate, who have specific capabilities. The superior who so discriminates stands to gain the co-operation of subordinates. His discrimination depends upon his own competency as a superior. The manager who is able to select knows his subordinates, their physical and psychological capabilities.

8. *Command.* The "command" is seldom needed if proper supervision, training and education, recognition and reward, and reasonable participation have been the habit rather than the exception. Ordinarily, where command is not required but is used, there will be conflict.

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<sup>15</sup>Herzberg, Mausner, Snyderman, *op. cit.*, p. 134.

On the other hand, there are occasions where command is a necessity, where the superior cannot risk the suggestion, the request for action, the approach of: "This is what needs to be done. Any ideas? Okay, let's do it!" Where that approach cannot be risked, conflict will arise *unless command is exercised!*

9. *Representation.* The superior is the representative of his subordinates. Conflict develops if he fails to represent each in a fair and timely manner. Credit for an idea which originates in a subordinate should be given to that subordinate. At times a subordinate will be in trouble with the supervisor's superior; in such a case it often is wise to give the subordinate credit for a good idea even though it originally may have been the supervisor's. The subordinate has problems, grievances, gripes, these should be represented to his superiors with honesty and clarity. By the same token, the supervisor should represent his bosses and peers to his subordinates in like fashion.

10. *Creativity.* Managers must be creative. They must encourage the development of creativeness in subordinates. If a subordinate feels that all he ever can do is what he is told to do, conflict may arise. People tend to want the opportunity to "go it themselves." In the academic sense, one may consider the statement made by Herzberg, Mausner, and Snyderman. ". . . a successful supervisor was often instrumental in structuring the work so that his subordinates *could* realize their ability for creative achievement."<sup>16</sup>

11. *Friendliness.* Often the superior who maintains a strict "class distinction" is hiding something, seeking to cover some form of incompetency or something in his personality of which he is just a little bit ashamed. Aside from this, such action in the industrial world (and often in the military) tends to foster conflict. A superior must be in a position to offer consolation to a subordinate, to offer advice and counsel, to give help. Each man within a department depends upon every other man.<sup>17</sup> The maintenance of effective interdependency requires that the leader approach his people in a friendly manner.

Does friendliness mean that the boss must "wine and dine the subordinate?" No! It simply means that the superior must treat the subordinate as a human being with social and economic needs of his own, and a need for companionship and kindness.

12. *Confidence of Superiors.* If a supervisor wants to shake the roots of a subordinate's feelings of security, let him fall out with his superiors. The subordinate wants to know that his immediate boss is held in esteem by the men on top.

13. *Confidence of Peers.* Compatibility must exist among the supervisor and his immediate boss, his immediate subordinates, and

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<sup>16</sup>Herzberg, Mausner, and Snyderman, *op. cit.*, p. 135.

<sup>17</sup>Herzberg, Mausner, and Snyderman, *op. cit.*, pp. 120-139, *passim*; Paul Ecker, John Macrae, Vernon Ouellette, and Charles Telford. *Handbook for Supervisors* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959), pp. 33-54; Stuart Chase, "A Generation of Industrial Peace," Standard Oil Company of New Jersey, 1946.

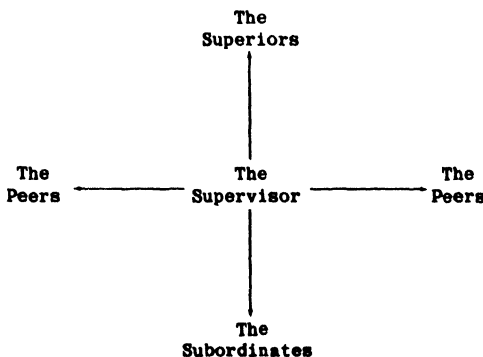
his peers, (on either side). Responsibility flows also in the same four directions. Figure 62 depicts the supervisor's responsibility setting.

14 *Fix Responsibility* Subordinates like to know what they are expected to do, why, when, and where. The superior must therefore "fix" responsibility or stand to deal with the conflict which will arise.

**THE APPLICATION OF DISCIPLINE.** How the supervisor exercises discipline is particularly important to the psychological ease of the subordinate. Exit interviews often expose the feeling: "I'm quitting because my boss is unfair." A quick glance at recorded grievances and arbitrations reveals the same point to be true. What was said in Chapter 3 about discipline holds true here, but let us probe a little deeper.

Discipline has two roots: (1) punitive and (2) respect. The punitive clearly is associated with punishment for wrongdoing. Respect, on the other hand, is seldom even considered as a matter of discipline; but discipline it is, for it begins in "self discipline." The superior who schools himself in correct action, who stands as the example, who *can* be looked up to, has in fact established the base of true discipline: respect!

Traditionally, discipline suggests a deterring action, an autocratic condition. The manager must strive constantly toward a *co-operative* discipline, for his real purpose is to motivate! The superior seeks to develop positive and consistent motivation in the subordinate. He does this through respect first. Punitive action is the last resort. In fact, the superior who must exercise punitive action is admitting personal deficiency in many cases.



THE SUPERVISOR'S RESPONSIBILITY SETTING

Figure 62

In the punitive sense, discipline must be applied in terms of the stated policies of the firm and the union contract, and consistently rather than as the result of a whim or momentary anger. Recall the old saying: let the punishment fit the crime. First, the superior must determine if there *is* a crime *or* merely a misunderstanding or failure of communication, which, of course, may be no fault of the subordinate. Discipline must minimize conflict. The following pattern is suggested.

1. The actions of managers will come under the microscope of grievance machinery. Orders, assignments, requests and reprimands therefore must be reasonable and within the bounds of defined jobs or obviously necessary due to an emergency situation.

2. Supervisors need to have the discipline objective clearly in mind, and do everything possible to assure communication of those objectives to the subordinates. The objectives common to any situation are as follows.

. . . To obtain and maintain mutual respect — respect for himself by his people, for his people by him, and for his people and himself by others.

. . . To obtain the co-operation of his people in achieving the required goals and operating within the established rules.

. . . To develop his people to the point where they can create for themselves, can see and attain goals for themselves, can, in other words, really accomplish the responsibilities inherent to their jobs.

3. Approach violations of rules and operational errors with a consistent and reasonable attitude and a fair procedure.

. . . When a problem arises, step into the breach quickly — act, do not wait; *but* —

. . . Get the facts before making a decision or expressing a view, and make sure that the “facts” obtained are the “facts” and not a creation of jealousy.

. . . Then, give the culprit an opportunity to explain. Listen and note the explanation.

. . . Make the decision. Here, of course, is the meat of the problem.

If the supervisor hopes to avoid serious conflict, his approach to the decision must be carefully structured. (We are not suggesting a period of inaction; experience and conscious recall of principles enable very rapid action even though a careful pattern is followed.) He must: (1) identify the exact violation or error; (2) consider the impact of the violation or error — who and what is damaged, and so forth; (3) consider the subordinate’s record and the manner in which he has been corrected or reprimanded in the past, and how long since the last

altercation, (4) compare this problem with those of the past — same violation, or a new one, (5) consider the possibility and nature of mitigating or aggravating factors, and how significant they are now and have been in the past, and (6) note the existing policy and practice regarding such situations as the one confronting him. Then, (7) let the decision be based upon three related considerations: will the decision help motivate the employee positively and if not what then, will the decision be defensible and is it in keeping with the meaning and the letter of policy and procedure, and will this decision help *me* to avoid future actions of the same kind by my subordinates

**THE SUPERVISOR IS A MANPOWER MANAGER.** He will breed conflict in his organization if he fails to realize his role as a manpower manager. He will contribute to, or create feelings of, insecurity within his people unless he fills his role as manpower manager satisfactorily.

The National Labor Relations Act defines a supervisor in paragraph 11 of Section 2. The definition points out that a supervisor has the authority to hire, transfer, suspend, lay off, recall, promote, discharge, assign, reward, and discipline others. Where a manpower division exists a supervisor may have all, some, or only a very limited few of these responsibilities. He should, of course, have a predominant share of responsibility in each. How well he meets these responsibilities will carry a lot of weight in determining the security of his subordinates. If, for example, he cannot select compatible and competent people into the work-unit, if his rewards are not adequate (see chapters 2, 3, 4 and 6) conflict sets in. More than this, if he fails to carry out his end of the manpower management programs, he will be in trouble with top management also. This, too, leads to feelings of insecurity in his subordinates.

## **MOTIVATION — EMPLOYEE WANTS**

Men work to satisfy needs. If, as has been shown by the various prisoner-of-war reports, men are stripped of the opportunity to get enough food, they will stop at almost nothing in an effort to secure that food. Having satisfied his basic biological needs, man turns to other factors, but until the basic needs are met, matters of friendship, status, and the like are ignored.

In the industrial environment there is a similar pattern. When pay is considered adequate, money ceases to be a primary motivator — in fact, we all know persons who have refused to do something even though the monetary reward would have been high. Recognition by a superior may become unimportant as a motivating force because to gain that recognition means losing the respect of the work group. Motivation has certain characteristics of interest here.

1. *Motivation Is Situational* What motivates one may not motivate another, motivation varies from time to time, from place to place and between individuals and groups. Alert managers learn to recognize the differences in subordinates in order to cope with this condition.

2. *What People Want Often Is Not What They Say They Want.* The employee who seeks to get his superior discharged is not going to come right out and say so, except in extreme or unusual cases. Just as clearly, it is easier for a man to express a desire for higher wages than for him to explain that he'd like someone to tell him he is a good fellow. The manager must understand this and learn to utilize the "grapevine" and specific techniques such as attitude surveys to help discover the wants of his people. The manpower division supports the operating manager by providing or advising that provision be made for employee-services designed to help morale.

3. *Internally Generated or Self-Motivation Is Best* In the industrial environment this is probably the most difficult form of motivation to obtain. It results from the individual's past experiences, rewards, and actual knowledge. It is based on the degree to which the employee understands the goals of the firm and his superiors. For it to be effective the subordinate must feel "free" with his superior, who must communicate goals and plans to the subordinate. The manpower division plays an important role here by developing the kind of differential selection which improves the likelihood of obtaining persons who are motivated to produce.

4. *Motivation and Interest Are Related* The things we are interested in we tend to do first, and usually do best. The manager will seek to establish employee interest through correct job assignment, education, and communication, and by applying relative rewards. The manpower division facilitates the manager's efforts by maintaining a program of employee services related to off-the-job as well as on-the-job interests, and a research program to improve management's knowledge of employee wants and interests and means for developing them.

**EMPLOYEE WANTS.** Although no consistent and readily predictable pattern of "wants" appears to exist, employees, like all men, have a more or less general series of motivational needs. Studies over a number of years indicate the existence of this general grouping even though no means has yet been developed which tells the manager when one need (or want) or another will be foremost in a man's mind.<sup>18</sup> This series includes the following.

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<sup>18</sup>cf. Herzberg, Mausner, and Snyderman, *op. cit.*, pp. 123-137, *passim*. Albert Gray, "What Employees Want in a Job," *Canadian Business*, Vol. 18:60-70, Montreal, Canada, September, 1945; Robert Hoppock, *Job Satisfaction*, (Harper & Brothers, New York, 1935), J. D. Houser, *What People Want From Business* (McGraw-Hill Book Company, New York, 1938), Fritz J. Roethlisberger, *Management and Morale* (Harvard University Press, Cambridge, Massachusetts, 1947); Whiting Williams, *Mainsprings of Men* (Charles Scribner's Sons, New York, 1925).

1 Man is basically a gregarious animal. His gregarious nature generally leads to a development of a need for friendship or affection.

2. Man tends to need recognition. He wants praise and other forms of reward for work well done, and rather expects a different reward for work poorly done. His recognition requirement means also that he wants the sincere interest of his superiors.

3. Man needs status and wants acknowledgment of status. The supervisor thus acknowledges seniority, title, reputation and the like; if possible, he makes operational corrections indirectly (noting, of course, that individual differences require that the superior recognize the subordinate who *must* be handled via the direct approach).

4. Man wants fair treatment. Policies and procedures relating to promotion, transfer, discipline, in fact pertaining to all personnel actions including work assignment and rewards for performance, must be stated in writing and lived up to by the letter.

5. Man wants the opportunity to participate and to express himself. Man wants to be heard! True, the intelligent man will quickly understand that not all people can be responsible for all things, not all can establish the goals at the corporate level. Men do want, however, to be "in the know," to be given a voice in their level's operation and the like.

6. Man requires security. He wants the opportunity to go as far as his desires and capacities will allow (sometimes further). He wants to know that his job is there, that his pay check is safe.

7. Although many men reject the thought of increasing their responsibilities, they tend to want the chance to pursue those which rightfully belong to them by job definition.

Tables 24 and 25 present a summary of the early research into men's wants. Currently, one of the most appropriate presentations is that already cited by Herzberg, Mausner, and Snyderman.

**DETERMINING EMPLOYEE WANTS.** Knowing employee "wants," having the skill to determine those desires and to employ the techniques typically helpful in detecting them is tantamount to appreciating the nature of morale and the techniques of morale analysis. Actually, there are two very general classifications of techniques which have utility in the determination of "wants." These can be classified as *direct* or management-initiated techniques and *indirect* or employee-oriented techniques.

**Direct Techniques.** These include two basic approaches, the questionnaire and the interview. The pitfalls of interviewing described in Chapter 5 and referred to throughout the text, and the problems of surveying, all bear upon the use of these methods. Another method, known as the "incident" method, is becoming the recognized "best way." It actually is an application of the interview method, but is designed to recognize a triad revealing *factors* leading to *attitudes*

TABLE 24

## SUMMARY OF EARLY RESEARCH REGARDING WORKER'S WANTS

Factor Examined	Results of Studies Ranked Importance	Rank Mean	True Rank
Steady Work	1 1 1 2 2 1 1 2	1.1	1
Good Working Conditions	2 5 6 2 4 4.5	3.9	3
Good Working Companions	3 7 3	4.3	4
Good Boss	4 6 5 5 5 4 5 7 5	5.2	5
Opportunity for Advancement	5 2 2 1 1 5 3 6	3.1	2
High Pay	6 8 3 6 7 6 2 4	5.25	6
Opportunity to use Own Ideas	7 3 3 3 7 11 11 5	6.7	8
Opportunity to learn Job	8 4 4 3 8	5.4	7
Good Hours	9 9 8 9.5	8.8	9
Easy Work	10 10	10	10

TABLE 25

## HOPPOCK'S SIX MAJOR COMPONENTS OF JOB SATISFACTION

Components	Assumed Importance
The reaction of the person to unpleasant situations	1
The facility with which the person adjusts to others	2
The person's relative status in the social and economic group with which he identifies himself	3
The nature of the work in relation to the abilities, interests, and preparation of the worker	4
The feeling of security that the worker has	5
Loyalty (the application of the individual to a job not because of duty alone)	6

Source: Robert Hoppock, *Job Satisfaction* (Harper Bros., New York, 1935), p. 275. Hoppock did not hold these factors to be final. They are presented here as a point of interest for those interested in the wants and feelings of their employees; perhaps they may stimulate inquiry and interest!

leading to *results* or *effects*.<sup>19</sup> An additional method, which is a questionnaire, is a portion of the Triple Audit — the Employee Opinion Poll.<sup>20</sup>

Both interviews and questionnaires should be scaled and pre-tested. Interviewing procedures should be based upon a standard pattern — the concept of the “patterned” interview applies here. When using questionnaires, or outsiders to conduct interviews, it is important that respondents *know* that the program is sanctioned by the company — and it helps to have the sanction of the union.

Another side of morale or opinion analysis, and one often overlooked by managers and personnel people, involves the question of “preference in work-unit associates.” Determination of employee wants related to work-unit staffing is *best* handled through the use of *sociometrics*.<sup>21</sup> Sociometric analysis is a *direct* technique. It can be effectively applied to determine: (1) preference in associates, (2) preference in working leaders (choice of “straw-boss”), and (3) identification of isolates or periphery members of the work unit. The approach is handled via questionnaire and, in some cases, follow-up interviews; questions cover topics related to job performance, interest, and relationships, and leadership requirements and performance also are challenged. Questions are framed as in the following examples:

Who in your department would make the best supervisor?

First Choice                      Second Choice                      Third Choice

If you had your choice of three other persons from your department to work with as a team every day, whom would you choose?

First Choice                      Second Choice                      Third Choice

Who, in your opinion, is the least qualified person to be made a boss?

Other than yourself, who do you think is most deserving of promotion in your department?

Who do you think does the least work?

Response to the questions is developed by question and converted to sociograms, which depict the responses in graphic form. Each question is plotted, thus to the question “Who should be promoted?”, the response of the department members may show all members but one voting for that one. The device has utility not only in building work

<sup>19</sup>Herzberg, Mausner, and Snyderman, *op. cit.* pp. 20-29, *passim*.

<sup>20</sup>cf. Dale Yoder, Herbert G. Heneman, Jr., and Earl F. Cheit, “Triple Audit of Industrial Relations,” *Bulletin 11*, Industrial Relations Center, University of Minnesota, August, 1951, pp. 66-68.

<sup>21</sup>cf. R. H. Van Zelst, “An Interpersonal Relations Technique for Industry,” *Personnel*, Vol. 29, No. 1, July, 1952, pp. 68-77, also Joseph M. Rich, “Measuring Supervisory Training: The Sociometric Approach,” *Personnel*, Vol. 29, No. 1, July, 1952, pp. 78-84.

units, but also in determining the structure and character of the informal organization.

*Indirect Techniques.* The indirect approach to the determination of employee "wants," morale, attitudes or interests includes such programs as:

- Employee publications.
- Suggestion systems.
- Grievance machinery.
- Employee participation programs.
- The so-called "open-door" policy.

Table 26 presents a summary of the characteristics of these techniques. Although they lack the utility of the direct techniques, they serve the added purpose of catharsis and frequently result in the acquisition of ideas which otherwise might never come to light.<sup>22</sup>

*Remarks.* Supervisors or lower echelon managers, and even some top-management personnel, may hold: (1) morale surveys are a waste of time and money, (2) unions won't go along. The reasons for union resistance often are directly related to the *need* for opinion or morale analysis. Union officials who have been fighting for recognition, who have been exposed to all sorts of baiting by management are not going to trust efforts to determine employee wants. By the same token, management people frequently find themselves plagued with this fad or that one or this program or that one, all amounting to nothing and never followed up. Can they be blamed for resisting "one more hair-brained scheme"? Rank-and-file employees often feel exactly the same way!

If the study of employee wants is to succeed, a number of basic points should be remembered.

1. The purpose of analysis, nature of the technique to be used, and identity of those handling the project must be carefully communicated to all involved. If a union exists, its hierarchy should be included in planning.
2. A real and believable plan must exist — and be communicated — for the application of findings.
3. When changes are made as a result of findings, that fact should be communicated.
4. Operating managers must receive publicized credit for their contribution to such programs.
5. Even the *bad* findings should be made public but no names should be used unless something "good" can be said.

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<sup>22</sup>J. G. Luttrell, "100 Heads Are Better Than One," *Rotarian*, Vol. 69, Chic., Nov., 1946, "What Are Your Workers Thinking," *Modern Industry*, Vol. 16, 40-45, New York, April, 1947.

It therefore appears that consideration of the employee as a social being suggests: *if we are to deal with him successfully, we must know him — know his wants, his feelings, and what to expect as reactions.* Aspley and Whitmore have put it this way:<sup>23</sup>

**TABLE 26**  
**SUMMARY OF CHARACTERISTICS OF**  
**INDIRECT TECHNIQUES FOR DETERMINING EMPLOYEE WANTS**

Technique	Characteristics
Employee Publication	<p>Primarily a means of reporting views of management or results of employee surveys or studies of "wants " Letters to editors, etc may provide outlet for "want" determination or expression Suggestion or opinion columns may do the same Primarily a supporting technique Decision judgement should not be based upon included findings alone</p>
Suggestion System (including the "gripe box")	<p>A way of determining employees' material and non-material ideas Means of reporting to management the overt reactions of employees Not a means of determining possible factors of frustration in the workforce, but capable of partially satisfying the basic psychological needs of response, recognition, and participation Unless conducted or managed properly, the system may in fact become a cause of frustration May provide a therapeutic release of employee emotions The ability of this technique to furnish a means of exposing ideas is in itself protection against the frustrations resulting from inability to be heard</p>
Open-door Policy and Supervisory Staff	<p>Actually an interviewing technique, but ordinarily useful only in determining the overt feelings of employees Satisfies to a degree the psychological needs of response, recognition, and participation Hindered by the fact that employees hesitate to "tell" the boss anything he does not want to hear Frequently an excuse for no personnel policy</p>
Grievance Machinery	<p>A means of determining open complaints and surface or overt causes of complaints. Grievances are limited by contractual agreement and may be masks for true dissatisfactions Grievance may be only a tool for labor-management struggle for power Resignation or fear may hinder the reporting of grievances Offers employee a feeling of security from management's arbitrary use of authority Frustration may arise if the union discriminates between grievances for the general good or for political reasons in time of election Frustration also may arise if the employees feel that either the union is not representing them or that management is "kicking" the union around</p>

TABLE 26 (Continued)

Technique	Characteristics
Employee Participation and Policy Making	<p>Participating of employee representatives in development of policy and procedure may furnish management with information regarding basic employee attitudes. Such participation may enable determination of wants and feelings before acute frustration can arise. It may enable discovery of all of Thomas' four wishes -- security, response, recognition, and new experience. The purpose is to integrate the views of management and labor in the work situation and determine the desires and interests of employees concerning management policies. Any form of employee or union participation must be honestly and fairly approached by management and labor, otherwise it will become a causal factor of employee frustration.</p> <p>Some managers may assume that such participation is nothing more-or-less than turning over the reins of management to labor. This could happen, but the technique is specifically designed to facilitate communication of ideas and feelings, not to change the nature of management or its authority.</p>
<p>General Limitations Common to a Degree in all Indirect Techniques for Determining Employee Wants</p>	
1	Ordinarily these techniques are incapable of providing any direct evidence as to the basic causes of frustration. They do furnish direct evidence of overt cause patterns.
2	Anonymity is not easy to assure the worker when these methods are used.
3	True wants are frequently masked by inability of self-expression on the part of the employee and lack of interpretative skill on the part of management.
4	Great care must be taken to protect against the feeling that favoritism is being exhibited, or that discrimination is being applied.
5	Determination of true wants and feelings is difficult because of the ease of mistaking substitute grievances and feelings for the true issues.

To understand people is to know how to treat them so as to secure the response and the results we want. Failure to understand the motives that make men work, their hopes and ambitions, their prejudices and shortcomings, is responsible for most of the problems in modern management.

<sup>23</sup>John C. Aspley and Eugene Whitmore, *The Handbook of Industrial Relations* (Dartnell Corporation, Chicago, 1947), p. 62.

Turning farther back, one discovers the very succinct statement of two well-known labor personalities.<sup>24</sup>

The dynamic quality, the militancy, and the crusading spirit of the labor movement, especially of CIO, in the last decade (speaking of the '30's) were nurtured by the failure of management to satisfy the non-economic needs of the workers.

### EMPLOYEE SERVICES

Employee services refers to those programs or benefits offered employees over and above their wages and salaries and their economic "fringe benefits." As used here, the term refers specifically to those programs related to the general idea of conserving the psychosocial condition of the workforce. The implication is that some programs are required as an aid to the physical conservation effort and others as an aid to the psychosocial. The further implication exists: there is a less obvious and often a less demanding need for employee services than for services directly associated with the physical conservation of manpower.

*WHAT IS INVOLVED.* One might classify the services applicable in two ways: those which bridge the physical and psychological efforts, and those which stand as distinctly associated with the psychological.

*The "Bridging" Services.* These include programs associated with the control of fatigue and monotony: coffee-breaks, rest periods, in-plant music, mid-shift recreational programs. Such services may accomplish two things, they may ease tensions and prevent or minimize physical strain and risk of injury. The manpower division has the responsibility of determining what is needed, when and where it should be applied, and how best to apply the programs. It is the manpower division's job to advise top management and then, acting after approval, to initiate and administer the programs.

*THE PSYCHOLOGICAL SERVICES.* These include programs to determine employee "wants" or "opinion" or morale (however you wish to classify them), and programs resulting from such determination and planned to meet expressed needs of employees. Before identifying the latter group, let us say a few more words about the former.

*Employee Publications.* The employee publication has been referred to in Chapter 5. A particularly salient point: if such a publication is to have real value in manpower conservation, it must be so established that the employee has an opportunity to both contribute information and assist in its operation. Publications which, like so

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<sup>24</sup>Clinton S. Golden and Harold J. Ruttenberg, *The Dynamics of Industrial Democracy* (Harper & Brothers, New York, 1942), p. 21.

many recreational programs, become "spectator" publications, have little value in the over-all effort to conserve manpower.

*Suggestion Systems.* Also mentioned in Chapter 5, the suggestion system must provide a real system of rewards in order to have value as a conservation device. Reward should be relative to the value of the idea submitted and accepted. Even a rejected idea should receive recognition.

*Vocational Guidance and Counseling.* Major technological changes and rapidly-changing conditions make vocational guidance a necessity. Guidance work requires the attention of qualified individuals — either visits by local guidance people or development of an internal staff.

*Counseling* is a service which may or may not be needed. All people, however, including managers themselves, need personal advice now and then. Counseling should not be handled by run-of-the-mill manpower people, managers, or fellow workers. It should involve the kind of skill possessed only by the trained psychologist. Employees should *know* that if they require such services (and managers should know that if they *feel* such services are needed by an individual) competent, recognized personnel are available for the purpose.

This is not to say that every organization needs a psychotherapist. Every effective manpower manager, however, requires a plan which facilitates the acquisition of professional counseling. Decision as to how to establish the service depends upon apparent or estimated need, economic ability, and the like. It is certainly recommended that manpower managers become familiar with the mental health organization within the region.

*Legal Aid.* At some time, everyone needs a lawyer. Some aspects of legal aid can be carried out successfully by members of the typical manpower division. For example, the insurance clerk can provide most of the help usually required, the controller's office will have a notary public; the plant engineer can provide information concerning local building codes and regulations. The manpower division should be the co-ordinating unit when such services are required by employees. If an individual requires consultation and advice regarding building codes, the manpower division sets up the meeting with the plant engineer (unless, of course, the applicant is a member of the engineer's own group).

In addition to this typically routine type of aid, employees may require civil advice. A man may need help in the purchase of land, in making or probating of a will. In such cases, the manpower division should be able either to call upon the legal staff of the company, arrange meetings and transfer of funds (if this is involved) or be able to arrange for outside help. Whether the company pays or even shares the expense is a matter for top management decision. Certainly it is not a question for generalization. One might point out,

however, that in areas where housing is limited, legal aid may be extremely necessary and should be developed as part of the over-all housing service available to employees. If the individual needs help but cannot get it, there is a very good possibility he will go elsewhere; in the case of management and technical manpower, particularly under today's market conditions, this risk should be minimized.

*Financial Aid.* Two specific considerations appear under the heading of financial aid — the issue of employee loans and the broader issue of complete credit union service. Credit unions are separate organizations; they stand outside the company but often are established with the aid of the company on company property. They may range from simple loan organizations to fully-developed fiscal institutions providing almost all services available in commercial banks. What should be established is a matter related directly to what is needed and what the workforce can maintain. Credit unions are not the business of management. The only part the manpower group plays in credit union operation is the initial part connected with determining need, arranging meetings with credit union authorities and the like. Further, the manpower group might well function as the "go-between" for management and the credit group — although this actually would seem more the business of the company's fiscal personnel.

*Company loans* or other financial assistance developed by the company are an entirely different matter. Companies establishing branches in areas distant from the main plant may staff them with a nucleus workforce. In such cases, the company may offer financial assistance, if not outright financial support for the move. Employees engaged in educational efforts may need financial help. When the effort directly (or even indirectly but identifiably) benefits the company, fiscal assistance appears to be warranted. The actual granting of loans would not be a function of the manpower group. They might well be charged with need-investigation, however, and will most certainly arrange appointments for employees. Should a company grant loans? Should loans be granted on an interest-free basis? These questions must be answered by top management. Whatever the answer, policy should be established and based upon need and economic ability. The established policy should be applied consistently.

*Savings and Thrift Programs.* Although the manpower division may be expected, in some cases, to administer savings programs, this normally would be the function of the fiscal division. The manpower division, however, may be charged with determination of need. Should a company undertake savings programs for employees? This again is a matter of need and economic ability: it costs money to deduct from the payroll for such services.

Programs of this type can be designed to include deductions for stock purchase, purchase of government bonds, and for direct entry of

monies into saving accounts. Do not, however, construe the idea of a "savings program" as being relative to a profit-sharing program. Profit sharing occurs as a fiscally-associated fringe benefit.

*Library Facilities.* As our technology increases in complexity, the need for professional libraries increases. Some organizations include regular library service together with professional service as an aid to employee self-development efforts and as a direct-service activity related to the manpower development program. One notes that of all the employee services mentioned so far this could be the most easily rationalized.

*Education and Scholarship Programs.* Many employees feel a need for self improvement in fields other than those directly or even remotely useful in terms of the company production effort. Naturally, where the desire is to improve oneself in terms of company needs, the programming would come under the manpower-development effort. Where the desire concerns itself with other interests, however, the problem is less that of manpower development than it is of psychological conservation. This phase of educational work thus may come under the health and welfare unit of the employee-service unit within the manpower division instead of the manpower-development group.

A company may establish a policy whereby the employee is reimbursed for all or a portion of his tuition depending upon the grade received; a flat 50 per cent of the "tab" may be picked up by the organization, or nothing may be forthcoming except assistance in enrolling. Almost any arrangement is possible. The point to remember is that whatever is done should be done in terms of *published* policy. Determination of need and best approach fall to the manpower division. Whatever administrative steps are required fall to the manpower division. The fiscal division handles financial arrangements.

Scholarship programs may be developed in an effort to hold employees to their jobs. Such programs usually are designed to furnish full or partial payments to academically competent youngsters. One organization, for example, has a "college of your choice" award for the top boy and girl of each year's high school class and a "college of the company's choice" award for the next highest boy and girl — the youngsters must be directly related to an employee.

*Company Stores and Purchasing Plans.* Generally it is felt that company stores, like company housing, went out with the thirties. This is far from true, and the need has not disappeared. In areas where population is scarce, transportation is limited and facilities or roads inadequate, company stores have a real value. Then too, communities exist where the shopping facilities are inadequate because of local customs — if associated with an oil company, one hardly would expect to shop in a local Arab market for all daily supplies. Some organizations maintain company stores as a control over local shopkeepers.

There are those who would profit from the dead — in one instance of our experience, local shopkeepers raised their prices 50 to 60 per cent to organization people; if a company wife walked in she was charged the listed price, but if a town woman walked in she was charged 50 to 60 per cent less. The organization finally opened a store of its own, threw it open to the public, and charged prices a regular two cents lower than those in town.

Should an organization develop its own stores? Should it establish an "open to the public" store, or one open only to employees? Should its pricing policies be based upon an accepted loss? All such questions are situational and top management must consider the case in terms of need and economic ability. The manpower division, the fiscal division, and the purchasing agent would be responsible for determination of need and best approach.

*Purchasing plans* often are used to aid the employee. Special discount rates are set for the company's product; and, at times, a special clerk is provided to operate a plan through which anything from a home to a can opener can be purchased. What is done should depend upon need and economic ability.

Some plans and some stores may be operated on a "co-operative basis." Employees would buy into the organization and have a fairly large say in its operation — perhaps the entire say. As a general rule, where the purpose of such plans or stores is at least partially that of maintaining a workforce, the co-operative approach may be the wisest; the employee then has a *real* stake in the operation and may have the very opportunity he requires to permit his managerial desires to function.

**OPERATIONAL CONSIDERATIONS.** Several principles or operational considerations command the attention of management before employee services are adopted.

1. Employee services should be of benefit to employer and employee. A service without mutual value will sooner or later be challenged. The worker eventually will realize that what might well go into increased wages or better equipment is being wasted upon some fancy program.

2. Employee services must be needed by the employee, and established as the result of expression of that need. The Ivory-tower approach to deciding what is needed should be discarded — find out what is needed and what the mutual benefit is.

3. Effective employee services usually are concerned with matters that individual employees either cannot do for themselves or that can be better handled through group effort.

4. Wise management avoids full operational control over employee services: such services ought to be "employee-self-services."

5. If a particular service can be performed more economically and effectively by outsiders, then it should not be established under company guidance or affiliation.

6. Services should be of the best possible quality and staffed by the most competent personnel possible.

7. Employee services should be established as the result of proven need, not because "it is the thing to do."

8. Employees require full knowledge of company policy regarding services.

Pigors and Myers indicate quite firmly that employee services which go beyond legal requirements serve to weld a more substantial base of mutual respect and understanding between management and labor. They also increased the possibility that employees will accept management's leadership before that of the union.<sup>25</sup>

### INDUSTRIAL UNREST

One reason for establishing manpower conservation programs is to minimize industrial unrest which results in unnecessary manpower and production losses. People think of industrial unrest as "labor trouble." Supervisors frequently blame the staff for unrest and the staff blames the line. Managers at all levels and in all fields often consider unrest as natural, inevitable, and typical of the times.

**DEFINITIONS AND REMARKS.** As used here, the term "industrial unrest" refers to disturbances within the company involving manpower and arising from individual dissatisfaction. This, of course, includes labor trouble. Managers generally speak of labor trouble as resulting in disorderly arguments between the hierarchy of organized labor and the management of enterprise.

*Disturbances* go beyond labor trouble. Labor trouble typically involves overt action, argument, and discord, and often is backed up by, or used to, express views which are substitutes for the real problem. *Unrest* is more subtle in its totality, but becomes readily discernible when it reaches the point of being labor trouble.

In reality, *industrial unrest* refers to the *day-to-day, cumulative dissatisfactions of the individual*. Dissatisfaction is contagious! As it mounts within the individual, it tends to spread. As it spreads, labor trouble tends to develop — employees become increasingly susceptible to the machinations of scrupulous and unscrupulous labor leaders, more easily upset by thoughtless but otherwise competent superiors, and exceedingly disturbed by incompetent superiors. While dissatisfaction is passing to the group and mounting within the group, however, the individual may reach a state of mind which leads *him* to act.

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<sup>25</sup>Paul Pigors and Charles A. Myers, *Personnel Administration*, (McGraw-Hill Book Company, Inc., N. Y., 1947), pp. 260-274.

What happens? Labor turnover, absenteeism, tardiness, accidents, more frequent and more serious grievances, increased scrap rates, decreased quality and quantity of production are the results.

*RESPONSIBILITY FOR UNREST.* Who is to blame for unrest or dissatisfaction in the workforce? To answer this, one first must consider the question — Dissatisfaction with what?

In a given case, the way to determine this is to make an analysis of employee morale or opinion (wants, attitudes, or whatever name you choose) and compare results to the responses gleaned through exit interviews, accident interviews, counseling sessions, and the results of "quality-control committee" meetings.

Responsibility for the morale study belongs to the manpower group and top management. Carefully developed and administered exit interviews, accident interviews, and the like are the responsibility of both the using manager and the manpower division (or, in the absence of such a division, the top manager of the using-manager's division). Quality control matters come under the quality and engineering managers.<sup>26</sup>

*INDUSTRIAL UNREST IS MAN-MADE* In a text of these proportions, the pattern of cause can receive only brief consideration. That pattern is related directly to the patterns leading to accidents and fatigue, and also is related to the expressed "employee wants." Industrial unrest is not inevitable — it is man-made. It can be avoided by good management practice. The cause pattern can be stated as follows.

1. *Organization.* the condition, the structure, and the procedures may cause dissatisfaction within the individuals. Their conduct may result in negative group behavior, may establish as well as reflect unrest within and between work groups

2. *Communication.* communication failure frequently becomes a very frustrating issue. The failure of information flow leads directly to dissatisfaction and results in overt and covert manifestations of unrest.

3. *Control:* over-control and under-control disturb the psychological ease of man. When man's security is challenged, when his needs are not met, when his real or imagined sensitivities are threatened, he becomes dissatisfied and his actions result in unrest. It is man who so threatens just as it is man who stands behind communication failure.

4. *Management Competency.* the personal competency of individual managers and the merit of the policies, procedures, and methods which they establish may lead to unrest

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<sup>26</sup>Many firms establish a group designed to study the reasons for excessive scrap or rework and rejects. Information pertaining to manpower, and coming from such quality-control committees, should be studied by manpower people. It often sheds light upon employee dissatisfaction.

5. *Rank-and-file Competency*: the competency of one's fellow worker may be such as to upset his ability to achieve his goals. For example, if man "A" depends upon man "B" for the flow of material and man "B" does not keep up with man "A," then man "A" can be expected to become frustrated or dissatisfied among other things. The result may be turnover, increased disciplinary action and the like. In addition, rank-and-file competency can be considered in the same light as manager competency. The individual may be carrying his out-of-plant problems into the work situation. His personal dissatisfactions may be such as to require (so far as the individual is concerned) an outlet which can be acquired only within the atmosphere of the plant.

6. *Union Activity*: individual shop stewards, union officials of every rank, the local and/or the national, organization may be sources of conflict either in a primary or secondary sense. The union official who senses that his prestige is suffering certainly can be expected to seek some way of "stirring things up." This might be referred to as a *primary* source of unrest. On the other hand, the shop steward or the chairman of the union's grievance committee constantly may be fighting the "good fight" with a completely incompetent member of the management team — he, the union representative may be very competent and his counterpart may be very incompetent — who could blame such a union official for getting "fed up"? In such a case, the primary source of the unrest could be referred to as the management incompetency and the secondary source, the reaction of the union official to that incompetency.

We also must realize that in too many cases a union hierarchy can thrive only on unrest, and that they therefore seek to foment that unrest. Too often this occurs where that hierarchy is, to say the least, unscrupulous. Management is not the only hierarchy where one can find incompetence: many union officials bemoan the presence of incompetent people within their hierarchies. Often in the face of such conditions unrest is created by a management group which "gets fed up."

**INDICATORS OF INDUSTRIAL UNREST.** Although dissatisfaction in work groups occurs with uncomfortable frequency, management should avoid *assuming* that it exists. By the same token, the assumption that no unrest exists also should be avoided. Management owes it to itself, to its employees, its stockholders and the community to *know* what is occurring. Determination of the presence and nature of employee dissatisfaction can be made through employee opinion surveys and by examining the evidence provided through exit interviews, accident interviews, and other records. Reliance upon these approaches as the sole means of detection may be unwise. If incompetent supervision exists, then exit interviewing can be expected to be relatively valueless; if policy or procedure fail to provide for correct comparison between interview data and morale studies (or if morale

studies are not being made) then no real evidence would be available. In any case, these approaches usually provide evidence after the occurrence of the losses management hopes to avoid.

Fortunately, a series of occurrences are present indicating, at least to some degree, the existence of unrest, which can be studied to determine the need for further specific studies of moral or procedure. These *indicators* of unrest have already been mentioned. They include the following:

- |                      |                                                    |
|----------------------|----------------------------------------------------|
| . . . Labor turnover | . . . Scrap and rework                             |
| . . . Absenteeism    | . . . Decreased quality and quantity of production |
| . . . Tardiness      | . . . Alcoholism                                   |
| . . . Accidents      | . . . Pilferage and sabotage                       |
| . . . Grievances     |                                                    |

*Labor Turnover.* The term “labor turnover” refers to *the flow of manpower out from and into an organization*. Much of this movement of men is undesirable and is a reflection of unrest and unnecessary, or at least unwanted, cost. Some such movement is desired, however, and even planned by management. Then too, although undesired, some of the manpower flow is unavoidable and perhaps represents costs which must be accepted so long as men continue to exercise their right of individualism.

The “outflow” of manpower is usually referred to as *separation*, and the “inflow” as *accession*. Separations and accessions can be classified as follows.

1. *Separations.*

(A) *Quits* — these can be typed as employee-instigated, company-instigated, or impelled by some specific event. The *employee-instigated* quit is the case where an individual becomes dissatisfied with his lot in the company. The *company-instigated* quit refers to the case where an individual is given an opportunity to quit instead of being discharged for cause. The *impelled* quit refers to the action a man may have to take because of health or injury, outside pressures from the home, or some reason not associated with the company or company-caused conflict (being drafted may also lead to a quit). Any quit associated with a *company-involved* cause should probably be considered as avoidable or undesirable: if proper selection, supervision, training, compensation and the like had existed, the quit might never have occurred.

(B) *Discharges* — discharges can be disciplinary, economic, or impelled by legal action. Normally any discharge is indicative of some undesired situation, of an unnecessary or avoidable cost. *Disciplinary discharges* reflect conflict which might never have developed if proper selection, training, supervision, and so forth had been practiced. Although one may consider that some quits are

unavoidable, discharges should never be considered unavoidable in the sense that one would call some proportion of them as "normal," and therefore take no action to reduce them. *Economic discharges* may be argued as being unavoidable, but who is willing to claim that economic discharges are desirable, and who will argue that such action should not be avoided? Certainly the economic discharge — resulting, of course, from a negative competitive position — reflects a company "in trouble." The so-called *legal-action discharge* reflects situations wherein an employee has committed some crime or the like and must be discharged as a result. Correct manpower management practices and/or correct management in general can cut down or eliminate such discharge situations.

(C) Layoffs — economic layoffs, disciplinary layoffs again reflect undesirable and avoidable situations

(D) Leaves of absence — here we find a pattern of events which, though sometimes avoidable, are nonetheless desirable to some degree with one exception. *Unavoidable*: the military leave may not be desirable so far as the company is concerned, but one must admit that no failure on the part of the company is occasioning the leave. *Avoidable*: the educational leave may be avoidable, but if it helps both man and company it is completely desirable. *Avoidable*: a leave occasioned by health considerations, particularly if those result from the work the individual does in the company, would be undesirable and avoidable. If the health matter reflects some outside activity, the leave may be unavoidable, thus undesirable so far as the company is concerned.

(E) Retirement — generally retirement reflects the planned and desired form of separation

(F) Death — if occasioned by the work, this would be an undesired and avoidable classification.

(G) Release because of accident — here we have another clear-cut case of the avoidable and undesired event if it is caused by the work.

## 2. Accessions.

(A) Replacements — too often managers miss the point that manpower input does not necessarily reflect a healthy situation. Replacements occasioned by a retirement *are* healthy. They reflect the planned input of "new blood." Replacements because of accidents, discharges, quits, most forms of layoff and death, however, usually reflect events and conditions which could have been avoided.

(B) New Hires — here we have an avoidable but planned event, one reflecting a desired cost if the new hire means an increase in the previously allotted manpower budget due to expansion of the business — but new hires reflecting incompetent supervision, poor engineering of jobs, and the like are not desirable.

*Measuring Turnover.* Some organizations go to fascinating extremes in the measurement of labor turnover. Great masses of charts

and graphs, even office walls set up to resemble the "load board" or master schedule of a production control unit, can be found. The important thing is not the fancy visual presentation of data or the sophisticated math utilized in connection with them: the important thing is *what the data are used for and how effectively they are used!*

If top management fails to recognize the opportunity presented by properly collected turnover data, then there is no reason to set up a fancy collection and analysis system. If the only reason for looking at such data is to comply with government requests, then there is no need to go beyond the requirements indicated by those requests.

The information asked for and published monthly by the Bureau of Labor Statistics includes the following: (1) separations broken down to quits, discharges, layoffs, miscellaneous separations including military, and total separations (the sum of the previous breakdown) and (2) the number of accessions, or people hired. This collection and publication of data serves many useful purposes.

1. To the company, the internal collection and computation of this information does provide to the industry and the nation the root knowledge useful in judging the company's position regarding turnover. It does not, however, provide the information necessary for true internal control.

2. To the company, the bureau's monthly reports show three rate breakdowns: all employees, male, and female employees. The monthly publications show rates on all variables (quits, discharges, layoffs, and so forth) for each industry. This allows the company a comparison for internal use *and* the opportunity to develop its own interpretation of national patterns. This information is useful in long-range top-management planning. Total separations and quits, and accessions for men and women are published quarterly for manufacturing and related industries. This, too, is useful in top-management planning.<sup>27</sup>

3. To the union, these data serve the same useful purposes as specified for the company.

4. To the government, and particularly those who hold the responsibility for mobilization of manpower, this information provides a useful base for the planning involved in mobilization efforts.

Although the Bureau of Labor Statistics information is useful, it has limited value from the point of view of internal control. Knowledge of the national or industrial averages, for example, may have no real significance in some particular company — for one thing, the data as presented does not identify the presence or absence of seasonal or secular patterns, nor does it account for cyclical variations in economic

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<sup>27</sup>Description of the standardized definitions and procedures used by the Bureau of Labor Statistics can be found in the *Monthly Labor Review*, Vol. 76, No. 5, U. S. Government Printing Office, Washington 25, D. C., U. S. Department of Labor, Bureau of Labor Statistics, May, 1953, pp. 519-520 and 522.

activity. Averages based upon such large variations in population are easily misleading to small or exceedingly large individual companies.

Developed from the governmental approach, a series of typical measures of turnover exist. They include the following:

$$\text{Separation Rate} = \frac{\text{total separations}}{\text{average working force in period}} \times 100$$

$$\text{Accession Rate} = \frac{\text{total accessions}}{\text{average working force in period}} \times 100$$

$$\text{Net Labor Turn-} \\ \text{over Rate} = \frac{\text{total replacements}}{\text{average working force in period}} \times 100$$

$$\text{Quit Rate} = \frac{\text{total quits}}{\text{average working force in period}} \times 100$$

$$\text{Adjusted Net Labor} \\ \text{Turnover Rate} = \frac{100 (\text{total replacement-unavoidable separations})}{\text{average working force in period}}$$

The management seeking to use every possible means of detecting the presence of unrest and conflict and of determining cause and the organization seeking to minimize unnecessary manpower and production losses will want to go beyond the Bureau of Labor Statistics approach and resulting measures.<sup>28</sup> The minimum approach in such a case would include the following:

*First*, determination and actual statement of purpose to which turnover and related data are to be applied.

*Second*, determination of the unavoidable classes of turnover which apply to the specific organization and examination to be certain that these are in fact unavoidable, planned, and so forth.

*Third*, determination of the specific avoidable classes of turnover applicable to the case which represent actually undesirable loss of manpower and money

*Fourth*, development of a system of data collection and recording which will indicate the concentrations of the classes of turnover by department and cause. It is particularly desirable to establish this record so that the number of events and the costs are readily compared.

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<sup>28</sup>Many organizations "say" they want to do this, but in fact do nothing except gather masses of data which are useless and in themselves wasteful of money unless they are used; we must stress the belief that if "good" management is to be practiced, it must insist upon the collection and utilization of this and related data. Although the format suggested here is merely a recommendation, if the data is used it can be a helpful approach and may serve as a sound base upon which to design a better approach in a given case.

What is sought here is the ability to distinguish the organizational units where the unrest-indicator points to a concentration of apparent difficulty. Unless this type of identification process is used, managers may be expending effort to reduce turnover (or related events) in the wrong area — this, of course, would be wasteful.

*Fifth*, development of a permanent record designed to depict graphically the trend of events by department as compared to the company's total experience with the specific class of separation or accession. In like fashion, seasonal variations can be developed.

*Sixth*, once data have been developed in this manner for a sufficiently long period (say 12 months), analyze the data to determine the statistical significance of each specific class, establish control charts by departments for the significant classes.

Establishing such a system of measuring helps the manpower group to know where attention should be focused, where money should be expended, and helps determine when a study of employee morale should be made. Furthermore, such an approach helps the manpower manager decide whether his exit interviewing is providing reasonably useful information.

**ABSENTEEISM.** Absentee data are collected and examined in the same way that turnover information is handled. The frequency and duration of absenteeism by department will indicate the departmental concentration. Where one department has a significant concentration as compared to another, serious challenge should be made. Often absenteeism is caused by the employee's dissatisfaction with his supervisor, his work assignment, or other avoidables. If, in addition, the record is maintained by cause (so that the record can be challenged in terms of frequency and duration by cause by department) an even more useful set of decision facts is being gathered. This approach will facilitate manpower's efforts to come to the assistance of employees as well as managers.

Many times an employee's absenteeism is due to community practices. For example, if the local stores are open only during the day and the employee must shop but cannot except during working hours, he will absent himself from the job to do so. Of course this problem has been pretty well overcome in most communities. Then too, bank and doctors' hours may be a problem. All such causes of absenteeism (tardiness and turnover) could be eliminated by forceful but diplomatic action on the part of the manpower division of the company.

Where management seeks to establish a firm grip upon absenteeism and tardiness, it should realize that the first step requires excellence of supervision and supervisory practice. The operating manager must be held responsible for the acts of his personnel! A system of discipline must be stated and adhered to with consistency. Employees should be required to make full reports on absenteeism and tardiness; call-in

procedure should be clear and communicated to all personnel; the union should be included in planning and administering the control over absence. One notes that recorded arbitrations point up the wisdom of: (1) bringing to the attention of the union hierarchy the impact of absence and lateness upon cost and income to workers as individuals and members of work units, and (2) establishing absentee and lateness controls with the approval of the union.

**TARDINESS.** Tardiness data are collected and examined in the same way that turnover and absentee data are handled. When all three sets of events are recorded and examined in the same fashion, the impact of concentrations by department and cause has significantly increased meaning. A correlation of turnover, absence, and tardiness, possibly indicative of direct relationship by cause, may be useful.

If the record shows a consistent lateness by certain individuals who travel over the same route, there is reason for the management and the union to team up and seek: (1) improvement of traffic flow by local government, (2) improvement of road nets, (3) improvement of public transportation facilities, and/or (4) alteration of shift hours.

**GRIEVANCES.** By recording and analyzing grievances in the same patterned way that turnover, absenteeism, and tardiness are handled, management again increases the force of its evidence used to determine the location and nature of unrest. The same comment applies to scrap and rework, on-the-job alcoholism, and pilferage and sabotage.

**THE MANPOWER RESPONSIBILITY.** Theory indicates the usefulness of recording and examining the data pertaining to these indicators of unrest. Experience shows that regardless of the theoretical value, very little practical value has accrued over the years from the fact that theory spells out merit. Experience also reveals that the prime reason for failure in practice is twofold: (1) top management fails to demand correct procedure on the part of the manpower division and the operating management, and (2) top management fails to act when the manpower division does make proper investigation and provides proper evidence of unrest. Nonetheless, proper investigation and provision of factually-based advice remain manpower's responsibility.

## **EXIT INTERVIEWING**

Exit interviewing stands as a method designed to determine the cause of turnover (separations) and, therefore, as a means of keeping one's "finger on the pulse of employee morale." It is not a complicated technique, but apparently the practice leaves much to be desired. Time after time, a most lackadaisical attitude appears in supervisors and personnel people regarding this interview. Time and again top management either ignores the results or fails to determine if and how such interviews are being used.

Many authors, teachers, and consultants point out that exit interviews really are not very reliable. Using this common statement, practitioners point out that there is no sense in bothering about the interview. It is true that many individuals will not give a straight answer to the question: "Why are you leaving us?" It is true that departing employees often decide to say nothing rather than stir up a "hornet's nest" and that others tell any kind of a story in order to get out as fast as possible. It is likely, however, that among the reasons departing employees do such things are the feelings or facts that: (1) "nothing will be done anyway so why start something;" (2) they have never been told the real purpose of the interview; (3) the supervisor will "get them if they open up," (4) the shop steward will "get them if they open up," (5) management does not care, or (6) "who would believe me."

If an exit interview procedure is to succeed and is to provide information useful in determining employee dissatisfactions and in the over-all effort to conserve manpower, certain distinct points must be recognized. Among these are the following.

1. The use of exit-interviewing procedure must be a matter of policy and correct design, and daily utilization must have management's backing and attention
2. Top management must let it be known that they want and depend upon exit-interview information
3. Employees must know that what is said in such an interview will be confidential, but that management will take action when action is justified
4. The employee will be interviewed by a member of the manpower group, not his immediate superior. If no manpower group exists, then the interview will be conducted by a member of the top-management group.
5. The employee will be unable to collect termination pay unless he reports to the exit interviewer.
6. The exit interviewer should have a statement from the supervisor of the employee indicating the reason for departure as the supervisor knows it, the rating of the employee on the job, a statement of the employee's reason for departure, a statement of eligibility for rehure.
7. The procedure properly includes a follow-up study by the interviewer. Follow-up should include consultation with several persons close to the separated individual in the former work relationship and in the typical social relationships that develop. Follow-up also includes the supervisor, but should not be limited to him for he knows that the departee has had something to say and is prepared with defense. Follow-up would not be limited to personal consultations; it would include a check of production, grievance, and discipline records.

No conclusions ever should be drawn from an exit interview unless such follow-up is performed.

8. Exit-interview findings should be maintained in the same manner that turnover and related data are maintained, by cause and type of separation by department and so forth. The findings of exit interviews will be more meaningful if the records are maintained in like fashion; such action facilitates comparison and improves the probability that conclusions will be valid.

9. The exit interview itself must be conducted in an atmosphere designed to generate confidence. The interviewer should be sympathetic and tactful but clearly should stand for the maintenance of proper employee conduct. The interviewer must be a trained individual. Exit interviews conducted by clerk typists, records clerks and similar people are doomed to failure from the start. Of equal importance is the environment: the interview certainly should be held in privacy!

### VACATION PROGRAM

In almost every case where there is a union, vacation programs come under the labor contract. When under the "contract" their design and administration become a matter for bilateral decision and often result in rigid programming. A manager ought to realize that some exceptionally pertinent points exist for his consideration — points which should claim his attention regardless of the existence or non-existence of a union.

1. Employee vacations should no longer be considered as a boon handed out by a magnanimous employer, they are a necessity.

2. Medical, psychological, and management research indicate that time off from the job benefits both the individual and the company<sup>29</sup>

3. As a given technology increases in complexity the psychological pressures upon the individual tend to increase and, in turn, tend to increase his need for change and mental rest

4. As the social pace increases, both on and off the job, the individual's need for change and mental rest tends to increase.

5. As industrial work becomes more sedentary in nature, the individual's need for physical exercise tends to increase.

6. As the individual increases in age and as his responsibilities increase, his need for physical and psychological change tends to increase.

7. Man's need to participate in decisions directly affecting his leisure and his work is reflected in his desire to share in the "vacation decision."

8. Man's ability to satisfy his economic and social needs depends, in large measure upon his psychological and physiological condition:

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<sup>29</sup>Periodic review of the following publications will help keep one abreast of current findings in this area: *Nursing World*; *National Safety News*; *Industrial Medicine and Surgery*; and *NICB Studies in Personnel Policy*, National Industrial Conference Board, New York.

the ancient adage "all work and no play . . ." has a direct bearing upon man's ability to produce for his and his company's benefit. The vacation improves that ability in the general case.

*THE VACATION DECISION.* In the past, vacations were considered a benefit given as a reward for services. This same concept holds true today in all too many cases.<sup>30</sup> Furthermore, past practice tended to treat the vacation issue as a privilege, reserved either for the management employee and/or the white-collar worker, or favoring them. Both of these ideas are obsolete and, in many cases, dangerous. Rest and environmental change are a real necessity to most people and the organization stands to benefit when the employee (regardless of rank) is given the opportunity for that rest and change. Rather than a reward for service, management should realize that the vacation, just like the rest period, tends to reduce manpower and production losses over the long run, if not over the short.

Common practice and the precedence of labor contracts have tended to develop a feeling that vacations should follow a pattern regardless of the job and the industry concerned. The typical practice is indicated by Figures 63 and 64.

The vacation decision actually involves two areas of consideration: (1) the time-off pattern, and (2) when the time off should be given. It is too bad, in many respects, that unions have been satisfied with the aforementioned pattern. It is likewise too bad that management has failed to recognize that the "long-service reward" idea as a basis for establishing the time-off pattern is of less real significance than the *human need* for time off. The manpower manager should work closely with the medical-service section and the industrial engineers in an effort to determine the actual needs and benefits to be gained by periodic time off. The pattern should be based upon the determined needs and benefits instead of a precedent established by arbitrations and contract negotiations.

When the time off should be granted is usually a matter of production requirements. Vacations can be granted on a staggered basis or the plant can be shut down for a period of time. No one way is the right way. One additional comment can be made: there is evidence that as our technology increases in complexity, the need for more frequent periods of time off will increase. At the present time, there is reason to believe that members of the upper echelons of management require more frequent periods of rest than typically is given the rank and file — the pressures of the work account for this.

If any conclusive statement were to be made regarding the vacation issue, it might well be that manpower personnel and engineering

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<sup>30</sup>Review of arbitrations concerning issues directly and indirectly related to vacations will reveal the validity of this viewpoint.

## Percent of Companies Offering.

LENGTH OF SERVICE	1 WEEK		2 WEEKS		3 WEEKS		4 WEEKS		OTHER*	
	Office	Plant	Office	Plant	Office	Plant	Office	Plant	Office	Plant
<u>6 months</u>	50.0	19.7	3.3						7.4	8.2
<u>1 year</u>	34.5	72.9	63.9	23.8					1.6	3.3
<u>3 years</u>	9.0	32.0	82.8	54.1	.8	.8			7.4	13.1
<u>5 years</u>	.8	2.5	92.6	90.2	3.3	3.3			3.3	4.0
<u>10 years</u>	.8	1.6	47.6	45.9	40.1	36.9			11.5	15.6
<u>15 years</u>	.8	1.6	9.0	9.0	85.2	84.4	2.5	2.5	2.5	2.5
<u>20 years</u>	.8	1.6	8.2	7.4	70.5	71.3	17.2	16.4	3.3	3.3
<u>25 years</u>	.8	1.6	8.2	8.2	50.9	49.2	38.5	37.7	1.6	3.3

\* These companies generally follow the pattern of giving one extra day of vacation for each additional month or year of seniority.

Source: By permission from, *Personnel Policies and Practices Report*, Prentice-Hall, Inc., Englewood Cliffs, N J., April 11, 1961, p. 281.

## VACATION TIME IN COMPANIES HAVING PLANT AND OFFICE WORKERS

*Figure 63*

personnel should seriously study the effects of the work upon people and the people upon work in an effort to determine what the correct patterns of time off are for the specific company they represent. They should steer clear of tradition in this matter. The problem of vacations is related to those of fatigue, accident prevention and control, and employee morale. It also is related to the broad concept of workforce conservation.

**SUMMARY**

Efforts toward conservation of manpower involve the basic idea of maintaining the employees' personal feeling of satisfaction. This is neither an easy nor an inexpensive technique. It involves recognition and study of the importance of fatigue and monotony, of the services needed to make the employee more comfortable in his mental state, and it includes efforts to determine employee opinion or moral. Probably the most important phase of psychological conservation relates to the efforts to discover employee opinion and to indicate signs of

Percent of Companies Offering:

<u>LENGTH OF SERVICE</u>	<u>1 WEEK</u>	<u>2 WEEKS</u>	<u>3 WEEKS</u>	<u>4 WEEKS</u>	<u>OTHER*</u>
<u>6 months</u>	79.2				12.5
<u>1 year</u>	4.1	95.9			
<u>3 years</u>		95.9			4.1
<u>5 years</u>		75.0	12.5		12.5
<u>10 years</u>		33.3	54.3	4.1	8.3
<u>15 years</u>		12.5	75.0	8.4	4.1
<u>20 years</u>		12.5	66.7	20.8	
<u>25 years</u>		8.3	37.6	50.0	4.1

\* These companies generally follow the plan of giving one extra day of vacation for each additional month or year of seniority.

»NOTE→ Over the past two years, 19.7% of the plants and 8.3% of the office concerns made changes in their policy. In every case cited, employees will get longer vacations with shorter service requirements.

Source. By permission from, *Personnel Policies and Practices Report*, Prentice-Hall, Inc., Englewood Cliffs, N. J., April 11, 1961, p 282

VACATION TIME IN COMPANIES HAVING OFFICE WORKERS ONLY

Figure 64

unrest. Such efforts include morale surveys, study of turnover and related events, and the utilization of exit interviews. No management really can say that they are practicing psychological conservation of manpower unless they undertake a formally developed system of investigation which includes morale, turnover, and exit-interviewing work.

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*Free men have a right to expect freedom of choice in selecting their work, and dignity of treatment as they pursue that choice and perform their work. Those who seek to abrogate these rights, regardless of their pretext, do, in fact, destroy the principles of freedom and encourage a return to serfdom!*

## Labor-Management Relations: The Union and The Law

Perhaps no other aspect of manpower management contains any more perplexing issues than that referred to as "labor-management relations" or simply "labor relations." As utilized in today's industrial environment, the term pertains to *the handling of the formal and informal, periodic and daily problems related to, or directly involving, "organized labor."* This practical workaday definition focuses attention upon organized labor and, in so doing, establishes the frame of reference for this and the next chapter.

The specific elements encompassed by this definition include union contract negotiation; the day-by-day administration of the collective bargaining agreement, the daily relationships with shop stewards, and other union officials connected with that administrative effort, and the arbitration of differences arising from daily application of the contract or developing because of management or union decisions. The labor legislation affecting the conditions and terms of employment also is included. Clearly, the issues embraced by this definition represent a highly specialized phase of manpower management. In this chapter and the next a brief treatment of the subject is presented.<sup>1</sup>

### ABOUT LABOR-MANAGEMENT RELATIONS

Four points may be noted before going further. *First*, labor relations is *but one phase* of the over-all manpower management activity;

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<sup>1</sup>Perhaps the most complete, though slightly dated, reference to the specifics of labor-management relations (labor relations) is: Harry A. Millis and Royale E. Montgomery, *Labor's Progress and Some Basic Labor Problems* (1938, Vol. 1), *Labor's Risks and Social Insurance* (1938, Vol. 11, and *Organized Labor* (McGraw-Hill Book Company, Inc., N. Y., 1945, Vol. III). See also, "Summaries of Studies and Reports," *Monthly Labor Review*, Vol. 76, No. 1, January, 1953; and Richard A. Lester, *Labor and Industrial Relations*, (Macmillan Co., N. Y., 1951).

it is not, as often thought, either the prime function or the main responsibility of manpower management.<sup>2</sup> *Second*, since labor relations is only "one phase" of a broader total activity, it is in a sense subordinate to that total activity. In other words, successful labor relations depends to quite a large degree upon the effectiveness of the other manpower-management activities. *Third*, the operational aim of labor-relations work is to establish and maintain *amicable* labor-management relationships. The term "amicable" is used here, and in the typical workaday situation, to indicate the *fact* that successful labor relations cannot exist in the presence of any significant degree of conflict. This also identifies the connection *between manpower conservation and labor-management relations* — the conservation effort is directed at holding together an effective workforce and minimizing unwarranted manpower and production losses; certainly one of the required approaches is the development and practice of effective labor relations. A warning is in order, however! One should *not* assume that labor-management relations are "fine" merely because there is no overt evidence to the contrary. If labor is getting "everything it asks for," the *apparent* relations will be good, *but* the *true* condition may be far from good.

This series of three points permits the conclusion that no matter how well a manager handles labor troubles, contract negotiations and the like, *labor-management relations will collapse unless generally good manpower management is practiced!*

As this conclusion is considered, the *fourth* "recall point" appears: effective labor-management relations *is the business of every manager, not just manpower managers*. In fact, the labor-relations responsibility begins and ends with the operating managers of an organization. It is their right and obligation of command within their "lines." It is their prime responsibility for negotiation and decision. The manpower personnel — including the official in charge (be he vice-president or manager) — provide the expert guidance and advice necessary to correct decision; they collect and analyze the pertinent data and make recommendations. Inherently they do not have the right to make the binding decisions even though they may represent, (and usually should be included as a representative), the company in labor-management negotiations.<sup>3</sup>

**ORGANIZATIONAL CONSIDERATIONS.** The line and staff relationships pertinent to the labor-management relations activities

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<sup>2</sup>Paul Pigors and Charles A. Myers, *Personnel Administration* (McGraw-Hill Book Company, Inc., New York, 1947), p. 11, *passim*; see also Chapter 8.

<sup>3</sup>Pigors and Myers, *ibid*, p. 12 *passim*; see also Chapter 8. *Note*, in the truest technical sense, if a vice-president of industrial relations has the "desirable right" it would be a result of specific assignment, for his superior would inherently have the "line" obligations.

have been laid out in Chapter 8.<sup>4</sup> A few additional points deserve attention, however. *First*, some organizations establish a "director of labor relations" who may report to top management instead of the head of the manpower division. It is his job to advise and assist all other managers (from foremen to top management) in the development and maintenance of amicable relations with the union, and he may represent the company in negotiations. Experience and the consensus of academic opinion support the conclusion that the labor-relations function is subordinate to the over-all manpower-management function, and that the "director" of this sub-function should report to the "head" of the manpower activity.<sup>5</sup> Naturally, where no manpower unit exists, the function comes under top management.

*Second*, Chapter 8 indicates the factors determining the size of this and other manpower activities. Perhaps more important than size or its determinants is the question of communication. The labor-relations unit requires completely open and direct communication to all units of the company involved with the union. Then, too, control is particularly vital.<sup>6</sup> One notes in this connection that uniformity of action and of policy and contract interpretation is enhanced by development and maintenance of SOP specifically designed to meet the labor-relations situations of a routine or predictable character.

*Third*, staffing the unit responsible for this phase of manpower work requires special attention. The unit may be completely separate from all other manpower-management functions or an integral part of the over-all manpower division. In either case, like medical service and safety management, this highly specialized field requires "expert" knowledge. The head of the manpower division and the manpower of the functional sub-unit must be thoroughly competent in the field of labor legislation, and should fully understand both the typical union structure, procedures, and informal relationships and those of the immediate local with which he deals. Furthermore, the clerical personnel involved in this work require more than terminological fluency in the field.

**THE COMPANY'S POLICY CONSIDERATIONS.** A company's labor policies are a vital force affecting its success or failure in the matter of labor-relations and in the general effort to meet its established production, sales, and fiscal goals. Its labor policy reflects management's attitude toward organized labor and, therefore, directly

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<sup>4</sup>cf. Robert Saltonstall, *Human Relations in Administration* (McGraw-Hill Book Co., Inc., N. Y., 1959), p. 146, Dale Yoder, *Personnel Principles and Policies* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959, 2nd ed), pp. 11-17 and 42-57, *passim*.

<sup>5</sup>Saltonstall, *op cit*, Chapters 5 and 6, *passim*; Yoder, *op. cit.*, Chapters III through X, *passim*; Pigors and Myers, *op. cit.*, pp. 11-21, *passim*.

<sup>6</sup>cf. Chapters 4, 6, and 8.

influences labor's willingness to be cooperative.<sup>7</sup> All of the previously-made points concerning policy have a bearing upon this issue. A company's labor policies influence the amount of manpower and production losses they will experience. The policies therefore reflect management's understanding of the relation between labor relations and manpower conservation. They further strengthen the point that conservation of manpower is a continuing effort affecting every facet of manpower management.

The reader will note that although labor policy may appear here in fairly brief form, the issues and the problems of development are far from simple and require much additional investigation and study.

### THE BASIS OF LABOR POLICY

A company's management has three choices in developing its labor policies:<sup>8</sup> (1) it may elect to establish policies designed merely to meet the letter of the law, (2) it may establish policies designed to meet the legislative requirements but still designed to combat the concept and practice of unionization, or (3) it may shape policy to assure that action will adhere to legislative requirement and go beyond *to protect employees and facilitate development of effective relations with an enlightened union*. The preponderance of evidence supports the belief that the third choice is the desirable and correct one.

**GENERAL CONSIDERATIONS.** The first of the foregoing choices would result in a "standoff," the second would typify a "down-with-unions" approach. The third, though certainly more realistic in terms of today's industrial environment and more desirable in its appearance, raises very difficult and complex issues often overlooked or simply ignored by management, politicians, and so-called "average citizens." In the first place, though clearly a choice aimed at recognition of and co-operation with organized labor, and designed to foster management initiative in labor relations, it also means that management's policies *must include recognition of the rights of employees as members of "organized labor."* A company's labor policies thus should recognize the fact that rank-and-file employees are *entitled* to the *respect* and the *protection* of management.

The underlying questions to consider in shaping policies reflecting the third choice are as follows. *First*, will the policy result in procedures and actions completely compatible with the Constitution of the United States? *Second*, will the policy result in procedures and action com-

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<sup>7</sup>Yoder, *op. cit.*, Chapter III; cf. Chapters 3, 4, 6, 8, and 9 of this text.

<sup>8</sup>Pigors and Myers, *op. cit.*, pp. 30-32, *passim*; cf. George Strauss and Leonard R. Sayles, *Personnel: The Human Problems of Management* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1960) Chapter 4, *passim*.

pletely compatible with current labor legislation? The basic principle behind current labor legislation, as well as a basic precept of Common Law, is *freedom of choice*. Company labor policy certainly must seek to uphold and strengthen the freedoms so fundamental to our national and industrial greatness. *Third*, will the policy result in procedures and actions consistent with the goals of the organization? *Fourth*, will the policy result in procedures and actions designed to assist the honest labor leaders in their fight to contain and eliminate corruption? *Fifth*, will the policy result in procedures and actions which minimize the development of industrial unrest? Naturally, the preventive approach is the desirable one! *Sixth*, will the policy specify to the importance of forthright, aboveboard action? *Finally*, will the policy reflect the significant fact that the kind of leadership management exercises more or less determines the kind of leadership it will get in organized labor?<sup>9</sup>

One might draw the conclusion from the foregoing that any labor policy would be correct or at least wise if its fundamental precepts:

- . . . Hold that adherence to public policy is only "where we begin."
- . . . Recognize the importance and value of unions.
- . . . Recognize the rights of employees and specify to their protection.
- . . . Foster honest and co-operative leadership in organized labor.
- . Foster the attainment of the company's goals.

*THE COMMUNITY.* An organization's labor policy will be affected by the community, and will in turn affect the community. The organization which stands in open defiance to the concept of organized labor will feel the brunt of the community's displeasure. On the other hand, if it fails to fight corruption within organized labor, the same displeasure develops. Again, if a company's labor policy fails to name peaceful labor relations as its aim and to provide for the machinery necessary to attain such an aim, the community will tend to look with disfavor upon any efforts the company may make to maintain its competitive position.

Another point: the individual employee, the honest labor leader, management, and the community stand to lose if a company's labor policies foster a situation conducive to *unplanned*, uncontrolled expan-

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<sup>9</sup>These fundamental policy-shaping questions have their point of origin in the works of Whiting Williams, *Mainsprings of Men* (Charles Scribner's Sons, New York, 1925); Stuart Chase, *A Generation of Industrial Peace* (Standard Oil Company of New Jersey, 1946); Cyrus S. Ching, "As Management Sees Our Postwar Labor Problems," *The Controller*, Vol. 13, No. 2, 1945, pp. 58ff; and Sylvester Petro, *Power Unlimited* (The Ronald Press Company, New York, 1959).

sion of foreign imports.<sup>10</sup> Already the question stands bare and ugly: *is labor pricing itself out of a job?* Few note the point, but management is as dependent upon labor as is labor upon management. If the policies of *either* abrogate the position of the other, then everyone stands to lose. One can summarize by pointing out once more that management has a community responsibility which should not be rejected by any of its policies.

**OPERATIONAL CONSIDERATIONS.** No matter how effective or proper a policy sounds on paper, unless it can be converted to effective procedures and programs, it may as well be considered useless. As management seeks to develop its labor policy it therefore must go beyond the basic or general points and questions stated previously; it considers certain minimum operational matters. Naturally, all operational points referred to in previous chapters will pertain also. These minimum considerations can be stated as follows:<sup>11</sup>

1. Procedures and programs arising as the result of labor policy should be aimed at the *prevention* of labor trouble — handling labor trouble becomes a secondary goal. The idea of “handling” presupposes that “trouble” exists; this, of course, is not the situation desired!

2. The basic policy(s) needs to be developed with the subordinate supervisors as well as the rank and file in mind. If the policy is contrary to, or leads naturally to, the development of procedures contrary to the behavioral characteristics (the opinions, wants, attitudes, goals, and the like) of the workforce, conflict will be created by the policy and its resulting procedures.<sup>12</sup>

3. A policy which permits “deals” establishes difficult-to-follow-or-break-into communication circuits (difficult for both company and union people), allows procedures which result in the withholding of necessary information from the union, permits procedures designed to block legitimate union activity — such policy and its resulting procedures will cause conflict.

4. Procedures and programs resulting from labor policy need the concept of participation built into them. The individual employee *wants* to participate in matters affecting his workaday life, and the union hierarchy wants, and correctly so, to “know the score.” How else can that hierarchy correctly represent its membership?<sup>13</sup>

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<sup>10</sup>This is *not* to argue for either isolationism or high tariffs. It is becoming clear that certain societies produce certain goods more effectively than others, and that services must be established and change must be effected in such a way that there is time for adjustments to take place. Let us not forget the lessons of cheap steel and cheap glass, or the impact of the foreign compact car.

<sup>11</sup>Too often those making policy do not examine its operational effect before issuing their statements. cf. Yoder, *op. cit.*, Chapters III, VII, and X, *passim*; Saltonstall, *op. cit.*, Chapter 10.

<sup>12</sup>cf. Chapters 2, 3, 4, and 6; also, Pigors and Myers, *op. cit.*, p. 31.

<sup>13</sup>cf. Chapter 19; Saltonstall, *op. cit.*, Chapter 10.

5. A particularly important procedure relates to grievance-handling. Effective labor policy results in the establishment and maintenance of a grievance procedure which assures speedy, complete, and honest consideration of employee grievances.

6. Effective labor policy results in a situation which finds all managers — including foremen — treated as managers. Furthermore, a resulting procedural rule would require that *all* managers thoroughly understand the labor contract and apply it uniformly and fairly.

7. Procedures resulting from labor policy must be completely ethical — management hardly can expect moral and legal treatment at the hands of organized labor unless they practice what they seek!

8. A key procedural rule, resulting from correctly-designed policy, holds that wherever there are corruption, coercion, and compulsion, management should participate in, if not lead, the fight against them.

### THE LABOR ORGANIZATION

Labor organizations are just as formal and as structured as manufacturing concerns. Their design and procedures influence the behavior of the membership. The nature of communication and control influences, and is influenced by, the individuals comprising the organization.<sup>14</sup>

Those responsible for the development of labor policy, and the establishment and implementation of resulting procedures and programs, require an understanding of the labor organization for exactly the same reasons that they need an appreciation of organization theory. Perhaps another way of putting it would be: one hardly can expect to be able to handle a situation or problem, or deal with an organization effectively, unless he first knows the situation, the problem, the organization! It is with this point in mind that the following material is presented:

*THE UNION — A DEFINITION.* Today's labor organization — the union — is a permanent and relatively cohesive organization for "wage earners" which is dedicated to the improvement of employment conditions and relations.<sup>15</sup> It stands as a *formal* structure designed in echelons<sup>16</sup> and "managed" at the top by "professional" labor managers.

Certain significant factors stand out in this definition. *First*, although the union is not designed as a corporation and does *not* have any of the legal obligations or rights of the corporation, *continued life*

<sup>14</sup>cf. Chapters 4 and 6.

<sup>15</sup>cf. Sidney and Beatrice Webb, *History of Trade Unionism* (Longmans, London, 1950); Philip Taft, *Economics and Problems of Labor* (Stackpole Sons, Harrisburg, Penn., 1942), p. 419; and Selig Perlman, *A History of Trade Unionism in the United States* (The Macmillan Co., New York, 1922).

<sup>16</sup>Designed "in echelons," the union contains the "scalar" implications referred to in Chapter 3. The hierarchy becomes a formally-developed structure and the "structural considerations" of organization theory will apply to the union as well as to the company.

is one of its goals. This intended permanency may explain, in part, the political flavor of today's organized labor and the union's desperate interest in union security. *Second, economic gain* stands out as one of the aims of organized labor. This interest in economics seems to have shifted within recent years from a preoccupation with improvement of the individuals to a preoccupation with improvement of the organization *and of groups within the organization*. *Third*, although in the earliest years of union activity the interest in economics seems to have been the predominant, if not the sole, interest, organized labor quickly evolved to the point where interest focused upon the attainment of security for the individual against oppression, job loss, and the like. This purpose exists today. The definite formality of today's union structure suggests that even if not protected by law, organized labor would be a powerful force acting to influence the decisions of management and government.

*THE UNION — A FORCE IN SOCIETY AND INDUSTRY.*

Organized labor is a powerful and distinct segment of today's society in general and of today's industrial environment in particular. With a general membership of something better than eighteen million persons and an organization based upon something better than sixty-one thousand local union groups, it is no wonder that organized labor is spoken of as a "force in society."<sup>17</sup> The American community, whether it contains a unionized company or not, finds in organized labor one more entity of self-interest.

Organized labor is a *formative* pressure group — its "professional" leaders have reached a power peak which enables them to force the selection of a "comfortable" secretary of labor. He plays an important role in the formation of national labor policy. Furthermore, the strength of unions serves as a consideration affecting the development of the manpower policies of individual companies.

Organized labor is an *interpretive* pressure group — it interprets national and company policy for its rank and file; and through its newspapers, periodicals, radio and television programs, and partisan commentators it interprets national policy for the general public. Furthermore, today's unions represent a most powerful "*allocative*" pressure group — their numerical strength permits them to exert direct influence in granting political "spoils." In those states where they are strong, they can influence the fiscal allocations of the state government.

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<sup>17</sup>cf. "Union Membership and Revenue, 1957 vs. 1955", *NICB Management Record*, December, 1957, p. 414, *Road Maps of Industry*, No. 1055, NICB, March 16, 1956.

In addition, in most organized companies the union's power permits it to exert direct influence upon the labor budget allocations.<sup>18</sup>

In view of these points, one can conclude that today's labor unions are *politically oriented*. Once an organization becomes politically oriented, it becomes a force in its immediate environment, in its immediate society. The present structure of organized labor is such that its "immediate environment" is the entire nation!

What does this mean to the manpower manager? In simple terms it means that a significant segment of, or the entire national strength of, organized labor could be brought to bear upon his company when and if a labor dispute arises. Furthermore, it means that his relationships with the local union will be either directly or indirectly influenced by the AFL-CIO. The manpower manager, therefore, must remain constantly alert to the very broad implications that *his* actions *could* have — he must realize that his actions possibly could affect more than his company and the local union, that the pressure of the AFL-CIO might be brought to bear upon an entire industry, corporate complex, or community because of what he does. He may, therefore, find it necessary to be "looking over his shoulder continuously." Such a possibility complicates the over-all job of management, particularly the job of managing manpower.

**HISTORY IN BRIEF.** The permanency and cohesiveness of today's unions developed from many years of struggle. Even the formality of the present structure took shape over years of trial and error (and the internal squabbles still existing indicate that the "final" form is yet to come). Throughout these formative years, however, the definition of purpose remains relatively constant.

*Point of Origin* The yeomanry guilds appear as the point of origin for today's labor union.<sup>19</sup> Where the craft and merchant guilds generally sought to bring employers and employees together for their common benefit, the yeomanry guilds protected the journeyman (employee) in his relation with the master (employer). These associations existed, therefore, to achieve both economic and noneconomic security just as do the labor unions of this era.

*Early American Unions.* In 1792 the Philadelphia shoemakers formed an association to facilitate bargaining with employers. It collapsed within the year.<sup>20</sup> In 1794, the Federal Society of Journeymen Cordwainers was established. This second attempt by the shoemakers lasted 12 years. It collapsed in 1806 following a charge of conspiracy.

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<sup>18</sup>Consideration of daily papers and current monthly "trade journals" quickly substantiates this view. The student may find it instructive to list the evidence in such sources over the period of one month.

<sup>19</sup>Dale Yoder, *Personnel Principles and Policies* (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1959), p. 24.

<sup>20</sup>Taft, *op. cit.*, pp. 419-420, *passim*.

The New York printers also started a union in 1794. Their Typographical Society lasted until 1797. In 1799 the Franklin Typographical Association was formed and appears to have lapsed into oblivion in 1804.

It is interesting to note that quite a sophisticated brand of collective bargaining developed with the Typographical Society of New York in 1809. This group presented "price lists" singly to master printers who in turn met and developed counter proposals and submitted them to the society through a committee.

Another point is significant. Even in those early days, benefits were paid striking members of the union, and the unions actively sought to establish the closed shop wherein only union members are employed. Furthermore, strikes were utilized to attain demands not given to gracefully by employers. The violence which accompanied the strikes led to the prosecution of the unions for criminal conspiracy in the first case, recorded in 1806 in Philadelphia, Journeymen Cordwainers, charged with: (1) a combination to raise wages, and (2) a combination to injure others<sup>21</sup>

*Early Group Efforts.* The first real class or group effort developed in 1827. Again Philadelphia was the scene. At that time, the Mechanics Union of Trade Associations was established and it helped to create the world's first real labor party — the Workingmen's Party.<sup>22</sup> We note that political orientation became an early identifying characteristic of organized labor.

New York State became the scene of the first state-wide labor action.<sup>23</sup> The movement generated as an effort to establish a workman's party aimed at development of a ticket to attack the older parties in the 1830 elections.

A similar movement began in Boston in 1830. It spread rapidly throughout the New England area and in 1831 the New England Association of Farmers, Mechanics, and Trade Associations was formed in Providence, Rhode Island.<sup>24</sup> This almost purely political effort disintegrated in 1834, and workers moved away from the "indirect" approach to improve working conditions (the use of the political party) and concentrated upon the "direct" action afforded by "trade unionism" and strikes.<sup>25</sup>

The "general trade unions" movement began in New York City in 1833 with the formation of the General Trades Union of the City of New York and Its Vicinity. The movement spread to Baltimore and Philadelphia and in 1834 the National Trades Union was established. Although it was largely a propaganda organization and political in nature, it represented a first effort at national unionization.

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<sup>21</sup>*Ibid.*, p. 421.

<sup>22</sup>*Ibid.*, p. 422.

<sup>23</sup>Taft, *op. cit.*, p. 425.

<sup>24</sup>*Ibid.*, p. 426.

<sup>25</sup>*Ibid.*, pp. 426-427, *passim*; *Documentary History of American Industrial Society*, Vol. V, pp. 185-199.

Throughout these early years, the goals of the various unions and unionization attempts were pretty much the same. In general they sought to obtain a ten-hour day and a closed shop, acquire relief from the oppression of unreasonable foremen and employers, and acquire wage increases. The approach taken to achieve these goals combined strikes and political action. Unity within labor was relatively non-existent, however, the violence which generally accompanied strikes was severe. The often unrealistic, if not unacceptable, utopian attempts at political action<sup>26</sup> and, of course, the inadequacy of communications systems served as a basic pattern of causes explaining the failure of unionization attempts. Internal dissension played an important role in the failures also.

1860 to 1914 This period is dominated largely by the previously-mentioned National Labor Union, the Industrial Brotherhood, the Knights of Labor, the emerging American Federation of Labor and the United Mine Workers. It is a period strife, of depressions and strikes, and of internal ideological battles for control of union organization.

The National Labor Union evolved in 1866. It followed the failure in the 1830's of the premature National Trade Union and the similarly premature International Assembly of 1864. This organization sought to combine local unions, trades assemblies, and any other interested units. It quickly developed into a political body and in 1872, at its Columbus (Ohio) convention, nominated a presidential ticket. As Kirk points out, it failed in that same year largely as a result of the old plague — internal dissension<sup>27</sup>.

In 1874 the struggling unions held a congress and formed the Industrial Brotherhood. Failure again resulted, largely because of the impact of the 1873 depression. Labor leaders then became active in the formation of the Independent Party of 1876.

In 1876 the Knights of Labor was started. It began as a Philadelphia tailors' local. Gradually, however, other trades were represented. Two types of assemblies evolved: those devoted to a single trade, and those comprised of workers from many different trades. The locals were formed into districts which in turn furnished representatives to a general assembly. The general assembly also contained representatives from the national trade districts which represented the single trade unions and stand out as predecessors of modern unionism.

The Knights pressured employers for improved working conditions and the like, and sought from government the establishment of labor statistics bureaus and the creation of consumer-producer co-operation. Although the Knights obtained considerable recognition and managed to attract workers to its fold (700,000 in 1886), those labor leaders interested in the national and international concept of trade unionism

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<sup>26</sup>Taft, *op. cit.*, pp. 432-434, *passim*; cf. Morriss Hillquit, *History of Socialism in the United States* (Funk and Wagnalls, New York, 1903), pp. 77-98, and Norman Ware, *The Industrial Worker* (Houghton Mifflin Co., Boston, 1924).

<sup>27</sup>William Kirk, *National Labor Federations in the United States* (The Johns Hopkins Press, Baltimore, 1906), p. 15.

and the socialists whose real interest was political reform waged a constant internal warfare. In 1886 the trade union representatives split away from the Knights and formed the American Federation of Labor. The membership of the Knights fell to something less than 511,000 between 1886 and 1887, and from then on the AFL moved relentlessly ahead.

The Knights of Labor failed for several apparent reasons: they generally opposed violent economic action against employers; their movement was more one of political reformers than of wage earners, and the socialist leaders represented ideals which ran contrary to the basic American belief in individuality.

The AFL and Eugene V Debs' American Railway Union dominated the scene until 1894 when Debs' group was beaten soundly after action by the United States Supreme Court in relation to the Pullman Strike and the use of the injunction. From then on, the labor scene was dominated by the United Mine Workers and the AFL.

1914 to 1933. The AFL and the United Mine Workers dominate this period. During these years, these big unions consolidated and unified their internal organizations, succeeded in establishing goal solidarity, won national recognition as labor's dominating organizations, and became a political force. The exigencies of World War I had much to do with this success. Samuel Gompers, president of the AFL, won an agreement with the federal government in the establishment of the Cantonment Adjustment Commission (later entitled the Emergency Construction Commission),<sup>28</sup> and also won an agreement covered by the Ship Building Labor Adjustment Board. As mentioned in Chapter I, the United Mine Workers acquired full recognition in 1916.

Union successes in this period also include winning a position on the Secretary of Labor's Advisory Council (1918), the establishment of the War Labor Conference Board and the National War Labor Board, and winning recognition of the worker's "right to organize." It was not until Franklin Delano Roosevelt's administration, however, that organized labor found its feet planted solidly in the nation's earth.<sup>29</sup>

*Structure of the AFL.* As originally constituted, the AFL was designed so that the national and international craft unions retained their sovereignty, and those locals which stood as separate from national or international groups retained theirs.<sup>30</sup> The authority of the Federa-

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<sup>28</sup>cf. Alexander M. Bing, *War-Time Strikes and Their Adjustment* (Dutton, New York, 1921), Paul H. Douglas and F. E. Wolfe, "The Shipbuilding Labor Adjustment Board During War-Time," *Journal of Political Economy*, May, 1919, pp. 145-158.

<sup>29</sup>Taft, *op. cit.*, pp. 460-464, *passim*.

<sup>30</sup>By this time, a great many unions had branches in Canada and/or Mexico. These were referred to as international. In fact, back in 1873 American unions had affiliated units in Canada and were, therefore, classified as international. National unions were those whose affiliates were located solely within the boundaries of the United States.

tion, the central organization, thus was limited, and existed only as specifically delegated by the sovereign "subordinate" bodies. This arrangement helps explain much of the claim that unions are democratic — the majority rules and from the bottom up, *at least in theory*.

During the period 1896 to 1910, the number of national and international unions affiliated with the AFL expanded from approximately 55 to 120. From 1910 to 1933 the total dropped to 107, however, even though the number of individuals continued to expand significantly.

From the structural point of view, the Federation stood as a voluntary association of sovereign subordinates, with the real strength and authority resting with the "internationals." This strength came from the fact that the internationals chartered the locals. Within each state, state federations and city centrals were established and locals could join these units as well as retain charter rights to their international and thence to the central Federation. In addition, the AFL issued direct charters to federal labor unions and local trade unions for which there was no appropriate international.

The AFL established five major sub-federations or "departments" designed to clarify the jurisdiction of the internationals. These were: metal trades, building trades, union label trades, maritime trades, and railway employees.

In 1901, as a result of the "Scranton Declaration" the AFL, which was originally a craft organization, allowed the chartering of industrial unions. According to *Research Memorandum No 8* of the National Labor Relations Board, dated May 15, 1939, at least two of the affiliated internationals in 1933 were distinctly industrial unions.

*Structure and Power* Interestingly enough, the democracy exhibited by the AFL's structure and charter was frequently aborted as a result of the leadership personalities involved. Samuel Gompers, for example, was a strong man who led with strength. Then, too, the loose-knit structure facilitated encroachment by men of ill principle. William Z. Foster, for example, brought Communism to the unions in 1922, although the older leaders rallied and managed to retain control of the majority of the affiliated organizations and the top of the AFL structure, the infiltration still remains.

*The Recent Picture.* Craft and industrial unionism had never been comfortable bedfellows. The craft associations usually represented wage earners on a geographical basis and had skilled individuals in their membership. The industrial unions, on the other hand, represented unskilled and semiskilled individuals typically employed in a given company. Furthermore, craft unions tended to vest extreme authority in a "business agent" and/or area council, while industrial unions depended upon bargaining leadership by men who were employees of the company whose workers the union represented. These differences were significant causes of conflict within the AFL.

*The Split.* In 1933 the long, smoldering, and often flaring discontent between the proponents of the two concepts (industrial vs. craft) burst into open flame. The proponents of the industrial union

initiated their complete split with the AFL at the Federation's 1935 convention. At this time, they formed the Committee for Industrial Organization, made up of representatives of 11 specific groups. These included coal workers, typographical workers (although the true descendants of the Franklin Typographical Association remained with the AFL), clothing and ladies' garment workers, textile workers, oil and gas workers, rubber workers, the American Newspaper Guild, and the mine, mill, and smelter workers.

For three years this new structure retained a relatively informal organization but pursued a very active program designed to impress employers, employees, and the government with its real and potential power. In November, 1938, a constitutional convention was called and the now famous Congress of Industrial Organizations was formed with the leadership of the group falling into the hands of John L. Lewis.

*CIO Structure.* The CIO's structure was far more complex than that of the AFL. The Congress boasted a president, two vice-presidents, a secretary, and a treasurer. It had an executive board composed of those officials plus one representative from each of the national or international unions or organizing committees. The executive board performed as the governing body for the organization between its conventions.

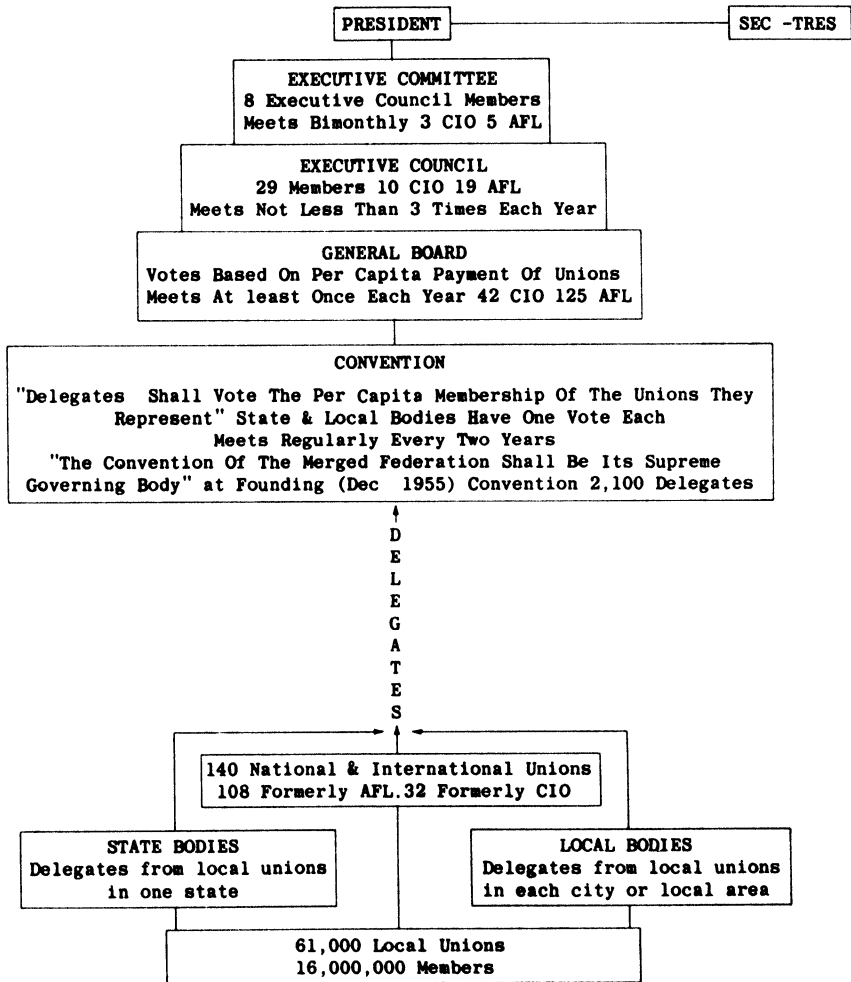
The member organizations in 1938 included 32 national and international unions, 9 organizing committees, 23 state industrial councils, 124 city and county councils, and 161 local industrial unions. The state federations and city centrals of the AFL were closely paralleled by the CIO's state and city industrial councils. The number of affiliated unions reached 45 in 1939, but in 1948 that number shrank to 40 and by 1954 it had dropped back to the original 32, although the actual unions or groups were different. The membership ranged from approximately 4,038,000 in 1938 to more than 6,000,000 in 1947, and to about 5,200,000 in 1954.

John L. Lewis retained control of the CIO until the 1940 convention when Philip Murray was elected president. Although some still will not admit it, Lewis was backed to the hilt by the Communists — both the Communist unions and the political action cells backed him until after the Nazi invasion of Russia, when they joined his foes and became his most bitter rivals and critics. It might be added that had Lewis stood by the "party line" and plugged for intervention against Germany instead of retaining his isolationist stand, his Communist allies might have remained as friends and Lewis' power in the CIO might not have dwindled.

*PRESENT STRUCTURE.* Both during and after World War II, jurisdictional disputes between the AFL and the CIO affiliates, as well as between the two central organizations, made union security a matter of grave concern to the leaders. Furthermore, unified political action seemed unnecessarily difficult to achieve in the divided organiza-

tion. Both units found some degree of difficulty in overcoming the encroachments of independent unions and unwanted splinterings by unions seeking their own "road to salvation."

In 1955 the two powerhouses of organized labor in this country amalgamated. Figure 65 indicates the structure of the amalgamated



Source: *Road Maps of Industry*, No. 1055, NICB, March 18, 1956.

**AFL-CIO GOVERNING STRUCTURE**

*Figure 65*

AFL-CIO. It will be noted that some semblance of the old idea of retained sovereignty remains and that some evidence of the structural democratic framework still is retained. Actually, little new in the way of structure exists; the original pattern of the 1860's and the 1870's still clings in this present-day organization, though in modified form.

Through unification of structure, the two organizations hoped to: minimize jurisdictional problems; increase control over the organized labor movement; increase the effectiveness of their political action (a point almost achieved in the 1960 elections); increase the possibility of growth and continued life for organized labor; bring maturity and honesty to union-management and union-membership relations, and centralize fiscal management of union funds. Centralization of control over union funds seems a rather important point for consideration by those interested in the future of the American labor movement and of American industry. Union funds stand as a fantastically large and truly capitalistic institution. Today, union fiscal management involves a significant segment of the total economy: how it is managed will and does affect every American, not just the union membership!

*The Local Unions.* Most managers have direct and almost continuous contact with the local union organization. Manpower-management personnel, although they deal with the business agents and other representatives of national and international union hierarchies, also have daily contact with the locals — contact in terms of administrative negotiation with local officials and operational contact with the membership.

The local is the base, the root, of organized labor's structure. It is the source of financial strength for the national or international and the central organization. It is the immediate representative of those whom organized labor exists to serve. It is through the local that the hierarchy of organized labor approaches management in its effort to obtain political, economic, and social adjustments.

Employees may be organized *geographically* or *by company or plant*. This continues the original craft and industrial union concept. One notes that because of this concept the employees of a given concern all may be members of one union, or they may be members of several different locals. All the unskilled or semiskilled members of a given plant thus may belong to an industrial local, the skilled craftsmen may belong to a community-wide local containing only those who have the specific skill, and the white-collar workers may belong to another community-wide organization.

It is possible, then, that in some given plant a portion of the total workforce will belong to one bargaining unit, another portion to another unit, and still another to some additional local. This adds up to a confusing situation when it comes to administering or negotiating contracts.

Furthermore, the governments of the two types of locals differ. Locals which represent workers on a geographical basis tend to vest a large degree of authority in their business agents. These men work full time for the membership. They handle grievances, problems of union jurisdiction, and contract negotiations. Since they represent a large number of employees spread among many employers, obviously *their personal power is significant*. On the other hand, unions organized to cover a specific plant or company have representatives to care for their own immediate needs. These men have considerably less authority and less personal power than the business agents of the geographically-structured groups. As would be expected, the corruption which does exist in unions is more likely to focus upon those with the wide geographical structure at the local level. On the other hand, the industrial union movement has traditionally been associated with radicalism to some degree.

*The Local's Contribution.* Management personnel often ignore the value of unions in general and their own local in particular. The local, on the other hand, often is treated by academicians as having value only to the membership. What are the services provided by the local?

The local *serves the membership* in the following ways:

- . . . It provides collective bargaining service.
- . . . It assists the membership in handling grievances.
- . . . It administers the labor contract for its membership.
- . . . It may administer a benefit and welfare program for the membership.
- . . . It may provide (and usually does) legal aid to the membership.
- . . . It usually provides a union hall where the membership can gather, hold social events as well as business meetings, and can go for information regarding jobs.
- . . . It offers organizing service — whether this is to be considered a service in the true sense of the word depends upon the nature of the organizing effort, the status of individuals considering the issue, and the factor of need (obviously, if it is not needed, organizing work is no service to anyone).

The local *serves the community* in the following ways:

- . . . It may foster community recreational programs, or participate in the sponsoring or administration of such programs.
- . . . It may sponsor or perform community welfare services — in time of local disasters the locals have performed great public service.
- . . . It may sponsor, actually administer, or assist in the administration and sponsorship of adult education.

. . . It may offer a degree of economic stability to a community through its collective bargaining efforts.

The local *serves the company* in the following ways:

. . . It may assist in the recruitment and selection of manpower.

. . . It may assist in the development of manpower and in the company's efforts to conserve manpower.

. . . It will act as a check upon management actions — some may argue that this is unnecessary and unrealistic. Let us not forget that since managers are human they may overlook the human implications of a planned program unless there is someone or some group to check.

. . . It may provide a degree of stability to the operation of the business by assuring or helping to assure peaceful relations between management and labor.

*Leadership and Membership.* Two questions arise concerning the leadership of the locals, both are important to those charged with responsibility for labor relations. *First*, who are the leaders? *Second*, what are their functional responsibilities?

As in national and international unions, the local leadership is elected. That leadership may be quite slow to change even though the union is a political structure which claims democracy as its format. *Why should it be slow to change?* For one reason, lethargic membership may find it expedient to "let George do it." Another reason, and for some more difficult to admit, those in power may choose to exercise their power to keep themselves in office. Furthermore, management may find it more satisfactory to deal with a stable union hierarchy and may, therefore, help the current officials retain their power.

*Are local leaders professional?* In a sense, the business agent may be of professional or quasi-professional stature. Locals do not, however, retain professionally-trained staff personnel. These individuals are found in the nationals and internationals and in the central organization. These staff-economists, lawyers, negotiators, organizers, and public-relations men are made available to the local officials, but are not found in *direct* support of the locals. State and large city organizations will have professionally trained persons; some of the independents have them at local or close to local levels.

*Are local leaders competent?* Any manager who makes the general assumption that the leadership of the local is incompetent is in for a very rude awakening. One way or another the average local leader acquires a degree of competency which often enables him to handle his problem as well as, if not more effectively than, his counterpart on the management team.

The functional responsibilities and titles of local leadership include two types of officials: those on the executive board and those referred to as *grievance officials*. The executive board personnel include the

president, vice-president(s), secretary, treasurer and the like. These individuals are responsible for the handling of the local's internal operation — the fiscal management, administration, management of social activities, appointment of committees and committeemen, and the administration of elections. They also may serve as grievance-committee personnel at some stage of the grievance procedure, and usually will be found among those representing the union at an arbitration or contract negotiation.

Personnel charged with handling the grievance situation include shop stewards (who also may be classified as the shop-whips), business agents, grievance committeemen, and chief stewards. In large and wealthy locals, one may find that full-time elected personnel are paid to handle grievances and negotiations. In any case, at the local level the union officials ordinarily continue working as employees of a company (exception — business agents, as mentioned previously).

*What of the membership?*<sup>2</sup> The comment was made previously that union members may be lethargic. It is difficult to understand, but frequently the vast majority of the membership is no more interested in their union than they are in the welfare of a given Siamese cat in the middle of the Gobi Desert! Authors, arbitrators, union officials, state and federal politicians all decry this condition; nevertheless, it continues.

Manpower managers, in fact all managers, should realize that one of the important requisites to a good labor organization and amicable labor relations is *an active and positively motivated membership*. Management and the community stand to gain much when the members maintain their constitutional rights within their unions. This is one of the factors which effectively limits the boring-from-within by Communists, the direct assault by racketeers, and more-or-less innocuous errors in judgment typical of officials who really have no knowledge of the desires of their subordinates.

*Who joins the union?* The answer can be phrased as follows: In some cases anyone who wants a job joins the union; in all cases, employees who have more ability, ambition, and/or energy than can be utilized on their jobs tend to be ready joiners of the union and other external organizations. One also finds a certain few who join the union for what they can get out of it and its other members and, of course, there are always the malcontents.

**INDEPENDENT UNIONS.** Throughout the history of American labor there have been, as there are today, certain labor groups which stand alone.<sup>31</sup> Some of these independents formerly were affiliated with the AFL or the CIO. In some cases, these independents have

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<sup>31</sup>Every serious student of management should have at least one course in labor history. The lessons of the past help to guide future action.

broken away of their own accord, in some cases they were "booted" out for Communist association and leadership or racketeering and the like. In other cases they always have been independent.

The most prominent independents are the railroad brotherhoods which include the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, the Brotherhood of Railway Trainmen, and the Order of Railway Conductors.<sup>32</sup> The United Mine Workers also is classed as an independent. It has such a varied pattern of affiliation and disaffiliation, however, that one could almost call it an "affiliated independent." Although not anywhere nearly as frequent a shifting is true in its case, the International Association of Machinists has a relative pattern.

*REVOLUTIONARY UNIONISM.* Throughout history men with revolutionary intentions have approached their goal, or attempted to do so, through the labor movement. American labor history exhibits the same pattern. The most prominent revolutionary groups have been the "Molly Maguere" (1862), the Progressive Cigar Makers Union of 1881, the Socialist Trade and Labor Alliance (1895), the Industrial Workers of the World (1893-1925), the Syndicalist League of North America (1912), the International Trade Union Education League, and the Trade Union Unity League (1929-1935).

Let us not forget that Moscow instructs its world-wide membership and that those instructions change with the times. The one distinct and unchanging goal of Communism is, however, *the absolute control of the free world.* One of the fundamental approaches to this goal involves the infiltration and domination of every labor movement. Ever since the days of William Foster, with the exception of the period of domination of the CIO by Lewis, the typical Communist tactic applied to American labor has been boring from within. Although government and unions have worked hard to eliminate this menace, and although the big unions have done a good job of cleaning house, the menace is still present.<sup>33</sup>

*INTERNATIONAL LABOR.* Two organizations should be mentioned to round out the picture of labor's organization or movement. One, the International Labor Organization, is not a labor organization in the true sense of the word. This is a research and information-exchange agency currently connected with the United Nations. Its real purpose is the mutual exchange of information and ideas concerning organized labor and its relations with management and government. Originally it was developed as a part of the League of Nations follow-

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<sup>32</sup>These unions are subject to the Railway Labor Act and its amendments. They are not subject to the National Labor Relations Act and its successor acts.

<sup>33</sup>cf. Senate Select Committee transcripts.

ing World War I. Representation includes two members of government, one of labor, and one of management from each member nation.

The second organization is the World Federation of Trade Unions. It is natural to expect that when organizations are led by ambitious men who see opportunity to organize beyond their immediate geographical boundaries, they will do so. American labor has affiliated unions in Canada, Mexico, and the Philippines. World-wide labor organization also exists. Prior to World War II this organization was the International Federation of Trade Unions. Following the war, the rehabilitated organization was called the World Federation of Trade Unions. Communist domination led the Western delegates to establish their own International Confederation of Free Trade Unions — the AFL-CIO and the United Mine Workers hold membership in this latter unit.

### MEMBERSHIP-OR-NO — UNION-OR-NO

Consideration of the historical picture, and reconsideration of the definition of purpose behind unionism raise certain questions. For example: (1) Why do employees join a union? (2) Why do some employees refuse to join a union? (3) Why is it that a union enters the scene in a specific case? The answers bear directly upon the over-all question of the *need* for unions, the questions *and* answers have a direct relationship to the psychological conservation of manpower. Study points out, for example, that when the employee's wants are not satisfied by the company, he turns to some external agency for satisfaction — the union is the most immediately available agency. Study also indicates that if employees have negative opinions about their company — if their attitudes are negative — the union will tend to be welcomed or, if it already exists, its actions will become more militant. Let us consider these questions more fully.

*WHY EMPLOYEES JOIN A UNION.* It may seem to some that this question and its answer(s) border upon the obvious. Those who feel this way will tend to answer the question by pointing out one of two things: the employee joins either because he is forced to do so by unscrupulous union organizers, or he does so because management has failed in its managing job. Neither answer is completely correct or complete — the error of such response is one of omission. Correct response for the general case involves one or all of the following minimum considerations.

1. *Improvement of Bargaining Position.* Many individuals feel that by banding together they improve their ability to bargain with their employer (or management). The feeling has much merit, particularly in view of past management practices. Employees, in the general case, react as you and I. If we see a person getting a raise,

receiving what to us appears as a special privilege, being given what in our eyes is a "bad deal," we react in terms of what we see and hear. We do not know *all*, and possibly not even *any* of the facts, but we react! Now, since in the past management has, in fact, been unfair, we tend to view everything management does in terms of our past experience. This "set," working day after day, from man-to-man and group-to-group, tends to make us welcome *any* organization which might help us get a fair deal from management. The power of numbers, possible through unification as promised by a union, attracts us to the union.

2. *The Law of Effect.* As mentioned previously, if our actions are not repaid by *rewards* which to us are suitable in terms of our actions and management's abilities, obligations, and prerogatives, we tend to become frustrated. Any employee might feel this way. Those who do will tend to welcome the union as a means of compensation, and look upon union membership as a means of forcing management to provide proper reward. They also tend to view membership as a release for pent-up frustrations.

3. *Control of Own Destiny.* Although it seems true that many modern-day Americans have lost their sense of heritage, have fallen for the Socialist gambit, it is equally true that many have not. In either case, and this is another example of "strange bedfellows," we find that the idea of union membership may provide a sense of security. For those who have no initiative, have lost their desire to maintain individuality, have fallen into the pattern of letting some agency guide their destiny, the union offers a logical solution. Although such people will not, or cannot, fight for themselves, they still retain enough individuality to have a desire to maintain some control over their destiny. Through the union they see an opportunity to retain control without being individually and personally responsible.

The complex of modern industrial organization is such that individuals cannot, as individuals, "stand up to be counted." The union seems to afford the opportunity to control their fate through organization developed and managed by them.

4. *Participation.* Directly connected with the idea of controlling one's own destiny is the idea of participation. Connected though it is, the desire has a slightly different impact. Here we recognize the wish "to be in-the-know," to have an opportunity to express opinion and to make suggestion — in other words, to participate in the planning, controlling, and the like. Not all persons are so inclined and not all those who are have an opportunity to take part. Those who want to participate, and find that they cannot, will tend to turn to the union for two reasons. *First*, the fact of their membership will enable them to participate in the affairs of some organization — the union. *Second*, they tend to feel that they can participate in the affairs of their company through the bargaining impact of their union.

5. *Facilitate Communication.* In all probability very few people actually voice this point, and possibly are not even overtly aware of

it; nevertheless, membership in the union facilitates the employee's ability to communicate with top management. In a large corporate structure, it is particularly difficult for the man at the bottom to reach the man at the top if he stays within the command channels. Furthermore, the man at the bottom has little reason to be connected with the "e" circuitry linking into the top echelon. The rank-and-file employee therefore will tend to turn to union membership as a device he can use individually or collectively to communicate with the upper echelons of the company.

In some of the aircraft and missile concerns, engineers have joined unions. A closer look at this situation reveals that these engineers are, in fact, a part of the rank and file, even though it may be heresy to say this. In such instances, these men are massed into one or several high offices, within the hierarchy of the company they take on a nameless shape and operate in faceless automaticity.

6. *Status.* Directly related to everything mentioned previously is the factor of status. In the large, industrial unit men find themselves with limited status. They tend to seek more recognition. They lack the power to attain that recognition, that status, as individuals. They therefore tend toward union membership in the hope that through it they can attain status.

7. *Coercion* This reason for membership has been placed last, but it is significant. Under the law today, the employee *can* be forced into union membership in all too many cases. Even though the "closed shop" theoretically is illegal, the "union shop" is not. In essence, the union shop arrangement makes it necessary that the employee join the union that has won bargaining rights in a given plant after his probationary employment period expires. If he fails to join, he forfeits his right to his job. Except where this practice is specifically outlawed by the so-called "right-to-work" laws, the union shop clause is typical of a labor contract.<sup>34</sup>

Even where this is not the case, the pressure of social ostracism leads many employees to join the union.<sup>35</sup> Social pressure is not the only device utilized. Many employees who resist union membership find that suddenly they cannot get tools from the tool crib; that their work is rejected by inspectors (even though it is up to specifications); that if overtime is being assigned they get none; that they cannot make standard production because the operator who precedes them will not feed them the work. These economic pressures force them into membership. Let us not be so naive as to believe that the fear of bodily harm or property damage does not play a role here!<sup>36</sup>

<sup>34</sup>cf. Theodore Rose, "Union Security Provisions in Agreements, 1954," *Monthly Labor Review*, Vol. 78, 1955, pp. 649-658.

<sup>35</sup>Lloyd Reynolds, *Labor Economics and Labor Relations* (Prentice-Hall, Inc. Englewood Cliffs, New Jersey, 1954), p. 60.

<sup>36</sup>Senator John L. McClellan, Chairman of the Senate Select Committee, said: "If followed to its logical conclusion, it will lead eventually back to the law of the jungle." (Transcript 667). Read the papers, talk to your neighbors; the violence is there and so is their fear.

*WHY SOME EMPLOYEES DO NOT JOIN A UNION.* The nation's current workforce approximates 66 million persons, of whom only 18 to 18.5 million hold union membership. Even when we realize that of those making up the workforce only something close to 53 million are eligible to belong to unions, it appears that there must be some reason for non-membership. In fact, one might well ask if membership in a union is so beneficial, why haven't the majority of eligible people joined? Let us consider some of the reasons why people reject union association.

1. *Size of Business.* Many American companies are small, or relatively small. The owners, managers, or owner-managers are close to their rank-and-file personnel. The employee can speak out for himself, he can act in his own behalf; he knows what is going on and participates; he knows that when he or his cohort is punished or rewarded the action is justified. The size of the organization plus the competency of management make it unnecessary for the union to come upon the scene.

2. *Type of Business* Retail and service organizations and certain forms of wholesale operations do not lend themselves to union encroachment. The employees involved are not of the true rank-and-file type. They are not massed into a faceless lump of humanity. They are not paid or disciplined without consideration of personal contribution to total organizational success.

3. *Geographical Area.* The unions have, so far, kept their real organizing efforts restricted to the large cities and the industrialized areas of the country. Many employees and employers therefore have escaped the coercive pressures of the labor organization. Furthermore, past experience and social biases, plus large amounts of the old American individualism in certain geographical areas, serve to reverse the economic and social pressure — those who would condone unionization are socially ostracized or attacked through their pocketbooks.

4. *Nature of Work* White-collar employees, technicians, persons of very high skill (where only a limited few exist in a given industrial plant), and individuals who possess the *new* skills of our new technology tend to avoid association with unions. Normally these people are not massed into nameless conformity. They are not incapable of voicing their opinions, of participation, and they are not subject to the negative aspects of the Law of Effect. Furthermore, they can communicate with the top echelon, and their loss is of such marked significance in many cases that their individual bargaining power could not be improved by union membership. Then too, they exist in scattered sections of a company and this lack of concentration tends to foster individuality and rejection of union conformity — it tends to improve the employees' sense of kinship with the company and its management. After all, doesn't your secretary consider your office as hers? Does not the highly skilled maintenance engineer consider your equipment as his?

5. *Personal Reactions.* Of the 65 per cent eligible for membership in unions, there are certainly many who have a personal aversion to such membership. This rejection may result from one or more of the following sentiments:

(A) There are those who consider membership in a union beneath them, as a lowering of status, as a mark of cowardice, or as an outright admission of their own inability to manage their lives.

(B) There are those who have seen or experienced the coercive tactics of organized labor and have decided that they want no part of any association with such organizations.

(C) There are those who view union insistence upon seniority advancement as harmful to their best interests

(D) There are those who are so completely satisfied by their relations with management, with the company, and the like that they see no advantage to union membership.

The fact that only approximately 35 per cent of those eligible for membership have joined unions is, in itself, an important reason for manpower-management personnel to consider the views of those who reject union membership. More than this, however, the reasons for rejection, coupled with the reasons for joining, offer a fair guide to the kind of environment likely to be conducive to amicable relations with a workforce.<sup>37</sup>

*WHY DO UNIONS DEVELOP?* Understanding the general reasons for membership in a union and the general purpose behind organized labor still merely suggests possible reasons for the development of a union in a given case. There must be some equally basic set of conditions which actually encourage a union to attempt to organize a given plant or company and which, if existing in a given concern, may be expected to lead to organizing effort on the part of unions and/or employees. Some of these reasons are as follows:

1. *Malpractice.* If management is in fact guilty of malpractice, sooner or later the employees will seek the support of a union.

2. *Radicalism.* In every group situation one is bound to find at least some evidence of radicalism, dissatisfaction with the *status quo*, or unbridled and unreasonable ambition. If enough such individuals appear in a given concern, they may be able to entice others to join in their effort to establish a union of their choosing. One might point out that *here is evidence of malpractice in manpower selection and development.*

3. *Change in Management.* The structure, the policies and procedures, the personalities of management, may change. Change may

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<sup>37</sup> cf. Neil W. Chamberlain, *Labor* (McGraw-Hill Book Company, New York, 1958).

be viewed by the workforce as a threat to the company or as dangerous to their welfare. The employees may fear that a new management, a new structure will result in a production-oriented management. In any case, change may precipitate overt action to bring in a union.

4. *Development of a Problem.* A specific problem may arise almost overnight. For example a discharge of an old employee, a sudden addition of automatic equipment, a problem arising in connection with workloads: any of these sudden occurrences can occasion demands for union representation.

5. *Contraction, Expansion, Staffing.* An unexpected or undesired plan by management to expand or contract may lead the employees to seek union representation. A sudden shift in company staffing policies may engender fear — for example, where promotion from the ranks had been possible and a shift in policy makes it impossible. In keeping with these thoughts is the effect of sudden or feared cutbacks.

6. *Structure.* In many industrial units, competition has led to an ever-increasing structure, an ever-growing business. As this growth develops, the rank and file tend to “get lost.” They tend to feel that they are losing any opportunity to participate and therefore seek union representation.

Consideration of these reasons for membership, for rejection of membership, and for the development of demands for union representation leads to a significant conclusion: *where the socio-psychological needs of employees are not satisfied by their employment situation, their affinity for organized labor tends to increase significantly.* Furthermore, unless management takes the lead in fighting corruption and coercive action, employees may be forced into association which they do not want with organized labor, and which may, in fact, be bad for the workforce and the company. A management which simply fights the entire concept of organized labor merely because it does not approve of that concept will find itself, however, in a completely untenable situation.

## LABOR LEGISLATION

An appreciation of the historical pattern of the labor movement and the reasons for membership in unions and union development is helpful to those responsible for the development of a company's labor policies and procedures. No less important is an appreciation for the labor legislation currently applicable to the industrial scene. Table 26 presents in brief form the generally pertinent labor law. Rather than develop in detail the specific legal points and implications of the legislative pattern, let us consider the historical picture.

*Foundation.* British law provides the legal foundation for this country. Our labor law has its foundations in the Common Law. The early judicial attitude toward organized labor was based upon the

TABLE 27

## SELECTED LEGISLATION AFFECTING LABOR AND MANAGEMENT

Date	Title or Common Name	Remarks
1888	Arbitration Act	Railroads -- superseded by Erdman Act -- differences between employees and railroads to be handled by arbitration
1890	Sherman Anti-Trust Act	Designed to combat trusts and combinations of business to control markets and services Provide treble damages to injured party. First applied against labor in Danbury Hatters vs Loewe. Union held in restraint of trade, individual members held responsible for union's acts
1898	Erdman Act	Replaced Arbitration Act of 1888. Provided for mediation and conciliation Outlawed "yellow dog" contract (U S. vs Adair).
1913	Newlands Act	Amended and amplified Erdman Act. Limited decisions under act to issues involved in cases immediately before the Board. Permanent U S. Board of Mediation and Conciliation set up.
1914	Clayton Act (Anti-Trust Act of 1914, the Picketing Act, Restraint of Trade Act)	Reaffirmed basic principles of Sherman Act New provisions in Sections 6 and 20. Unions were legitimate if not in violation of the act, prohibit issuance of restraining orders or injunctions against union while in legitimate dispute with management Thus, strike, picketing and boycott were legalized. However, in Duplex Printing Press vs Deering Secondary Boycott held not legitimate, in Bedford Cut Stone case, union held to be in restraint of interstate trade, and in the American Steel Foundry case, more than one picket at a factory gate was termed unlawful
1926	Railway Labor Act	Combined all basic features of previous legislation regarding labor and the railroads. Requires collective bargaining, no discrimination against employees for joining unions, settlement of disputes through voluntary arbitration, mediation, and fact finding boards. Now includes airlines.
1932	Morris-LaGuardia Act (The Injunctions in Labor Disputes Act -- 47 Stat. 70, c. 90)	First real step to break away from Common Law in industrial labor relations matters. Outlawed injunctions except as provided in act. Made "yellow dog" contracts unenforceable in federal courts Primary and secondary boycott now possible, strike and picket-line possible without fear of government action to stop them.

TABLE 27 (Continued)

Date	Title or Common Name	Remarks
1933	National Industrial Recovery Act (NIRA)	Provide "codes" of "fair competition," to labor it meant that employees had right to organize and bargain collectively without interference, restraint, or coercion by employers. Labor-management provisions declared unconstitutional in 1935 case of Schechter Corp vs U.S., replaced by Wagner Act
1934	Anti-Racketeering Act (Hobbs Act amended) (1952)	Makes it a felony to obstruct, delay, or affect commerce, or the movement of any article or commodity in commerce by robbery or extortion. Also a felony to act in concert with others in obstructing, delaying, or affecting commerce, and the like, or participate in any attempt at such violation, or to commit or threaten physical violence to person or property in furtherance of plans to commit such violation
1935	National Labor Relations Act (Wagner Act)	Assure right of workers to bargain collectively through representatives of own choosing. No restraints on unions but employees faced by "unfair practices" as interferers with right of employees to bargain collectively, contribute financially to labor organizations in order to dominate their formation or administration, discriminate against an employee in hiring or tenure of employment because of affiliation with union, refuse to bargain with employee representatives. National Labor Relations Board established (NLRB). Two main functions investigate complaints of violations re unfair labor practices, hold and administer secret ballot elections to determine what union, if any, should represent employees in a plant. First board was a three-man board. Upheld in 1937 in Jones and Laughlin Steel Corp.
1936	Byrnes Act (Anti-Strike-Breaker Law)	A felony to transport in interstate commerce strikebreakers, persons for purpose of interfering with peaceful picketing by employees during labor dispute re wages, hours, or working conditions, or interfere with exercise of employee rights of self-organization or collective bargaining
1943	Smith-Connally Act (War Labor Disputes Act)	Gave President power to take possession of and operate vital industries during wartime which would have closed down as a result of unsettled labor disputes. Expired June 30, 1947

TABLE 27 (Continued)

Date	Title or Common Name	Remarks
1946	Lea Act (Coercive Practices Act)	Makes it a criminal offense for any person to use or threaten to use force, violence, intimidation, duress, or other means to compel any radio station to employ or agree to employ more employees than are needed, or to make any extra payment in place of hiring additional employees.
1947	Labor Management Relations Act (Taft-Hartley) amended 1951, and, as amended by Labor Management Reporting and Disclosure Act 1959 U.S. Code 1958, Title 29, Sections 141-168 and Public Law 86-257, 86th Congress, 1st Session	Amends and supersedes Wagner Act. Reaffirms right of workers to organize and bargain collectively. Adds a list of "unfair practices" of unions thereby identifying both union and management unfair practice. Union list involves cannot restrain or coerce employees in exercise of right to organize and bargain collectively or to refrain from any such activities, or to restrain or coerce an employee in the choice of his bargaining representative, unfair to cause an employer to discriminate against an employee because of his membership or lack of membership in a labor organization except under a duly authorized union shop agreement in conformance to provisions of the act, unfair to refuse to bargain collectively with an employer, unfair to engage in, or induce or encourage the employees of any employer to engage in a strike or concerted refusal in the course of employment to handle any goods or perform any services with the purpose of - (a) forcing an employer or self-employed person to join any labor or employer organization, or to cease doing business with any other person, (b) forcing any other employer to recognize or bargain with a labor organization which has not been certified by the Board as the legal representative of his employees, (c) forcing any employer to recognize or bargain with a union when another has been certified by the Board, (d) forcing any employer to assign particular work to employees in a particular union, trade, craft, or class. Unfair for union to require employees under a legal union shop agreement to pay discriminatory or excessive dues as found to be so by the Board. Unfair of union to induce an employer to pay money or other thing of value, in the nature of an extortion, for services not performed or not to be performed (featherbedding is thereby prohibited).  Although union shop agreements are permitted, there is a ban on the closed shop. (Union officers were required to file annual reports showing they were not Communists -- superseded by Labor Management Reporting and Disclosure Act of 1959.)  NLRB under this act was composed of five rather than three members.

TABLE 27 (Continued)

Date	Title or Common Name	Remarks
1947	Labor Management Relations Act (continued)	<p>Section 8 (c) is known as the "free speech" provision, expressed views will not be an unfair labor practice as long as there is no threat of reprisal or force or promise of benefit contained. Jurisdictional strikes and boycotts considered unfair labor practice.</p> <p>In 1949 the Supreme Court upheld the decision of a lower court that the Labor Management Relations Act requires employers to bargain with unions on retirement plans (<u>Inland Steel vs United Steel Workers</u>).</p> <p>National Emergencies. If, in the opinion of the President, an actual or threatened strike or lockout will imperil the national health and safety, he is authorized to initiate steps to be taken to secure an injunction without regard to the provisions of the <u>Morris-LaGuardia Act</u>.</p> <p>Union no longer able to induce or encourage a strike of railroad workers, government workers, agricultural workers, a single employee of a neutral or secondary employer, or supervisors of a neutral employer. This is an additional violation of Taft-Hartley secondary boycott restrictions, and as an unfair labor practice is enjoined.</p> <p>Union forbidden to induce or coerce secondary employers to refrain from doing business with a primary employer having a labor dispute. Unions forbidden to picket a neutral employer for the purpose of preventing the public from buying goods that the neutral employer obtains from the primary employer with which the union has a labor dispute.</p> <p>"Hot cargo" or "unfair goods" clauses in labor contracts are outlawed except in the clothing and construction industries. Recognition or organizational picketing by a minority union, when the picketed plant already has a Board-certified union in it is outlawed.</p> <p>Under the new law, the States and Territories may take jurisdiction over labor disputes which the NLRB declines to handle. The Board's published "jurisdictional standards" indicate who will handle the dispute.</p> <p>Filing requirements including the non-Communist affidavit were repealed by section 201 (d).</p>

TABLE 27 (Continued)

Date	Title or Common Name	Remarks
1959	Labor-Management Reporting and Disclosure Act of 1959 (Landrum-Griffin Act)	<p>The law is based on need to eliminate improper practices of labor organizations, employers, labor relations consultants, and their officers and representatives. Act contains a "bill of rights" of members of labor organizations. These may be enforced by members by suit in federal district courts. Rights cover: right to attend, participate and vote in meetings, freedom of choice and speech in union meetings, protection from dues increases or assessments except if voted through secret ballot, etc., protection of right to testify, to communicate with legislators, and to bring suit after using reasonable organizational remedies, for appropriate relief when unions infringe the rights of members, the right to obtain copies of collective bargaining agreements and be informed by unions of rights granted by this law, right to notice and a fair hearing before any disciplinary actions, except discipline for nonpayment of dues. These rights defined in Title I.</p> <p>Title II requires the labor organization to adopt a constitution and bylaws, and to file a copy of these documents with the Secretary of Labor. Annual financial reports must be filed. Reports of "conflict of interest" must be filed. Employers and Consultants must file reports regarding their actions in connection with labor-management relations. All reports are public information.</p> <p>Title III provides for establishment of trusteeships and specifies certain administrative practices related to them. Title IV covers elections of officers and standards of conduct for elections.</p> <p>Title V covers fiduciary responsibilities and actions by union officials, prohibits members of the Communist Party from holding office, tightens and clarifies section 302 of Taft-Hartley. Title VI covers miscellaneous matters and ties the act to other pertinent legislation. Title VII contains the current amendments to Taft-Hartley involving matters administered by the NLRB.</p>

Source: This Table was prepared by Norman J. Labrecque. It is a composite of information taken from: *Federal Labor Laws and Agencies*, Bulletin 123 (revised), and 1960 Supplement to Bulletin 123, U. S. Department of Labor, Mollie Z. Margolin, *The Library of Congress Legislative Reference Services. Compilation of Significant Labor Laws, 1st to 86th Congress*, Library of Congress, Washington, D. C., November, 1960, *The Law and Secondary Boycotts in Perspective*, R-677, Library of Congress, Washington, D. C., February, 1960, "The Evolution of Present Labor Law," *Congressional Digest*, Vol. 38, Nos. 8-9, August-September, 1959.

*conspiracy doctrine* inherited from British law. The doctrine of 1806 held that any group acting in an organized manner to attain a given objective had the power to injure. In the Philadelphia Cordwainers' case in 1806, it thus was held that "no matter whether this prosecution originated from motives of public good or private interest, the question is whether the defendants are guilty of the offenses charged against them."<sup>38</sup> In later cases, the conspiracy charge was based upon the fact that labor applied coercive methods, not upon charges that wages were being attacked or the *fact of organization of labor*.

In 1842, in the case of *Commonwealth vs. Hunt* (4 Metcalf, 45 Massachusetts 111), Chief Justice Shaw recognized the legal right of workers to form trade unions and to function as trade unions. In this case, he held that a conspiracy occurred when persons acting in concerted action sought to accomplish some criminal or unlawful purpose or to accomplish an otherwise legal purpose by criminal or unlawful means.<sup>39</sup>

It is interesting to note that, although early cases were ruled upon in terms of the direct reference to the British law, the circumstances surrounding those cases suggest that there was coercive and/or criminal action. One can conclude that Justice Shaw recognized the real problem by specifically differentiating between what was lawful and what was unlawful, both in the fact of labor combination and in the methods applied by combinations. In fact in the case of *Commonwealth vs. Moore* (Mayor's Court of Philadelphia) in 1827, as reported in John R. Commons *et al* (eds) *A Documentary History of American Industrial Society*, the right of employees to join and form unions is recognized. Justice Shaw thus had a precedent from which to work.

The recorded evidence of court action, plus the fact of history which reveals that there were many unions under Common Law, lead to the conclusion that the Common Law — as it developed — *did* recognize the right of employees to form and join labor unions<sup>40</sup> Specifically, it appears that the Common Law allowed employees to reject employment at wages they considered unsatisfactory and permitted them to strike if they were dissatisfied. Further, it appears that as the justices of the country matured and the law developed in experience, it was not the *fact of organized labor* that was ruled against, but the coercive activities which were challenged by court action.<sup>41</sup> Unfortunately, Common Law judges differed in their opinions as to what union actions were legal and what were illegal.<sup>42</sup> This confusion strengthened the political appeal of union officials when they sought specific legislation to authorize their existence.

<sup>38</sup>*A Documentary History of American Industrial Society*, Vol III, p. 227.

<sup>39</sup>*Ibid.*, Vol. IV, pp. 99 and 255, see also Alpheus T. Mason, *Organized Labor and the Law* (Duke University Press, Durham, N. C., 1925), pp. 53-69.

<sup>40</sup>Sylvester Petro, *The Labor Policy of the Free Society* (The Ronald Press Company, New York, 1957), Chapter 9, *passim*.

<sup>41</sup>Taft, *op cit*, pp 587-589, *passim*

<sup>42</sup>Petro, *op. cit.*, p. 139.

*Sherman Anti-Trust Act, 1890.* The national and international leaders of organized labor have sought continually to gain the protection of the law without meeting the obligations of legal behavior. This is a strong statement, and one which will certainly meet objections. None but the most ill-advised or ill-intentioned can hold, however, that intimidation, interference with the flow of commerce, the use of secondary boycotts, physical injury and property damage, and like activities are legal or examples of meeting legal obligation. It cannot be held that if it is illegal for management to engage in such actions, it is not necessarily illegal for organized labor to engage in them — after all, what is fair for one is certainly fair for the other.

One of the early efforts to bring organized labor into a position of legal responsibility was the ruling handed down by the United States Supreme Court in the Danbury Hatters case. In 1908 the Court ruled that “the combination described in the declaration was a combination in restraint of trade and commerce among the several states.” *Loewe vs. Lawlor*, 1908, 208 U. S. 275) This ruling held that since the union was restricting the free flow of commerce, it was subject to the penalties of the Sherman Anti-trust Act. This, of course, meant that the secondary boycott was illegal and that damage suits could be brought against individual union members.

The facts of this case relate to closed shop activities, although many hold that a closed shop is perfectly all right, one must admit that requiring a person to join a union in order to *obtain* a job is a violation of the individual's freedom of choice. The facts also specify to the intimidation of retailers and wholesalers. Intimidation certainly can be considered unethical and immoral, and if carried on in a criminal or definably illegal fashion, it evidences failure to act legally.<sup>43</sup>

A very interesting point exists here. The court's ruling exposed individual union members to the risk of damage suits. Truly this was an unfortunate and unfair thing. After all, the individual members of a corporation are not subject to damage suits in connection with corporation activities. Did the government or the hierarchy of organized labor seek to correct this situation by bringing unions into a position of having to incorporate to protect their membership? No! This still has not been done effectively, although it was permissible until 1932.

*The Clayton Act, 1914* The position generally is taken that the Danbury Hatters case was a terrible blow to labor. It was! The blow, however, was not to the *concept* of organized labor as much as to the *methods* of the politically-orientated leaders of the national and international unions. Just as today, these men sought to legalize certain

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<sup>43</sup>cf. *Gompers vs. Buck's Stove and Range Company*, 221 U. S. 418 (1911). Here one finds another example of illegal practice. It is interesting to note that wherever peaceful strikes and non-coercive activities existed, they were commonly considered privileged and lawful. One notes that the real purpose of the Sherman Act was to impose limiting controls upon the monopolistic developments in the economy as a whole. Naturally, coercive actions would be of interest.

actions which, if entered into by individual citizens or corporations, generally would be considered incorrect.

The leadership of organized labor set out to remove the impact of the Court's action. Great pressure was brought to bear upon the politicians in the legislative bodies and the administrative groups of the country. Labor leaders sought to have unions excluded from anti-trust regulations. Their efforts led to the passage of the Clayton Act of 1914.

The act was hailed as labor's *Magna Carta*.<sup>44</sup> Section 6 stated that "the labor of human beings is not a commodity or an article of commerce." Union leaders felt that this section clearly excluded labor from anti-trust regulation. Section 16 included a provision which permitted private suits in equity to restrain a violation of anti-trust regulations. Section 20 limited the use of injunctions against unions and assured the right to strike. Actually, the act really did *not* furnish the union hierarchy with the freedom it sought. Supreme Court action really continued equity containment of organized labor's actions.<sup>45</sup>

One of the particularly interesting actions arising under the Clayton Act comes out of the Coronado Coal Company *vs.* United Mine Workers of America (259 U. S. 344, 1922, 268 U. S. 295, 1925). In this instance the Court made it clear that an unincorporated union *could* be sued! Whether as individuals or as a group, union members could be held financially responsible through fines.

In 1939, even though *identical* factors came under consideration, a new and extra-liberal Court handled the problems of the Apex Hosiery case in a different manner. The Court found that fiscal responsibility for property damage was a problem for local courts, that the company had not fully proven its case (even though extreme damage to equipment and property by strikers was shown), and that the union was not completely free of the restraint of trade portions of the Sherman Act.

Until 1932 (or if one considers the railroad workers, 1926 and the passage of the Railway Labor Act), the real basis for labor legislation was the Common Law. The many court cases from 1806 through 1927 indicate that although organized labor maintained that it was being discriminated against, what really happened was that its methods were challenged.

Although the Clayton Act exempted labor from the anti-trust laws, the courts interpreted the law to include labor and frequently found the unions acting in restraint of trade. Examination reveals that the courts were really trying to maintain equity whereas labor hoped to establish a condition of nonequity.<sup>46</sup>

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<sup>44</sup>Samuel Gompers, "The Charter of Freedom - Labor Provisions of the Clayton Anti-Trust Law," *American Federationist*, September, 1914, p. 957.

<sup>45</sup>Petro, *op. cit.*, p. 275. In the Duplex case (*Duplex Printing Company vs Deering*, 254 U. S. 349, 1921), the Court held that industrial conflict was not legalized by the Clayton Act.

<sup>46</sup>Petro, *op. cit.*, p. 275.

Although many would have us believe that until the legislation of the 1930's employees had no right to join or form unions, this right did exist. It took many years for a clear statement of that right to take legal form; it appeared in 1842, and was reaffirmed by Chief Justice Taft in 1921.<sup>47</sup>

*RECOGNITION BY LEGISLATION.* Organized labor's hierarchy was far from satisfied with its position under the Common Law. Regardless of labor's errors and illegal acts, none can deny that management had not been equally guilty. The facts show that many industrial organizations engaged strikebreakers; transported "goon squads" across state lines to fight unionists; sought and acquired control over local courts, won injunctions where much question of their validity existed, practiced "black-listing," and used "yellow-dog" contracts.<sup>48</sup>

In 1932 the Norris-LaGuardia Anti-Injunction Act was passed by Congress. It prohibited labor injunctions and had the effect of outlawing yellow-dog contracts. Management had been able to exercise real control over the injunction procedure. They had been able to obtain "blanket injunctions" whereby all unions and union people could be enjoined to cease their activities. These restraining orders made it impossible, or could make it impossible, for any union to operate effectively, even those who sought to operate within legal bounds. Management also fought unionization by utilizing the yellow-dog contract which, in effect, required that an employee sign a contract by which he agreed not to join a union or engage in union activities as a condition of employment. The Norris-LaGuardia Act ended such practices. In effect it established legislative recognition of organized labor.<sup>49</sup>

In 1933 the now famous Section 7a of the National Industrial Recovery Act set the stage for the Wagner Act. It specifically stipulated that employees should have the right to bargain collectively through representatives of their own choice. In 1935 the act was declared unconstitutional.

The National Labor Relations Act was passed in 1935 and was declared constitutional in 1937. This act established as legal the concept of collective bargaining. It gave the unions legislative protection. Prior to this and the Norris Act, employers could bargain or not bargain with a union of their employees. Now they had no choice.

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<sup>47</sup>American Steel Foundries vs Tri-City Central Trades Council, 257, U. S. 184 (1921).

<sup>48</sup>Black-listing was ruled against in *Cornellier vs Haverhill Shoe Manufacturers' Association*, 221 Massachusetts 554, 109 N.E. 643 (1915).

<sup>49</sup>Let it not be forgotten that by establishing this recognition in this way, the employer was put in the position of being unable or nearly unable to defend himself against illegal action.

Through this act employees were guaranteed the right to bargain through representatives of their own choosing. It became impossible for either the employer *or* the employee to avoid bargaining with a union that managed to establish itself as the bargaining agent regardless of that union's conduct.

*The NLRA in Brief* Specifically the act was established to facilitate the maintenance of the free flow of commerce in the country. It specified that collective bargaining through unions of the employees' choosing was the law of the land. It defined the rights of employees in the bargaining process, established specific practices by employers as "unfair labor practices," and created the National Labor Relations Board.

The National Labor Relations Board was charged with three specific functions: (1) determination of appropriate bargaining units, (2) certification of unions to represent employees upon petition from said employees, (3) prevention of unfair labor practices. In effect, *a problem of law was turned over to a politically-appointed board*. As originally constituted, the board had three members appointed by the President of the United States. Under Taft-Hartley this increased to five. If a union felt an employer was guilty of unfair labor practices it filed a complaint with the Board. If the Board found the employer guilty, it issued a restraining order. If the company refused to comply, the case was put into the Circuit Court of Appeals.

NLRB hearings *did not* proceed in accordance with legal practice. The defendant was *not* assumed innocent until proven guilty. The burden of proof was *not* upon the plaintiff. Full and legal evidence was not offered — judgment found its base in past actions, precedent, past attitude (alleged or real). Obviously, the Board's rulings were generally pro-labor.

The unfair labor practices of employers were five. They could not interfere with the rights of the employees to join a union. They could not dominate or interfere with the employee's union. They could not discriminate or otherwise intimidate an employee with respect to hiring tenure, or other conditions of employment because of a desire to become a union member. Union membership or actions related to union business or the filing of charges against the employer could not be used as a reason for discharge. Employers could not refuse to bargain with the representatives of the employees. It is interesting to note that the employer could not post notices or statements regarding the *facts* in a dispute it might be having with a union.

This law threw the entire balance of power over to the hierarchy of organized labor. Instead of decreasing industrial conflict, it actually increased it. Employees who wanted no part of a union were suddenly faced with a situation which, because their employer's hands were tied, meant that they had no choice but to join or quit their jobs.

Naturally the ranks of organized labor grew during this period,<sup>50</sup> as did the power of the hierarchy.

*National Labor-Management Conference of 1945* Jurisdictional disputes had plagued the industrial scene between 1935 and 1945. Unfair treatment at the hands of the NLRB had been prevalent. Industry-wide bargaining had made unions truly monopolistic. Unions had proceeded with their formerly outlawed actions of secondary boycotts, coercive tactics regarding non-union employees and retailers and wholesalers. In fact, a look at any newspaper of that period will quickly reveal that in the 1935-45 period the bodily harm and damage to private property by union hands was quite severe. These conditions led to the call by President Harry S. Truman for a national labor-management conference in 1945.

Employers had, for the most part, come to accept unionization during the World War II period. They felt, however, the foregoing conditions unfair, and considered the Wagner Act entirely too biased. They pressed to have labor correct the evils. Labor refused; this refusal played a large part in assuring the passage of the Labor Management Relations Act of 1947 (the Taft-Hartley Act, an amendment to the Wagner Act).

*The LMRA in Brief.* Where the balance of power under the Wagner Act stood in favor of organized labor, the LMRA sought to establish real balance between labor and management. The act retained the unfair labor practices of employers and added six unfair practices of labor. In addition, union officials were required to provide certain information to their membership and the secretary of labor; the structure and operation of the NLRB was altered.<sup>51</sup>

The unfair practices of organized labor include the following:<sup>52</sup>

1. Restraint or coercion of employees — violation includes mass picketing; acts of force or violence on picket lines or in connection with strikes, threats to do bodily harm to non-striking employees; threats by unions or their agents to employees that they will lose their jobs unless they support the union's activities.
2. Discrimination for union activities — employer cannot be forced to discriminate against an employee, cannot be forced to discharge employee for urging a change in union's method of selecting shop stewards, cannot be forced to make a contract requiring the hiring of only union members or persons satisfactory to the union.

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<sup>50</sup>Leo Wolman, *Ebb and Flow in Trade Unions*, National Bureau of Economic Research, New York, 1936, *Handbook of Labor Statistics*, 1950, U. S. Bureau of Labor Statistics, 1951, and supplements.

<sup>51</sup>It is suggested that the student obtain copies of the current legislation for his permanent library. Any manager, particularly those directly charged with manpower-management activities, should be thoroughly familiar with the legislation affecting his work.

<sup>52</sup>cf. *Federal Labor Laws and Agencies*, Bulletin #123, U. S. Department of Labor, and 1960 supplement.

3. Refusal to bargain in good faith — insistence of inclusion of illegal provisions in a contract, refusal to make a written contract of reasonable duration.

4. Secondary boycotts and certain types of strikes and picketing — hot-cargo contracts, force employer or self-employed person to join a union, force employer to bargain collectively with an uncertified union; force assignment of work to employees of a given trade or craft rather than to those of another trade or craft; sympathy strikes, picketing of an employer who continued to deal with a company with which the union has a dispute; use of “unfair lists.”

5. Charging excessive or discriminatory initiation fees.

6. Forcing employer to pay for work not performed (feather-bedding).

The LMRA also reaffirms management’s right to speak. Although it provides that no coercive language may be used, management can speak out and state the facts of a dispute with a union.

Labor officials are required to furnish the following information.

1. The names, titles, compensation, and allowances of the three principal officers.

2. The procedure by which the officers gain office.

3. The initiation fee and other fees charged

4. The amount of regular dues.

5. The procedures connected with election, calling of meetings, levying of assessments, authorization of strikes and the like.

6. Financial statements must be furnished the secretary of labor and the same statement must be furnished all members.

*The Labor-Management Reporting and Disclosure Act of 1959* stands as a major amendment to the LMRA. It was passed by Congress in an effort to curb improper practices of labor organizations, employers, labor relations consultants, and their officers and representatives.<sup>53</sup> It contains seven titles. Title I is a Bill of Rights of Members of Labor Organizations and sets forth rights Congress feels should be guaranteed union members. The intention of Congress was to remove the corruption so prevalent in certain unions and in certain consultant-union-management arrangements. Actually, both management and the individual employee receive benefit from this amendment. Management for example, receives further aid against secondary boycotts and black-mail picketing. Employees are aided since the use of union funds is restricted and election rules are established.

At the present time, labor legislation seeks to establish a balance between management and labor. Whether true balance will ever be achieved is anyone’s guess, but certainly the inequities existing before and during the early years of legislation must be prevented from re-

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<sup>53</sup>cf. Bulletin #123, *op. cit.*, pp. 25-38, *passim*.

curing. Figure 66 depicts the agencies responsible for administering the principle labor laws. Manpower people may have frequent contact with these groups.

### SUMMARY

We have presented here a brief background to present labor-management relations. Knowledge of this background may help the manager understand the activities of labor and the problems he confronts when dealing with labor.

The union movement is no creation of today's *avant garde*. It dates back to 1792. Years of struggle mark its development, struggle within as well as against management. In many cases, history bears out the contention that organized labor is a necessary adjunct to our society. Many union practices are viewed as undesirable, however, and still cause some men to reject the idea of organized labor. Desirable or not, organized labor is a force in today's society.

Legislation has developed in part to control that force and in part to allow its growth. Current legislation springs from the Common Law heritage. It finally is showing some recognition of the very problem recognized by many Common Law judges — that of assuring management, rank-and-file employees, and organized labor equity under the law. Management must realize that legislation still forces employers and employees to recognize and deal with unions even though they may not wish to do so, but at least the hierarchy of organized labor is now required to take a fairly responsible position under the law.

Although an appreciation for background is important, the manpower manager (in fact every manager) requires a good understanding of the daily issues relating to organized labor. In the following chapter interest focuses upon these matters

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This chart shows the Federal agencies which administer major Federal labor laws or portions of such laws. For a few of the acts listed there is no specified administrative agency, these acts provide penalties, provide for injunctions or give rights which may be enforced in a civil action.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	DEPARTMENT OF LABOR	Federal Labor Laws or Portions of such Laws																										
		Marijuana Act (Norris-LaGuardia)	Marijuana Act (Nobels)	Marijuana Act (Hobbs)	Apprenticeship Act (Byrnes)	Coal Mine Safety Act of 1952	Boys Bacon Act and Provisions in Other Acts Authorizing Wage Rates for Construction Work	Defense Base Act	Eight-Hour Law <sup>1</sup>	Fair Labor Standards Act	G. I. Bill of Rights (Servicemen's Readjustment Act of 1944)	Korean G. I. Bill of Rights (Veterans Readjustment Assistance Act of 1952)	Longshoremen's and Harbor Workers' Compensation Act	Miller Act	Railroad Retirement Act	General Unemployment Insurance Act	Barber Labor Act	Smith Hughes and George-Donnan Acts	Social Security Act	Transportation of Migrant Workers (Lee Act)	Veterans Reemployment Rights	Veterans Rehabilitation Act for Disabled Korean Veterans	Veterans Rehabilitation Training Act for World War II Veterans	Wagner-Peyser Act	Wolsh-Keefer Public Contracts Act			
	The Selector of Labor																											
	Bureau of Apprenticeship and Training																											
	Bureau of Employees Compensation																											
	Bureau of Employment Security																											
	Bureau of Labor Standards																											
	Bureau of Veterans Reemployment Rights																											
	Wage and Hour and Public Contracts Divisions																											
	Bureau of Old Age and Survivors Insurance																											
	Bureau of Public Assistance																											
	Children's Bureau																											
	Office of Vocational Rehabilitation (Vocational Division)																											
	Office of Vocational Rehabilitation																											
	Bureau of Mines, Department of Interior																											
	Federal Mediation and Conciliation Service																											
	Interstate Commerce Commission																											
	National Labor Relations Board																											
	National Mediation Board																											
	National Railroad Adjustment Board																											
	Unemployment Insurance Administration																											
	Veterans Administration																											
	<sup>1</sup> Enforcement of these laws is the primary responsibility of contracting or financing agency in accordance with regulations prescribed by Secretary of Labor																											
	<sup>2</sup> The Bureau of Labor Standards administers only provisions relating to filing of organization and financial data by labor organizations																											

U. S. Government Printing Office, Washington, D. C., 1957

FEDERAL AGENCIES RESPONSIBLE FOR ADMINISTERING MAJOR LABOR LAWS

Figure 66

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*Organized labor is a force in today's society. Management's job is to see that it remains a productive force.*

## Managing Labor Relations

Our consideration of the history of organized labor and of labor legislation indicates at least two points pertinent to the manager's collective bargaining work. A primary aim of unions has been legal recognition of the right of workers to bargain collectively with their employers. This "right" is now firmly entrenched in our society! It is secure because of Common Law interpretations *and* legislative action<sup>1</sup>

The aim of "professional" labor-managers has been to establish power for organized labor. Organized labor's hierarchy has sought the establishment of an environment wherein their leadership is recognized under the law, has authority to act under the law, and is accepted as a reputable segment of the total society. This aim has been partially fulfilled!

Legislative action demands that management recognize *the certified representatives of the workforce and bargain with them, in good faith*, concerning wages, hours of work, and working conditions.<sup>2</sup> Society, however, appears to reserve full acceptance of the union hierarchy until proof stands that the leadership of the national and international unions — particularly the AFL-CIO, United Mine Workers, Teamsters, and the several waterfront unions — has finally come into *full* support of the principles upon which this nation was founded, and

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<sup>1</sup>cf. *Commonwealth vs. Moore*, Mayor's Court of Philadelphia (1827); *Commonwealth vs. Hunt*, 4 Metcalf 111 (Mass. Superior Judicial Court 1842), *Vege-lahn vs. Guntner*, 167, Mass. 92, 44 N. E. 1077 (1896), *American Steel Foundries vs. Tri-City Central Trades Council*, 257 U. S. 184 (1921); and the Labor Management Relations Act, 1947 as amended.

<sup>2</sup>cf. Sec. 7, LMRA.

for which it stands.<sup>3</sup> Obviously, complete fulfillment of the second aim will not take place until such time as labor's leaders actually begin to work for and achieve true — not one-sided — equity in labor-management relations. Not even the appointment of Walter Reuther to this country's United Nations team would be proof that the leadership deserves full acceptance by society, for this still does not mean that the evils either fostered, or winked at, have been removed.

The just-mentioned lack of full acceptance of the hierarchy of organized labor stands as a sore point with many union people — perhaps rightly so. The climate surrounding those managers responsible for a company's labor relations is affected by that lack of acceptance, and is indicative of the atmosphere in which collective bargaining and contract administration *may* occur.

### COLLECTIVE BARGAINING AND CONTRACT ADMINISTRATION

In this sub-section, the following points will be covered: *first*, definition of collective bargaining, and the meaning of "good faith," *second*, definition of the labor-relations terminology so necessary to managers, *third*, discussion of management's bargaining error; *fourth*, discussion of contract negotiation, clauses, and administration; *fifth*, discussion of grievance procedure.

As each subdivision is covered, it is important to remember that the business of managing manpower is the business of *every* manager, and that even though a staff of "experts" may exist in a given company for the express purpose of handling the labor-relations responsibilities, *every manager will share* in the handling of those responsibilities.

With this latter point in mind, it appears important once more to draw attention to the attitude problem confronting the manager when he enters into collective bargaining with a "big" union.

A **WARNING!** In Chapter 2, the *Manifestations of Conflict* in today's industrial environment were outlined. Little evidence appears which would indicate that organized labor has changed its attitude very much in the past decade. True, Harry Bridges startled everyone by making a permissive agreement with management in 1960; the AFL-CIO has attempted to remove communism from their affiliates, and the hierarchy has raised "shocked voices" and made sporadic attempts to do something about gangsterism. The hallmark of labor's political policy and operating technique, set so many years ago by Samuel Gompers, still appears as the guide; however, the statement he made was: ". . . reward your friends and punish your enemies."<sup>4</sup>

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<sup>3</sup>"Full support" is not indicated by such things as "lip service" and press interviews, mob violence, secondary boycotts, or shutdown of major ports or industrial units vital to the nation's defense. Full support will be evidenced by actions which remove such blights

<sup>4</sup>Taft, *op. cit.*, pp. 434-435

The alleged gouging of paint on the cars of non-strikers, the alleged stonings and other acts of violence during the 1960 United Aircraft strike, and the apparent failure of union leadership to take steps to prevent these acts, indicates the continued modern-day acceptance of Gomper's principle. All, however, is not conflict today. Some real evidence of co-operation by labor's hierarchy does exist.

**COLLECTIVE BARGAINING — A DEFINITION.** Under current conditions, the term "collective bargaining" refers to the procedure used by a union's hierarchy and a management group to arrive at a labor contract which specifies employment conditions. As stipulated by current law, the area of proper interest includes wages, hours of work, and working conditions. The ingredients of the term include the "collective" idea. Employees form an organization which becomes certified by the NLRB and whose elected officials are authorized to act as their agents in arriving at a contractual agreement with the company. Companies also may act as a group. Also included is the idea of "bargaining" — a give-and-take procedure, a trading, a system of compromise, establishment of agreement following proposals and counterproposals.

Current legislation also requires the existence of "good faith." The concept of good faith *does not* mean that an employer must submit to a union's demands, or that a union must accept an employer's offer. Management may say no, and so too may the union. Good faith, however, *is not present if a counterproposal is not offered when a "no" is given.*

It is particularly difficult to determine when a party is bargaining in good faith. Rules of evidence *are not* allowed in such determinative situations. Past practices, allegations regarding attitudes and other difficult to prove points are applied in such judgments. Where this condition exists, and where the decision body is politically appointed (as in the case of the NLRB), and not held to legal process, it is not uncommon to find rulings favoring the powerful politically-oriented hierarchy of organized labor.

*Compulsion and Bargaining.* Although the express intent of current legislation is to promote industrial peace, to assure the free flow of commerce and industrial progress free from the fetters of labor-management conflict, it is interesting to note that the very law designed to promote harmony uses compulsion to obtain that harmony. Compulsion is a basic cause of conflict. The compulsion appears, of course, in the fact that managers are required to do what, in their free choice, they might have absolutely nothing to do with — they are required by law to bargain.<sup>5</sup>

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<sup>5</sup>This is not to express any horror at the law, but rather to point out that the law may well be a source of conflict to some.

Manpower managers realize that to help overcome their own natural aversion to the idea of compulsory collective bargaining, they must consider the law as a point of departure. Such an approach tends to direct attention to the employee as an individual *and* as a member of a group — what other focal point could be selected — instead of to the “professional” labor manager. Such an aim is perfectly within the fundamental scope of the manager’s job — *all* managers are responsible for their subordinates; a good manager does not need a law to tell him his responsibility!

*The Scope of Bargaining.* Labor-relations activity indicates that the scope of collective bargaining has no clearly defined limits. Generally, the term “working conditions,” which appears in the law, refers to items such as seniority, pensions, welfare programs, discipline, grievance handling, anti-strike rules, special compensation problems involving pay for travel or allowances for meals under certain specific conditions, vacations, layoff and discharge. *Clearly the intent is to create an objectively defined statement of policy and procedure governing specific employment factors.*

*The Risk.*<sup>6</sup> The legislated power of the union’s hierarchy is bolstered significantly by the large monetary returns coming from dues and assessments. This fiscal situation attracts the gangster element and others of ill-intent. The point is that: (1) compulsory collective bargaining is a real means (or easily can be) of removing competition from an otherwise competitive system, and it is specifically intended, or at least able, to force continually higher prices for the commodity of labor, (2) the thought of high wages, and the opportunity for ever-higher wages is understandably favored by employees — what the employee may *not* realize is that *if* the hierarchy of his union has been infiltrated by men of ill-intent, then by accepting them as his certified representatives, he is turning over to them full control of his economic life in exchange for a false security,<sup>7</sup> and (3) what the manager may fail to understand is that if he considers “good faith” as merely “giving in,” he may be subjecting his *people* and his *company* to the dictatorship of a self-interest group which, in the final analysis, may be no better — and perhaps even worse — than the “corporate barons” of the past. Clearly any manager who makes this error fails to live up to his inherent responsibility to his subordinates.

The most severe complications the manager faces are: (1) on the one hand he must protect the interests of his company and his employees, and (2) on the other hand, in order to maximize the op-

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<sup>6</sup>See the Transcripts of the Senate Select Committee’s hearings, 1957 through 1959.

<sup>7</sup>cf. Sylvester Petro, *Power Unlimited* (The Ronald Press Company, New York, 1959), Chapter 6, *passim*.

portunity for success, he must work with the many principled, hard-working union leaders to help them gain and preserve an effective, democratic, and operationally sound labor organization.

**LABOR-RELATIONS TERMINOLOGY.** Those responsible for the labor-management relations function require a ready recall of the basic language of labor relations. This facilitates their communication with the union and government agencies and their representatives, and the legal personnel with whom they may become involved. The terms involved are numerous, and their impact upon the function is significant. The first ten terms relate directly to the matter of union security, to the continuance of the labor organization.

1. *Open Shop.* An organization which, as yet, has not been unionized. Anyone may seek work. Union membership is neither a prerequisite nor a factor in holding a job. The employer may bargain individually with his employees. Such a shop is obviously against the security-interest of organized labor. It however allows free choice to both employee and employer.

2. *Recognition* The first step in collective bargaining. The management "recognizes" the union certified by the NLRB as the legal representative of the employees.

3. *Union Shop.* Employees must be, or must become, members of the union certified as the bargaining agent. Non-union personnel may be hired by the company, but they must become members of the union at the end of their probationary period of employment or lose their jobs. Most prevalent arrangement today.

4. *Preferential Shop.* Union members are given the first chance at an employment opportunity: they receive preference.

5. *Agency Shop.* Employees do not have to join the union, but they must pay dues whether they belong or not. Agency shop is almost identical to the so-called Rand Formula utilized in Canada in 1945 to settle a problem at the Ford Motor Company of Canada.

During the Eisenhower administration the National Labor Relations Board held the agency shop illegal. It was the opinion that since the Taft-Hartley law made union shop contracts improper in states having right-to-work laws, the companion technique of the agency shop was improper. The Kennedy administration packed the NLRB with liberals and in mid-1961, the new board reversed the previous ruling. The board's majority held that although (Indiana) workers need not belong to a union, they could be compelled to pay an "agency fee" comparable in amount to the union dues they would pay, if members of a legally established bargaining unit in a plant. The employee would gain no benefits from this "equivalent" fee, nonetheless the NLRB maintained that the agency shop was a proper form of union security and in no way impaired the individual's freedom.

6. *Closed Shop.* None but union members may be hired. The union agrees to supply the company's labor needs and the company

agrees to deal only with the union. Employees must pay their dues. Unions still urge the "closed-shop" arrangement. They claim it is necessary to prevent "raiding" by other unions, to maintain discipline and minimize the risk of "wildcat" (unauthorized) strikes. The arrangement provides maximum security for the national or international and the local union, for only union members are hired.

7. *Exclusive Bargaining Agent.* The union acquires security by obtaining a contract with management which requires that the union be recognized as the bargaining agent. Union membership is not required of employees, but it is agreed that the union is responsible for arranging the working conditions, wages, and hours with the management.

8. *Maintenance of Membership Clause.* Prevalent in World War II, the agreement holds that all employees who are, or become, union members following some given date must remain as members with paid-up dues for the duration of the contract. "Escape" periods were provided whereby the employee had a ten- to fifteen-day period following contract negotiations in which he could resign without prejudice.

9. *Checkoff.* The employer (management) becomes the union's fiscal agent. Management deducts union dues from employee's pay checks and transfers the funds to the union. The company finds itself acting as a "collection agency," and in the position of having contracted to impose both economic and non-economic coercion upon the employee if the "compulsory" checkoff and the "closed shop" or union shop are included in the contract. "Voluntary" checkoff now is permitted by law. Under this form, the employee must personally authorize the deduction. Such authorization is good for the duration of the contract and is usually subject to revocation upon a 60- to 90-day notice. One should realize that, in practice, the employee has little choice regarding checkoff; he almost has to agree to checkoff or risk being socially ostracized, delayed in acquiring set-up or tools and the like. Figure 67 enables determination of "who" is a union member.

10. *Closed Union.* Probably the most un-American technique a union can use to maintain its security. The technique can be instituted in several ways. (A) membership is limited to specific numbers at any given time; (B) membership is limited to persons having a family relationship to those already holding union membership cards; (C) charging exorbitant "initiation" fees to some applicants for membership, and none to those the union really wants as members, and (D) discrimination against sex, race, and nationality. It is interesting to note that the Upholsterers International Union has a "bill of rights" to protect members and applicants from unfair or coercive action. A "board of appeals," external to the union, hears complaints by members. Such an approach certainly deserves applause by management and the public; the alert manpower manager will realize that this is the kind of thing he should help union officials to establish, if his help is requested and can be performed without violating the law.

Labor-Mgt Relations Act	% Time Spent		Supervisor Organization Hierarchy Executive & Nonexecutive Titles	Fair Labor Standards Act	REMARKS
Excluded From Union	0%	100%	President	Exempt	
	---	---	Other Officers		
	---	---	Division or Prime Function Heads		
	---	---	Department Heads		
	---	---	Superintendents		
	14	---	Foremen		
	15	---			
	16	---			
	17	83	&		
	18	82	Supervisors		
19	81			(Line 3) Spending more than 20% of time on annual and operational routine work defines the job as nonexempt	
20	80				
(2) ←	21%	79%	Working Foremen & Supervisors	Nonexempt	→ This line (2) does not lend itself to definition, but in a practical sense, many companies do not "worry" about exclusion from union until foreman spends 10% to 15% of his time supervising, "as boss "
	---	---			
	---	---			
(1) ←	98	2			→ (Line 1) In the strictest interpretation of Taft-Hartley, any time spent in supervisory work excludes the job from union coverage in reality all jobs above this line have managerial responsibility and authority and manage manpower
	99%	1%	Rank & File Production & Maintenance Workers		

Rules Indicated

- (1) In the very strictest sense "line 1" separates management from the rank and file (Mgt from Labor)
- (2) "Line 2" is the "practical" divider of management from the rank and file
- (3) "Line 3" separates management from the rank and file from the point of view of compensation, and in all respects those jobs above the "line" are managerial, they become the "exempt" payroll

GRAPHIC KEY FOR DETERMINATION OF EXEMPTIONS AND INCLUSIONS UNDER CURRENT LEGISLATION

Figure 67

11. *Jurisdictional Limitation.* The nationals and internationals set up boundaries (as to geographical area or type of trade or skill) which limit the area of activity of each union. Disagreement as to boundaries leads to "jurisdictional disputes." A "jurisdictional strike" may be called by a union if an employer refuses to, or attempts to, force another employer to give work to members of one given union instead of another, and if a union follows a similar pattern.

12. *"Raiding."* Unions do attempt to displace each other as the representatives of given groups of employees. They "raid" each other.

13. *"Dualism."* A situation wherein the membership of two separate unions claim the same jurisdiction.

14. *"Sweetheart Contracts."* Arrangements between a management and a union hierarchy involving a financial transaction which interferes in some way with the employee's right to join a union of his choice. Outlawed by the Labor-Management Reporting and Disclosure Act of 1959.

15. *Strike (economic strike).* Union members (or employees in general) stop work and/or fail to report for work in an effort to enforce demands made of management. Normally, the charter of a union limits the strike action and requires that approval be obtained from the national or international before the local "goes out." On the other hand, a "strike vote" usually is necessary for a local, national, or international to "call a strike," but in some instances unions have "ordered" the membership out on strike. The 1960 General Electric strike is an example of the fact that the local can refuse such an order.

16. *Sympathy Strike* Union members in a company cease work in an effort to support union members of another firm who are on strike.

17. *General Strike.* All, or nearly all, union members in a given region cease work in an effort to support other union members, or they cease work to force acquiescence to the demands of organized labor's hierarchy.

18. *Unfair-Labor-Practice Strike.* Cessation of work in protest over an employer's labor practices.

19. *Wildcat or Outlaw Strike.* Union members strike without authority. A "flash" or "quickie" strike is the same thing, except that only a small union segment is involved.

20. *Sitdown Strike.* The union members cease work and refuse to leave the premises.

21. *Slowdown.* Not an actual strike. Union members establish a set of limits on production; they slow up their productive effort.

22. *Lockout.* Management closes the doors. Unions frequently try to force management to stay in business by claiming a "lockout" if the company seeks to cease operations or move to another region. Unions try to have a clause in the contract which specifies that there must be a notification period before the company closes down.

23. *Picketing.* Passive picketing refers to the technique of putting a group of strikers in front of the company and having them pace around carrying signs which claim that the company is unfair. Mass picketing refers to the situation where all, or a very large number, of the strikers mass around the entrances to the company and seek to prevent people from entering.

24. *"Stranger Picketing."* Individuals who have no connection with the workforce of the company being picketed are used in a picket-line. Unions have used "professional" pickets for this purpose just as management has used "strike breakers" to force a union to abandon its strike.

25. *Boycott.* Union members refuse to work for, install equipment for, or patronize an employer who will not come to terms with the union, or they refuse to use the product of a competitor.

26. *Secondary Boycott.* Union members coerce third parties into refusing to patronize or work for an employer who will not come to terms with the union.

27. *Standard Rate.* Uniform price for each job, uniform value and supply of labor. Unions try to establish standard rates in an effort to equalize workers.

28. *"Bogeys" or "Pars."* These are union members' terms for restrictions on production. They refer to the establishment of uniform quantity of output.

29. *Featherbedding.* Employer is forced to pay for services not rendered. He may be forced to hire "standby" crews where standby crews are not required. He may be forced to carry extra hands — as in the case of the airlines when the pilots attempted to force the companies to carry three pilots, or in the case of the musicians when an extra was hired and did nothing but stand around. Featherbedding takes many forms. In one factory, for example, the union forced the company to hire a crew of seven to do a job that really required only four. The crew did the natural thing — they took turns sleeping.

30. *"Cooling-Off Period."* Compulsory delay to a strike.

31. *Right-to-Work Laws.* State laws which proclaim that union membership is not a condition of employment — that an individual does not have to belong to a union to secure or remain on a job. The closed-shop and union-shop provisions of a labor contract thus are held as interference with an individual's right to employment. In some cases, union security efforts are regulated by requiring that a union shop can be established only if approved by a majority of the workforce. The right-to-work laws of Arizona, Nebraska, and North Carolina have been tried in the United States Supreme Court and found constitutional.

In 1961 the NLRB authorized the agency shop in Indiana. It seems that the wording of that state's right-to-work law enabled such action by the board. However, and also in 1961, the Supreme Court refused to set aside a Kansas high court ruling to the effect that the agency shop was an evasion of that state's right-to-work law, and therefore not permissible. One may assume that if Indiana and other states plagued by the 1961 NLRB ruling amended their laws to specifically forbid collection by the union of fees, dues, charges and the like from non-union employees, the board would find it difficult to controvert the law, and the courts would continue to uphold the statute.

**MANAGEMENT'S ERROR.** The hard truth is that organized labor frequently enters into collective bargaining better prepared than management! Why this should happen is a mystery, unless it is true that the average manager has failed to recognize his responsibility in this area. Certainly the unions have recognized their responsibility. They maintain specialists in bargaining, staff economists to assist their

business agents, and each month the AFL-CIO circulates their collective bargaining report to all affiliated unions. This report provides bargaining agents with pertinent statistical information.

Management has a tendency to leave preparation for bargaining until the last minute. This comment is not true in many big companies, and certainly not in any size company that is being managed properly. The evidence cannot be ignored, however, and it clearly indicates that all too many management groups either wait too long before preparing for bargaining, or turn the job over to clerks or newcomers. The unions recognize the importance of proper bargaining procedure and preparation: we wonder when management in general will do likewise. Let us consider some of the typical management errors more fully.

1. *Assignment of Task.* It is not uncommon to find that some clerk-typist has been assigned the task of gathering information for management's use at the bargaining table. True, a clerk could gather the information if told specifically *what* to get, *where* to get it, and *how*. On the other hand, it frequently turns out either that clear instructions are not provided or the clerk is allowed to interpret the data gathered. How many clerk-typists are competent to interpret data for management's use in collective bargaining?

2. *Passage of Information.* The unions quite freely pass information about collective bargaining to each other. Management, however, often treats its collective-bargaining data like some sacred relic. Of course the trade publications provide useful monthly information, but individual companies do not pass information back and forth as freely as do the unions.

3. *Lawyers.* Oddly enough, management often turns problems over to lawyers which should be given to managers, and to managers rather than to lawyers. Unless the lawyer has a direct and full-time relationship with the company and more than a mere knowledge of terms, he cannot be expected to do a fair job of negotiation about anything except legal or legally-oriented matters.

4. *Peace at Any Price.* We probably never would have had to seek legislation to prevent "sweetheart contracts" if it had not been for the willingness of some managements to obtain labor peace at any price. True, under the old Wagner Act it was an unfair labor practice (as interpreted by the labor board at that time) for management to speak its piece, during the war it often seemed unwise. Since 1947 it has been possible to speak out: management should do so! Usually all that a sweetheart contract does is put off the problem until some future date or increase the real problem.

Management's improper preoccupation with the idea of labor peace also led to situations where gangsters were bleeding employees and the company. Can you find any *sound* management reason for doing business with a union business agent, vice-president, or president who

is *known* to have a prison record and to be part of organized crime? Any collective bargaining agreements coming out of such relationships certainly stand a very good chance of being bad for the employee, the company, and the community!

5. *Records* As already pointed out, the unions do an excellent job of records keeping and information exchange. Management, on the other hand, frequently does a poor job. When you enter into a collective bargaining session, you must be prepared to deal in fact as well as opinion. Facts cannot be assumed — they must be proven. Records are a necessary adjunct of proof.

6. *Attitude* Nothing will put the union representatives on the defensive more quickly than a negative attitude on the part of management. If the management people treat the union representatives as unmitigated fools, those representatives are going to toss every conceivable monkey wrench into the session. If management tries to hide facts, the union will become even more adamant.

**CONTRACT NEGOTIATION AND ADMINISTRATION.** Collective bargaining results in a labor contract. The contract sets the *modus operandi*, it establishes the procedures and policies to be followed during the period of agreement. The contract should be written. To assume that a labor contract can be effectively administered if it is a mere verbal agreement is to demand confusion and conflict. Written though the contract should be, the parties ought to realize that there will be some areas that cannot be reduced to detailed written expression until they have experience with the area. For example, suppose the company and the union have never had to face an economic layoff. Neither party, then, has had real experience with the problem. For them to try to apply a detailed procedure for handling such a problem, as it appears in some other organization's contract, would be risky. A better approach would be to reduce to writing the *intent* of the parties, and an agreement that they would study the problem together if it came up, before taking any action.

The intention of a contract and the parties is particularly important. In fact, labor-relations experts often hold that the *intent* of a contract is more important than the *letter* of that contract. Some matters should, therefore, be set down on paper in a manner which facilitates flexibility of action. On the other hand, some matters must be reduced to detail. The items most typically reduced to detail are as follows:

- |                            |                                    |
|----------------------------|------------------------------------|
| . . . Wages and hours.     | . . . Discharge procedure.         |
| . . . Vacations.           | . . . Layoff and recall procedure. |
| . . . Grievance procedure. | . . . Promotion procedure.         |

Obviously, when the statement is made that the intent of the parties is of particular importance in contract negotiation and adminis-

tration, what is being implied is that the attitudes of the parties have an equally important part in determining the success or failure of the labor-management relationship. In this connection, it should be realized that some managers frown upon the whole idea of a contract. Such a feeling may provoke the union to rash action, for it may conclude that whatever is agreed to is being agreed to merely in the hope that, once written, and with the union established in a dues-collecting position, the contract will then be ignored.

*Procedure* Alert managers look upon the idea of contract development, and of having a contract, as providing one more opportunity to discover what should be done, and of doing what should be done in manpower management. The wise manager may well look upon the contract as a device which *he* can use to force himself to be sure to do what should be done. Such a point of view, if standard to all those engaged in contract negotiation, can facilitate the whole procedure. But what is that procedure?

Management's negotiation procedure can be broken down into at least four steps:

*First, preliminary study* – the effort here is a continuing one. The information gathered should cover such points as: (1) what are others in the area and the industry doing, (2) what specific problems does our company have that other organizations do not have; (3) what specific problems does our union have that others do not have, and (4) are there any national problems which are affecting our position. Records should be maintained upon a periodic base – say quarterly – which allows the development of progressively current data.

*Second, the bargaining facts are developed.* Some such facts can be maintained as standard, some as recurrent, and some will have to be developed whenever negotiation is planned. Company *policies* may be considered standard. The point has been made that every organization interested in developing effective manpower-management technique should have a policy manual. The ingredients of such a manual do not change frequently. By the same token, company *SOP* can be considered as standard unless change is frequent and significant. Typical of recurrent fact is the *fiscal position* of the company. This changes frequently and should be carried in a regularly recurring report. Some managers may feel that the company's fiscal position is no business of the union. Such a view can serve only to antagonize the union in the first place, and in the second, is fallacious. The union's business is the honest representation of the employee; how is this possible if it does not know the financial facts? The NLRB holds that the union has a right to detailed information regarding wages and earnings.<sup>8</sup> Common sense says that if the employees want an increase, but there is

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<sup>8</sup>cf. Walter L. Daykin, "Furnishing Wage Data For Bargaining," *Labor Law Journal*, Vol. 4, No. 6, June, 1953, pp. 417-422, *passim*.

absolutely no way of giving it, then the only way of satisfying the employees would be to *prove* that there is no way of giving what they have asked. Solomon Barkin points out that the union needs facts on profits, income distribution, break-even positions and the like.<sup>9</sup> It stands as reasonable to claim that unless the union and the management have the same information, they hardly can be expected to work out a mutually satisfactory contract.

Also included in the list of recurrent fact, or reports, would be the law, and the court and NLRB interpretations. The manpower division should make certain that management is kept informed of all changes in the law, as well as current interpretations.

Among the recurring reports one should expect to find periodic information regarding the future company plans. Expansion and contraction present their own special problems to contract negotiators, as do plans to move a business. Each time a negotiation is to take place a special report concerning future company plans should be prepared.

*Third*, development of proposals becomes the next step. Here management should take into consideration the *estimated* requests or demands of the union at the present time, and the risk of "raids" being faced by the union as well as the previously-mentioned factors pertinent to management's position. The development of proposals is relative to the preparation of a "battle plan." One calls for all available intelligence information concerning the company and the union. He tries to draw up proposals which will, under existing conditions, most likely protect the interests of all who are in any way involved with the company, or whose welfare is directly related to the company welfare as a whole.

*Fourth* is the actual negotiation phase. Negotiation may be handled by a mere handful of people from both management and labor, or there may be from 12 to 17 people from both groups, plus innumerable observers. How any given negotiation meeting will be conducted is largely a matter of the choice of the parties.

*Who Should Negotiate?* Contract negotiation is a top management responsibility. If, as indicated in Chapter 8, a manpower division exists, the head of that division would participate in the negotiation as either the chief negotiator or the chief advisor. This raises the question of organization again — some will insist that there should be a separate labor-relations section and that *this* vice-president should be in charge. If there is such a division, then the head of the unit certainly should be the chief negotiator or advisor. We cannot subscribe to this system — industrial or labor relations is but *one* phase of the over-all function of manpower management.

The management team should include legal, production, fiscal, and sales representation as well as a manpower management group.

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<sup>9</sup>cf. Solomon Barkin, "Financial Statements in Collective Bargaining," *New York Certified Public Accountant*, July, 1953, pp. 439-446, *passim*.

The union should be faced with men who have direct and full knowledge of the pertinent aspects of the business and the problems at hand.

*Multi-Employer Bargaining.* Organized labor's hierarchy continues to exert significant pressure to entrench the idea of industry-wide bargaining. They insist that only through this form of bargaining can the small local stand against the big company, and that this form helps maintain industry stability. Many employers agree! The technique *does* increase the risk of establishing a giant labor-monopoly, however, which, of course, would be subject to only a limited control by the courts of law.

Unions may plug for industry-wide bargaining, but often they object strenuously when management attempts to do the same thing. The last steel strike, for example, found the employers holding together for a long period. Actually, one suspects that the union brought extreme pressure to bear upon the member companies, making it uncomfortable for them to maintain a united front. It would seem that if industry-wide bargaining is good for the unions, it should be good for management, if allowed as a union bargaining device, it should be allowed as a management device. Alert manpower managers will strive to obtain uniformity of interpretations and bargaining applications.

*Contract Clauses.* As things now stand, industry and labor are drifting toward the development of a series of more-or-less standard contract clauses. Experience and study have permitted this development.<sup>10</sup> Standardization tends to reduce misunderstanding and misinterpretation. It is, for this reason, a valuable idea.

Although the trend toward standardization is apparent, the range of clauses and their nature or style vary with the labor contract. Figure 68 presents some typical clauses.

1. *Union Security and Recognition* The type of "shop," the existence of the checkoff, the use of the union label, admission of union officials to company property, and membership in "good standing" are typical of the points covered.

2. *Management Security.* Where used, such clauses seek to define the specific areas of management responsibility and authority. It seems rather evident that if a union is in a mood to negotiate items such as sales prices, marketing policies, vendor relations, plant location and production processes, and the question of who should be foreman, the claim that it seeks the eventual full control of enterprise is justified.

3. *Wage Clauses.* These specify as to actual wage policies, rates, and the like. Ordinarily this clause is complex and particularly extensive.

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<sup>10</sup>The United States Bureau of Labor Statistics is particularly active in this area.

4. *Hours* Such clauses cover the regular and overtime hours of work. They spell out shift arrangements, time off for meals, holiday arrangements and the like.

5. *Fringe Items* Matters which are on the "fringe" of wages are covered. They include various employee benefits, services, welfare plans, pensions, insurance and the like.

Jurisdiction, as expressed in the foregoing section, will not be exercised over those employees in other printing Depts. of the Company until such time as a majority thereof are organized by the Union, or until such time as the aforementioned new processes shall be introduced by the Company.

#### EMPLOYMENT

All work within the jurisdiction of the Union, as determined by this agreement, shall be performed only by journeymen and apprentices. Apprentices may be employed only in accordance with the ratio of apprentices to journeymen provided in this agreement.

Since it is the desire and intent of both parties to this agreement to assure in so far as possible the continued maintenance of high degree of skill in the journeymen classifications and a correspondingly high degree of quality and quantity of production, it is mutually agreed that journeymen are defined as (1) an employee who has completed his approved apprenticeship training as established in this contract, (2) persons who prior to the effective date hereof worked as such in the Composing Room of the Employer signatory to this contract; or (3) an applicant for work in a Composing Room holding a certificate of competency issued by the Joint Examining Board as hereinafter provided.

#### Union Security

All present employees within the bargaining unit covered by this agreement on its effective date shall within thirty days thereafter, as a condition of employment, become and/or remain members of the Union in good standing.

Present employees in the bargaining unit who have not on the effective date of this agreement completed thirty

days of employment with the Company shall, as a condition of employment, within thirty days after the effective date of the agreement. . . .

#### Incentive and Time Study

Incentive employees are guaranteed their base rate when working under the bonus system of incentive payment.

Production standards shall be set so that the average qualified operator working on the basis of normal incentive effort shall be able to achieve incentive earnings of 30% above his base rate under the existing plan.

#### Grievance Procedure

Should any employee or group of employees feel aggrieved concerning the interpretation of application of any provision of this agreement to rates of pay, wages, hours of employment or other conditions affecting the health or safety of employees, adjustment thereof shall be sought as follows

(a) The aggrieved employee or group of employees shall contact the foreman or the steward of the department who shall reduce the grievance to writing and they shall seek to adjust it in conference with the foreman who shall give an answer thereto within twenty-four hours of the presentation of the grievance, if possible.

(b) Should the foreman fail to adjust the matter within twenty-four hours the grievance may be referred to the division steward of the Union in charge of the department in which the grievance arose and such division steward shall, in writing, or by telephone in an emergency, request the Personnel Manager for a meeting with a designated representative of the Company in which the grievance arose. Such meeting shall be held within three days. . . .

## SAMPLE CLAUSES — LABOR CONTRACTS

*Figure 68*

**Wages and Hours**

Under normal circumstances the workweek shall consist of forty (40) hours of eight (8) hours a day, Monday to Friday inclusive, except that where production and delivery requirements necessitate a change therein production employees shall, after notice, be required to work a different schedule but not exceeding forty-five (45) hours in a workweek. Employees engaged in necessary maintenance work shall likewise, after notice, be required to work a different schedule but not exceeding fifty (50) hours in a workweek. The Company agrees to notify the Union in advance of changes in shifts or work schedules, except where conditions require that such changes be made immediately.

Overtime at the rate of time and one-half shall be paid for all time worked in excess of eight (8) hours per day or forty (40) hours per week.

Work on Saturday will, in accordance with the employment practices in effect, normally be work on the sixth day worked, and work on Sunday will normally be work on the seventh day . . . .

**Wage Increase**

Day work job classification rates shall be increased five cents (5¢) an hour as of (date) and five cents (5¢) an hour as of (date).

Incentive base rates shall be increased four cents (4¢) an hour as of (date) and four cents an hour as of (date).

*Figure 68 (Continued)*

6 *Discipline* Here the discipline procedure is established, and usually these clauses require the development of "shop rules" It is not unusual to find that specific causes for disciplinary action are outlined, for example, intoxication, fighting, insubordination, theft, and the like

7. *Promotion and Transfer* Here the impact of seniority is established and procedures for discharge, layoff, recall, and transfer are stated. Plant-wide or departmental seniority is specified Some remarks appear necessary in this connection

Plant-wide seniority results in a situation where plant-wide bumping will occur in case of a layoff — that is a man in one department can bump a man in another department out of his job Departmental seniority results in the situation where bumping is restricted, and general seniority issues are related to the department only, thus, there may be as many seniority lists as there are departments. *Super seniority* refers to the extra seniority acquired by a union official, that over and above his earned seniority *Synthetic seniority* refers to the continuance and accumulation of seniority by servicemen They can exercise their seniority upon return from active duty

8. *Contract Life.* The clause stipulates the duration of the contract That may be one, two, three, or even five years.

9. *Grievance Procedure* This clause is vital to the proper administration of the contract In it the grievance procedure is spelled out

**CONTRACT ADMINISTRATION.** Effective labor relations requires active daily attention to the administration of the labor contract. Many managers, particularly those newly-introduced to or-

ganized labor, make the mistake of assuming that once a contract is negotiated that is all there is to it. This, of course, is far from the truth.

Contract administration is, in a sense, a control procedure. It therefore fits into the control model and requires that attention be given the specific areas and implications of control theory.<sup>11</sup> In simple form, the pattern of work involved in contract administration includes (1) interpretation, (2) application, and (3) revision.

To handle this administrative function properly, one first should know the most likely sources of difficulty and the causes thereof. Next, he should thoroughly understand the contract itself, and he must be in a position to interpret the contract in a uniform and correct manner. This is a big job, and is quite demanding of the manpower-management personnel.

*Manpower Personnel.* The manpower manager sees to it that the line is properly advised, trained or coached, and assisted regarding contract interpretation and application. He sees that data regarding issues arising out of the contract application and interpretation are massed, analyzed, and prepared to guide proper revision.<sup>12</sup>

*Common Sources of Trouble.* There are certain causes of difficulty common to almost every company. *Ignorance* of the contract, its language and intent — to control this, the line or using managers must be trained to the contract. *Incompetence* is difficult to admit, but one often discovers that a given supervisor is not competent. In such a case, difficulty over the contract will arise. Control is achieved by removing or training the individual. *Dishonesty* may be a problem. Removal of the individual would seem to be the answer. *Lack of foresight* — at the time that the contract was established, both parties may have failed to see certain points now causing trouble. In such a case, a freely co-operative union-management group *will not* use the difficulties arising as a club. Instead they will sit down together, work out interim arrangements, and agree to correct the situation at the next negotiation. *Pressures* — economic pressures may cause problems. For example, a sudden and unexpected downturn in the general economy or in the sales of the company's product may necessitate sudden layoffs. All that can be said about difficulty arising because of pressures of any kind is that manpower managers, and managers in general, who exercise a proper control over their responsibilities are less likely to be caught unaware than those who do not operate under control theory.<sup>13</sup> Naturally, in a situation where management seeks to deal with labor in a completely fair and open manner, they will keep the

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<sup>11</sup>See Chapters 6 and 8.

<sup>12</sup>See Chapter 8.

<sup>13</sup>See Chapters 6 and 8.

union informed of changes as they develop, not after the fact! *Wording* — the wording of a contract, or the intent behind the wording, may be unclear. Here again one should sit down with the union and work out an interim arrangement.

It appears clear that in the administration of the contract, the link between manpower selection, manpower development, and the basic knowledge concerning organization, communication and control stands out as real and significant. It also should be obvious that the aforementioned sources of difficulty could rest with the union hierarchy as well as with the management. If that is the case, what is management's responsibility?

Suppose, for example, that a given shop steward is actually ignorant of the contract or incompetent in his work under the contract. What should we do? Clearly, the first thing is to notify the chief steward or the proper member of the union hierarchy of the individual's deficiency.

**GRIEVANCE PROCEDURE.** Complaint procedure, grievance procedure, or process for the resolution of conflict — regardless of the name, the idea is the same. Historically, and inherently, if a subordinate has, or thinks he has, a grievance, he should go to his immediate superior and either acquire satisfaction or permission to go over that superior's head. Failure to receive satisfaction could mean that the subordinate either "grins and bears it" or he quits. Table 28 indicates the symptoms and sources of "hidden" grievances. Often management can avoid serious grievance problems by carefully watching signs of hidden or developing trouble and undertaking corrective action before the grievance procedure is initiated.

Experience indicates that two classes of grievance can be established. They are those which involve established policy or procedure and those which are not covered by, and may not even directly involve, policy or procedure. A complaint concerning work load, work assignment, pay, discipline, or promotion would be an example of the first category. A complaint referring to a personality clash, or something equally difficult to define and not covered by the contract, would be an example of the second classification.

Some managers mistakenly assume that a formal grievance procedure is not required unless the company is organized by labor. It is true that a different form of procedure normally is used in such a case, *but it is not true* that the procedure is not needed. The basic idea behind a formal procedure would be to formalize the subordinate's path of contact for presenting his complaint, formalize the procedure for recording, analyzing and resolving the complaint, and assure the fact that every subordinate has an opportunity to be heard. One might point out that the legitimate model for a formal procedure is the inspector general procedure of the military.

Table 28

SYMPTOMS AND SOURCES OF EVIDENCE OF HIDDEN GRIEVANCES

<u>Symptoms</u>	<u>Sources of Evidence</u>
Frequent absence . . . . .	Time cards Absentee records Discipline records
Frequent tardiness . . . . .	Time cards Discipline records
Negative attitudes . . . . .	Complaints of others
Surliness	Reduced production as recorded
Indifference	Increased scrap
Grouchiness	Observation by superior & report
Bickering	Discipline record
Silence	
Aloofness	
Bickering	
Direct Symptoms . . . . .	Production records
Poor work	Quality inspection records
Increased accidents	Scrap records
Increased scrap	Accident records
Decreased production	Time cards
Increased reports for "sick-call"	Route cards
Undue horseplay	Discipline records
Latrine lagging	Machine "down-time" records
Poor housekeeping	Observation

Hidden Grievances May Arise  
Because of Poor Leadership

<u>Expect Grievances If</u>	<u>Grievances re Supervision Tend to Be Non-existent If</u>
Handshaking takes the place of honest dealing with subordinates	The superior applies the rules to all in like manner
Horseplay is prevalent in a given department	The superior maintains a fair but strict attitude
None can be right but the boss	The superior welcomes ideas
None get credit but the boss	The superior makes it a point to give credit where it is due
There are those who obviously are within the "inner circle"	The superior plays no favorites and avoids special friendships
The boss avoids personal contact	The superior believes in personal contact
The boss tells nothing, sees nothing and hears nothing, and trains no one	The superior communicates and encourages communication, and seeks to develop his people
There can be no promotions	The superior fosters the progress of his people

Where a union exists, a possible model would be divided into a series of steps. The following may be considered:

1. Discussion between the aggrieved and his immediate superior. Superior would “log” the problem and the decision. Answer should be given the aggrieved immediately, or certainly within the shift.

2. If problem has not been resolved, the subordinate files a written grievance with his shop steward, who passes it to the immediate superior. Action should be within some short period of time. Often the shop steward will be able to explain away the problem, hence the reason for filing through him. Upon receipt of the grievance, the supervisor would “log” the situation and be required to give an answer within 24 hours — answer might be to pass the grievance on to the next level or step.

3. The grievance is sent to the grievance committee. The committee might be composed of the following:

<i>For Management</i>	<i>For Union</i>
Plant manager	Business agent
Manpower manager	Union president
Industrial relations super.	Chief shop steward
Another manager (superior to the immediate superior of the aggrieved party)	Grievance committee member

The grievance should be acted on as quickly as possible, certainly within 30 days. If the committee cannot resolve the issue, then the following alternatives are open. Figures 69 and 70 present typical procedure patterns.

(A) The issue may be submitted to arbitration if the parties agree that it is arbitrable. In this case, they generally agree to abide by the decision of the arbitrator.

(B) If the issue is not arbitrable according to the contract, the union may strike or the company may lock out the workers. A 60-day notice of intent to strike is required.

Many management and union groups prefer not to submit the second classification of grievances to arbitration for they fear the idea of an outside third party’s establishing labor policy. One approach could be taken in the final step, however, which might well prevent a strike or continuance of ill will: mediation might be called for.

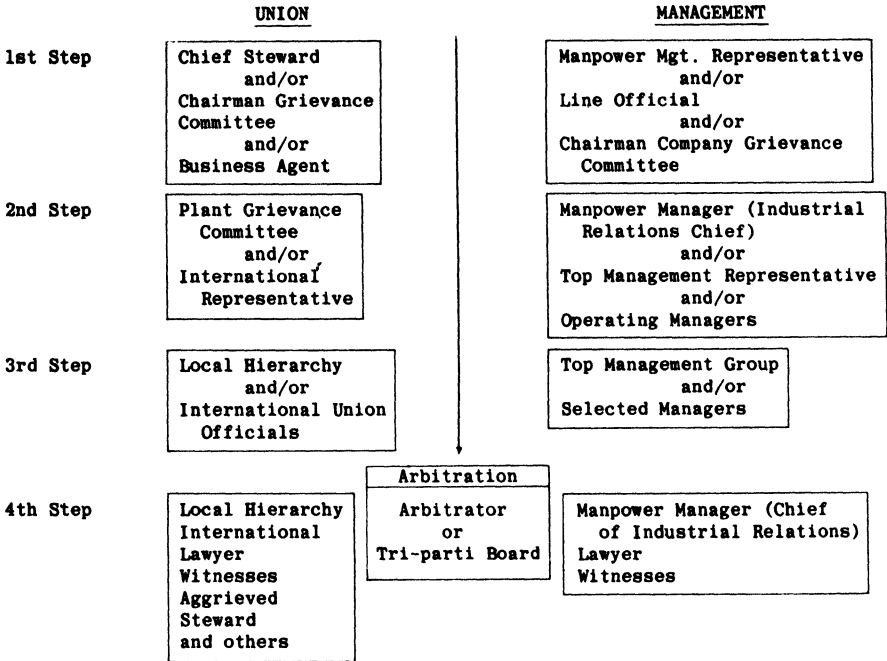
**GRIEVANCE PROCEDURE AND MANAGEMENT.** There is reason to believe that management should have the right to approach the union with grievances just as the union has the right to approach management. Management hardly can wait for 30 days to get a decision, however; hence, this is not a normally acceptable idea.

Another question sometimes raised has to do with managers who have a complaint regarding their work. Some would like to see a formal procedure established for managers. Actually there is no me-

Aggrieved Employee contacts Foreman or Immediate Superior

or

Employee and Steward contact Foreman or Superior



GENERAL GRIEVANCE PATTERN OR SYSTEM DESIGN

Figure 69

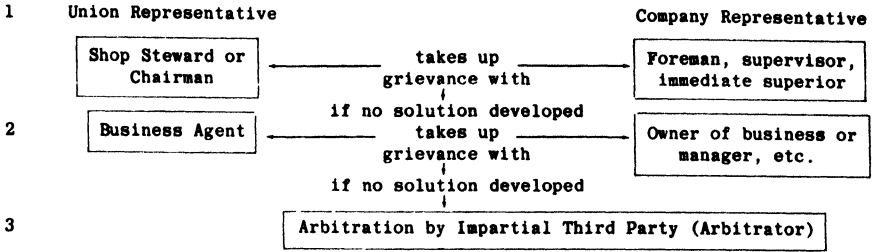
chanical or structural reason why this could not be done; but from the behavioral point of view, a manager should be competent to go to his superior, state his case, and then take the necessary action dictated by the situation. If he lacks this competency, he lacks the competency to perform as a manager!

**MEDIATION, CONCILIATION, AND ARBITRATION**

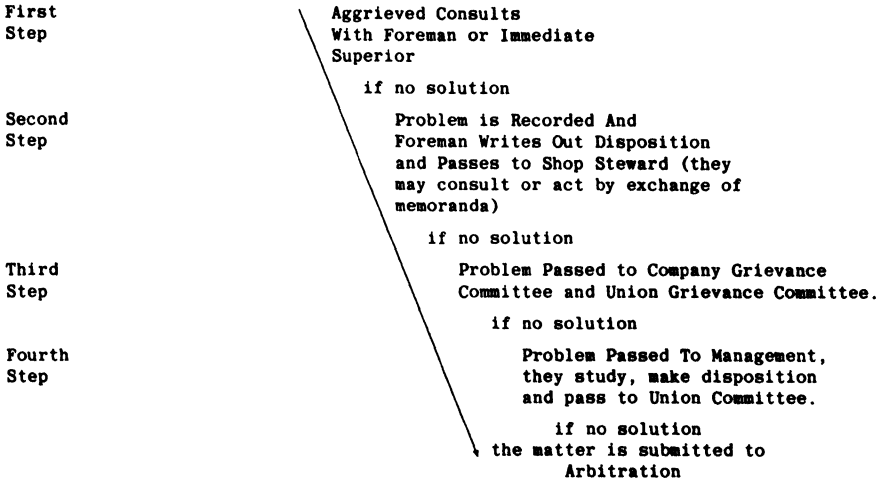
Current legislation has established the Federal Mediation and Conciliation Service, and most states also provide this service at state level under state jurisdiction. These services investigate and help resolve industrial disputes with labor.

Typical Three-Step  
Grievance Procedure

Step



Typical Four-Step  
Grievance Procedure



GRIEVANCE PROCEDURES

Figure 70

**MEDIATION – DEFINITION.** Mediation occurs when a third party selected by the disputants or by the government (state or federal) acts as a go-between. This third party keeps negotiation going, helps the parties arrive at a solution, and may offer a solution of his own.

**CONCILIATION – DEFINITION.** Conciliation occurs when the third party merely functions as a go-between, encouraging the parties to continue negotiation. In most cases today, mediation is preferred to conciliation.

**ARBITRATION.** Arbitration is the final stage of a grievance procedure. It may be called for concerning matters that have not been put through grievance machinery, but normally this is not done unless the labor contracts are fairly specific regarding the question of what is and what is not arbitrable.

Historically, arbitration is an ancient procedure. Tradesmen, shippers, furriers, and the like have engaged the services of arbitrators for many years. The insurance arbitrator has been around about as long as Lloyds of London.

In the broad and general sense, arbitration can be defined as a procedure whereby the parties in dispute submit their problem to a third party who analyzes the situation, arrives at a decision, presents the decision and steps back out of the picture. Something better than 80 per cent of today's labor contracts call for terminal arbitration — that is, arbitration as the final step in the grievance process.

Terminal arbitration usually is *voluntary*. It is termed voluntary because the parties to the labor contract have agreed that they will submit their disputes to arbitration if they cannot resolve them by themselves. In a sense this results in a compulsory situation, because if the parties fail to live up to the agreement they are opening themselves to the risk of a contract violation.

Compulsory arbitration, however, does exist. It occurs when public law requires management and labor to hold off a work stoppage, submit their problem to a third party or board, and abide by the ensuing decision.

Arbitration may be conducted by a single third party or by a panel. In the case of the single arbitrator, the parties select someone mutually acceptable, or they may establish an individual as their permanent arbitrator for the duration of the contract. In the case of the panel, each party selects his own panel member, and these two individuals then select the third member of the panel. A panel is generally called a "tri-partite board."

Arbitrators may be selected from a list of public spirited citizens, from the list maintained by the American Arbitration Association, or from the state or federal mediation service. Some argue that professional arbitrators, or men established by the contract as permanent arbitrators, are better than nonprofessional. It would seem that the argument is largely a matter of the situation and the individual. On the other hand, professional people, that is teachers in the field of industrial relations, industrial engineering or administration and the like usually have no axes to grind and usually do not depend upon their arbitration work for their livelihood. This point may stand as a reason for them to maintain a more consistently unbiased point of view. Men who make their living at arbitration have been accused (usually unjustly) of setting patterns to their decisions. One thing does stand out:

the arbitration process is a quasi-legal affair and usually involves points of contention with a more distinct work-orientation than legal-orientation. Such being the case, the industrially-trained person, and particularly the man who knows the workings of the company where a dispute is occurring, is often of far more use to the parties than a person who is merely public spirited. The arbitrator should also have an understanding of the law because his decision and procedure can be challenged in court.

The parties in dispute usually share the cost of the arbitration. Time limits are established and define how soon a case must be brought to arbitration, and how soon the arbitrator must make his award.

The significant procedural points in arbitration are as follows: (1) a carefully phrased and mutually acceptable "stipulation" of the problem is presented to the arbitrator; (2) he "hears" the case — evidence may be presented, he may ask questions, inspect the records and the premises, and request "briefs;" (3) the arbitrator studies the evidence and makes a "finding of relevant facts," and (4) he states his award. The award must be consistent with the stipulation or submission. Simple wisdom indicates that any award must be in writing.

**MANAGEMENT ERRORS.** The evidence leads to a disturbing conclusion: unions do a better job of presenting their cases than management! The net result is that all too often management loses its case more because of failure to prove its point than because its point is conclusively wrong. Why do they lose? Probably there is no single answer nor any general pattern that would explain the loss in every instance. The more prevalent reasons for management loss seem to be: (1) failure to investigate and determine the true facts; (2) failure to estimate the union's case and tactics fairly; (3) failure to examine the records and challenge the possibility of events; (4) failure to present proof of fact, a willingness to assume that an arbitrator will accept as fact simple or unfounded statements; (5) failure to admit error, and (6) a tendency to consider the union incompetent — the old problem of underestimating one's adversary.

Management owes it to its stockholders and employees not to permit such errors of judgment. Perhaps the worst error of all is the general fact of arbitration — that is, so many times the cause of the conflict which eventually winds up in the hands of the arbitrator is so ridiculous that it should never have happened, and certainly never should have gone to arbitration.

Prevention should be management's real aim in arbitration. The best goal is to concentrate upon determination of the cause that leads to the case, and upon removal of that cause. It does little good for either party to win a case if the same thing happens again in six days or six months.

### APPRAISING LABOR RELATIONS

Labor-relations work is as much a part of the over-all effort to conserve manpower as safety management or fatigue control. Amicable labor relations generally result in a reduction or minimization of conflict and, therefore, in a reduction of manpower and production losses. Labor relations hence becomes an integral part of the conservation function. As such, the success of the labor-management relations effort is related to the success of the conservation effort in toto; its appraisal should be related to the appraisal of the over-all conservation function.

The questions, therefore, stand as follows. What should be measured? Why, when, and how should measurement be made? Who should be responsible? It is to these questions that we assign our attention in this sub-section.

*WHAT TO MEASURE.* Concentration could be directed to the number of arbitration cases and grievances won, the number of concessions to labor and the like. Such an approach is shortsighted and certainly indicative of more interest in fighting the union than in seeking the co-operation of the workforce and their leaders. Furthermore, such an approach offers only very limited information useful in the over-all control attempts by management.

The success of industrial-relations activities is clearly indicated through investigation of such matters as grievances, arbitration cases, and negotiations with the union. What is important, however, is the *nature* of that investigation. In the completely ideal situation the following would be true: there would be no grievances; there would, in fact, be no arbitrations and the only negotiation with the union would be very short and occur only at the end of the existing contract period. This ideal is, of course, unrealistic under existing conditions.

*Grievance Measurement.* If the ideal, no matter how unrealistic, stands as the desired, but recognizably unattainable goal (and we recall from Chapters 3, 4, 6, and 8 that wise managers will set as their "end goals" items or objectives recognizably difficult or impossible to attain at the present time) it can be used as a theoretical standard and measurement can be made in terms of that standard. In the case of grievances one thus would consider the base objective as no grievances.

Then, the point of interest becomes threefold: (1) the general frequency of grievances, (2) the repeat frequency of grievances, and (3) the resolution of grievances. The *general frequency* of grievances should be considered on a periodic base, for example quarterly or monthly. Maintenance of this frequency allows determination of any seasonal, secular (trend) or cyclical variations present or unfolding, and permits the maintenance of a control chart if desired. Of course,

a fully comprehensive frequency system breaks the grievances down so that the record is maintained *by type or cause* and *by departmental or section location*. This breakdown facilitates trouble-shooting, and permits the very necessary integration of grievance frequency data with other data such as turnover, accidents, absenteeism and the like in an effort to control the conservation-of-manpower function.

The *repeat frequency* analysis is maintained in the same manner as the general frequency data. Here one is interested, however, in *the number of recurrences of grievances by type and by location* in reference to *the total number of grievances for a given period*.

The *resolution of grievances* should be maintained in similar fashion. In addition to the type and location and number of cases resolved, however, *it is important to know at what step* satisfaction was obtained (and it appears wise to maintain at least a sketchy analysis of the nature of resolution — for management, for union).

Clearly, from the record of fact — that is, from the frequencies — the manpower manager, and management in general (and the union) can identify the location of difficulty. One thus gets a picture of operational effectiveness. From the record of solutions one can obtain a fairly clear picture of the effectiveness of contract administration and manager performance.

*Arbitration Measurement.* Since arbitration is the terminal phase of grievance procedure, analysis of arbitration experience tends to provide more insight to the effectiveness of contract administration and grievance machinery than to operational effectiveness. By maintaining the record in the same manner as recommended for grievance data, however, the operational effectiveness picture is improved. The system of measurement thus would involve the record of: number of cases by type, by point of origin (location), by award (how the arbitrator ruled), and maximum benefit derived if the repeat cases are maintained in like fashion and compared to the total number of cases per period.

*Negotiation Measurement.* This is just about impossible to handle unless the negotiation record is backed up by a full and complete analysis of grievances and arbitrations. The reason: negotiation is closely linked to the past difficulties experienced by the parties in their daily contacts throughout the contract period. Unless the experience during that period is recorded in useful fashion, negotiation will break down to opinion differences instead of a study of fact — at least this will be the case with non-financial issues.

The control interest in negotiation is the nature of concessions granted, as compared to proposals and counter-proposals made, and the nature of concessions made at this negotiation, as compared to those made at the last. This form of analysis does not lend itself to quantitative treatment under existing knowledge. Manpower man-

agers, managers in general, and students of the field should realize that one of the basic needs today is research on translating qualitative data into quantitative data, and on applying quantitative measurement to subjective information.

*An Index of Effectiveness.* Clearly, if management seeks to establish a single measure of effectiveness of its labor-relations activity, grievance and arbitration records will have to be combined. The approach would be to establish an *index* from the grievance and arbitration information and maintain a control chart.

*WHY, WHEN, AND HOW.* Many personnel directors and industrial relations officials would hold that any measurement system similar to the aforementioned would be too expensive or difficult compared to its worth. Many would claim that the records all exist, are filed, and can be pulled out and studied when necessary. The point is: Do these people actually make such studies? Often one discovers that the record does exist, the basic information is all in the file, but what good is it in a file? Managers who seek to make events rather than merely wait for them to occur, and who take an active instead of a passive approach to the job of managing, realize that periodic analysis of events helps them stay ahead of the job. Clearly, the continual maintenance of regularly developed and statistically oriented data, in a manner which allows immediate reference, is of far greater value than a set of records tucked neatly into a file drawer. Just as clearly, the crash-button approach — which means that once every six months or once a year, or when a “problem” arises, those filed records will be examined — is an approach that increases the risk of analytical error. The “why” of maintaining a system of analysis is therefore directly associated with the kind of management demanded of a company’s managers!

*When* should appraisal be made? If “good” management is practiced the answer is: on a continuing basis. The specific instance must be considered, however, when seeking a definite statement of the time. In some organizations the number of arbitrations and of grievances may be quite small. In such cases, a monthly audit and the maintenance of monthly data probably would suffice. In other instances, the number of grievances may be exceedingly high, thus a daily or weekly system would be required.

*How* appraisal should be handled already has been indicated. The aim of the manpower manager should be to establish a statistically oriented system which incorporates the use of control charts, measures of central tendency, measures of the significance of difference between events, determination of trends, seasonal variations and the like. Wherever possible instantaneous feedback of information to the manpower division should be arranged. The grievance machinery, for example, should be established so as to facilitate transfer of information every

day if the grievance procedure is used frequently, or every week or every month as the case may be — *instant feedback* would dictate the transfer of information *at the time of occurrence*. Again, one notes that useful and important though files may be, the recommended approach suggests utilization of charts which certainly can be developed as the production or quality control groups would develop and maintain theirs.

**WHO IS RESPONSIBLE.** As pointed out frequently throughout this text, manpower management is everyone's business. Responsibility for the appraisal of the labor-relations work is, in a sense, everyone's business. The line managers, the officials directly concerned with the daily supervision of employees who come under the certified union's control, and the officials responsible for the daily and periodic administration of the contract all have a part to play in appraisal. Their prime mission in this case is to co-operate fully, to be certain that they pass the information on to the manpower division and to the section responsible for control within that division. The manpower division, then, has the responsibility for compilation, analysis and interpretation, and preparation of recommendations for improved action.

Since the labor-relations function is associated directly with the conservation effort, the appraisal system should be tied in with the other measurement techniques or systems associated with manpower conservation. The system also should be a regularly maintained effort, *not* one that is used once a year or once at the end of every contract period.

### SOME ERRORS IN PRACTICE

Talk as one will, it is uncomfortably true that management often sinks its own ship. The following are *summaries* of situations in which management and labor went to arbitration and management lost. These cases are not necessarily exceptions; in fact, they are relatively typical.

**Never Mind The Worker** The question was a wage adjustment. The company was small, employing some 200 people. The wage scale was comparable to other companies organized by the same union. The union had just negotiated a series of wage increases with the other companies. They now asked this concern for the same packaged deal.

This company was the only one of its kind, at the time, in the area. It did not produce the same goods produced by the other concerns organized by the union. Its process was largely experimental and it had not, as yet, had enough time to get the "bugs" out. The company was actually taking a 3 cent loss on every batch sold. Its prime competition was foreign; and this competition was

able to put the product down on the dock in New York at a cost approximately 3 cents per batch below the company's ability to produce it. In an effort to get itself established on the market, the company was taking a 3 cent loss.

All of this information was passed on to the union at the time of the arbitration, and of course to the arbitrator; however, no corroborating evidence was offered by the company. The union, on the other hand, presented a carefully documented case which clearly indicated the reason for its demand for a wage increase.

To cut the story short, the company lost its case. The loss was due largely to their failure to *prove* their position, *plus* the facts that the union proved its position and the union's position was in full harmony with the general pattern of the day. Who lost in this instance? The employees! They lost because the company could not afford to continue its operations. One might also say that the community lost, for it meant that some 200 individuals were unemployed. Was the union wrong in pressing the issue? Of course it was, but one must admit that it had little choice — remember, a union is a political body; the majority of the membership wanted an increase and could not see any reason why they should not get one when their neighbors were getting one. Management probably would have won its point, however, and would then have saved its employees from financial embarrassment if it had presented the proof.

**Who Socked Charlie** Most "shop rules" hold that anyone guilty of fighting upon company property may be discharged.

It is typical that if a foreman is hit by a subordinate, that subordinate is subject to immediate discharge. In this situation the allegation was that the foreman had been struck by a subordinate. The subordinate was, of course, discharged. The union moved into the picture and the case moved on through the grievance machinery to arbitration.

The proceedings dragged on for five days. An entire complex of testimony was presented which made it look for all the world as if the employee had in fact violated the rules and had struck the foreman. Finally, however, the union stepped up with the "earth shaker" They had waited and baited the company, had forced out various points which, in themselves, made it look a little doubtful that the foreman had been struck first, had been struck at all, or had not deserved being struck. Suddenly they produced the blueprints of the plant which clearly showed that if the events had taken place as the company had claimed, someone would have had to move a wall and a stack of crates. The question remained: "Who struck Charlie?"

There was no doubt that the foreman had been struck, there was no doubt that a fight had occurred. Was the worker justified? Did the foreman actually tell the truth about the situation, about how, why, and WHERE it happened? Management did not really determine these points before it went to arbitration! We are not clairvoyant. We cannot say why they failed to do this. It stands to reason, however, that in any situation where a decision must be made, the facts must be determined. The wise manager will investigate the tactics likely to be utilized by his opponent!

**If I'm Not Right  
I Won't Play** The question had to do with workloads. The union held that its time-study people had discovered that a certain load was imposed upon the workers and held that this was over the load agreed upon by contract. Management held that it had investigated and discovered that it was not out of line with the contract. A look at the contract did not help much, as it appeared that both parties were wrong to some extent. Then the question was asked. "Is there any *real* difference between your views?"

This perfectly logical question so shocked the parties that they stopped their ferocious exchanges and looked at each other in complete surprise. A quick calculation revealed that they had no argument. Each had gone about the problem of determining the load in a slightly different way, and in the contract the basis for the workload agreement had been set in still another way. A simple remark thus served to start them back to agreement and the realization that they really had no argument.

Sometimes management and the union hierarchy get so involved in fighting each other that they forget all about co-operation or the fact that each may have a point. Good management requires that we enter into negotiations and grievance airings with an open mind, and that we operate with the basic policy of co-operation as our guide. In this case, management could have saved itself money, and ulcers, if it had approached the issue with a cool and objective mind instead of with the attitude that the union couldn't be right.

**Joe Is A  
Good Boy** The union was protesting Joe's discharge. It claimed that he had been unjustly accused of multiple absences and too frequent tardiness. Management claimed that in accordance with shop rules, Joe had been warned repeatedly and had finally reached the limit of permissive treatment. The union began to challenge the record offered by management. What management did was to submit a typed statement indicating Joe's absences and tardiness by the month — the actual dates were not present.

The typed list had not been available to the union before the case began. The union was dismayed to discover that in July Joe was listed as having five absences, whereas the union record showed he only had two and that neither was related to the Fourth of July. Naturally the union asked for something more conclusive than a typed statement. The payroll record was requested.

The hearing took place in December. The payroll record was not immediately available. The time cards weren't available. It took two hours to locate the payroll records and the time cards. When found, they did not agree with the typed statement.

Here is a truly extreme situation. We would agree that it is almost unbelievable, however, it happens! What is the point? What is the excuse for such bad management practice? Actually, a respectable business agent is no more interested in fighting to keep a job for a dead beat employee than is management. Alert managers realize this and approach problems of this sort with an open record and a co-operative instead of combative spirit.

#### **UNEMPLOYMENT — A LABOR-MANAGEMENT PROBLEM**

Labor and management relationships are confused by many things, not the least of which is unemployment or its threat. Contract negotiations, the daily administration of the contract, and many arbitrations reflect the fear of unemployment. For example, in 1961 the auto workers made no effort to disguise the fact that one of their key aims in negotiation with the industry would be to reduce employment insecurity arising from increased automation.

According to the census figures of January, 1961, our population was approximately 183 million people. Approximately 67 million were gainfully employed. In February of that year, 1 out of every 10 factory workers was reported as unemployed. Even though the total approximated only 5.5 million, this was still quite a figure. Economists tend to feel that 4 per cent is a normal unemployment rate. From the 1953 low of 2.9 per cent, the figure continued a gradual climb so that by February of 1961 it appeared that the year's rate would be 6 per cent.

Throughout this text the point has been emphasized that a manpower shortage exists. In the face of unemployment figures of the kind just mentioned it may seem strange, if not incongruous, to maintain that a shortage does in fact exist. Let us remember that unemployment figures are deceiving. In fact, labor-management relations are seriously confused by this condition.

The manpower shortage which plagues manpower people is a shortage of competent personnel, not "warm bodies." This of course relates to the unemployment problem in a very direct manner. For example, in 1961, some 1.4 million young people reached their

eighteenth birthdays. This 1.4 million is added to the list of employables. But are they all employable? Is the young man in college to be counted as unemployed? Is the young woman who gets married at 18, but works part time, to be counted as unemployed when she is not working? Actually, neither management nor labor has really accurate unemployment figures to consider.

In this country unemployment statistics normally are not broken down to indicate: (1) the number of unemployables in the population; (2) the number of temporarily unemployed in a given quarter; (3) the number of new additions to the workforce remaining unemployed per quarter, (4) the number of old members of the workforce newly unemployed. These and other classifications are ignored. In fact, if the parties to a given contract want to know how many employees in the bargaining unit were released due to automation, and how many were released due to lack of consumer interest in the product, they must take the data from the files and develop it. Internally, management frequently ignores such necessary classifications, and externally they must depend upon special surveys which often come too late to be of value. For example, in March, 1961, Secretary of Labor Arthur Goldberg was estimating that 1.8 million were unemployed because of automation. Mind you, this was an estimate. In the contract negotiations in the automobile industry, however, this is the kind of total figure necessarily brought into play. Of course the companies and the union argue the specific figure for the industry from known layoff and discharge figures, but do they argue true cause? Probably not, for the lack of really accurate internal and external statistics means that who was laid off because of product demand, and who was laid off because of automation, becomes a matter of opinion instead of fact!

What is the point of all this? Quite simply this: unless government corrects the weakness in its statistical reporting, and unless the companies and the unions do the same, then neither the company nor the union really can hope to approach the unemployment issue without raw emotion showing through.

**TYPES OF UNEMPLOYMENT.** When studying labor problems it is helpful to realize that different kinds of unemployment exist. If, for example, the company is considering an adjustment to the production process, the manpower people must consider the effect this will have on transitional training. If the union is pressing for a guaranteed work week, the manpower people must know the seasonal and cyclical employment patterns.

Several types of unemployment can be defined. *First*, technological, or transitional, unemployment refers to that resulting from displacement because of a change in equipment, process, or material.

Persons displaced because of automation are said to be technologically unemployed.

*Second*, some individuals lose their jobs "for cause." They violate rules, they fail to meet specifications; they are fired! This kind of thing is referred to as "personal" unemployment. The term also includes unemployment occasioned by personal reasons such as chronic illness, deteriorating ability and the like. The habit of lumping various measurable causes into this classification seems to confuse matters. It might be better to maintain internal records which specifically identify groupings such as recommended in the discussion regarding labor turnover.

*Third*, a so-called "frictional" unemployment exists. This refers to people who refuse to move to available work and to unemployment due to a person's age.

*Fourth*, seasonal unemployment reflects a quantitative rather than a qualitative factor. Product demand fluctuates in many cases on a seasonal base. Employment varies with the season. Unfortunately a neat assumption has become a byword; because national figures indicate that January is the month of lowest employment and October the month of highest, it has become relatively commonplace for individual concerns to assume that their employment picture is directly related to the national averages. There are many instances when this is untrue. Manpower people should maintain their own record of seasonal variation, not depend upon national averages. The internal picture can be maintained by using a stability index. By formula, it is calculated as:

$$S = \frac{F}{MF} \quad \text{Where} \quad \begin{array}{l} F = \text{total working force in the average month} \\ MF = \text{total working force in month of maximum employment} \\ S = \text{stability index value} \end{array}$$

*Fifth*, cyclical unemployment refers to cyclical changes in the demand for labor. This term reflects variation in market demand for the product, just as does the seasonal variation.

*Sixth*, because both seasonal and cyclical unemployment refer to a quantitative measure, and because they include in their meaning some obvious relationship to demand variation, it seems wise to maintain a qualitative record of those laid off or discharged because of economic reasons beyond the immediate control of the company: those affected by changes in economics. Such people are not directly affected by technological factors.

**OBLIGATIONS.** Organized labor has, as one of its obligations, a responsibility to attempt to hold unemployment at a minimum. None can deny this point. Why, however, should it be a politically

oriented group such as a labor union that most frequently expresses concern over unemployment? It is American business that employs the majority of those gainfully employed. It seems only right and logical that American business should accept the unemployment challenge — it is certainly management's responsibility long before it is the union's.

Management's obligation in this area seems fairly clear. Many who are displaced due to technological improvements may, in fact, be unemployable because of age or some physical or psychological reason, or simply because they refuse to move to areas where there is a demand for their skill. Other than proper development of retirement programs and medical compensation plans, management cannot be held as having an obligation here. Many who lose their work because of technical change, however, fall into the transitional group: that is, they will be unemployed until they can either re-train themselves and find another job or find another job for which they are competent. In these cases management has an obligation.

Management's obligation is first to plan technological improvement. In planning, they require time schedules for replacement of personnel; they need to establish re-training schedules for personnel to be replaced, thereby enabling internal rather than external replacement as the key to the staffing effort. Alert management realizes that they can foster community re-training and co-operate with community relocation work for those who cannot be absorbed.

Each such step to overcome transitional problems reflects in the profit structure. It reflects positively, not negatively, if handled properly. The more re-training possible, the less one needs to invest in the expensive external recruitment and selection effort. The more re-training and relocation work management can accomplish, the less the probability of higher taxation to pay for increased unemployment handouts.

Whether management has an *obligation* to furnish work to a given individual or group for some set number of weeks a year is another question. We prefer to approach it in this fashion. If it improves the profit structure of the business to iron out production and market variations, and thereby stabilize or relatively stabilize employment, then this is management's obligation. Furthermore, if it improves the profit structure to attack a known and reasonably predictable cyclical demand variation, thereby minimizing cyclical unemployment, then this too should be done. Management, however, is not a welfare agency. The welfare of a workforce does not lie in the handouts it receives; it begins and ends with its effective production.

**UNEMPLOYMENT AND LABOR RELATIONS.** Labor organizations will continue to press for "security." Contract negotiation will be tinged by the problem. Often the security sought actually will be

worker security. Just as often, in fact in many cases more often, interest will focus upon union security.

Management and labor do need to work out the unemployment problem. There is a question, however, when it comes to maintaining union security. All that can be said here is that if organized labor can push contract clauses which assure union continuance, they will. It is interesting to note that during the Eisenhower administration the NLRB ruled illegal the use of the Agency Shop clause. Early in the Kennedy administration, the AFL-CIO applied pressure to the new NLRB to reverse the previous ruling. As noted previously, this pressure resulted in a mid-1961 ruling by the Board which made the Agency Shop legal.

The unemployment or security problem appears in another way. During periods of economic stress, and particularly in areas where unemployment is relatively severe, the old problem of sex differences crops up in contract administration and negotiation. In one case, for example, the union exerted tremendous pressure to achieve equal pay and equal job opportunity for female employees. This was done at a time when jobs were plentiful and product demand high. Six months later the area began to feel the economic pinch and jobs became scarce. Unemployment increased significantly. Within a matter of weeks the union had challenged management's recall of women. One notes that, since it is a politically-oriented body, the union interpretations of contracts quite likely will vary with the economic pressures of the times.

Slowdowns reflect fear of unemployment also. Employees fearing replacement due to technological change are quite likely to engage in make-work practices and slowdowns in the mistaken idea that this will cause management to refrain from replacement moves.

To avoid the costs involved in excessive or unnecessary unemployment, manpower people undertake planned projection of skill and quantity needs regarding personnel; they take steps to co-operate with community relocation and re-training efforts. Furthermore, alert manpower managers take careful steps to include the union hierarchy in such planning.

### **LABOR-MANAGEMENT RELATIONS AND THE MANPOWER FUNCTIONS**

Commonly referred to as labor relations, this phase of manpower-management activity has a direct bearing upon, and is in fact an integral part of, the over-all effort to conserve manpower. Effective labor-relations work results in development of amicable and freely co-operative association with the union representing a company's workforce. Such an association is indicative of a relatively conflict-free situation. Naturally, where minimum conflict appears, the losses which normally arise because of conflict tend to diminish or disappear. Such

losses include manpower and production losses, which, of course, the entire conservation effort is designed to minimize.

The relationship between labor-relations and the over-all manpower conservation effort may also be looked at in another and slightly different way. Manpower conservation activity is designed to hold together an effective workforce (to reduce manpower and production losses). If organized labor finds a combative attitude in a concern's management, it tends to act in kind. That is, if strikes and slowdowns appear to be the only way that the union can gain or maintain a foothold in a given situation, then these tactics will be applied. Clearly, such tactics spell conflict and loss of production, if not manpower. Just as clearly, instead of holding together an effective work unit, management is gaining a hostile unit.

Management has an obligation to its employees *as individuals* as well as members of a group. Effective labor relations result in an amicable association with organized labor, but do not necessitate standing still while gangster elements or others of ill intent take over the leadership of its workforce. Should this happen, sooner or later the company will lose its effective employees through quits or discharges and the over-all purpose of conservation is aborted.

The job of labor relations is a complex responsibility at best. On the one hand management must take the lead in establishing a co-operative atmosphere in which it, and the hierarchy of labor, can bargain; on the other hand, management must see to it that its workforce is protected from unprincipled union leadership and co-operate with the principled leaders of organized labor.

Those charged with this responsibility require a good understanding of the history of labor and of the legislation currently pertinent to labor-management relations. Furthermore, they require skill in contract negotiation and administration. Naturally, they also require a real understanding of the application of control theory, and should strive to develop and maintain a useful system for appraising their activity.

**LABOR RELATIONS AND LABOR POLICY.** Labor relations work will not be particularly successful unless management has adopted a proper labor policy. Unless manpower managers and the rest of management fully appreciate the problems, structure, and history of organized labor, and comprehend the facts of labor legislation, however, a proper labor policy is not unlikely to develop.

Even in the presence of a reasonably sound labor policy, labor relations activity can fail. If, in the daily administration of the labor contract, failure occurs, then policy is for naught. If, therefore, management fails to require that *all* its managerial personnel, including its foremen and leadmen, learn to interpret and apply the contract in a

fair and uniform manner, the labor-relations work will not succeed; the over-all conservation effort is therefore likely to fail.

**LABOR RELATIONS AND MANPOWER SELECTION.** Current labor law, and most labor contracts, have an effect upon manpower selection activity. If the contract establishes a union shop, checkoff and the like, then during the selection process the applicant must be informed of the situation and of his rights. Furthermore, the nature of the union representing the workforce will have a bearing upon the kind of personnel the company is able to acquire. It is not unusual to find that where a concern has been organized by a notorious union, the "cream of the workforce" will avoid employment there. On the other hand, a good union and a good union-management relationship can very well make the over-all job of recruitment, selection, and induction much easier and more effective.

**MANPOWER DEVELOPMENT AND LABOR RELATIONS.** The presence of a union may complicate efforts to train, promote, and transfer employees. The typical seniority rules set up by organized labor do interfere with correct management action, for they tend to force promotion and transfer and the training of individuals strictly upon the basis of length of service. It however is not unusual for competent management and honest union leaders to establish an effective system which recognizes *both* seniority and competency. In fact, as we all know, this is a correct basis for training, promotion, and transfer whether or not there is a union. Of course if the labor-relations climate is negative, one hardly can expect such a co-operative arrangement to be developed.

**LABOR RELATIONS, A PART OF CONSERVATION.** There should be no question at this point of the fact of a relationship between the over-all manpower conservation effort and labor-relations activities.

**LABOR RELATIONS AND COMPENSATION.** The final "working objective" of manpower management is the equitable compensation of the workforce. Unless a workforce is compensated adequately, unnecessary turnover, absenteeism, strikes, slowdowns, and the like may occur. There is a distinct relationship between the compensation function and all other functions of manpower management. As we have pointed out, if unnecessary turnover occurs, the selection job increases, the development job intensifies, and of course the conservation job is complicated.

Labor relations has a special connection with the compensation function. Today many employee groups have their compensation pretty well dictated by collective bargaining agreements. Obviously, those responsible for negotiating such agreements must be equipped to handle questions, challenges, proposals and the like which affect or directly

involve compensation. In Part VI, this phase of the manpower-management function is presented.

### SUMMARY

The activities associated with labor-management relations require that manpower people, and all managers, have a fairly thorough understanding of the nature of labor legislation and union organization and development. Under today's conditions, practically all of the many possible problems related to labor relations have at least some foundation in either federal or state law. In most large-scale companies, organized labor has become a formidable force exerting allocative, interpretive, and formative pressures.

Although the manpower division of a company is charged with a major responsibility in the field of labor relations, the first-line supervisor is probably the key to the success of daily relationships. How well he knows the labor contract, how fairly and consistently he applies and interprets its provisions, how fully he investigates grievances before passing judgment all bear directly upon the total relationship between the union and management. Naturally, therefore, one of manpower's prime functions is to assure proper labor relations training of foremen, department heads and the like.

Management attitudes which lead to a condition of "just meeting" legal requirements do not enhance co-operation between labor and management. The problems faced by the individual employee and the union hierarchy must be understood, and the views of these people appreciated if co-operation is to develop and be retained.

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*Human labor, through all its forms . . . is one immense illustration of the perfect compensation of the universe<sup>1</sup>*

## PART VI

# Compensation Of an Effective Workforce

Pay to employees represents the largest single cost of doing business. Compensation is important to people. Equitable compensation of the workforce is a working objective of the manpower function. As shown in Figure 71, the compensation function closes the circuit of manpower management. If manpower management is to roll smoothly, compensation must be considered satisfactory by those receiving it and by those providing it.

If the employee considers his income unfair for the work he performs, he will strike, quit, slowdown or commit some like act that increases the cost of doing business for the company. If the company finds that wages are causing an unfavorable cost-income relationship, it will seek a means of changing the situation. This could mean complete loss of income to the employee.

The problem is to find a compensation formula satisfactory to the parties who comprise the industrial organization. This is no simple task. Even if the industrial climate were free of all external influences, it still would be difficult to establish a rate of return satisfactory to those requiring it. The fact remains, however, that a satisfactory balance must be obtained. This is a job of manpower managers.

To accomplish this task manpower people must apply, in as scientific a manner as possible, the best techniques available to discover what constitutes a fair day's work and a fair day's pay. Their determinations require consideration of the factors influencing the meaning of "fair" from both the employee and the company points of view. Furthermore, they always must keep the goals of management in mind

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<sup>1</sup>Ralph Waldo Emerson, "Essay on Compensation," *Essays of Emerson* (Illustrated Modern Library, Random House, Inc., New York, 1944), p. 69.

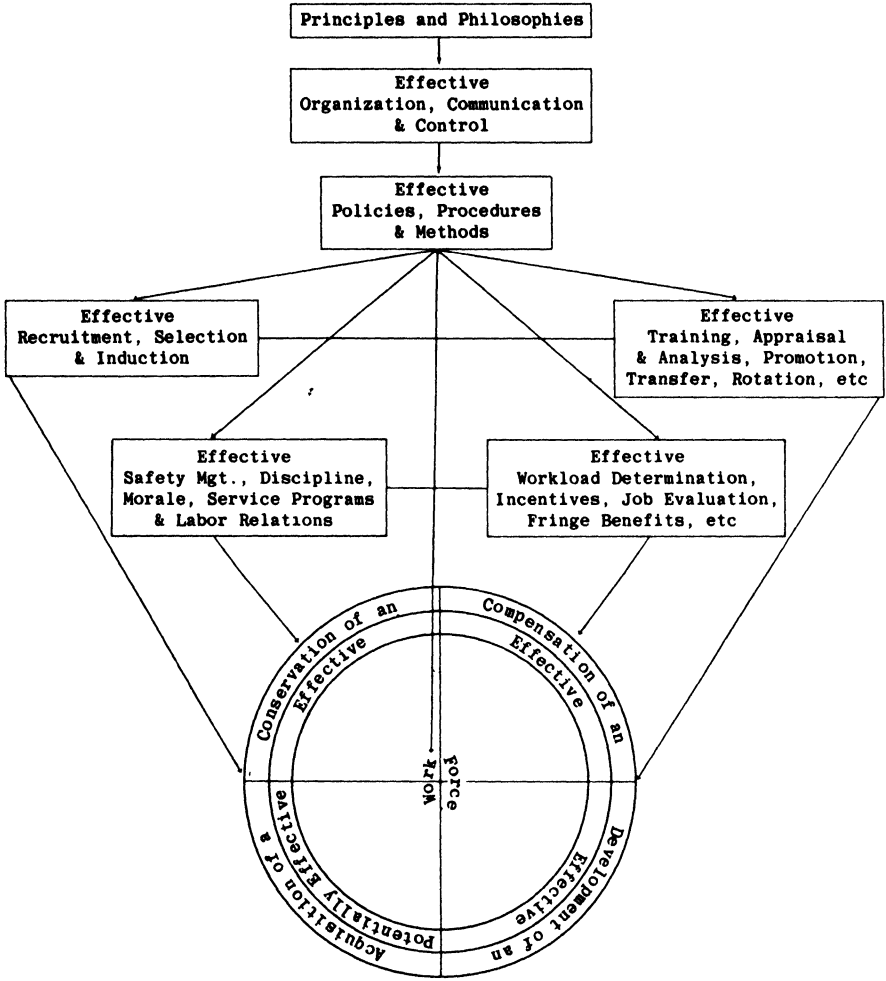


Figure 71

— profit, customer acquisition, continuance of life, and “good” citizenship.

The compensation problem can make or break an industrial organization. In all likelihood, even though each of the other manpower functions were approached in a fully acceptable manner, failure to approach the compensation function in like manner would make effective manpower management impossible. This part of the text deals with concepts, considerations, and methodology currently used in an endeavor to establish *just* compensation for employees.

*Compensation to the employee is the important part of his life. It is his accounts receivable. To a large extent it determines his life.<sup>1</sup>*

## Compensation Concepts and Considerations

The income of the United States allocated to wages, salaries, and fringe benefits recently reached approximately 69.5 per cent of the total.<sup>2</sup> In the iron and steel industry, for example, the aggregate payroll for wage employees in 1960 was \$2,813,991,905 for an average number of 449,888 employees.<sup>3</sup> This largest single business expense requires control.

The customer is concerned with the price of products; although willing to pay a fair price for everything needed, plus some luxuries, he tends to withhold purchases of luxuries and semi-luxuries if he believes the price includes wasted time on the part of employees and their managements. In other words, the customer won't do business if he considers cost unfair. Paying employees for featherbedding *is really getting something for nothing and also is morally wrong.* All managements and leaders of union groups, as well as employees themselves, must realize that compensation is intended as payment for production, not wasted time, loafing either mentally or physically, undue down-time, or generally slothful performance. If the price of products includes too much of this, the customer tends to look elsewhere.<sup>4</sup>

To the employer, compensation is an expense; to the employee, it is income. Although these accounts would be on the opposite sides of

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<sup>1</sup>Lawrence C. Lovejoy, from remarks in a graduate seminar, 1961.

<sup>2</sup>U. S. Department of Commerce, *Survey of Current Business*, (National Income Number), Vol. 40, No. 7, (July, 1960), p. 7, (data for 1959).

<sup>3</sup>By permission from *Wage Trends in the Iron and Steel Industry* (American Iron and Steel Institute, New York, April, 1961).

<sup>4</sup>Perhaps the success of foreign producers in American markets is in part due to "labor's costing itself out of work."

a ledger, each of the parties has the same attitude toward the subjects of income and expense. Each hopes to increase the amount of his gross income and if prudent, will watch unnecessary expense. In this light both employer and employee, or their representatives, share similar attitudes.

The employer recognizes the employee's desire for increased income. The employees and their representatives should recognize that the employer must exercise care in spending what he takes in. As union leaders are promoted in the union hierarchy they must become more and more aware of what balance sheet and profit-loss statements mean. If a union ignores an employer's losses and fails to help turn them into profits, it is not competent to represent the employees. A manager of a business who, through inefficient operations, expects his employees to "go along with him" and accept below community rates of pay, is in the same class as the advocate of featherbedding on the union side of the table. Management, employees, and unions must realize that there *are decent concepts* in the compensation philosophy which can be made equitable and acceptable to all parties — management, unions, consumers, government, and owners.

### COMPENSATION FOR WHAT?

Compensation is paid by one party to another for doing something. It is not, and should not, be paid for doing nothing. Every person should be worthy of his hire! Yet, the world has always had beggars and hangers-on, not always because such people cannot render a service, but because they want something for nothing — a sort of "divine right" attitude that the world owes them a living. Some people are willing to work and others apparently are willing and happy to let them.

Compensation is given those who perform their assigned tasks in an acceptable manner — and acceptable pace and quality. Because of past abuses, management and labor differ in their opinions as to what constitutes an acceptable pace. No one can adequately describe a "fair pace," but somewhere along the line there is an acceptable *average* pace satisfactory to all parties concerned.

By custom, either formally or informally adopted, employees who perform their work at a better than average speed are sometimes cautioned by their fellow workers to slow up (probably out of fear that rates will be cut — fear generated from past experience). It appears that the employee looks at pace in terms of money — how much he will get and for how long!

The employer looks at pace in a similar manner — how much will he have to pay, and for how long. When you hire someone to mow your lawn, you express great interest in pace, particularly if paying

by the hour. People pay for the lawn mowing by the job rather than by the hour — the work gets done faster and the job is not so expensive.

The compensation picture is further complicated by the existence of “classes” of work. Paying the same rate for all classes of work regardless of kind is unrealistic. Mowing the lawn is one thing; taking complete responsibility for the proper care of the flower and vegetable gardens and the mowing of the lawn is something else. The higher the level of skill and/or effort required, the better the price. There hence has developed over the years an attempt to evaluate in total all the factors of job performance in order to develop a proper relative hierarchy of job rates. The attempt to use system in the evaluating of process, rather than argument of precedent or a display of emotion, has gained considerable ground — and rightly so.

When speaking of compensation for doing work, one speaks of work in terms of quantity and quality, and distinguishes one type of work from another. The function of determining pay rates and additional benefits, defining differences in performance requirements and establishing performance rates, and controlling compensation expenses is referred to as *wage and salary administration*. This is an inherent responsibility of the manpower division.

### NEED FOR A COMPENSATION PROGRAM

Management and labor have differing views regarding wages. Unless management takes the lead and seeks to create a systematic wage and salary program, these differences easily can result in a continuing state of confusion and emotional argument. Such a condition results in constant “brush-fire” warfare between the parties, and tends to mean that management is allowing events to control them, rather than their controlling the events.

Furthermore, without a systematic program, management cannot have real control over labor cost, and labor (either the individual employee or the union) will lack any assurance that the work performed is receiving a “fair” return for the effort exerted. In addition, wages and salaries are *symbols of status*. Man is peculiar; on the one hand he wishes to maintain his status differential over his neighbor, on the other, he wants to improve his status in comparison with his neighbor. Unless a systematic program is developed, this human conflict over status can result in disruption of production.

### OBJECTIVES OF A COMPENSATION PLAN

The maintenance or improvement of the competitive position of the company is the over-all objective of manpower management. This objective cannot be attained unless each manpower function meets its specific objectives. By the same token, they cannot be attained

unless they are clearly stated and known to all involved. The objectives of a wage and salary administration program can be stated as follows.

- . . . To know the job content of all work assignments in order that an equitable compensation structure can be built.
- . . . To prevent abnormal turnover due either to too low or inequitable rate structure, and to help the organization maintaining a full and effective workforce.
- . . . To evaluate on an orderly basis every work assignment in the business as to the job's relative worth to the organization and to translate this relative worth into dollar rates.
- . . . To measure or appraise the job performance of every employee against acceptable standards.
- . . . To enable management to formulate and determine compensation policies.
- . . . To keep abreast of all legislation affecting the determination and payment of compensation.
- . . . To develop budgets to be used by management in controlling personnel expense.

The broad objective of wage and salary administration could be stated as: the establishment of a compensation system equitable to both employer and employee.)

### SYSTEM CONSIDERATIONS

Development of an effective compensation program involves a number of variables. Some are external in nature and a company must evaluate them in terms of its own operation. Others are internal in nature and are created by the company itself.

*EXTERNAL CONSIDERATIONS.* The external considerations tend to be about the same for any firm regardless of its product, process, or location. Some of these can be listed as:

- . . . Influence of compensation theories of the past.
- . . . Government regulation and intervention.
- . . . Cost of living — purchasing power.
- . . . General economic conditions — labor supply.
- . . . War or peace — time economy.
- . . . Company's competitive position.
- . . . What the community pays.
- . . . Union attitudes and objectives.
- . . . Mores of the community.

*Influence of Theories of the Past.* Through the centuries many philosophers advanced theories which they felt applicable. Of course, these must be considered in the light of the times when advanced, as in the development and acceptance of any theory. If an hypothesis,

which is an assumption or supposition, is thought well enough of, if it is not disproved, it may become accepted as a theory. If this theory holds true long enough, it may be considered as a principle, within the boundaries or limits of human knowledge. As these boundaries of human knowledge are pushed back, that which was once accepted as a theory or possibly a principle may be discarded as inaccurate, inapplicable, and not a truth at all. This certainly was true concerning the Ptolemaic theory of astronomy which held for centuries until Copernicus came along to advance his theory about the universe! The thinkers of the past made many great contributions and conclusions about the compensation paid to the employed. Our thinking today cannot help but be conditioned by what they have said.

The economic theories advanced by several philosophers of the past have had their influence; they have swayed men's minds.<sup>5</sup>

By all the rules of schoolboy history books, they were nonentities; they commanded no armies, sent no men to their deaths, ruled no empires, took little part in history-making decisions. A few of them achieved renown, but none was ever a national hero, a few were roundly abused, but none was ever quite a national villain. Yet what they did was more decisive for history than many acts of statesmen who basked in brighter glory, often more profoundly disturbing than the shuttling of armies back and forth across frontiers, more powerful for good and bad than the edicts of kings and legislatures. It was this: they shaped and swayed men's minds.

The serious student in the field of manpower management, particularly compensation administration, might well study the philosophies contributed by Saint Thomas Aquinas (1225-1274), Adam Smith (1723-1790), Thomas R. Malthus (1776-1834), David Ricardo (1772-1823), John Stuart Mill (1806-1873), Karl Marx (1818-1883), Charles Fourier (1772-1837), Claude de Saint-Simon (1760-1825), Robert Owen (1771-1858), Henry George (1839-1897), John Bates Clark (1847-1938), Thorstein Veblen (1857-1929), John Maynard Keynes (1883-1946), and Joseph Schumpeter (1883-1950).

When studying the contributions of these men, it is wise to attempt to visualize whether or not their theories, products of the times in which they lived, fit any of the circumstances of today.

Although no single set of their theories is likely to be satisfactory today, a mixture of some of their pronouncements, as one might concoct a recipe of a salad dressing, could be made acceptable. Adam Smith's idea of competition's working to regulate the market price contains considerable truth; Ricardo's subsistence theory of wages is incorrect today, but we do recognize a minimum wage level in the Fair Labor Stand-

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<sup>5</sup>Robert L. Heilbroner, *The Worldly Philosophers*, (Simon and Schuster, New York, 1953), p. 3.

ards Act; John Stuart Mill does have a grain of truth for today in our attention to budgets in his wages fund theory. Although Karl Marx's theories are not shared by the Western world, they are the thinking behind the Iron Curtain, and John Bates Clark, in his marginal productivity theory, does discuss the point that more employees on an employer's payroll than are necessary to get out a piece of work will be uneconomical. In conclusion one can state safely that knowledge of the theories propounded by the philosophers of the past will add to one's field of learning and assist in making decisions of what will or will not work under present conditions.

*Government Regulation and Intervention.* As society developed, the customs of its people became a definite force in stabilizing man's deportment in business. In olden times the absolute power of a leader determined this deportment. As absolutism gave way to more democratic forms of government, judges tendered opinions and arbitrated differences between contending parties. These decisions, together with an evident desire of people to develop some uniformity of conduct, became the roots of Common Law. Common Law was unwritten, but a binding force accepted by the majority.

With the growth of communities into provinces, territories, states, and nations, the communication of what the acceptable rules of the majority really were required that much of the so-called Common Law be reduced to writing for all to read and study. The need for *statutory law thus developed*. In addition to the actual drafting and passage of written law, there has evolved a body of interpretations which are just about as important as the law itself. These apply to what the law really means in the times and under the circumstances in which the interpretations are made.

In the United States, we feel strongly that in the interest of uniformity, laws must be established by the legislators, within the framework of the Constitution, to deal with many specific situations. Obviously there will be differences of opinion concerning the meaning of all pieces of legislation. A system of courts therefore has developed to render decisions as to the deportment of people — do they conform to, or contravene, the statutes.

In the interest of uniformity, federal laws have been passed concerning employee compensation.<sup>6</sup> State laws also have been passed and apply within their particular boundaries. Local communities have acted in like fashion. This legal framework is a significant external factor influencing compensation programming. Pertinent federal legislation is presented in Table 29.

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<sup>6</sup>We do not support interventionist thinking, however, there is a government responsibility to foster "proper" conduct and to remove from the national and industrial scene the pernicious influence of unethical groups and individuals.

**TABLE 29**  
**SELECTED LEGISLATION WAGES AND HOURS**  
**AND WORKING CONDITIONS**

Date	Title	Remarks
1931	Davis-Bacon Act (Labor Wage Rates Law)	Passed 3 March, 1931, as affected by the Portal-to-Portal Act of 1947 and the Reorganization Plan No 14, 1950 Covers direct Federal construction, alteration, or repair of public buildings or public works, provides that prevailing rates of wages are to be paid to workers where contract is in excess of \$2,000, includes all agencies of Federal Government and District of Columbia that make direct construction contracts If contractor fails to pay minimum wages, money can be withheld from contractor to pay workers, and Comptroller General has authority to pay out the monies for back wages It is no defense for the contractor that the worker agreed to accept and has accepted less than minimum rates, or has voluntarily refunded wages.
1934	Copeland Act (Anti-Kickback Law)	Provides a fine up to \$5,000 or imprisonment up to 5 years, or both for those who induce an employee on work covered by the law to give up any portion of his pay, force, intimidation, threat of dismissal cannot be applied Act pertains to all work financed in any way by government funds Secretary of Labor has control Contractors required to file weekly affidavits re wages and deductions, payroll records must also be submitted
1936	Walsh-Healy Act (Public Contracts Act)	Passed 30 June, 1936, as amended, U S Code 1952, Title 41, Sections 35-45, Supp. III, Title 41, Section 43(a), as affected by the "Portal-to-Portal Act" of 1947 Applies to U S Government contracts exceeding \$10,000 Sets basic labor standards for work done under contracts Prime features (1) 8 hr day and 40 hr week, time-and-a-half paid for daily or weekly overtime (whichever results in greater compensation), (2) payment of prevailing minimum wage rates as determined by Secretary of Labor, (3) prohibits employment of child labor (boys under 16, girls under 18), (4) prohibits use of convict labor, and (5) requires that working conditions meet safety standards and sanitary requirements of State in which work performed Industrial homework prohibited. Covers learners and apprentices. Exemptions and exceptions are listed, and liabilities defined
1937	Fitzgerald Act (Apprentice Labor Act)	Authorized Secretary of Labor to set and promote safety standards in order to safeguard the health and welfare of apprentices

TABLE 29 (Continued)

Date	Title	Remarks
1938	Fair Labor Standards Act (Wage-Hour Law) Revised in 1961	Passed 25 June, 1938, amended by P L 1023, affected by "Portal-to-Portal Act" of 1947, and Reorganization Plan No 6, 1950 Sets minimum wage, overtime, and child-labor standards applicable to persons in interstate commerce or producing for interstate commerce Not a blanket, applies according to specific activities of employee Major provisions require minimum wage of at least \$1 00 hr , premium overtime at time-and-one-half for hours actually worked in excess of forty per consecutive work-week of 168 hrs , except for certain conditions declared hazardous by Secretary of Labor, and certain exceptions permitting a 14 yr limit, the standard minimum working age set 16 yrs , provided specific records-keeping requirements Exemptions from the law are defined, for example, executives, administrators, professional people, and outside salesmen's jobs The 1961 revision raised minimum to \$1 15, to go to \$1 25 per hour by 1963 Coverage extended to 3 6 million people (Recommend reader acquire copies of revised law )
1943	Current Tax Payment Act	Provides for collection of income taxes by employers, income tax withheld from pay envelopes or pay checks of employees Just as "check-off" makes the company a fiscal agent for the union, the withholding tax provisions make the company a treasury agent of the government

Source: Prepared by Norman J Labrecque, cf. "The Evolution of Present Labor Law," *Congressional Digest*, Vol 38, Nos 8-9, August-September, 1959, *Federal Labor Laws and Agencies*, Bulletin No. 123 and 1960 Supplement, Washington, D. C, U S Government Printing Office, John H. Fanning, *Labor Issues Before the Supreme Court*, R-634, Oct., 1959, Washington, D. C, Library of Congress, and Harry A Mills and Emily C Brown, *From the Wagner Act to Taft-Hartley* (The University of Chicago Press, Chicago, Ill., 1950)

*Miscellaneous State Laws* All states have laws concerning compensation matters under their jurisdiction. Some cities also have enacted laws governing compensation, or levied taxes thereon where possible in their specific jurisdiction. Some of these non-federal laws have coverage as follows.

1. Maximum hours of work permitted in any work week for certain job classifications. These laws may be applicable to men, women, or children, or all three; and no overtime is allowed.
2. Minimum wages.
3. Days and hours of rest.
4. Lunch periods specified.
5. Date of payment of wages; number of days subsequent to the period in which wages are earned that an employer must make payment; provisions for cashing pay checks without fee.

6 Equal pay for equal work laws insure no difference in pay between men and women for the same job duties

7 Extent of deductions from wages for specified causes.

8 Specification of holidays on which no work is to be performed, or if performed, the extent of premium pay that must be made.

*LEGAL INTERVENTION — A NECESSITY.* In the absence of statute, there could be a total lack of uniformity in employee compensation. History reveals the need to protect against this possibility. The existence of "sweat shops," the evils of improper employment of minors and women, and other practices make certain "rules of the road" a necessity. The mere presence of a law is, in itself, however, no assurance that compliance will always exist. Management must see that the statutes are obeyed. Unless it wants more rigid restrictions placed upon it, in addition, it must adopt the statute as the point of departure, the minimum basing point.

The fact that a law exists, however, does not necessarily make it a good law. Legislation often is pushed through by powerful minority groups. Legislation is often established which in no way benefits the majority, or any but one specific minority. Management must be alert to its community responsibility. It must keep existing and pending legislation under study. If a law is harmful or no longer needed, management has a duty to devote its energy to its repeal.

*COST OF LIVING AND PURCHASING POWER.* An employee's need for income is in part influenced by the cost of living. This, in turn, is a reflection of what money will buy. The employer's ability to pay is influenced by what money will buy for him and by what it costs to do business.

The Consumer Price Index depicts the variation in an employee's living costs. It is the common name for the "Index of Change in Prices of Goods and Services Purchased by the City Wage-Earner and Clerical Workers' Families." The index is published monthly by the Bureau of Labor Statistics of the United States Department of Labor. Recently it has been converted to a new base period (1947-1949 = 100) in compliance with the recommendations of the U. S. Bureau of the Budget. Many employer-union contracts include a "cost of living" escalator clause based upon the movements of the Consumer Price Index. Such clauses call for increases in pay rates according to formula as the cost of living increases. The adjustments in pay attempt to maintain a rather even level of the purchasing power of the dollar. Figure 72 shows a typical escalator clause.

The index is not an exact measurement, but it is the best we have at present. Calculated for certain groups of city dwellers, it does not include the rural population. There is a lag in publishing the figures, for it takes time to collect and compute the data. The annual averages

Cost-of-Living Increase

Effective with the first payroll period commencing after (date), and thereafter during the period of this agreement, each employee covered by this agreement shall receive a cost-of-living allowance as set forth in this section.

The amount of the cost-of-living allowance shall be determined and re-determined as provided below on the basis of the official Consumer Price Index published by the Bureau of Labor Statistics, United States Department of Labor (1947-49=100) and referred to herein as the "Index."

The amount of the cost-of-living allowance shall be determined and re-determined semi-annually on the basis of the Index as follows

Effective Date of Allowance

First pay period commencing on or after (date), and at semi-annual intervals thereafter.

Based Upon

Index as of (date).

In the event the Bureau of Labor Statistics shall not issue the appropriate Index on or before the beginning of one of the pay periods referred to in the above table, any adjustment in the allowance required by such Index shall be effective at the beginning of the first pay period after receipt of such Index

No adjustments retroactive or otherwise shall be made in the amount of the cost-of-living allowance due to any revision which later may be made in the published figures for the Index for any month on the basis of which the allowance shall have been determined.

The amount of the cost-of-living allowance which shall be effective for any such semi-annual period shall be determined in accordance with the following table

BLS Consumer Price Index	
123.6--124.0	125.6--126 0
124.1--124.5	126 1--126 5
124.6--125 0	126.6--127.0
125.1--125.5	127 1--127.5

Cost-of-living Allowance

In addition to Wage Scale by Job Classification shall be a 1¢ adjustment for each 0.5 change in the Index and so forth. The cost-of-living allowance shall be added to the rates for each classification.

A decline in the Index for each 0.5 point shall result in a reduction of classification base rates of 1 but no reduction shall take place if there is a decline in the Index below 121.5.

Continuance of the cost-of-living allowance shall be contingent upon the availability of the Index in its present form and calculated on the same basis as the Index for (date), unless otherwise agreed upon by the parties.

SAMPLE ESCALATOR CLAUSE FROM LABOR CONTRACT

Figure 72

computed by the Bureau of Labor Statistics at the end of each year, based upon the 1947-1949 = 100 as a normal period, are:

Year	Index	Year	Index	Year	Index
1913	42.3	1929	73.3	1945	76.9
1914	42.9	1930	71.4	1946	83.4
1915	43.4	1931	65.0	1947	95.5
1916	46.6	1932	58.4	1948	102.8
1917	54.8	1933	55.3	1949	101.8
1918	64.3	1934	57.2	1950	102.8
1919	74.0	1935	58.7	1951	111.0
1920	85.7	1936	59.3	1952	113.5
1921	76.4	1937	61.4	1953	114.4
1922	71.6	1938	60.3	1954	114.8
1923	72.9	1939	59.4	1955	114.5
1924	73.1	1940	59.9	1956	116.2
1925	75.0	1941	62.9	1957	120.2
1926	75.6	1942	69.7	1958	123.5
1927	74.2	1943	74.0	1959	124.6
1928	73.3	1944	75.2	1960	126.5

Purchasing power can be considered in another way, in terms of the "real average hourly earnings" using the 1947-1949 base period. Every management seeking to establish a truly equitable compensation program ought to undertake this computation and maintain it on a yearly or quarterly basis. By so doing, management quickly can see the real value of their employees' hourly rates. The U. S. Bureau of Labor Statistics publishes such figures. In the Steel Industry (blast furnaces, steel works, and rolling mills) the 1960 preliminary data showed an average hourly earning of \$3.07 with a purchasing power of \$2.427 on the 1947-1949 base.<sup>7</sup>

*GENERAL ECONOMIC CONDITIONS.* When we think of general economic conditions, our minds naturally turn to the extent of employment of all people who want to work, the level of retail sales in the market place, whether we can afford to buy things we want, and many other features which make us feel life is worth living. We tend to view the general picture through our own eyes, the figures and statistics of economists notwithstanding. If we have a friend out of work, there is a recession, if we are out of work, there is a major depression.

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<sup>7</sup>Bureau of Labor Statistics, U. S. Department of Labor; and *Wage Trends in the Iron and Steel Industry* (American Iron and Steel Institute, N. Y., April, 1961).

Solid indicators of economic condition do exist and should be considered by management in developing a compensation program. For example, when retail and wholesale dollar sales are lower, manufacturing production indices show declines, an increasing percentage of the population is unemployed, hours of work are much less than 40 per week, housing starts are "off," and there is every possibility that "things are not so good."<sup>8</sup>

Various business indicators give an indirect picture of the need for personnel in a particular concern. Historically, when there has been a labor supply in excess of demand, there has been more competition among the unemployed for jobs and, hence a possibility of a decline in pay rates — the old law of supply and demand at work.

Prudent employers never overlook the opportunity to replace inefficient employees. When business is good this is easier for terminated employees can find work better than when unemployment rolls are swollen. Every employee should realize that he himself exercises considerable control over his own employment security by his efficiency. Obviously this does not hold true in all instances, especially where there are contracts and pressures which protect mediocrity at the expense of efficiency.

*WAR OR PEACE-TIME ECONOMY.* Pay rates always have risen during war, in part due to the short supply of labor and the increased demand. During the national emergencies of World War II and the Korean War, wage and price regulations were enacted by presidential order to prevent runaway rates. The same will no doubt take place should another emergency arise. Emergency regulations related to wage and salary administration cover stabilization of wages, freezing of employees in their jobs, mobility arrangements, and price regulation. In the future such regulations are likely to be imposed with no waiting period. It therefore behooves all employers to have their "compensation house" in order at all times so that any new regulation, whatever it may be, will not cause administrative or human hardship. A list of the compensation items covered in the regulations effective during the Korean War can be secured from the federal government.<sup>9</sup>

*COMPANY'S COMPETITIVE POSITION.* Not all companies can afford to be compensation leaders in their respective community or industry. The small concern, for example, lacks the comparative ability to pay wages similar to those paid by the giants in the field.

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<sup>8</sup>The student will find the business indicators published regularly by Fortune, Dun's Review, Factory Management and Maintenance, and other trade publications of interest and useful in their effort to understand the world of business.

<sup>9</sup>cf L. C. Lovejoy, *Wage & Salary Administration* (The Ronald Press Company, New York, 1959), pp. 66-67.

If they were compelled to pay the same, their ability to survive would be severely curtailed. This would be contrary to the philosophy of our country, for we hold that every lawful business should have a chance to survive and succeed.

Marginal companies offer employment to many thousands of people for whom jobs would not otherwise be available. In considering a practical approach, therefore, it would be unwise to expect uniform wage rates, job for job, all over the United States regardless of location or type of business. To be sure, we have a minimum wage prescribed by law, but we have no maximum. The competitive position of an organization is most certainly an external consideration in its determination of its own compensation rates.

*WHAT THE COMMUNITY PAYS.* One of the criteria in the determination of pay rates is the survey of compensation paid for similar jobs in the community or industry. Although community pay rates are held by some to be an unfair basis for the setting of pay rates, compensation paid by employers, and accepted by employees, for similar jobs does represent a cross section of the "going rates" at any given time. In other words, if thousands of employees and their employers are willing to work together on the basis of such rates, the current worth of jobs is fairly well established.

This thinking is not dissimilar to that of the merchant selling his wares; he wants to receive as high a price for his merchandise as he can, but the buyer will pay only "so much." For example, the merchant feels that \$15.00 is a fair price for a pair of shoes he has for sale but if the buyer will agree to pay only \$12.00 for the shoes, and the merchant is willing to sell at that price, \$12.00 is the fair worth at the time of the sale. Under other conditions, the buyer may be willing to pay only \$9.00 for the same shoes; if the merchant will sell the shoes for that price, the worth of the shoes at that time is only \$9.00. It may be that because of scarcity and a feeling he can get \$15.00 for the shoes, he will not sell at a price lower than \$15.00, or possibly more. If the same buyer can do no better elsewhere he may be "forced" to pay the \$15.00; if he does, the worth of the shoes at that time is \$15.00 per pair. The market place has a great influence in determining worth of products as well as the skill and effort of human beings.

*UNION ATTITUDES AND OBJECTIVES.* The union at its national or international level determines certain objectives which it seeks to obtain through the bargaining process, or frequently states as "demands" concerning its long-range program. Even though the locals which comprise the peak union organization may not always agree 100 per cent with the officials of the national, the latter does superimpose its opinion regarding long-range objectives. Then, too,

certain groups of the membership may not agree with these long-range plans but are overruled by the majority. An example of the latter is the attitude of a group of long-serviced employees who would prefer a wage increase rather than have large sums set aside by their employers for supplemental employment benefits. The thinking of these longer-service employees is that they are not ever likely to be laid off, and hence why should they sacrifice pay increases to provide for the unemployment of their fellow employees with much less seniority? Younger personnel, on the other hand, frequently prefer a wage increase to provisions for a pension (deferred compensation) at some far distant time.

The union has a real influence upon federal and state legislation affecting compensation. The broad, long-range plans are determined at the national level, at the peak organization level of AFL-CIO. The representatives of the top organization determine the policies and organize to carry them out. They do so by attempting to have local, state, and federal government officials who will be sympathetic to or, in fact, further the interests of labor as seen by the union hierarchy, elected or appointed. Unless organized at the national level, a small local would be helpless in doing much to further its own interests with legislators.

Organized labor's power over compensation is economic and compulsive. Failure to meet wage demands can mean costly work stoppages and loss of customers. Because of the affiliation of the local with the powerful national body, the power of a local union often exceeds that of the employer. Naturally, all of this fits into the pattern of external considerations management must examine when dealing with compensation problems.

*MORES OF THE COMMUNITY.* The community where a firm is located often exercises a direct influence upon payroll arrangements, hours of work, and other expense. No matter where a business is located, the customs of the area cannot be ignored.

## INTERNAL CONSIDERATIONS

Effective development of manpower policies and programs always requires consideration of internal as well as external factors, and so it is with compensation. Unlike some other manpower functions, however, the internal factors pertaining to employee compensation are particularly difficult to separate from the external, and are frequently completely overshadowed by them. For example, in the automotive industry collective bargaining has been handled by the union on an industry-wide basis, but in the past management has chosen to use an individual company approach. Not until 1958 did they show any real solidarity.

The industry-wide approach requires open books — all parties must stick together and share confidence. The companies rejected this approach in the past with the result that the union attacked the “softest” company first. Once that firm’s defense was breached, the union forced the other companies to accept what, internally, was seldom desirable.<sup>10</sup> Internal considerations thus were seriously affected by the external. One could in fact say that rates, hours, fringe benefits and the like have in the past, at least, been set with little regard for the following specific internal considerations.

- . . Growth prospects of the company
- . . . Stabilization of production and labor requirements
- . . . Equipment and machinery
- . . Skill levels required
- . . Ability to pay
- . Hiring standards
- . . . Attitude of management
- . . Relative value of work assignments
- . . Appraisal of employee performance
- . Labor-management climate

*GROWTH PROSPECTS OF THE COMPANY.* Rapid growth of a firm quickly increases the compensation problem. In one case it meant that a simple accounting job changed overnight from a \$5,900 starting salary to an \$8,000 starting salary. The job content changed radically even though the job title remained identical. This is fairly typical. Sudden growth means rapid increases in work loads and pronounced changes in skill requirements. Larger numbers of people are required, and increased skill competencies needed. Thus the payroll is expanded not only in numbers, but also in rate raises.

Slower, more planned growth also necessitates additional personnel in both the managerial and rank-and-file categories. Frequently the need is for individuals of both immediate and potential competency, people qualified to perform anticipated future jobs. Such personnel often are hired on a “get-ready” or “standby” basis. This hiring in advance is in essence the excuse for the college graduate training programs — the employment of people on a current basis to provide personnel for future jobs. This poses a special compensation problem.

A growing company can expand only as rapidly as it can fill its job openings. If future job openings are filled in advance of real need, extra compensation cost can be justified only on the basis of future plans. Then too, these future job incumbents will have to be paid the “going rate” just as will all personnel hired in the future. It is not unusual to find that the rates paid the new job holders exceed

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<sup>10</sup>Witness how General Motors was left wide open when Ford capitulated to the union in 1955.

the rates being paid to people who have been employees of the company for a long time. This situation requires correction or the old-timers may leave or become exceedingly dissatisfied. Effective policy and program takes these considerations into account.

*STABILIZATION OF PRODUCTION AND LABOR REQUIREMENTS.* Wherever possible management seeks to stabilize production and labor requirements. Such tactics place operating costs under easier control. They tend to reduce waste in manpower budgets due to excessive turnover, layoff and recall, and hiring costs. They tend to reduce waste in production and material budgets. Obviously this is desirable.

From the human point of view, the stabilization effort has an important effect. Regularity in income tends to increase employee satisfaction and minimize labor unrest. By the same token it eases the problem of determining compensation levels.

An employer who can offer only periodic work may find it very difficult to acquire the kind of workforce he wants. He may have to pay a premium wage. If he cannot, he may have to put up with sub-standard production and marginal returns. It is evident that alert management will seek to stabilize, and will design compensation policy and program with this in mind, if possible.

*EQUIPMENT AND MACHINERY.* Labor cost is typically either the largest, or one of the largest, single items of production cost. Production processes often are basically dangerous or at least physically tiring. Since the beginning of the Industrial Revolution, men have sought ideas and machines which would minimize the risk and burden of work while decreasing the unit production cost.

Today mechanical processes have advanced to such an extent that man has little need for manual skill in the factory and often little real effect upon the sequence of operations. Automated procedure reduces the risk and physical effort involved in production work, changes the skill requirements, and reduces the unit cost of operation by increasing output without increasing the quantity of labor. This effect should be reflected in the labor's compensation. In the automated plant the labor cost per piece can be reduced without sacrifice to the employee. The rate can be still higher than in a plant producing similar goods without automated process.

Companies operating the slower-paced equipment clearly cannot afford the wage costs per piece of the automated firm. Policy in such an organization must take this into account. Furthermore, management in such companies must seek union understanding of the point.

*SKILL LEVELS REQUIRED.* Companies requiring a high skill workforce tend to have higher labor costs than those requiring only low or medium skill. Furthermore, the rates paid common labor grades

are usually the "going rates" of the area, whereas high skill jobs may require payment at a rate far in excess of the area patterns. For example, an employer seeking a certain type solar energy expert will find the laws of supply and demand directly influencing his compensation scales. Because of this fundamental fact, plus the ever-growing need for people possessing higher and higher skill levels, management may need to pay a premium hiring rate with a resulting high labor cost.

A peculiar situation is developing as a result of automation and the effort to eliminate controllable seasonal variations in production — much of what traditionally was considered "variable" labor cost is becoming "fixed" or "semi-fixed." Instead of being able to reduce labor cost by cutting the payroll (eliminating unnecessary personnel), modern mechanical methods often make it necessary to keep a constant workforce whether 5 or 500 units are being produced. As long as the equipment is running, a given number of people are required. Furthermore, in these cases, common or routine work may call for technicians rather than old-style production workers.

All of this has a direct impact upon the nature of compensation policies and methods. Obviously, it has a direct bearing also upon how much labor cost a concern can afford.

**ABILITY TO PAY.** How much a firm *can* pay is referred to as its "ability to pay." This is a reflection of its profit picture and its policies regarding depreciation, replacement and the like. The ability to pay compensation is not just a function of the difference between cost to make and sell and actual selling price, it is not just a question of difference in markup. Also involved are the nature of the equipment used and whether it is subject to rapid obsolescence and/or depreciation, the nature of the materials used in production and whether they must be purchased in quantity and stockpiled or on a hand-to-mouth basis. Then too, the production process has much to do with the ability to pay.

This consideration requires careful, and sometimes frequent, explanation to the union and its membership. They often lose sight of the factors influencing ability to pay. They frequently see only markup.

**HIRING STANDARDS.** Occasionally it seems wise to set "starting" pay very low — much lower than normal base pay. Such an approach is a reflection of hiring standards. Where, for one reason or another, employment policy permits the hiring of "anybody," this approach may be used to hold labor costs as low as possible. The weeding-out process is done during the probationary period instead of in the selection step, hence, management seeks to cover one poor practice with another. Effective compensation policies normally will

shy away from such tactics and be based upon more acceptable selection practices.

**MANAGEMENT'S ATTITUDE.** Management's attitude is a prime consideration in developing any program or policy. It is reflected in the attitude of the workforce. A management that seeks an enviable attitude toward employee compensation matters is probably one which:

1. As a part of its compensation program will continually survey its community in order to keep abreast of current rate levels, and, if below community, will make the necessary corrections.

2. Will make an analysis of what increase or decrease in compensation rates should be effected in order to be consistent with the operation changes made whenever there is any change in materials, equipment, or methods.

3. Will periodically review the performance rating of employees to determine if each is qualified for a pay increase or to continue receiving the merit bonus previously granted him.

4. Will give counsel to assist the employee who falls below the acceptable level of performance to help him increase his productivity, and then grant the opportunity for the improvement.

5. Will in all its dealings with employees' representatives act in a businesslike manner, showing respect, giving counsel, and, in general, helping these representatives do a good job for their constituents.

**RELATIVE VALUE OF WORK ASSIGNMENTS.** Not all jobs are equally difficult, risky, or demanding of technical competence. Effective compensation policy recognizes this and requires procedures which translate this fact to the pay check. Consideration of relative value is difficult. It involves evaluation of job content and the end effect of each job upon the value added to the product. Effective policy requires compensation programs based upon such evaluation. Furthermore, the value differences must be maintained from year to year as contracts are renegotiated.

**APPRAISAL OF EMPLOYEE PERFORMANCE.** Although some people believe in the concept of equal pay for everyone, such a view does little except support mediocrity and foster conformity at the expense of initiative. Effective compensation policy takes the opposite approach: it fosters initiative. It seeks to reward outstanding performance and encourages it, if for no other reason than to reduce unit operating costs. Naturally, such an aim necessitates appraisal of employee performance.

**THE LABOR-MANAGEMENT CLIMATE.** In Chapters 20 and 21 the need for a co-operative labor-management climate was pointed out. Unless this co-operative spirit exists, compensation programs stand little chance of success. If the parties come to the bargaining table in conflict (either as individuals or members of the union) it

is likely that rates, hours, and fringe benefits will become a source of constant bickering. So, the thought, again appears: if the climate is to be favorable, perhaps management had better take the lead in efforts to make it that way.

### OPERATIONAL CONSIDERATIONS

Compensation can be considered as the manpower "linking-function." Its operation is in every way sensitive to the operation of each of the other manpower functions. They, in turn, are fully responsive to the adequacy of compensation. Furthermore, without a compensation activity, there is likely to be no activity. With these thoughts in mind, it should be clear that the operational considerations pertaining to each of the other "working objectives" will apply to compensation.

One additional point bears special attention: the relationship between the wage and salary group and the payroll group. The wage and salary administration personnel have no part in the actual process of paying people. They do not process the ledgers, the checks, the vouchers and usually do not hand out the checks. Their responsibility is procedure development and administration, procedure analysis, data collection, policy recommendation, problem solving and the like. They do, however, require direct unhindered communication with the payroll group. Compensation procedures should recognize this need.

### POLICY

No matter what the function, its success depends largely upon the adequacy of its governing policies. Policies, it will be recalled, are guides to action which depend upon procedures for their implementation. When establishing these guides, management is hemmed in by certain "fences." These fences stand as the specific and general, or common external, internal, and operational, considerations pertinent to the function. The fences and policies relating to each of the other "working objectives" influence compensation policies, this applies for all manpower activities because of their distinct interdependency and the cumulative effect of policy

*THE GENERAL INTENT.* Compensation policies must support, not controvert, the other manpower policies. Alert management thus avoids the "Santa Claus" approach to compensation. It seeks to optimize rather than waste company assets. Similarly, it avoids "Scrooge-like" policies. These too can result in wasted assets. Effective policies stand in between those extremes. They reflect the philosophy of justice; they prescribe balance of interests and needs.

Effective compensation policies avoid overpayment as well as underpayment. They have the goal of equitable compensation to all members of the enterprise.

**POLICY DESIGN AND CONTENT.** Correctly-designed compensation policies are consistent but flexible. They apply in the future as we<sup>11</sup> as in the present, or at least permit adjustment to meet unpredictable future events.

Correctly-designed policies result from study and participation by those affected. They result from fact, not the emotions generated by "brush fire" incidents. Both design and actual content reflect the defensible intent to do what is right and fair.

Remembering that policy reflects company philosophy, it is important that the following thoughts be included in compensation policy.<sup>11</sup>

1. The adequacy of a wage and salary administration program is dependent upon its mutual acceptance by both the management and the employees of the enterprise.

2. The effectiveness of a satisfactory wage and salary program will be optimized if communication of its provisions is made to all interested parties.

3. The compensation limits of a job should be determined by the relative value of the job's contribution to the over-all objectives of the enterprise.

4. The compensation rate of an individual employee for his job performance should be in direct relation to the adequacy of performance.

5. The components of an employee's total compensation can be analyzed best if each item is identifiable

6. The approximate cost and desirable need of any employee services or benefits commonly referred to as "fringe benefits" should be determined prior to effecting installation of such benefits. Once installed, a benefit is very difficult to eliminate.

7. No element of a wage and salary program should contravene any applicable law or statute of the federal, state, or local government.

8. A periodic audit of the provisions of a compensation plan is required in order to insure compliance with it by members of the organization and to discover weaknesses necessitating revision.

**IMPLEMENTATION REQUIRES SOP.** Effective translation of compensation policies into practice requires establishment of a *Manual of Standing Operating Procedures* or a book of "standard practice instructions." Such a manual reduces specific steps to routine; creates or at least provides for uniform practice, and establishes one medium for instructional and interpretive communication. As changes become necessary, they are included in the manual, thereby assuring or helping assure uniform practice throughout the firm.

Included within the manual will be matters such as the following.

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<sup>11</sup>Selected quotes from L. C. Lovejoy, *Wage & Salary Administration* (The Ronald Press Company, New York, 1959), pp. 90-93.

- . . . How and when people will be paid, the details involved.
- . . . The actions before and after changes in equipment, methods, layout, and materials; what the employee should expect, what he should do, what management must do, and so forth.
- . . . Provisions for handling cost-of-living increases and decreases, for maintaining the purchasing power of the employee.
- . . . Procedures regarding pay for time not worked, for holidays, vacations, sick time, and the like, what the employee must do, and how; what the company must do, and how.

The list of items could be almost endless, but application of the control concept set forth in Chapter 6 facilitates determination of the important items. The time devoted to working up rules and procedures will be more than offset by the time that would be required in determining what should be done whenever there was a recurring situation.

*GENERAL TYPES OF REMUNERATION.* There are three main types of compensation: direct, contingent, and deferred. *Direct* payments refer to monies received on regularly-scheduled pay days. Usually these payments result from computation of the established rate of pay for the time period just concluded or the regular rate times the measured production to which the rate applies. *Contingent* compensation refers to payments of a special nature. For example, the special rate for working the second or third shift is a "contingent" rate, and the difference between the monies received for that rate and for the base "day" rate would be a contingency payment. The same is true of remuneration for an awardable suggestion. *Deferred* compensation refers to payments receivable in the future, such as a pension.

Clearly, deferred and contingent compensation overlap. Bonuses, for example, could be termed contingent or deferred; for that matter, so could pensions. What one places in these classifications is not so important; what really counts is that all employees understand the nature of such payments and the classification used, whatever it may be. Table 30 lists various current and future items of compensation.

Another related point refers to "incentives." Typically, incentives are spoken of as "financial" and "non-financial." From the point of view of labor cost, all incentives are financial because they all cost somebody something. Even so-called "psychic wages" (or psychological wages) cost someone. The "nice" job title may cost the employee in terms of added responsibility, lost wages, or both; the "pleasure" of teaching costs the teacher in terms of lost wages; the soothing music and the coffee breaks cost the company, and may even cost the employee in terms of lost wages.

**TABLE 30**  
**ITEMS OF COMPENSATION**

Fixed rate per hour or day	Contributions to Employee Security
Fixed salary rate per week, bi-weekly period, semi-month, month, or year	Group insurance package
Premium pay for time worked	Federal Social Security -- Old Age and Survivor's Insurance
Overtime in excess of normal schedule	Unemployment Compensation
Second and third shift differential	Workmen's Compensation
	Retirement pensions
	Guaranteed annual wage
	Supplementary unemployment benefits
Bonuses and awards	Employee Services
Length of service bonus	Cafeteria and restaurant services
Attendance bonus	Club membership
Merit bonuses	Counseling services -- personal, legal, income tax
Suggestion awards	Company stores and discount purchasing arrangements
Christmas or year-end bonuses	Credit union and loan service expense
Profit sharing	Housing and housing financing
Stock purchase programs	House organs
Use of company-owned automobiles	Insurance for traveling expenses
Paid time off at the work place	Medical and nursing services
Coffee breaks	Company supply of safety clothing
Down time	Savings and bond purchase plans
Lunch periods	Recreational programs
Travel on company property	Safety programs and awards
Rest periods	Tuition aid in attendance at educational institutions
Wash-up and clothes change time	
Wasted time	
Paid time off partly at the work place	
Call-in time	
Reporting time	
Paid time off away from the work place	
Absence due to illness	
Death in family	
Election day time off	
Excused absence	
Holidays	
Illness in family	
Jury and witness duty	
Marriage	
Medical appointments	
Military leave	
Special days off	
Terminal pay in case of death	
Severance pay upon dismissal	
Vacations	

Source: Adapted from L. C. Lovejoy, *Wage and Salary Administration* (The Ronald Press Co., N. Y., 1959), pp. 373-374, 391-392, 407-408 and 433.

**SUMMARY**

Unless the compensation received by employees is sufficient, in their minds, to meet their needs, labor unrest and various forms of work stoppage can be expected. Unless management's labor costs are within reason, management can be expected to seek means of reducing that cost, which may cost labor its jobs. It behooves both parties to remember the needs of the other. These needs and interests must be kept in fair balance. The employee compensation program is developed with this in mind.

Development of that program is a manpower management responsibility. The manpower group must analyze needs, study and collect data, advise top management regarding policy, and see that policy is implemented properly. In its effort to see that adequate compensation policy is established, the manpower group necessarily considers external, internal, and operational factors. These factors are similar in content to those related to the other "working objectives" of manpower management.

Employee compensation is of three forms: direct, contingent, and deferred. Unfortunately many people fail to realize that deferred wages cost money. Many overlook the fact that present wages must often be sliced significantly to pay for the high fringe benefits prevalent today.

Compensation programming is a difficult task. It requires careful consideration of many related factors. It involves incentive wages, establishment of relative job values, and thoughtfully conceived fringe benefits. It is with these factors that the following chapters are concerned.

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*The methods used to determine pay and the method of payment are usually as important to the concept of equitable compensation as the amount paid.*

## Work Assignments, Compensation, and Wage Incentives

Labor has its price. A large proportion of rank-and-file wages have a legally imposed "floor," but the "ceiling" is a situational matter. Both labor and management have their distinct interests and needs. Policy alone cannot assure proper compensation; assurance depends upon both correct policy and effective system. A carefully conceived and controlled system is a means of translating policy into practice.

Effective system rejects hit-or-miss methods of determining rates and benefits. It requires methodical determination of what work is done and what pay should be forthcoming. It operates to stimulate the quality and the quantity of production, and permits periodical adjustments as necessitated by changing conditions.

### **BASIC INGREDIENTS OF SYSTEM**

The exact amount of money given a person for work performed depends upon several factors. *First*, the work done influences the amount of remuneration. Jobs differ in value. *Second*, the way in which work is performed influences the remuneration. Satisfactory quality and quantity certainly have greater value than unsatisfactory work, and superior work is worth more than merely satisfactory. *Third*, the minimum pay for most rank-and-file jobs is preset by law, by labor contract, by community tradition or attitude, or by some combination of these. These factors reveal the nature of the required system.

Clearly the system must include a definition of the work assigned. Standards of output must be developed. Furthermore rates must be established which do not violate legal, contractual, or community requirements. This is the basic composition of a compensation system. It will be understood, however, that compensation rates cannot be

determined with the exactitude of a civil engineer's measurement of a plot of ground; nevertheless, a system is available.

In this chapter we are concerned with the establishment of work assignments, rate structures, and incentives. Before going further, however, let us be sure of two points. *First*, wage incentives and job evaluation do not by themselves determine the amount of money received by a given individual. *Second*, the most scientific approach to work definition, incentive development, and job evaluation can be made completely meaningless by incompetent administration of the labor contract and generally poor leadership.

### ESTABLISHING WORK ASSIGNMENTS

The process of determining what work needs to be performed and whether or not its performance serves to achieve the objectives of the organization is a primary duty of management. In essence it is the work-assignment function. Through this determination management arrives at answers to the questions of what, why, where, and how regarding the work involved.

The first step requires determination of the need for the work. This need should not be judged by some precedent as, for example, "we always have performed such-and-such an operation," rather, recognition of need should come *after* analysis. The work assignment should, in fact, be necessary to the completion of some product or service.

*What Work?* It is then logical to consider what the piece of work is that needs to be performed — in other words, identify the work. The work to be performed must be studied to determine whether or not it is really necessary. To be sure, doing something that has always been done is thought to be cogent reason for continuing. Cases have been known where employees, individually or collectively, pressure management into continuing operations that no longer serve a useful purpose. Featherbedding is descriptive of this situation. Only through study can cases be identified.

The engineer who works on the development of a new piece of equipment must first study what necessary operations it *must* perform. When finally and satisfactorily developed his machine will do "what" is necessary to produce the item desired. The chances are that in addition to the "what" of the work, he will have analyzed the "why" as well.

*The Why of Work.* The answer to the "why" of an operation is also of great importance, for each unnecessary operation adds to the cost and, hence, to the selling price! Work must be paid for, whether or not it contributes to end value of product. Frequently one finds operations existing long after the need has disappeared. Such inefficient practices injure the cost-income relationship and reduce a company's ability to pay.

*The When, Where, and How of Work.* The timing of operations, the "when;" their location, the "where," and the methodology, the "how," all have their part in the establishment of proper work routines. The "when" is an integral part of work-flow studies; the "where" relates to layout studies; of course, the "how" never can be omitted even if only minimum thought is given the "where" and "when."

Interest in these five adverbs is important for a very obvious reason: the continuance of loose operations contributes to higher-than-necessary prices and costs and weakens a company's ability to pay. This situation may result in compensation equivalent to charity if the employees continue to accept it or in a close down of the business because of competitor or union action. In either case, the employee and management lose.

**THE ARGUMENT.** Some managements consider that the process of determining the work content of jobs is not a part of the broad field of wage and salary administration. Some hold a different view. Be that as it may, the proper determination of employee jobs is directly related to personnel cost. Everything about the function relates to the use of manpower, the distinction between the machine's work and the man's work, and the scheduling of both. It relates therefore to the labor cost and requires the attention of the manpower division, the controller's office, and, of course, the line management. Furthermore, since the cost of labor may have a direct bearing upon a company's ability to pay and to stay in business, it is important to the question of compensation.

Although the totality of the job establishment function may not be a part of the wage and salary administrator's responsibility, he is involved. "Job establishment" is defined as the "process of determining the content of each job so that the total work assignments of an organization will reflect a minimum of duplicated and unnecessary operations and an optimum utilization of time, materials, and manpower consistent with the well-being of job incumbents."<sup>1</sup>

The function of job establishment is concerned with: (1) work flow, (2) simplification of work assignments, (3) job enlargement, and (4) determining the pace of employee performance. In pursuing these considerations, the process of job analysis is used. As stated in Chapter 7, job analysis is a fundamental manpower tool. It serves each function of manpower management as a data collection and analysis device.

In job evaluation studies, the job analyst's chief concern involves required employee skills, the extent of the physical and mental effort required, the job responsibilities, and the working conditions — in other words, the money values. For the purposes of job establishment, the analyst considers the details of the job — what they are, their

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<sup>1</sup>Lawrence C. Lovejoy, *Wage and Salary Administration*, by permission, (The Ronald Press Company, New York, 1959), p. 158.

necessity, whether duplication and unnecessary motion exist. In short, his interest lies in questioning whether the work can be done in a better way or at a different place.

Job establishment is related to "labor cost," which transcends all manpower activities including compensation. The relationship exists because, by definition, it seeks to determine and improve operational efficiency.

**THE MANPOWER RESPONSIBILITY.** Basically, job establishment is a line responsibility. It is the line's job, particularly top management's job, to say what, where, when, and how work will be done. Wise line managers seek the advice and guidance of staff specialists competent to analyze and determine the best way to perform the work required. Staff personnel such as industrial and design engineers thus become involved.

Since the nature of required work, and where, when, and how it is to be accomplished influence the type of labor skill and training required, the risks involved, and the rate of pay, manpower people also become involved with job establishment. Usually the job analyst and/or the wage and salary administrator handle this function for the manpower group.

**Analyst Relationships** Through process and methods analysis and time study, industrial engineers determine and prescribe work flow and simplification, pace standards, and job scope. Design engineers specify the quality requirements. Each of these factors relates to job content. The job analyst and/or the wage and salary administrator must maintain close liaison with those two groups.

**WORK ASSIGNMENT AND WORK FLOW.** Employee time must be paid for; therefore time should be spent in a way which optimizes the cost-income relationship. In other words, work should flow through a plant in as nearly uninterrupted a manner as possible. Interruptions increase the unit cost to management and may decrease employee earnings. Work flow is of interest to the wage and salary administrator because of the likelihood that interruptions beyond the control of the employee will be a source of conflict unless wage rates are founded upon standards which allow for these interruptions.

Furthermore, if incentives are to work, materials and parts must move to the workplace at the proper time. Again, interruptions must be avoided.

One of the useful job establishment tools is the process chart (Figure 73). This chart will reveal the sequences of all operations and facilitate analysis directed toward correction of factors causing or contributing to interruptions.

**WORK ASSIGNMENT AND SIMPLIFICATION.** "Work simplification is the organized use on the part of *all* the people involved to

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used, both the employee's and the company's earning ability can be improved if the process can be improved.

Some consider simplification as related wholly to matters of extreme importance. This is generally untrue. The entire field of work simplification is concerned, for the most part, with little things — the trifling matter of one sheet of paper, a couple of paper clips, an extra nail, and hundreds of very minute things. The trifling thing, by itself, is not very significant but can take on an aggregate value of considerable importance when multiplied by a thousand or tens of thousands. For example, a useless or unnecessary operation that takes only one minute to perform does not amount to much if this one minute is wasted just once a week by one employee. On the other hand, if a thousand employees are compelled by some operation each to waste five minutes a day, the total hours wasted by the group in their five-day week for a year will amount to 1,300,000 minutes or 21,677 hours. If the average hourly wage for this group is \$2.00, the wastage of the group totals \$43,354! This example illustrates how some trifling matter, seemingly unimportant by itself, can be pyramided into a sizable amount. Work simplification is not always the task of searching to identify some small bit of wasted time, or the institution of some change which will eliminate small bits of misspent time, but is concerned also with the entire elimination of an unnecessary task.

The simplification issue concerns compensation in a way which demands alertness of supervisors, engineers, and wage and salary administrators. Sooner or later almost every employee finds himself in a position to simplify his particular work. This *can* mean that he is being paid for work no longer performed. On the other hand, if he makes a significant contribution toward cost reduction, he deserves a reward, particularly if management hopes or expects to continue to receive helpful suggestions from below. Furthermore, a simplified process often enables a real improvement in take-home pay if: (1) wages are tied to quantity produced, and (2) the employee is willing to pass on his improvements or to act on those made by others. Simplified procedures often are hidden by individuals. This happens because of fear that their standards will be raised or their rates lowered. Man-power people need to train out this point of view by correct teaching and example.

**WORK ASSIGNMENT AND WORK MEASUREMENT.** A part of the task of establishing jobs is the determination of the acceptable pace at which work should be performed. The speed at which humans work depends upon various factors such as physical and mental endurance limits (which vary from person to person); health factors and willingness; the nature of the work performed; the materials used; the methods, and so forth.

In some situations, the employee's speed determines that of the machine and in other cases the machine paces the employee. Obviously the pace at which men can work or are willing to work, individually or in combination with some kind of equipment, determines the number of employees who will be required for a particular kind of work, or in total the number that a business must hire for its entire production. Pace affects labor cost and, if compensation is tied to pace, it affects the employee's pay check.

Pace determination is handled through methods and time study or work measurement techniques such as work sampling. Some jobs lend themselves to very precise objective pace establishment. In such cases, one expects little difficulty in tying compensation rates to the quantity produced. On the other hand, sometimes pace determination depends upon rather subjective measurement, and makes it difficult to relate wages to quantity produced.

For example, one can determine rather objectively the number of properly finished pieces a lathe operator turns out by merely counting them and using a relatively simple inspection technique (which may easily permit tying quality as well as quantity to the compensation rate). In contrast, it is most difficult to count the daily pieces of production of the inventor who might take a year or so to complete some particular project.

Work measurement often is the source of considerable employee unrest. Many times organized labor resists any and all efforts to examine pace, let alone improve it. Close study of such cases reveals that what is really objected to is faulty work measurement procedures. Only unthinking people will reject the fundamental concept of work measurement if they fully appreciate the objectives. These objectives can be stated as:<sup>3</sup>

- . . . To establish time standards for job performance.
- . . . To introduce, as nearly as possible, scientific work measurement for individual jobs, especially for those where normally it is difficult to count units of production objectively.
- . . . To reduce unit costs.

**WORK ASSIGNMENT AND JOB ENLARGEMENT.** Job dilution is the opposite of job enlargement. For many years job dilution was considered a proper and necessary step. Successful implementation of mass production usually meant that jobs had to be diluted: Where one worker once had made the entire auto, to mass produce the auto each worker was assigned one minor thing on each car. Then too, World War II found us short of skilled and semi-skilled labor. To get out the production it was necessary to dilute the jobs, hire unskilled people,

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<sup>3</sup>Lovejoy, *op. cit.*, p. 165.

and train them to perform one step or minor sequence in the total production. For example, where an armory hired skilled toolmakers before the war, it was necessary to break the toolmaking work down to "toolmaker," "precision toolmaker," and "intricate toolmaker."

Now things are different! In the first place, we have come to learn that many people object, either overtly or covertly, to highly diluted work, they consider it unimportant, boring and so forth. It thus becomes more difficult to hire the kind of people wanted and turnover, work stoppages and the like have a tendency to result. This of course increases labor cost. It also may mean an unwarranted increase in compensation rates in order to acquire or hold personnel.

In the second place, modern technology often requires teams of experts to produce just one article because no one human has all the skills necessary. Much of the production and research work in the missile field is like that.

In addition, many of the jobs in today's technology that require only one or two people are so very complex that these individuals are not production workers, they are technicians. In many cases today, therefore, instead of diluting we are enlarging jobs. The concept exists when a company decides to install electronic computing devices to replace some of its clerical operations as well as produce reports not obtainable without high-speed computers. The office employees needed to program and operate the new equipment must possess considerably more skill than that of an ordinary clerk. Incidentally, such installations create opportunity for many office employees to enlarge their skills, jobs, and total compensation. Obviously, the idea behind job enlargement is to combine several operations into an employee's total job so that he has a variety of work to perform rather than just a highly repetitive, humdrum assignment. Such enlarged jobs call for a higher rate of pay, but in some cases increased employee production more than offsets the higher compensation rate.

In summary, *all* jobs at *all* times will be in different stages of proper establishment; they alter with the change in methods, processes, materials, and equipment. Because of this dynamism, attention must be devoted almost continuously to studying job content. The task is a never-ending one.

### COMPENSATION RATE STRUCTURE

In the sense that a structure is something that is built, a whole developed from interrelated parts, the compensation rate structure becomes an "edifice." It will show, when described in chart form, the make-up of pay-rate schedules for an entire company or any of its subdivisions. The pay rates assigned to various jobs or positions increase with the difficulty of the jobs. This arrangement stems from the concept that jobs requiring a combination of greater skill, effort,

and responsibility rightfully command a higher pay rate than those of lesser complexity. This thinking is graphically shown in Figure 74. A quick look at the figure will indicate that Job #2, for example, commands a lesser pay rate than Job #8, the difficulty of which (the combination of skill, effort, and responsibility) is greater than for Job #2. The techniques used to determine the various levels of difficulty or complexity will be discussed in the next chapter; they are the techniques of job evaluation.

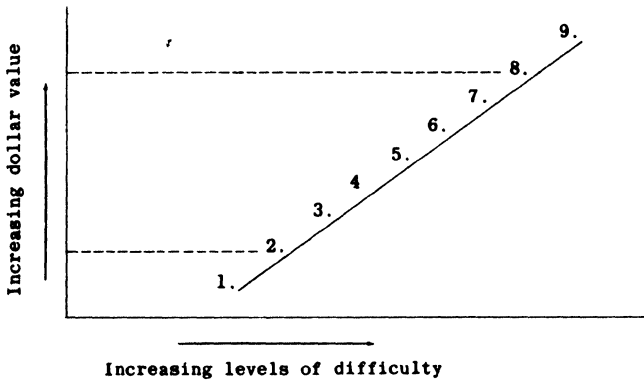
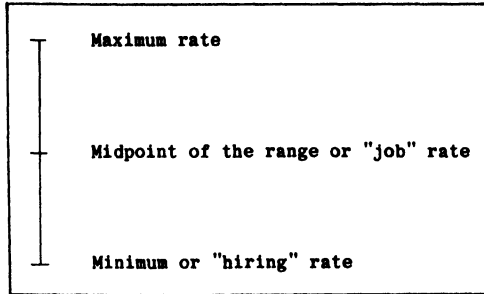


Figure 74

The job evaluation technique seeks to establish the relationship of jobs within an organization with respect to levels of difficulty, and then translate this relationship into dollars-and-cents rates. The expression of pay rates is qualified by a description of what the rates imply, such as the rate per unit of time or the rate per piece of production. These rates can then be qualified further by how well an employee performs his tasks as related to a standard of some kind. This latter qualification is referred to as employee evaluation, employee appraisal, merit rating, and a host of other titles. Rate structures can be arranged also to show rate variations due to an employee's length of service. In this case the pay rate becomes, in reality, a *range of rates* rather than a *single rate*.

**RATE RANGES.** A range of rates, when assigned to some job, means that the job's incumbent can receive more than one level of pay depending upon his job performance. In Figure 75, for example, an employee is hired at the minimum rate, let us say at \$1.50 per hour. As the employee learns the job, and can produce at the minimum



*Figure 75*

quantity and acceptable quality levels, his rate will be increased. Increase occurs either after a lapse of a definite time or as a result of management's estimate of his production. The increase is to the mid-point of the range — the "job" rate, for example, of \$1.80 per hour. The employee who turns out work of superior quality and quantity, really more than is required as the acceptable minimum standard, should receive a rate higher than the mid-point, perhaps the maximum, let us say \$2.20 per hour, as long as he maintains the superior standard. Compensation received in excess of the mid-point is really a bonus, and should not be continued unless the "superior" standard is maintained.

The rates of jobs where production can be counted are often paid on a piecework basis. The piecework rate for any job represents the results obtained by a range of rates, namely, more compensation at the end of the day results from more numerous products. For positions which carry a higher rate based upon length of service with the company or on a particular job assignment, pay is based on a range of rates also. In addition salaried positions frequently carry a range of rates. Although production count may be impossible, increases in salary are predicated upon management's appraisal of the employee's work at various periods. One of the faults in the administration of ranges of rates is the determination of the right criteria upon which to base pay increases. If the maximum rate is for "top" superiority of work, few people ever would earn this top pay. One the other hand, if the passage of time is the only criterion used in granting salary increases, all employees will eventually receive the maximum pay rate of the range.

A rate structure built upon the concept of rate ranges, as illustrated by Figure 75, requires additional considerations, such as the extent of the overlap of rates between the compensation for one pay grade and the next higher or lower pay grade. The concept of "pay grades" raises another issue. Pay grades call for the placing of several different jobs in the same grade because of the close proximity of their

dollar value. Naturally it is necessary to determine how broad the grade should be. In other words, a definition of close proximity is necessary in determining what level of difficulty will be considered approximately the same from a money point of view; of course, it is very difficult to recognize fine differences. For example, how could management explain the difference in the rate for job A at \$1.5575 and that of job B at \$1.5580 per hour? How could a union explain this \$.0005 per hour difference? Such minute differences are not defensible, hence, in this case, one logically places Jobs A and B in the same pay grade.

The decision regarding the width of a grade must be realistic or there will be many grades with only a small fraction of a dollar's difference. To eliminate job grades that have too close pay rates, rate structures have been built so the mid-point pay rate for grades will be based upon a percentage differential such as 10 per cent, 12 1/2 per cent, or 15 per cent. For example, if the mid-point rate for grade #1 is determined to be \$180 per month, then at a 10 per cent differential the mid-point rate for grade #2 would be 10 per cent higher, or \$198 per month. The width of the grade, as to job difficulty, amounts to \$18.00 per month. In terms of levels of difficulty, Figures 76 and 77 illustrate what is meant by width of grades. Note that in these examples the width of grades in Figure 76 exceeds those in Figure 77. The determination of grade width is based upon judgment as to what "width" is most suitable in a particular situation.

When building a rate structure, in addition to determining the width of the grades, the extent of the overlapping of grades must be settled. Figures 78, 79, and 80 illustrate three different concepts of grade overlapping. Figure 78 shows no overlapping of grades — the maximum of a grade becomes the minimum of the next higher grade. In Figure 79 the maximum of one grade becomes the mid-point of the

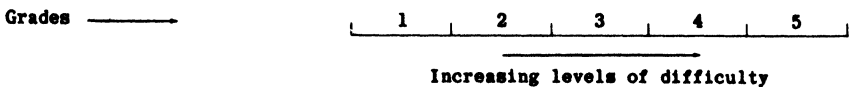


Figure 76

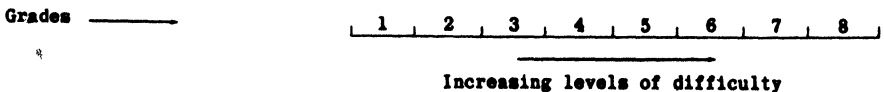


Figure 77

Levels of Difficulty

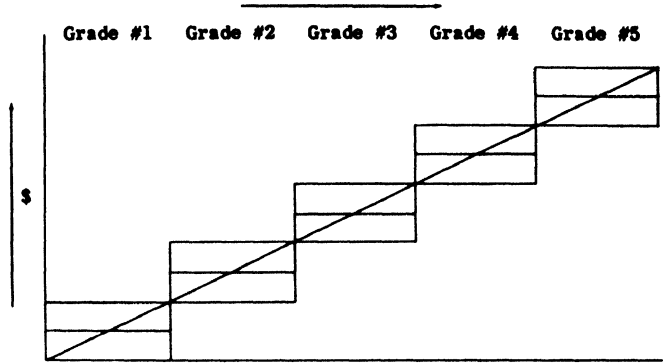


Figure 78

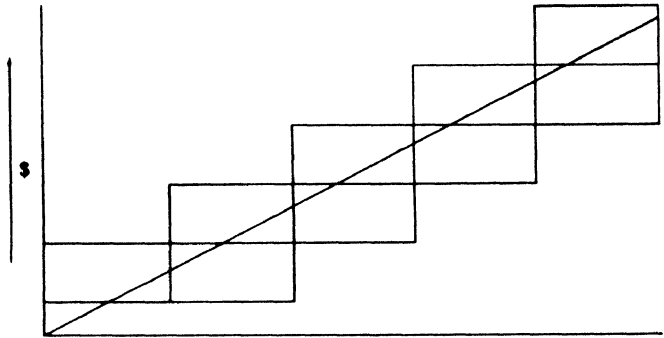


Figure 79

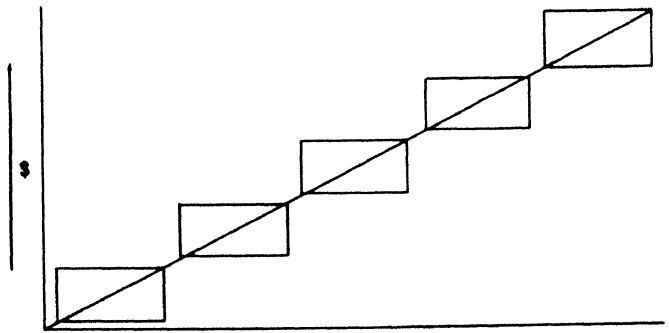


Figure 80

next higher grade and the minimum of the second higher grade. In some structures where there is overlapping there may be two grades of overlap — the maximum of a grade becomes the minimum of not the second but the third grade higher. Figure 80 shows the gap idea — the minimum of the next higher grade is above the maximum of the grade next lower. In this case, when an employee is upgraded to the next higher classification, he receives a pay increase even though his rate may be at the maximum of his last grade. This, of course, does not necessarily take place in cases illustrated by Figure 78 or 79.

*Single Rates.* The single rate hardly needs any description. The single rate simply means that for the job to which it applies there is only one rate of pay, regardless of the employee's length of service or how efficiently he performs his work. The only chance a single rated job has of being increased is through a general pay increase for all jobs across the board, on either a cents-per-hour or percentage basis. Figure 74 illustrates the single rate idea for the jobs shown as #1 through #9.

### KINDS OF WAGE PAYMENTS

Two main types of compensation payments exist, namely those based upon a unit of time, and those based upon a count of units of production. Time wages apply when there is no satisfactory way of measuring the exact quantity of work produced. In addition, they are used when no attempt has been made to set work standards. Where it is possible to make a count of production, it is possible to base compensation on what is produced. Measurability is an essential element in the establishment of piece-work wages.

*TIME WAGES.* Typically referred to as "daywork wages," time wages are based upon some period of time such as an hour, a day, a week or month. Compensation rates are expressed as \$1.50 per hour, \$12.00 per day, and so forth.

Tasks which do not lend themselves readily to a quantity count of production include certain office jobs, repair and maintenance work, and work which only indirectly contributes to production of a unit of a finished product. Broadly speaking, all jobs have a bearing on the production of a product or service. Sometimes, however, that contribution may be almost impossible to measure, except in a general way. For example, a timekeeper contributes to the finished product, though indirectly, because his work assists in making up the employee pay envelope. It would be most difficult, however, to determine the timekeeper's wage equitably by counting his daily production.

Even where exact measurement of contribution is impossible, management must make estimates or appraisals of the production turned out by daywork employees. Let us again bear in mind that compensation is paid for performing work of some kind. Either ob-

jective measurement or subjective appraisal of the quantity of work done therefore is an essential function of management.

*Advantages and Disadvantages of Time Wages.* Man likes the "easy" way. Time wages or daywork are exactly that – easy to understand, easy to compute. Furthermore proper utilization of daywork does not tax the ingenuity of management in developing and defending standards. Time wages often are the only suitable means of compensation. This is true not only when there is real difficulty in measuring output, but also when establishing a beginner's wage. Many people feel that since unions often prefer daywork, the system is desirable. This seems a rather sad point of view. Actually the basic reason for organized labor's preference for daywork is that it reflects the *equality-of-the-worker theory* – the theory that those who do similar work do, *per se*, exert equal effort and should be entitled to the same wage rate. This, of course is a theory of conformity and mediocrity; those who favor it will find it in full bloom in the Communist countries – for the rank and file, of course.

The basic weakness of time wages lies in the fact that the employee's pay is not related directly to the quantity and/or quality of his work. His initiative is not challenged. It makes him a slave of the power of group effort so far as any increase in compensation is concerned; he lacks the ability to guide his own fiscal destiny. Of course this cannot be held as a disadvantage where daywork is the only logical means of paying for work performed.

Another real weakness of the daywork approach is its real or potential effect upon labor cost. Where production count can be, but is not made, and where quality of production can be, but is not related to the individual's performance, unit labor costs are not under the kind of control "good" management should be exercising. Often they become unduly high, and production becomes uncomfortably erratic.

*PIECE WAGES.* Piece wage compensation is predicated upon payment of a fixed sum per piece produced by the jobholder. The idea goes back many years. It existed before the factory system began, when people performed their work at home. For example, if a man made a chair of a given type and was paid \$3.00, he would receive \$30.00 for making ten chairs. One finds the piece work concept almost everywhere under free enterprise; it has carried over to commissions paid to salesmen as well as to factory and service work. Obviously such payments are based upon a count of production.

Over the years, additional factors have entered into the methodology of establishing compensation tied to the count of production. For example, minimum wage laws relating to interstate commerce impose a \$1.25 base (as of 1963) regardless of production count.

*Advantages and Disadvantages of Piece Wages.* A properly established piece rate in a responsive situation can be a very powerful

incentive. Where the rate is established fairly, it provides employees with a maximum incentive. Furthermore, the computation of the individual's wage is straightforward and simple. It is easy to understand from the employee and management points of view. Although many unions still object to piece wages, they have been used with great success in the garment industry and many other enterprises under the control of organized labor. In these cases it has been found that both the employees and the management benefited.

Most of the objections to piece wages stem from poor management practice. They arise because of improperly developed rates, poorly designed layout and work flow, and the like.

One of the most fallacious objections to piece wages is that to apply the concept properly, management must pay closer attention to quality control. No "good" management (for that matter, no reasonable labor leader) advances such a preposterous objection. In this day and age few things are more important to the continued profit of a concern than its ability to make a product which meets the customers' requirements for conformity and quality of design.

#### **INCENTIVE PLANS — THE BASIC ARGUMENT**

Although little difference exists between piece work and incentive work, the latter has, through evolution, become the term used to describe compensation rates based upon production count. Generally speaking, incentive plans recognize the minimum hourly wage concept. In addition they establish the expected and acceptable work quantities that should be produced by the average employee if he is to remain on the job. Over and above this minimum level, the employee can earn money in some proportion to better than standard production and in addition to the base rate established by job evaluation.

For example, prior to May, 1961, the minimum wage paid to employees covered by the Fair Labor Standards Act was \$1.00 per hour, but through evaluation of a drill press operator's job a minimum, or base of \$1.60 per hour was established. In this example, the drill press operator will be paid his guaranteed base rate of \$1.60 per hour even though his production for some reason does not add up to \$1.60 per hour. Under an incentive plan, however, this drill press operator may be able to earn up to \$2.10 per hour. Of course, if he does not have the ability to earn his base rate of \$1.60, he is misplaced as a drill press operator. On the other hand, if he can average \$2.10 per hour, his average incentive earnings may be \$2.10 per hour regardless of the fact that he has a base rate of only \$1.60 per hour.

Basically, incentive plans have been developed to stimulate a higher level of production than if there were no money prize to spur employees on to produce greater quantity. There are all kinds of incentives which spur people on to greater activity. Approbation of

one's fellows incites people to devote time and energy to tasks for which there is no reward other than the applause of the grandstand. Men desire election to union offices knowing there will be no monetary compensation involved. Men and women devote hours to charitable organizations without monetary compensation. In times of war, men and women have displayed valor far beyond the call of duty. Some folks display undue pugnaciousness on the union picket line, even suffer bodily injury, not because they love their jobs in the picketed plant so much, but because they are incited to action by a stimulus which they probably cannot describe. At the workplace men and women devote considerable energy to gain promotion even if it means only a change in title — not necessarily increased salary. The desire of management to get employees to do a day's work or better than a day's work has resulted in the development of incentive plans. Apparently these serve to motivate people hence, various systems have been developed. Anyone who believes that incentive systems properly set up and administered are basically unfair to employees and serve management no good purpose needs to start his business education all over again.

To be sure, incentive systems may be improperly established, poorly communicated to the employees whose take-home pay is based upon them, and result in compensation totals unfair to either the employer or the employee. On the other hand, incentive plans based upon a fair employee pace, with compensation calculated at the "going rates" for like jobs in the community, do produce costs with which a consumer can live. There may be reasons, but no good ones, why consumers should pay unrealistic prices which include excessive labor, management, or material costs just to maintain some people in an uneconomic privileged position! In the interest of seeing to it that proper employee work pace is maintained and at the same time compensated on a pay scale consistent with the effort, certain ground rules for the development and administration of sound incentive plans must be observed.

*ADVANTAGES OF A WAGE-INCENTIVE PLAN.*<sup>4</sup> A sound wage-incentive plan, properly conceived, installed, and administered has numerous advantages. Such an installation is predicated on the application of good engineering-methods studies and acceptable wage-incentive, rate-setting techniques. Advantages accrue to not only the employers or manufacturers but to employees or workers and consumers. Possibly, too little has been done to emphasize the advantages of wage-incentive plans to employee and consumer groups. Perhaps more sympathy for, and acceptance of, the value of wage-incentive plans is attainable if greater emphasis is placed upon these

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<sup>4</sup>Lionel B. Michael, *Wage and Salary Fundamentals and Procedures* (McGraw-Hill Book Company, Inc., New York, 1950), pp. 235-236.

three-way advantages. Too often wage-incentive plans are thought of by the uninitiated as devices aimed at getting the most out of workers with no recognition of the corresponding advantages to employees and consumers that result from a fair and sound wage-incentive plan.

Some of the advantages accruing to each of the three parties involved follow. Certainly these are not all inclusive, but they do highlight the more important advantages.

1. Employer Advantages
  - a. More effective operation through standardization of methods and costs.
  - b. Increased production through improved methods and greater work productivity
  - c. Reduction of unit costs through greater utilization of equipment and worker effort
  - d. Increased market potentialities through providing a product at an attractive price
2. Employee Advantages
  - a. Provision of improved methods and working conditions.
  - b. Compensation of workers for increased productivity.
  - c. Realization of increased earnings and purchasing power
3. Consumer Advantages
  - a. Availability of a greater supply of commodities.
  - b. Availability of better designed and better quality products
  - c. Availability of desired products at a reasonable and sometimes lower price.

### REQUIREMENTS FOR AN EFFECTIVE INCENTIVE PROGRAM

During the early part of this century, say from 1914 through 1932, unscrupulous and untrained opportunists did such a poor job of attempting to represent the ideas and techniques of Frederick W. Taylor, Henry L. Gantt, and Frank and Lillian Gilbreth, that industry still is paying the price. Where the opportunists moved in, incentive programs usually failed. Some of the reasons for failure are listed as follows.<sup>5</sup>

1. Generally, supervisors were not brought into the programs until they had been installed. Even then, little was done to teach them the advantages, disadvantages, and pitfalls of the programs, and even less was done to show them the importance of their part in program administration.
2. Generally, supervisors had little or no appreciation of the importance of proper work flow, proper quality standards, or the importance of correct allowances for human needs.

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<sup>5</sup>cf. Lionel B. Michael, *Wage and Salary Fundamentals and Procedures* (McGraw-Hill Book Company, Inc., N. Y., 1950); J. K. Loudon, *Wage Incentives* (John Wiley & Sons, Inc., N. Y., 1953), pp. 1-10; and Lovejoy, *op. cit.*, pp. 333-338.

3 Usually the employees were told as little as possible about the programs. They had practically no knowledge of the mutual benefits achievable, nor did they have any appreciation of the fact that some jobs do not lend themselves to incentive planning, even though they may have been in close proximity to jobs that did fit the incentive mold.

4. Many installations of incentive plans were left to engineers who had absolutely no training in industrial engineering work or concepts.

5. Frequently the standards, either as developed or later as administered, did not take into account delays beyond the control of the operator or variations in operator ability. Just as frequently standards were changed as soon as a majority of the operators showed an ability to reach them.

6. Frequently the employee was faced with a ceiling on his earnings, a point beyond which additional output meant absolutely no additional return for him. In fact, records show that in many cases as soon as a particularly good worker was able to exceed the standard by some amount (determined by an "engineer") his rate would be cut.

7. In the early days few managers understood the importance of quality control. Furthermore, the techniques applicable in that field today did not exist at that time. This meant that the employee was not supported by the kind of inspection that could distinguish between worker-caused scrap and machine-caused scrap. Naturally the employee suffered.

8. In all too many cases incentives were installed with only one thought in mind: to *maximize* production. If one considers the important difference between optimization and maximization, it becomes clear that although the latter *might* consistently reduce unit costs over a short period of time, in the long run the operating costs, particularly the labor costs, did not decrease. Employee resistance often drove labor costs higher than before the incentive was established. The net result was that both labor and management shied away from the idea.

If the mistakes of the past are to be avoided and if management expects labor's co-operation in developing a mutually beneficial compensation program, sound principles must be followed. They must be applied to the incentive plans used, as well as the over-all policy and the establishment of rate structures. The minimum requirements for effective incentives are as follows.<sup>6</sup>

1. Effective incentives require standardization of methods, distinct units of measurement, and accurate (or reasonably so) time values.

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<sup>6</sup>Michael, *op. cit.*, pp. 184-191; Loudon, *op. cit.*, pp. 46-48; and Lovejoy, *op. cit.*, pp. 333-336.

Unless the work lends itself to this set of conditions, incentives dependent upon a production count should be avoided.

2. In most industrial operations, there will be some degree of spoilage through no fault of the employee. Effective incentives require that a distinction be made between employee-caused and machine-caused spoilage. Naturally this means that the incentive program needs the support of an effective quality control program also.

3. The standards used in an effective incentive program protect product quality. Quality is not endangered because of the employee's "rush to make standard, or better."

4. Controls are necessary to protect the employee against environmental hazards. Furthermore, if incentives are to work, the supervisors must devote considerable attention to safety.

5. Incentives should permit a decrease in management unit costs and an increase in employee earnings. The cost of additional inspection or administrative action arising because of increased output should be offset by the return from that production.

6. Effective incentives result in employee earnings in direct proportion to his increased output. Unfortunately too many managers still believe that the worker should share his production over standard with management. If the plan is correctly developed, if the standard and the rates are properly set, it seems logical that the worker is entitled to full benefit from production over standard. After all, correct rates are based upon study of the return resulting from production. It seems reasonable to assume that, if correct, those rates will give management what it needs to maintain a satisfactory cost-income relationship.

7. The effective incentive plan is understandable and utilizes easy computations. If the plan is so complex that the employee needs a professor of mathematics to figure out his pay, then the plan is simply no good — it will create resistance and frustration.

8. Effective incentives call for a pace that is reasonable. An incentive plan which, except under unusual situations, will not permit the employee to achieve fair incentive earnings, is no spur to greater effort.

9. The effective plan guarantees the hourly base rate. The employee requires the security of knowing that regardless of some unforeseen event, or his own momentary inability, he will take home at least his hourly base pay. Furthermore, incentive base rates should be no lower than the rates for non-incentive jobs.

10. The incentive pay should be sufficiently different from the hourly base rate to make worthwhile the additional effort required to assure that bonus.

11. The effective incentive plan is designed so that unit costs become constant once the employee begins earning the bonus.

12. Effective incentives assure the employee of stability in standards and rates except when methods, materials, layout and the like are changed *for cause*. It is not enough to say that a new method is

to be imposed — like replacing a standard screw with a Phillips-head. The change must be real and its need supported by analysis.

13. The effective plan is based upon a controlled environment. The worker is assured of receiving the right material, in the right form, at the right time and in the right place, and he is supplied with the correct tools and equipment

14. Where incentives work, the employee knows that policy is followed, that supervisors and industrial engineers are not toying with standards, rates, methods and the like except where study shows the need. Furthermore, the employee participates in change as well as in development of the incentive plan. In addition he is thoroughly instructed as to the benefits of the plan, the details, and the pitfalls that he and management must avoid if it is to be of mutual benefit

15. Effective incentive plans are administered by supervisors who, like the worker, know the ins-and-outs of the system. If the worker has reason to feel that the supervisor does not understand the plan, then it is likely that he will resist it

16. Supervisors must be brought into the development of the plan. If they do not participate, they can be expected to offer resistance.

If the foregoing requirements are recognized and met, the resulting incentive plan should be acceptable to both employees and management. Employee acceptance is important. Unless it is acquired, conflicts result that could easily cause failure of an otherwise effective manpower management program. Acceptance must not be assumed. It must be earned. Acceptance will come only through participation, a sincere and careful education effort, and the kind of daily administration of *all* manpower activities which gives employees and their representatives reason to trust management

If the plan is a fair one, it can be explained with comparative ease. Furthermore, if an incentive plan is sound, fair to all concerned, and defensible, no management apology for its existence is necessary at any time.

### TYPES OF INCENTIVE PLANS

Incentive plans can be classified in several ways: individual and group, money and time base, and by the amount of the “premium” or bonus it is possible to earn. *Individual* plans provide the worker with compensation as a result of his own production. *Group* plans mean that an individual receives a “share” based upon the group’s production. If the work’s level of difficulty is the same for each member of the group, each receives an equal share of the total. If the work varies in difficulty, the earnings of the individuals comprising the group will be divided accordingly.

Group incentives depend upon group efficiency. The unequal efficiency of individuals comprising the work group often leads to

severe dissatisfaction with group plans. If the workplace arrangement enables the group members to "police" each other, however, this type of incentive system may be effective.

Sales commission plans are examples of individual incentives. Like the piece work concept, the usual commission plan has a base rate plus an added incentive for better than standard production. Group incentives are not found frequently in sales work; however, some forms of group incentive are found in executive compensation plans.

*Money base and time base* plans involve the count of production. They differ in the statement of what the compensation rate represents or for what it is given. Money plans state the money rate paid for some given amount of production — say \$3.00 per 100 pieces. Time plans state the pace at which the work is to be produced. That rate then can be translated into money terms. For example, the time rate may be quoted at 60 pieces an hour; the pay for that hour may be 1 1/2 times the hourly rate for whatever the job is if the employee turns out 90 pieces an hour.

When the rates for production are expressed in dollars and cents, an increase or decrease in the general wage level makes necessary a change in *each* rate then in effect. This can create a large amount of clerical work because the pace of production is indirectly expressed in money together with production quantity. Furthermore, when base rates are used, they must be completely revised when the wage level is changed across the board.

Under time rates, if a general pay increase is made across the board, the only clerical work required is the changing of the employee's base rate in the records. The base rate is the multiplier.

Regardless of which expression is used, time or money, if the rates are set on the same bases of pace per hour, and the same compensation rate for the given class of work, the employee's total compensation rate will be the same. Of course if the bases differ, the pay will differ.

**FORMULAE — PRIMARY PLANS.** A large number of incentive plans exists — too many to discuss here. Most plans in use today, however, stem from one or more of the so-called primary plans handed down to us by Taylor, Gantt, Halsey and other industrial engineering pioneers. The formulae for certain of these primary plans are as follows.

Where — E = earnings	R = rate per hour
n = number of pieces	H = standard hours
r = rate per piece	p = per cent bonus
h = actual hours worked	P = percentage premium
B = established bonus	t = time saved

*Production Count Plans –*

Taylor Differential Piece Rate

- for production less than standard,  $E = nr_1$  ( $r_1 = \text{low rate}$ )
- for above standard production,  $E = nr_2$  ( $r_2 = \text{high rate}$ )

Gantt Task and Bonus System

- for below task (standard) production,  $E = hR$
- for standard and above production,  $E = R(H + pH)$

Emerson Plan

- for below standard production,  $E = hR$  (for up to 67% of high task)
- for production at standard or above,  $E = hR + B(hR)$  (at or above 67%)

*Time Saved Plans*

Halsey Plan

- for below standard production,  $E = hR$
- for production at or above standard,  $E = hR + P(H-h)(R)$

Rowan Plan

- for below standard production,  $E = hR$
- for production at or above standard,  $E = hR - \left(\frac{H-h}{H}\right)(hR)$

100% Premium Plan

- for below standard production,  $E = hR$
- for production at or above standard,  $E = hR + Rt$

*Guaranteed Piece Work*

Base or Piece

- for below standard production,  $E = hR$
- for production at or above standard,  $E = nr$

Base Plus Piece

- for below standard production,  $E = hR$
- for production at standard,  $E = hR$
- for production above standard,  $E = hR + nr$  (for all above standard)

In addition to the primary plans, other ideas have been developed which seek to add the concept of quality to the concept of quantity. One such plan appears by formula as follows.

*Where* – symbols remain as previously presented, but the following are added:

$q_p = \text{quality penalty}$

$q_b = \text{quality bonus}$

for below standard production, no quality check;

$$E = hR$$

for standard production, acceptable quality;

$$E = hR + q_b$$

for standard production, unacceptable quality;

$$E = hR$$

for above standard production, acceptable quality;

$$E = hR + q_b B(hR)$$

for above standard production, unacceptable quality;

$$E = hR + B(hR) - q_p(n)$$

The foregoing obviously is complex and administratively troublesome. To avoid such problems, managers interested in relating quality and quantity to the incentive find it best to set the standards with this relationship included.<sup>7</sup>

*A POINT OF VIEW.* Although many of the plans invented in the past are still in use and identified by their author, one usually finds the good points of several such plans combined into one tailor-made system for a given firm.<sup>8</sup> It should be remembered that management is duty bound to establish the proper paces for production and at the same time pay the "going rate" for the particular type of work to which the incentive plan applies. Furthermore, managements must approach the establishment of production pace as well as pay rates on a studied and engineered base rather than merely trusting to past practice. The scientific study of jobs does more than just enable determination of a suitable production pace. Probably one of the greatest rewards of such studies is the improvement made in the processes themselves.

In the establishment of incentive plans, it helps to remember that people need goals. Given such goals as fit the situation, they have a purpose, a reason to produce. Pace-budgets may hopefully be considered a form of goal for the production worker. Incentive plans require pace-budgeting because of the use of standards. Such plans establish quantity rates as well as money rates for the employee to shoot at.

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<sup>7</sup>The student will find it simple, and perhaps interesting, to assign values to the symbols presented and work out the various plans. If rates typical of the local area are used, such an exercise may be quite informative.

<sup>8</sup>cf. Charles Walter Lytle, *Job Evaluation Methods*, 2nd (The Ronald Press Company, N. Y., 1954), and Charles W. Brennan, *Wage Administration* (Richard D. Irwin, Inc., Homewood, Illinois, 1959). Out of 85 Connecticut firms surveyed, the vast majority of these using incentives employed either guaranteed piecework or a form of the 100 per cent premium plan: cf. Richard M. Story Jr., *Wage Administration in Eighty-five Connecticut Companies* (I. E. Thesis, Lehigh University, Bethlehem, Pa., 1957).

A *SPECIAL PROBLEM*. One of the ticklish problems wage and salary people contend with pertains to the union's acceptance of incentives. Recommendations have been made concerning the correct approach to this issue, but one point warrants special consideration namely, cost. Management is interested in cost, labor generally is not. It is as simple (though complex) as that. Every once in awhile, however, a union-management situation shows up that breaks away from the typical case. When this happens, the outsider could learn something helpful if he would ask why! One reason that unions *do* cooperate with management and turn their attention to cost is that management turns its attention to the education of the union, particularly the local officials.

Manpower people know full well that the *equality of workers theory* costs the employee. They know that where the process lends itself to incentive wages, but they are not used, both labor and management are losing income. They seldom pass such information along to the union, however, or get the opportunity to do so.

If management expects union appreciation of its problems, then they must give the union the opportunity to understand them. One way of presenting labor cost data to labor is simply to tell them. Naturally this is likely to fall upon deaf ears. If the two-way effect of properly developed incentives is presented, however, together with full and careful explanations, there is a good possibility that labor's ears will no longer remain closed.

The technique is to present actual comparative costs of the systems under consideration. Present them so that the cost to operate is clearly related to the cost to the employee of *not* using the incentive. Present the income relationship graphically so that the mutual benefit is clear.

## OVERTIME COMPENSATION

Overtime compensation refers to money payments to employees who work beyond some given number of hours per day or week. In reality such compensation is a premium paid for time worked in excess of a so-called "normal period." Hourly rated employees have received overtime pay at their straight-time rate. Employees whose pay was based on a longer unit of time than an hour, however, may or may not have received "extra" pay for hours worked longer than their normal tour of duty. The latter condition still is found where management people are concerned; however, non-management people have an improved situation today.

The Fair Labor Standards Act established the work week as 40 hours for millions of jobs, and weekly hours worked in excess of 40 are to be paid for at the premium rate of time-and-one-half. The Walsh-Healy Act established mandatory overtime premium pay (for

those covered by it) at time-and-one-half for work in excess of eight hours per day and/or 40 hours per week. Through management-union negotiations, overtime pay for some groups of employees may exceed the legal minimums. In some cases, the overtime will get as high as double time, and in many industries today the overtime premium is paid on a daily basis.

Production schedules which create the need for overtime pay do increase unit costs. One cannot blithely condemn a firm where overtime is typical, however, there may be circumstances which make it more economical to pay a few hours overtime premium than to hire additional full-time employees or to create additional shifts. Nevertheless, management must exercise close supervision over the necessity for overtime work.

Some employees, having nothing else to do after work, would just as soon put in a few extra hours once or twice a week and collect the premium pay. Unfortunately, unless there is good supervision, they can easily "stretch" their work so they can be "forced" to work extra hours.

Overtime premiums take other forms. For example, it is the custom in many firms to pay the cost of lunches or supper if the overtime work extends to, or through, the employee's normal supper hour. In fact, some labor contracts specify this. Supper money can amount to a considerable sum if not constantly supervised.

A management interested in proper control of operations will see to it that the wage and salary administrator maintains records concerning overtime. These will be kept so that frequency by department, and in some cases by department and seasonal period, can be studied. The wage people will compare cost of overtime to production resulting from it. If the value of production does not offset the costs, they will alert line management to the situation, pointing out the concentration of frequency. Perhaps a supervisor needs additional training, or to be replaced. Perhaps the production scheduling operations should be handled through operations research techniques instead of hit-or-miss, we-always-did-it-this-way methods.

### SHIFT DIFFERENTIALS

The origin of shift differentials is generally attributed to World War II. Study of any competent history of the railroads will reveal, however, that shift differentials were applied in some cases during the early years of America's expansion. Regardless of the point of origin, these differentials are given as a bonus or incentive for working so-called "undesirable" hours.

It is the custom today to pay a few cents additional per hour to the second shift and a still larger amount for the third. In one case,

for example, the second-shift employee receives 8 cents an hour more for his base rate than the first-shift worker and the third shift receives 12 cents an hour more than the first. Sometimes the differential is expressed as a percentage of the first shift's pay. If the first shift receives a base pay of \$1.20, and the differential is 10 per cent each, cumulatively the second thus would receive \$1.32 and the third would quietly pocket \$1.45.

The use of shifts raises some peculiar questions. For example, it is not unusual for a man to have to work through into the next shift. The question arises, then, for how long does he have to work in the next shift before he is entitled to the differential for that shift? Sometimes the question becomes a matter of contractual arrangement. Sometimes it is handled on the basis of overtime pay instead of shift differential. At this time there seems to be no standard or easy to recommend answer to the question. It appears to be situational.

Rotating shifts are used in industry quite frequently. Where this is the custom, the employee who has been used to a third shift differential for several weeks will find himself explaining a "pay cut" to his "better half." This can become a most embarrassing situation. In fact, this arrangement can become the source of serious labor problems.

Shift differentials are here to stay. The problem of relating the extent of the shift inconvenience to money certainly cannot be determined scientifically. This is a bargaining table matter, and management should realize that there is little for them to go on to support a view differing from that of the union except the precedent of the case. On the other hand, there are no legal requirements that make shift premiums mandatory.

### SOME ERRORS IN PRACTICE

Many manpower problems originate in the pay check or are related to it in some way. Some problems result from dissatisfaction with the amount of money received, some with the time of receipt or the method of payment. Other problems arise because of unethical management practices or from simple clerical mistakes. Perhaps the most unfortunate practice of all is that reflected by the following situation.

**Sam's Job** Sam was hired as one of the junior methods engineers in the --- company. During the orientation lecture his supervisor informed him that all junior engineers receive an end-of-the-year bonus based upon the number of changes they have made in production.

It took Sam about three weeks to discover that the accepted approach was to make a change one year and change it back the next. He also found that rates or standards were constantly being raised and lowered.

Is it any wonder that this particular company had as many as three workload arbitrations in one month and that labor turnover, absenteeism, and tardiness were higher than in any concern in the region?

**The Angry Wife** Employees were paid by check on Fridays. The banks were closed on Friday evening and on Saturday. Most of the men stopped at a nearby corner bar and cashed their checks on the way home Friday nights. The employment manager was getting fed up with the "angry wife" phone calls.

In small towns particularly, it is important for management to work out an arrangement with local merchants and banks so that pay can reach the home and be expended on the necessities. In one community the two plants have an arrangement whereby the employee can have his check deposited to his account by the company. In another the company has established, or arranged for the establishment of, a branch of the local bank right on the premises. Still other concerns handle the problem through the credit union or by paying in cash (cash raises problems of its own). The point is that instead of deciding the method of payment to suit the convenience of the company, the method should fit the particular community situation *and* the company's needs.

**A Matter of Understanding** The Blank company had installed an incentive system. It had, in fact, been done properly; methods, layout, work flow, inspection, and safety had been carefully considered. Furthermore, the standards and rates were fair. The rates were such that the worker received full value for production over standard.

While the installation was taking place, the union officials and the rank-and-file employees were carefully briefed regarding each step. About three weeks after the system was put into effect, however, grumbling began.

The dissatisfaction was concentrated in the foundry. Investigation indicated that the employees were disturbed because they were unable to tell what portion of their pay resulted from the base rate and what portion resulted from incentive. Further study indicated that a simple tally form on the envelope would clear up the problem.

Where payment is in cash it is important to provide a current record of earnings and deductions. Furthermore, where incentives are used, the employee should be able to determine his bonus and his base pay without having to make a calculation. Some firms have adopted a color code which they use on checks and on pay envelopes. In this way the employee becomes acutely aware of what is a tax deduction,

what is withheld for union dues, retirement, and the like, and what is received as base and incentive.

**Learning Rate** The labor contract required that new employees be given a learning period and a special learning rate. In general, throughout the plant, a new employee received ten days of instruction and his compensation was based upon the minimum common-labor rate for the plant. Following that period he received a 20-day period in which to make standard. During that period he was paid the base rate for the job. If unable to make standard and hold to it for a minimum of three days by the end of the period, the employee was then discharged or transferred to some lower skill job.

The contract said nothing about a learning period for employees transferred to a new job, only for new employees. Mary was transferred to a new job. At the end of 15 days she was not able to make standard. During those 15 days she received the common-labor rate. On the sixteenth day she was discharged because she was unable to make standard.

The case went to arbitration.

Regardless of the outcome of the case, it seems logical to maintain that any employee given a totally new assignment should be entitled to a learning period. Furthermore, when the transfer is made for the convenience of the company, or voluntarily, it seems only fair to give the individual a base pay comparable with the base of the job just vacated. It also seems only fair that, in such cases, the employee should be given the opportunity to transfer back to the old job if he cannot do the new one.

Many daily problems related to compensation could be avoided if supervisors and management would pay attention to the little things. In the learning rate situation, for example, just because the contract did not specify a rule for movement of old employees into new jobs, this was no reason for the supervisor, or anyone else, to ignore the need for learning time and an equitable rate of pay. In the "pay check" situation, alert management would have realized that employees would find it difficult to convert their checks into cash. Too often management spends a large amount of money setting up a technically good compensation system and then ignores the related administrative matters. Too often the result is a breakdown of the system, sometimes before it really gets into operation.

## SUMMARY

Compensation is a problem of cost and income. It is a problem of balance, of doing what is right from the point of view of the company and the employee. It is a problem of optimization, obtaining

the best possible return to the company *and* the employee while assuring present and future security to both. The security being sought is the security of competition and initiative, not the false security of the equality-of-the-worker theory nor that of wringing the last ounce of work out of the employee for the least possible cost.

Compensation determination therefore involves careful and complete consideration of the needs of the parties, of the company, the employee, and the community. Determination is management's job. Although society has seen fit to assure itself of a reasonable wage base in a general sense through minimum wage legislation, management must determine the exact value of specific work.

Compensation, like every other manpower management activity, is first a line responsibility, however, for reasons that should now be clear, the staff, the manpower division, becomes directly involved. Staff responsibility extends to the industrial engineering group, and naturally the payroll unit enters the picture.

Rate structures need development and definition. Not all jobs demand the same degrees of skill or expose the employee to the same risks. Since this is so there must be a hierarchy of value for the jobs. Once established and defined that hierarchy can be determined.

Incentives spur the employee to improved production only if properly developed. The industrial engineering group has the responsibility of developing the standards of production used in financial incentive systems. The base rates used in such systems must fit into the rate structure representative of the hierarchy of the work assignments.

It thus appears that an effective compensation program involves definition of the jobs, job evaluation, and incentives where applicable. Let us not forget, however, that the agreement between the employee and management, or the union and the management, sets the final rate. How well the man produces what he is required to produce does, in the last analysis, determine what he takes home. The next chapter concerns itself with the subject of job evaluation and employee appraisal.

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*Every employee wants recognition through his pay check. He wants it to reflect the value of his job and his performance as compared with others.*

## Job Evaluation and Performance Rating

An incentive that drives people to strive for superior performance is the desire to earn more. The money an employee receives for his work is based upon two principal factors: (1) the nature or kind of job he has, and (2) his efficiency — how well he performs his assigned work. These elements, in combination, produce a “package” which is reflected in the pay check or pay envelope.

People and jobs differ. The contributions of people and jobs to the end product or service differ. Systems have been developed which account for the varying degrees of skill and differing levels of responsibility and effort. Such systems reflect an ascending scale of job values into which work can be classified for the purpose of paying adequate wages and salaries. Methods also have been devised for appraising employee performance in order to reward the more efficient person with additional compensation.

None of these systems or methods is truly “scientific.” The attempts to rate or evaluate both jobs and the work of those doing them does, however, make use of scientific principles as far as possible. In other words, the results may not be scientific, but the processes involved use the logic of science.

### **JOB EVALUATION**

Job evaluation is one of the compensation processes using the logic of science. It is applied to facilitate a fair distribution of payroll dollars, but it does not determine the amount appearing on an individual's check. The establishment of a just rate structure depends primarily upon proper use of this manpower tool. Through its application are determined the general wage level and money differentials

among jobs, and new and old jobs are related in terms of their importance to the end product or service.

*THE NEED FOR JOB EVALUATION.* People are stimulated to produce by the thought of acceptable financial reward. They are further stimulated by the comparative difference, or possibility of difference, between jobs. Another way of looking at "need" is this: the individual in your plant who reads of a man in another part of the country making a few cents an hour more than he is for the same work feels mildly disturbed. If he finds, however, that a chap in your plant, doing easier and less risky work, is getting more money than you have a problem. Job evaluation is used to eliminate or at least reduce the likelihood of such inequities.

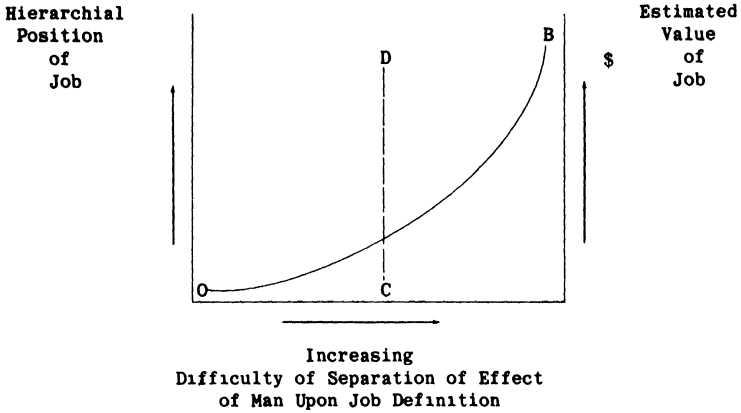
*EVALUATE THE JOB* Generally speaking job evaluation focuses upon appraisal of job, not person. The intent is to differentiate between the cold facts of operational requirements and procedures. On the other hand, development of an equitable compensation program also requires differentiation of people. The evaluation of people usually is termed "employee appraisal," "performance rating," or "merit rating."

Some claim that jobs and people cannot be separated for purposes of evaluation. In some cases this is true, but in others it is completely false and unrealistic. The separation of man and job for evaluation purposes usually is quite possible at the lower levels, but quite difficult at the upper levels. Figure 81 indicates this situation. As pictured by the line CD, somewhere along the difficulty curve OB it becomes virtually impossible to separate man and work.

In most cases people who perform the highly skilled technical and scientific work, the executives, and those charged with the upper level administrative work exert a real personal influence upon the job. They may, in fact, exercise more-or-less complete determination of the nature and methods of work. On the other hand, foremen, rank-and-file employees, and many mid-level staff and line jobs are handled according to set definitions of work. In these latter instances the work can be evaluated separately from the man.

### **BARGAINING VS. SYSTEM**

As mentioned previously, there are those in government, union hierarchies and academic circles who maintain that all wages or salaries should be determined exclusively by the bargaining process. Such total dependence upon the bargaining process would ignore the relationships existing from job to job, the differences in jobs, and the differences in people. Furthermore, it would put the entire compensation procedure in the hands of political power rather than analytic logic.



Note The line CD will vary with the situation That is, the intersection of CD with OB will differ from functional area to functional area, and from company to company

RELATIVE INFLUENCE CURVES — EFFECT OF MAN ON JOB, DIFFICULTY OF SEPARATION, AND VALUE

Figure 81

Some management people feel that jobs under their control do not lend themselves to evaluation. Such people need guided education, for they ignore the basic fact that jobs and employees, themselves included, have been evaluated since the beginning of the employer-employee relationship. Their continued rejection of logic in evaluation simply compounds the errors of opinion and continues or magnifies inequity.

Neither bargaining nor opinion judgment can assure the company or the employee of equitable treatment. Job evaluation, if properly conceived and administered can, however, minimize inequity.

ELEMENTS COMMON TO JOB PERFORMANCE

Job evaluation is based upon determination of specific common factors, common to all jobs, and the establishment of an ascending scale of importance of these factors. In other words each job is measured against each other job in terms of a common denominator or set of denominators.

*THE EMPLOYEE.* The employee performing a job influences *how well* that job is done as compared with management's expected standard of performance. Appraisal of the employee thus is required if a sound compensation program is to be established. Later in the chapter this "merit" rating will be discussed. For the time being, let

us merely realize that the number of people required to perform a given job as compared with some other given job may be an indicator of its importance.

**JOB SKILL REQUIRED.** This element is probably the most important one in determining the rank of a job within the hierarchy of all the jobs in an organization. Some systems consider this particular factor almost exclusively. Historically, from the earliest times the possession of skill by apprentices was considered the only qualification of importance, all other elements were treated as a part of "skill." The United States government *Dictionary of Occupational Titles* (D. O. T.)<sup>1</sup> classifies jobs under three main categories — skilled, semi-skilled, and unskilled.

In its simplest terms skill is the know-how needed to perform a job. It consists of the total knowledge required, and when broken down into its component parts includes:

- . . . Formal schooling or its equivalent
- . . . Experience gained in work situations
- . . . Training time on the job with a particular company
- . . . Mental application
- . . . Manual know-how
- . . . Accuracy in job performance

*Formal schooling or its equivalent* refers to organized classroom instruction or self-study. Many a person is educated although he attended a formal school for only a very limited period. The term "equivalent" frequently appears when describing this particular element or factor. *Experience* gained from previous work situations is an important part of skill, however, mere years worked on some job does not necessarily mean that all that time counted as experience. For example, one may be an elevator operator for 20 years, but those 20 years should never be considered as experience years; about one hour's training will provide most of the experience needed to be an elevator operator! Too often people confuse their working time on some job with experience time; only that portion of the working time when one learns something should be considered. *Training on the job* is a part of skill acquisition. Some work assignments can be learned in a few hours or days; for other assignments, training time may consist of several years. *Mental application* refers to the skill an employee needs for doing work requiring the exercise of mental processes rather than physical mental-manual co-ordination. Many non-routine office jobs, creative work "sparking" new ideas, and the like are typical of this point. This mental application element concerns the mental skill

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<sup>1</sup>*Dictionary of Occupational Titles*, (U. S. Dept. of Labor, U. S. Gov't. Printing Office, Washington, D. C., 1949). Vol. 1, 2nd ed.

any employee must possess to do the work assigned. *Manual know-how* refers to the work done by the hands and other parts of the body. For example, the office receptionist does not need the manual skill of a cabinetmaker. Obviously training time, practice, and all kinds of experience enter into the acquisition of manual skill. *Accuracy* as a part of skill is important. People of equal training seemingly do not possess the same ability to work accurately. If detailed accuracy is a job requirement, employees unable to achieve accuracy will not last long on that job. All the foregoing parts of the skill factor are important and must be considered in determining the worth of the skill element in various jobs. Usually the higher the skill required to do a piece of work the greater should be the compensation for that job.

**RESPONSIBILITY FOR CONSEQUENCES.** Typically, a *job duty* is the job responsibility of an employee. This is quite true for any and all types of work assignments. Getting the assigned work done is the reason for an employee's presence on an organization's payroll. If he fails to perform his job duties, there is no reason why he should receive compensation for them. In job evaluation however, the term "responsibility" takes on a different meaning than merely that of a job duty. "The factor of responsibility in job evaluation includes the degree of exposure to the possibilities of job failure and the seriousness of the consequences if job duties are not properly performed."<sup>2</sup> The factor of responsibility is usually second in importance to the factor of skill, the know-how to perform a piece of work. *Responsibility*, as a factor in job evaluation, attempts to distinguish among the seriousness of the consequences of job failure among jobs. This varies from job to job, and hence jobs with greater responsibilities should have a higher rating in this particular factor. For example, the failure of some janitor to sweep a certain area of the floor in the factory or office probably would not create the problems that would be created if a safety engineer failed to demand that the electric power be turned off when electricians are about to repair a high-voltage power line! Of course both the janitor and safety engineer have different job duties, and both are paid for their work, but the factor of responsibility is greater for the latter.

This factor of responsibility can be subdivided. In some systems of job evaluation a separate rating is given to these subdivisions, such as *responsibility* for company assets — equipment or money; *responsibility* for the safety of others; *responsibility* for the work of others (supervision), *responsibility* for methods; *responsibility* for records, and *responsibility* for public relations. If the responsibility of all jobs were the same there would be no reason to consider this particular factor.

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<sup>2</sup>L. C. Lovejoy, *Wage and Salary Administration*, (The Ronald Press Company, New York, 1959), p. 243.

**EFFORT.** All work assignments require the exercise of employee effort: mental, physical or both. Usually when a job requires a high degree of mental effort it does not require a high degree of physical effort. In fact, in some organizations very few jobs require any physical effort in excess of that expended by the majority of employees in that organization. For job evaluation purposes only those factors should be considered which vary in degree. For example, if all employee assignments were performed at desks and all employees expended the same physical effort to get their work done, the factor of physical effort should not be considered, for job evaluation systems attempt to *measure differences of factor value* between jobs. On the other hand, there are differences in the mental effort requirement of jobs in most organizations, especially in companies where there may be very little disparity in the physical effort of different work assignments.

**Mental Effort.** All jobs require the exercise of brain-power in some degree: decision making – the choice between alternatives; alertness in some form or another – either continuously or at infrequent intervals; varying degrees of concentration, and creativeness. The greater the combination of these components of the mental effort factor, the higher the score in the job's mental effort evaluation. As previously stated, the higher the score for mental effort the lower will be that for physical effort. When evaluating this factor it must be remembered that mental effort dictated by routine does not command the same rating or score as mental effort based upon the initiative and judgment of the job incumbent.

**Physical Effort** For factory jobs, a wide range of evaluation may exist between assignments requiring either continuous or intermittent physical exertion. In office work physical effort can be disregarded almost entirely except for a few jobs. It should be borne in mind, however, that the physical effort factor will be rated higher for jobs that require constant bodily exertion than for those requiring such effort only intermittently or occasionally.

**WORKING CONDITIONS.** This factor is composed of several subdivisions, and in some job evaluation systems each part is evaluated separately. Some of the components are: potential *hazards* to health, and bodily injury; a wide variety of *job surroundings*, fluctuations in temperature, abnormal temperatures, poor ventilation, noise, dirt, fumes and the like, and *connected expense* of the employee – his own tools, clothing, or other equipment. The degree of exposure to the factors of job environment is considered when evaluating this factor. As with physical effort, work assignments in some organizations may have little or no variation in working conditions. In such cases, that factor can be disregarded.

**MINIMUM BASE PAY.** Minimum base pay has nothing to do with the determination of *relative job worth*; however, it cannot be omitted in compensation calculations. Most compensation payments have some kind of a minimum established by federal or state law, local tradition and attitude, or by some contractual arrangement. Several systems of job evaluation, particularly those of the point scoring variety, provide for "base points" above which an employee's classification determines the compensation paid in addition to the minimum or base. The idea of a minimum base is realistic. After all, to be hired an individual must possess certain qualifications which command some financial attention, and he certainly must be paid whatever minimum wage or salary is applicable.

### JOB EVALUATION METHODS

No evaluation method is perfect, but there is such a thing as an orderly approach which produces more systematic results than the absence of system. Rating jobs in a haphazard way produces nothing more than a conglomeration of pay rates bearing no resemblance to a proper compensation structure. Attempts to build a pay structure upon temporary expedients, bargaining on individual jobs without regard for organizational relationships, bias or preference, and plain emotion give evidence of stupidity in its most malignant form. Nonetheless, many businesses as well as union managements subscribe to such nonsense.

**THE PRIMARY METHODS.** The methods or systems currently in use, and basic to present-day rate structure development, are the following.

Ranking Method	}	Nonfactor-evaluative Methods
Grade Description Method		
Point Scoring Method	}	Factor-evaluative Methods
Factor Comparison Method		
Combinations of the two		

Factor-evaluative methods provide for the evaluation of jobs by separately rating the factors common to all jobs — skill, responsibility, effort, and working conditions. Some plans further subdivide these factors. The nonfactor-evaluative methods do not score the individual factors. Each job is rated on an over-all basis, even though the various factors are considered in the process.

These methods can be established unilaterally by the company or by joint management-labor participation. It is logical that the thinking management of unions and companies will develop job evaluation systems through joint effort — both have a real interest in the end results.

The union should have an intense interest in the development of orderly systems. Such systems generally make it unnecessary to process thousands of individual employee grievances related to pay rates. Certainly management has a like interest; however, one still finds unilaterally developed systems. Ordinarily, where they exist, and where it is the union who has refused to participate (rather than management having refused to allow participation), the union reserves the right to grieve if the plan does not produce orderly and just results.

**NONFACTOR-EVALUATIVE METHODS.** Job evaluation methods which do not prescribe separate scoring of the common job elements are referred to as nonfactor-evaluative methods. The name comes from the fact that through them evaluation occurs on an overall, rather than a factor basis. That is, the factors of skill, responsibility, effort, and working conditions are considered in total and compared to other jobs as a totality. The rank order is therefore based upon an over-all impression rather than a careful study of components.

It is safe to say that even now a comprehensive survey of all industrial organizations would reveal that, except in the large concerns, the nonfactor-evaluative methods prevail. The reason for this preference stems from the simplicity and inexpensive installation cost of the nonfactor systems.

Nonevaluative systems are suitable where job elements are clearly discernible, where job values differ noticeably. For example, the differences between an office boy job and a bookkeeper job are pronounced, and a carefully analytical system is not required to tell us this fact. On the other hand, where the number of jobs is large and the difference between them not so pronounced, it is wise to employ the more sensitive factor-evaluative methods. The factor-evaluative methods are refinements of the nonfactor-evaluative techniques. The *factor comparison* is a refinement of the *ranking* method, and the *point scoring* is a refinement of the *grade description* method.

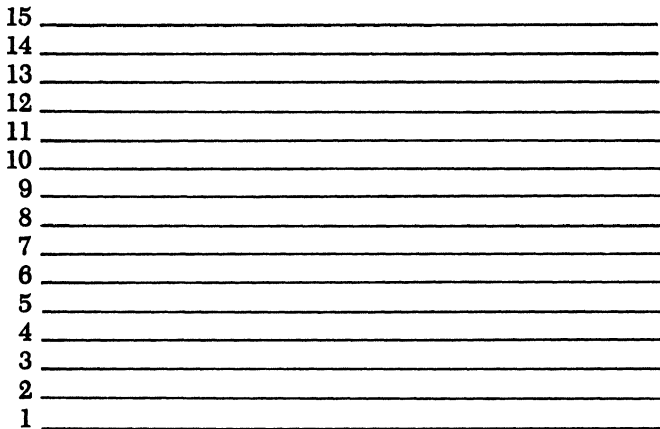
**RANKING METHOD.** In many activities, people are called upon to determine whether or not some element, thing, word, or activity takes precedence over another. When people make purchases they normally "make a selection" from what is offered for sale — they rank the merchandise into categories according to their own needs and pocketbook; in judging dogs in a dog show one ranks the animals.

In the evaluation of jobs, the ranking process attempts to determine the worth of jobs to the company and to place them in a hierarchy from the lowest to the highest. The process is simple, but requires that certain bench marks be observed in arriving at a conclusion. If the bench marks are objective and can be measured with certainty, the ranking process is simple. For example, scales will indicate the weight difference between two objects; the yardstick can measure

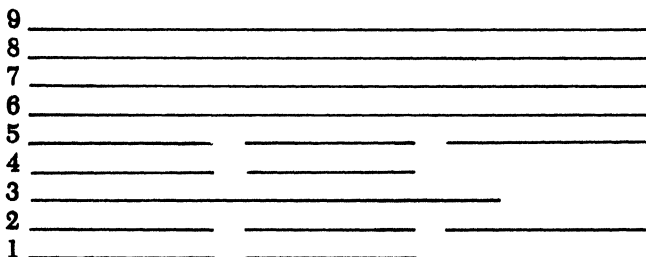
distance. The ranking process is not as simple when dealing with items for which there is no definite measuring stick. In such cases judgment must be used. Whatever that judgment, however, it must be founded upon guides. Often these are not as specific as rulers, scales, or quart measures.

In ranking the worth of jobs to a company, the combination of job factors — skill, responsibility, effort, and working conditions — offer tangible although inexact guides. In fact, exact measuring sticks do not exist for any job evaluation system; most are sooner-or-later, and in some way dependent upon judgment. For this reason it is quite impossible to defend differences in pay rates determined by any system if those differences are exceedingly fine.

If an organization has about 15 jobs, the ranking process attempts to place them in an hierarchical arrangement as depicted following.



The lowest ranked job appears as number 1 and the highest as number 15. This arrangement does not tell *how much different* the jobs are; it tells us that *there is a difference*. If there are 15 people in the company and some have the same ranked job, this would appear as follows.



By definition: "The ranking of jobs is the process of judging the position of one job as compared with others, either higher or lower or the same, in terms of all the elements comprising its worth to the organization."<sup>3</sup>

A simple way to rank jobs is to use the *paired comparison method*. Through this method every job is compared with every other job. Two or more people can do the ranking. When all jobs have been considered, the one most often judged of greatest value receives the top rank, and so on down through the hierarchy. With several rankers — four, for example — all the rankings of the four should be tabulated and an average made of their combined judgments. In the following figure (Figure 82) it will be noted that job number 9, in the combined judgment of the four raters, is the job of the ten having the greatest worth to the company. It should therefore receive the largest compensation. The conversion of these ranks into pay rates will be described later in the chapter. In general, the process of conversion is the same for the other job evaluation methods.

Job #	Ranks Reported by Raters				Total	Average Rank (total÷4)	Final Composite Rank
	Rater #1	Rater #2	Rater #3	Rater #4			
1	8	8	7	8	31	7.75	8
2	3	3	3	2	11	2.75	3
3	6	5	5	5	21	5.25	5
4	2	2	2	3	9	2.25	2
5	4	4	4	4	16	4.00	4
6	10	9	9	9	37	9.25	9
7	1	1	1	1	4	1.00	1
8	5	6	6	6	23	5.75	6
9	9	10	10	10	39	9.75	10
10	7	7	8	7	29	7.25	7

Source L. C. Lovejoy, *Wage and Salary Administration*, The Ronald Press Company, New York, 1959, p. 210.

*Figure 82*

<sup>3</sup>Lovejoy, *op. cit.*, p. 207.

**GRADE DESCRIPTION METHOD.** Traditionally referred to as the classification method, the grade description method typically is used to place jobs in an ascending scale of classes or grades. "Grade description" is a more definitive term than "classification" since the objective of all job evaluation systems is to group jobs into grades.

The development of the job grade or class is a logical step from the ranking idea. This method accomodates a larger variety and number of jobs than the ranking method because jobs of similar worth are clustered into grades. Figure 83 shows how jobs of close value are assigned grades.

Job #	Grade	Job #	Grade
1 _____	}	27 _____	}
2 _____		28 _____	
3 _____		29 _____	
4 _____		30 _____	
5 _____		31 _____	
6 _____			
7 _____	}	32 _____	}
8 _____		33 _____	
9 _____		34 _____	
10 _____		35 _____	
11 _____		36 _____	
12 _____	}	37 _____	}
13 _____		38 _____	
14 _____		39 _____	
15 _____		40 _____	
16 _____		41 _____	
17 _____	}	42 _____	}
18 _____		43 _____	
19 _____		44 _____	
20 _____		45 _____	
21 _____		46 _____	
22 _____	}	47 _____	}
23 _____		48 _____	
24 _____		49 _____	
25 _____		50 _____	
26 _____		51 _____	

Figure 83

In Figure 83 assume there are 51 jobs to be ranked. Because of small and almost minute differences among many of the jobs, we try to rank all of them from job 1, the lowest, to the highest in worth, job 51. It is quite possible that there will be differences of opinion among raters as to whether job 4 is of lower rank than job 5, or that job 29 should be ranked lower than job 30. If job 5 is so close in worth to job 4, or job 30 is so close to job 29, why try to distinguish in compensation between them? If jobs 4 and 5 are placed in the same grade 1, and jobs 29 and 30 are placed in grade 6, we will eliminate the argument! The grade description method recognizes that close differences will exist and, when this is the case, why not lump these closely evaluated jobs into the same pay classification? Figure 83 shows that ten grades, each obviously with a different pay rate, will take care of the classification of the 51 different jobs.

In order to systematize these and future evaluations, it will be necessary to describe the level of job difficulty of each grade, and in the description of each grade list a few examples of applicable job identities. When this is done the evaluation of jobs will be comparatively simple. All the evaluator has to do is compare the description of the job to be evaluated with the description of the various grades available, and then assign the grade of best fit. There is one thought to keep in mind: When a job is extremely close to the minimum of a job grade, give the job the next higher grade classification. This is illustrated in Figure 83 where it will be noted that a "no man's land" is provided between grades. For example, between grade 1 and grade 2 there are no jobs shown which just miss meeting the requirements of grade 2 by "a hair." In other words, the job is always given the "benefit of the doubt." In figure 83 the raters may have figured job 7 so close to grade 2 that they placed it there. Where a large number of jobs are involved, about as close as a rater can come to their proper ranking is to classify them into grades rather than trying to rank jobs within some grade. Examples of the descriptions of grades are shown in Figure 84 and 85.

**FACTOR-EVALUATIVE METHODS.** The factor-evaluative methods include the point scoring and factor comparison systems and other methods which in essence combine in some way portions of these techniques. Point scoring and factor comparison systems differ from the nonfactor-evaluative methods in that jobs are not evaluated on an over-all basis but rather in terms of the separate job elements. After evaluation of the job elements, or factors, there is a summation of the evaluated parts to determine the whole job's worth. This concept was first developed in the early 1920's by Merrill R. Lott, then Director of Research and Statistics for the Continental Baking Corporation. Lott

Grade 1	Junior or beginner office worker
Grade 2	Junior office clerk
Grade 3	Billing typist Comptometer operator II Junior Clerk I Key punch operator II Stenographer II Typist Typist clerk
Grade 4	Bookkeeping machiner operator Key punch operator I Stenographer clerk Telephone operator Transcriber operator
Grade 5	Comptometer operator I Statistical typist Stenographer I
Grade 6	Junior draftsman Tabulating machine operator II Vari-typer operator
Grade 7	Chief telephone operators Secretary Senior clerk II
Grade 8	Draftsman Senior clerk I Tabulating machine operator I

Source L. C. Lovejoy, *Wage and Salary Administration*, The Ronald Press Company, New York, 1959, p. 225.

#### OFFICE JOB TITLES BY LABOR GRADE

Figure 84

proposed the analysis and evaluation of the component factors of a job and weighed the various factors in their relationships.<sup>4</sup>

It is interesting to note that the chief difference between the point scoring and the factor comparison methods is the manner in which the rating scales are developed. Once the rating scales are determined and the jobs in an organization have been rated, the new or changed jobs to be evaluated in the future are more likely to be "slotted" into the list of the previously-evaluated jobs rather than through the use of the originally developed scale for evaluating "key jobs."

In both types of factor-evaluative method it first is necessary to select several "key" or bench mark jobs which the developers of the rating scale consider representative of the various job levels or grades. Of course this selection may not be exact in all instances, but these key or bench mark jobs do represent a starting point. Obviously it

<sup>4</sup>M. R. Lott, *Wage Scales and Job Evaluation* (The Ronald Press Company, New York, 1926).

Grade

- 1 Requires the following of simple specific instructions with no responsibility for selecting the procedure to use Receives close and frequent supervision (Example Clerical Assistant )
  - 2 Requires the following of definite instructions, but necessitates selecting, from a limited number of alternative standard practices, the proper procedure to be used in performing a variety of simple operations Receives less close and frequent supervision than Grade I (Example Junior Clerk )
  - 3 Requires assumption of responsibility for the selection, from a wide choice of alternative standard practices, of the proper procedure to be followed Receives moderate supervision (Example Junior Bookkeeper )
  - 4 Requires a wide understanding of a restricted area of operation (e g , accounts receivable unit of accounting department) for the purpose of making routine decisions about methods to use or course to be followed in performing the task May direct the work of other employees who follow well-defined methods of procedure Receives moderate supervision (Example Bookkeeper )
  - 5 Requires a wide understanding of a restricted area of operation (e.g , accounts receivable unit of accounting department) for the purpose of examining problems to which there might be several possible solutions but which are covered by general company practice Unusual situations may be reviewed by supervisors, but considerable responsibility is placed upon the incumbent May direct the work of others that is routine in nature (Example Assistant Chief Clerk )
  - 6 Requires a wide understanding of a broad area of operation within a restricted field (e g , statistical division of accounting department) and plans actions that will be carried out as routine procedures, such planning being based on examination of new or unusual problems within the restricted field The approval of a supervisor must be sought before actions may become a permanent part of the routine Plans and directs work of others under direct supervision (Example Chief Clerk )
  - 7 Requires a wide understanding of a broad area of operation within a restricted field (e g , statistical division of accounting department), and the examination of complex problems in situations involving company policy where there is little opportunity for check on work Plans and directs work of others under very limited supervision (Example Unit Head )
  - 8 Requires a thorough understanding of the operations and policies of a restricted field (e.g , statistical division of accounting department), and the function of that division in relation to other divisions within the department Supervises the division and coordinates the various aspects of work in that division Relies primarily upon own ability to keep the division functioning smoothly (Example Division Head.)
  - 9 Requires a thorough understanding of the operations and policies of the entire department (e g , accounting department), and the integrating of the work of the various divisions of the department Interprets departmental policies for the various divisions within the department, and assumes over-all direction of the various divisions under the general supervisions of the Department Head (Example Assistant Department Head.)
  - 10 Requires a thorough understanding of the operations and the policies of the department (e g , accounting department), and the functions of that department in relation to other departments (e g , sales, production, etc ) in the company Interprets company policies for the department and assumes over-all planning of departmental operation within the framework of company policy (Example Department Head.)
- 

Source: By permission from *Job Evaluation*, by E. Lanham, pp. 70-72. Copyright, 1955, McGraw-Hill Book Company, Inc.

GRADE DESCRIPTIONS — OFFICE

*Figure 85*

would be too cumbersome to start building an evaluation scale with five hundred or a thousand jobs. Hence, the selection of a few jobs, for example, 15 to 20 representative jobs would be a more logical way to commence the study.

*The Work Agenda.* The work agenda for development of either of the factor-evaluative methods will follow the pattern stated below.

1. The selection of the method to be installed.
2. Communication of the objectives of the plan to all in the company — all management as well as employees whose jobs are to be evaluated.
3. Selection of a committee to be in charge of the work whose judgment will be sought almost continuously.
4. The selection of the job classifications to be studied — for example non-supervisory salaried jobs, supervisory salaried jobs, non-supervisory wage jobs, sales personnel jobs, etc.

It is wise not to try to evaluate every job at the start; instead select first the group of jobs that may need attention.

5. The selection of 15 or 20 key or bench mark jobs. These jobs should, in the judgment of the committee, represent various levels of job worth so that the whole range of jobs in the hierarchy will have a sample job on the list.

6. The selection of job elements of job factors that are common to all jobs. In the factor comparison method it is usual to agree that there will be only five factors considered — skill, responsibility, mental effort, physical effort, and working conditions. In the point scoring methods these five factors often are subdivided, and each factor subdivision evaluated separately.

7. The definition of what is meant by each factor; in other words, each factor must be defined so that in all subsequent evaluation work each word or expression will mean the same to every member of the committee as well as employees and their supervisors.

8. Each key job must be analyzed and the results reduced to writing. These job descriptions must be sufficiently clear so that they tell the whole story about the job as far as the job evaluation process is concerned. It is from these descriptions that the evaluator gains the insight into the degree of difficulty in each job.

9. Concurrent analysis of the key jobs and writing of the job descriptions therefore is a time-consuming task. If a job analyst can complete ten to twelve jobs each week, he will be doing an efficient job.

10. At this point, the differences in the building of the rating scales for the point scoring and factor comparison methods will differ. These differences will be described under the respective headings.

*The Point Scoring Method.* This method is a refinement of the grade description technique. A rating scale, against which a comparative description of the jobs is made, is first prepared. Unlike

the grade description approach, the scale provides for separate evaluation of the components of each job. When this has been done, the separate evaluations for each component or factor are added together. This total is the evaluation of the job expressed as a "point."

In addition to the rating scale for each separate factor or element, another is prepared which expresses the minimum and maximum number of points applicable to each job grade. For example, the evaluation of a job may show the following: Education — 60 points; Experience — 75 points, Responsibility — 80 points, and Working Conditions — 20 points, for a total of 235 points. The minimum and maximum point scale for the various grades may show that jobs with point totals between 210 to 245 points will be in labor grade *Five*, for example. As previously mentioned, another step is needed, namely the conversion of these grade groups into money values. This conversion will be discussed under the heading of Community Surveys.

The grade description method of job evaluation provides a general description or definition of each grade. Point scoring goes a step further. It requires that a detailed definition of each of the separate job factors be supplied or prepared. Point scoring thus forces attention to a general definition of grades *and* a detailed description of factors, thereby increasing the depth of analysis involved and the likelihood of just rate structures.

Nowadays it is common to find the separate factors further subdivided into "degrees." Each degree must be defined and a point score assigned. Clearly, the rating scale for the point scoring method is quite detailed, much more so than that used in the grade description technique. Do not be deceived however: such evaluation consists of comparing the *description of the job* (developed through job analysis) with a rating scale also based upon job analysis and a set of standards found through study to be applicable. Figure 86 shows that portion of the Sperry Gyroscope Company scale applicable to the skill factor description in the rating of factory jobs. Notice the factor description as well as the description of each degree of each factor.

Figures 87 and 88 show the selection of factors and point values used in the NEMA salary plan and the Sperry factory jobs. These particular factors are not the only ones used by industry. Other concerns and consulting and trade association groups have different ideas and apply other factors and point assignments. Figure 89 presents a roster of factors used in eight different firms. These organizations were selected at random merely to illustrate that there is really no unanimity of thought requiring that all point scoring plans use the same factors.

*Initiating a Point Scoring System.* Previously the "work agenda" for developing a factor-evaluative system was presented. The steps

added to that activity pattern, when initiating a point scoring system, are as follows.

1. Selection of the factors.
2. Determination of the degrees of each factor.
3. Determination of the point weight to be given each factor and its degrees.
4. Detailed descriptions of what is meant by each factor and its degrees.
5. Building a table which will show the minimum and maximum point applicable to each labor grade or classification.
6. Assignment of money values to each grade classification. (This will be discussed under Community Surveys in this chapter.)

It must be remembered that the preparation of the rating scale and the determination of the money values applicable to each grade classification is a time-consuming process. If a company desires to build a plan from the first step, even though it may use all the information it can gather from other plans in use, it is quite likely that it will take about a year to complete the task. The jobs found

## II. SKILL

MAXIMUM POINTS — 300

Manual Skill and Mental Skill, though closely related, differ in actual practice

**Definitions:** A **MANUAL SKILL** The required ability to use hand and machine tools, instruments, and equipment properly, in an adequate or competent manner

B **MENTAL SKILL** The ability to plan and visualize the task to be performed, ahead of actual performance. Judgment and resourcefulness are inherent factors requiring consideration

**Discussion:** Care must be exercised when evaluating these characteristics not to confuse the skills adequate for the job with excessive skills, which may be possessed by persons now doing the job

**FACTOR AND DEGREE DESCRIPTION & POINT ASSIGNMENT —  
SKILL SPERRY GYROSCOPE COMPANY JOB EVALUATION**

(Sample Pages)

*Figure 86*

Figure 86 (Continued)

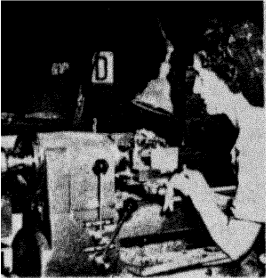
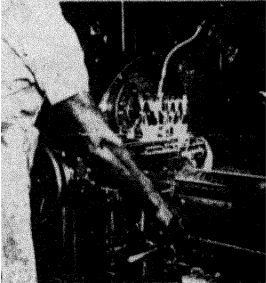

CHARACTERISTIC: SKILL — A. MANUAL SKILL (Continued)			
CODE	STEP DEFINITION	POINTS	EXAMPLE
D.	Operation of machine tools where ordinary adjustments are required. This may involve simple setups of machine tools; assembling and fitting of partially completed units or sub-assemblies to tolerances which may be occasionally close; performance of simple wiring jobs on smaller units and sub-assemblies requiring a limited technique; setup of simple jobs on angle plates.	54 to 71	
E.	Setup and operation of ordinary non-automatic machine tools involving the more difficult jobs; wiping lead joints; wiring and cable forming jobs of a moderately complicated nature; building of wooden partitions; setup of complex jobs on angle plates.	72 to 90	
F.	Bench operations similar in nature but difficult to perform; setup of fully automatic machines; setup of medium and large size castings for heavy machines; performance of difficult assembling of complicated units and sub-units involving intricate fittings and adjustment to close tolerances.	91 to 108	

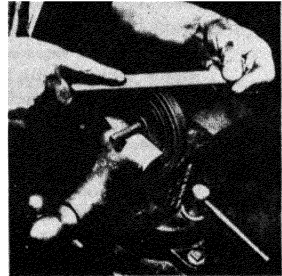
Figure 86 (Continued)

CHARACTERISTIC: SKILL — B. MENTAL SKILL			
CODE	STEP DEFINITION	POINTS	EXAMPLE

**\*ROUTINE NOT DETERMINED BY WORKER**

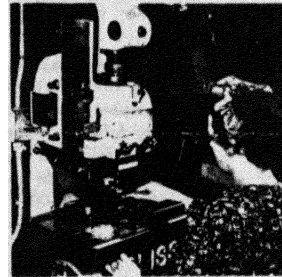
- A.** Job duties are definitely and clearly established. Operations subject to constant supervision. Typical examples: Separation of parts from scrap, rough burring of parts, sweeping floors, elementary assembly operations.

0  
to  
30



- B.** Operations are defined as to methods and tools used. May at times require making minor decisions. Supervision is usually available. Typical examples: Selection of parts to specifications such as size or shape, simple soldering operations, assembly of parts progressively into a unit. Simple parts inspection, operation only of machines such as drill press, punch press, etc.

31  
to  
59



- C.** Job procedure is established as to methods and tools used. Minor decisions may be required in planning details of operation. General supervision is available. Typical examples: Set-up of machine tools; bench or assembly operations; mixing paints or pigments; inspection of assembled parts and sub-assemblies; wiping joints.

60  
to  
88

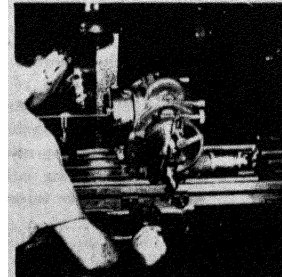


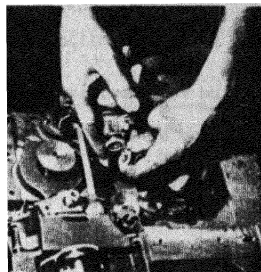
Figure 86 (Continued)

CHARACTERISTIC: SKILL — B. MENTAL SKILL (Continued)			
CODE	STEP DEFINITION	POINTS	EXAMPLE

**\*ROUTINE MAY BE DETERMINED BY WORKER**

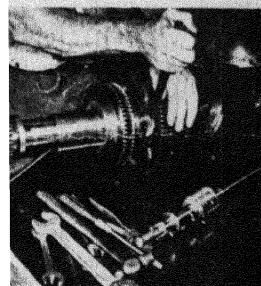
- D. Job routine is standardized as to methods of performing work. Decisions may be required in determining proper sequence of job steps, and devising ways and means of solving related job problems. Minimum supervision is available.

Typical examples: Difficult set-ups of machine tools.



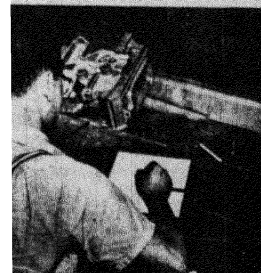
- E. Work follows generalized line of procedure. Judgment and initiative may be required in selecting proper method. There may be only a minimum amount of supervision.

Typical examples: Repairing machines, inspection of tools, diagnosing electrical circuit failures, determining cause of mechanical failures, layout of sample castings



- F. Job requires planning and devising of procedures to follow. May require complete layout of work ahead of performance. Minimum amount of supervision.

Typical examples: Making intricate tools, dies, gages.



\*By "Routine" is meant any series of acts directed toward the completion of a task.

Source: By permission from *Joint Job Evaluation Manual*, pp. 17-22. Sperry Gyroscope Company, Inc., Brooklyn, N. Y., in conjunction with local 450 United Electrical Radio and Machine Workers, CIO, 1943.

Company A (12 Factors)

Education  
Experience  
Judgment  
Analysis  
Originality  
Responsibility for Accomplishment  
Accuracy (seriousness of errors)  
Supervision of Others  
Contacts  
Independence of Action  
Working Conditions  
Physical Demand

Company B (8 Factors)

Education  
Experience and Training  
Complexity  
Working Conditions  
Physical Demand  
Responsibility  
Monetary  
Public Relations  
For Work of Others

Company C (9 Factors)

Education  
Machine Skills  
Prior Experience  
On Job Training Period  
Public Contact  
Responsibility for  
Cash  
Records  
Use of Judgment  
Working Conditions

Company D (12 Factors)

Skill  
Essential Knowledge  
Experience and Training  
Analytical Requirements  
Manual Skill  
Responsibility  
Monetary  
Confidential Information  
Contacts--Public and Internal  
Independent Action  
Effort  
Mental  
Physical  
Job Surroundings  
Supervisory Requirements

Company E (9 Factors)

Education  
Previous Related Experience  
Scope of Duties  
Qualifying Period  
Initiative Exercised  
Responsibility for Errors  
Contacts Required  
Attention  
Supervision of Others

Company F (8 Factors)

Education  
Experience Required  
Mental or Visual Demand  
Probability of Damage to Equipment or  
Material  
Responsibility for Safety of Others  
Direction of Others  
Working Conditions  
Hazards

Company G (8 Factors)

Knowledge  
Judgment  
Planning  
Staff  
Assets  
Details  
Relations  
Conditions

Company H (15 Factors)

Experience  
Previous Experience Required  
Specialized or Technical Education  
Manual or Physical Skill  
Physical Effort  
Work Complexities  
Complexity and Difficulty of Duties  
Seriousness of Errors  
Working Conditions  
Hazards  
Adverse Working Conditions  
Contacts  
With Outsiders  
With Other Departments  
Responsibility For  
Safety of Others  
Company Funds or Property  
Confidential Information  
Performance of Work Without  
Immediate Supervision  
Work of Others

Source: L. C. Lovejoy, *Wage and Salary Administration*, (New York, The Ronald Press Company, 1959), p. 250.

**ROSTER OF FACTORS IN EIGHT DIFFERENT COMPANY PLANS**

*Figure 89*

is a refinement of the ranking system. Where the basic ranking system evaluates jobs on an over-all basis by considering the factors in total, the factor comparison method determines the ranking of *each* job factor (factor by factor) in relation to that factor as it applies to each job. In other words, it is a factor to factor study as suggested by Merrill Lott in the early point systems.<sup>6</sup> Although this statement might lead one to feel that the point system and the factor comparison method are identical, they are not. The process of rating the individual factors differs.

The early application of the factor comparison method required selection of "key" jobs in terms of two criteria: (1) the job was thought to be paid the current "going" wage, and (2) each such job selected was representative of a different level of worth (or value or skill) in the hierarchy of company jobs. Usually wage and salary administrators appear to have held themselves to a study of some 15 so-called "key" jobs. Furthermore, only *five* job factors were considered, each described as under the point method. The factors used now and in the past are: mental requirements, skill requirements, physical requirements, responsibility, and working conditions.

The original approach required development of a rating scale consisting of the limited number of key jobs which were ordered by using the ranking method. Figure 90 depicts the form used by the evaluators in ranking these jobs. The technique required ranking each job in terms of each factor. Each factor was ranked separately. The form thus might show job "X" ranked as the highest (No. 1) under skill, but ranked lowest (No. 15) under working conditions.

It was usual to have three to five evaluators make their own rankings separately. A composite scale was then made from the tally of judgments of all evaluators. Where there was disagreement as to rank, agreement was reached by means of consultation and compromise.

Once the key jobs were ordered, the remainder of the firm's jobs were studied and ranked. Figure 91 illustrates the final rating scale form. Notice that a pattern maker would receive 76 cents per hour for the skill factor, 62 cents for mental effort, 23 cents for physical effort, 37 cents for responsibility, and 14 cents for working conditions. As the factor comparison scale is finally developed to include all jobs, it is quite possible that the original data will be buried, that it will not stand out in the scale of *all* jobs. This final scale becomes far more descriptive of the true relationship than that of the original few jobs rated.

In recent years the foregoing method has undergone some change. The original method for building the factor scale is seldom used today. Key jobs are now selected for their likelihood of representing the hier-

---

<sup>6</sup>cf. Lott, *loc. cit.*

Rank	Me Requirements			Responsibility	Working Conditions
	Mental	Skill	Physical		
1		X			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					X

Source: Eugene J. Benge, Samuel L. H. Burk, and Edward N. Hay, *Manual of Job Evaluation* (Harper & Bros., New York, 1941), p 107

### FACTOR COMPARISON JOB RANKING FORM

*Figure 90*

archy of job grades only; in other words, the evaluator's consideration of pay rate is omitted. The basic reason for this is the difficulty of getting evaluators to agree on jobs which, in their opinion, are being paid fairly.

**THE TURNER PERCENT METHOD.** The Turner Percent Method is now the most generally used factor comparison technique. When building the factor comparison scale, William W. Turner and Edward N. Hay discarded the dollar and cents approach in the selection of the key jobs.<sup>7</sup> The selected key jobs are first ranked as shown in Figure 90, which will produce a chart showing the *ranking* of the

<sup>7</sup>William D. Turner, "The Percent Method of Job Evaluation," *Personnel*, May, 1948, pp. 476-492, and "The Mathematical Basis of the Percent Method of Job Evaluation," *Personnel*, September, 1948, pp. 154-160.

Cents	Mental Effort	Skill	Physical Effort	Responsibility	Working Conditions
80					
79					
78					
77					
76		Pattern Maker			
75					
74		Machinist No. 1			
73					
72					
71					
70					
69					
68					
67					
66					
65					
64				Substation operator	
63					
62	Pattern Maker				
61					
60					
59					
58	Substation operator				
57					
56					
55					
54					
53					
52					
51	Machinist No. 1		Rammer		
50					
49		Substation operator			
48					
47					
46		Pipefitter No. 2			
45					
44		Painter	Poleman		
43					
42					
41			Laborer		

FINAL RATING SCALE FORM FACTOR COMPARISON METHOD

Figure 91

Figure 91 (Continued)

Cents	Mental Effort	Skill	Physical Effort	Responsibility	Working Conditions
40					
39					
38					
37				Pattern maker	
36					
35					
34					
33					
32		Drill press operator	Pipefitter No 2	Machinist No 1	Rammer
31					
30		Carpenter's helper			Poleman
29					
28			Machinist No 1	Pipefitter No. 2	Laborer
27					
26					
25	Pipefitter No. 2		Painter	Drill Press operator	Pipefitter No 2
24					
23	Painter		Pattern Maker	Painter	Painter
22					
21	Drill press operator		Carpenter's helper	Carpenter's helper	
20					
19					
18	Carpenter's helper		Drill press operator		Machinist No 1
17					Drill press operator
16		Poleman		Poleman	Carpenter's helper
15					
14	Poleman				Pattern maker
13					
12	Laborer			Rammer	
11					
10					
9		Rammer	Substation operator	Laborer	Substation operator
8					
7	Rammer	Laborer			
6					
5					
4					

Source: Jay L. Otis and Richard H. Leukart, *Job Evaluation* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1954), pp. 184-185.

factor content of each job, but not *how much* each factor differs in rank. The ranking judgments as to "how much" are then exercised in two ways: (1) the ranking of each job under each of the five factors as in Figure 90, and (2) within each job the relative rank of each of the factors. These two sets of judgments will produce two scales

as in Figures 92 and 93. The procedure from this point on replaces the allotment of cents or points per hour used in the “going” wage concept.

In order to translate these ranks into a mathematical table, some assumptions have to be made. According to the Turner method, any rank which receives first rank will, in the calculations that follow, receive 100 per cent and the other ranks will be judged by the evaluators at some lesser per cent. The development of the final rating

<u>Job</u>	<u>Skill</u>	<u>Decision</u>	<u>Responsibility</u>
A	1st	1st	1st
B	2nd	3rd	2nd
C	3rd	2nd	3rd
D	2nd	3rd	4th
E	4th	4th	4th
F	5th	5th	5th
G	6th	6th	5th
H	5th	5th	6th
I	5th	5th	4th
J	6th	7th	6th

Source: Lawrence C Lovejoy, *Wage and Salary Administration* (The Ronald Press Company, New York, 1959), p 267

**JUDGMENT RANKING SCALE — VERTICAL —  
TURNER METHOD**

*Figure 92*

<u>Job</u>	<u>Skill</u>	<u>Decision</u>	<u>Responsibility</u>
A	1st	2nd	2nd
B	1st	3rd	2nd
C	1st	3rd	2nd
D	1st	3rd	2nd
E	1st	3rd	2nd
F	1st	3rd	2nd
G	1st	3rd	2nd
H	1st	3rd	2nd
I	1st	3rd	2nd
J	1st	2nd	2nd

Source: Lawrence C. Lovejoy, *Wage and Salary Administration* (The Ronald Press Company, New York, 1959), p. 268.

**JUDGMENT RANKING SCALE — HORIZONTAL —  
TURNER METHOD**

*Figure 93*

scale by the Turner method goes through several steps,<sup>8</sup> but with the final result that these percentages are converted into points as shown in Figure 94. As other jobs are evaluated, they are "slotted" into the scale at their proper place. Eventually, when all the jobs are evaluated, the entire roster becomes the factor comparison scale.

<u>Job</u>	<u>Skill</u>	<u>Decision</u>	<u>Responsibility</u>	<u>Total</u>
A	100	43	50	193
B	66	22	43	131
C	66	25	29	120
D	66	22	29	117
E	57	19	25	101
F	50	16	25	91
G	43	14	22	79
H	50	16	19	85
I	43	16	25	84
J	43	14	19	76

Source: Lawrence C. Lovejoy, *Wage and Salary Administration* (The Ronald Press Company, New York, 1959), p. 275.

#### TURNER METHOD RATING SCALE

*Figure 94*

**BASIC ABILITIES SYSTEM.** This system is closely related to the grade description method. Jobs are not broken down into factors as in the factor-evaluative methods, rather the "abilities" and "knowledges" required for satisfactory job performance are considered in placing jobs in their proper grade. It is reasoned that if a job requires certain abilities and knowledge, an employee assigned to such a job must possess those requirements — he must have the mental and physical ability, assume the responsibilities and duties, and function under the pertinent working conditions. This thinking is closely

<sup>8</sup>For details of the Turner Percent Method calculations, see L. C. Lovejoy, *Wage and Salary Administration* (The Ronald Press Co., New York, 1959), pp. 267-275.

related to the idea that skill is really the most important determinant of job grades.

Development of the hierarchy of job grades necessitates their evaluation in a vertical, scalar fashion. The employee having the "ability" and "knowledge" to perform a job in a certain grade should be entitled to the wage or salary rate somewhere between the job's minimum and maximum pay rate. Obviously each grade in the hierarchy will be assigned its own range of rates. To the employee, his vertical pay evaluation will depend upon the job grade to which his job is assigned; the horizontal rating or the pegging of his pay rate within the grade rate range will depend upon the requirements for his job performance. The following may explain a bit more clearly what is meant by the *horizontal* evaluations.

"To what extent a company should make a job-to-job and factor comparison and subdivide levels of responsibility is a debatable question each company must answer. It is possible to have as many subdivisions as jobs. However, few companies ever set up more than five horizontal sub-grades and most concerns stop at three.

"Invariably, in any organization there will be jobs within a given salary grade or even within a given job classification, where the *performance* requirements will differ even though the *basic abilities* required are the same. For instance, different degrees of mentality, stamina, and skill may be required of supervisors who are on the same level of responsibility, merely because of the type of work supervised. To take a different example, different degrees of typing skill may be required on typists' jobs that are in the same salary grade simply because of the kind of work involved. In both cases, mental and physical traits, education, skill, and experience are pertinent factors, but they relate to performance requirements and horizontal grading, rather than ability requirements and vertical grading."<sup>9</sup>

*Skills.* In Figure 95 are examples of the abilities required for office work divided into two parts, one showing *semi-skills* and the other, *skills*. Semi-skills are those which take from three to six months to learn, and the skills take twelve months or more. In using the list of basic skills, the job evaluation committee prepares a list of grading rules for use in connection with the list of basic abilities such as shown in Figure 95.<sup>10</sup>

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<sup>9</sup>Ralph W. Ells, "Flexible Job Evaluation," *Office Executive*, September, 1953, p. 15.

<sup>10</sup>An example of these grading rules will be found in Ralph W. Ells', *The Basic Abilities System of Job Evaluation* (Madison, Wis., Bureau of Business Research and Service, University of Wisconsin, June, 1951), Wisconsin Commerce Reports, Vol. III, No. 2, pp. 43-45. Also will be found useful information about the Basic Abilities System in Ralph W. Ells' article, "Simplified Job Evaluation," in *Tools for Improved Personnel Relations* (American Management Association, New York, 1951), Personnel Series No. 140.

After compiling the list of all the basic abilities applicable to a company's operation and the ground rules for job grading through the use of the list, the job evaluators place all jobs into their proper

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>A. <u>Semi-skills</u></b></p> <ol style="list-style-type: none"> <li>1. Knowledge of company and departmental procedures.</li> <li>2. Ability to get along with people.</li> <li>3. Ability to meet the public.</li> <li>4. Ability to handle confidential information.</li> <li>5. Ability to work under unpleasant conditions.</li> <li>6. Ability to type.</li> <li>7. Knowledge of bookkeeping.</li> <li>8. Ability to take dictation.</li> <li>9. Ability to transcribe dictation.</li> <li>10. Knowledge of mechanical drawing.</li> <li>11. Ability to trace.</li> <li>12. Ability to operate a bookkeeping machine.</li> <li>13. Ability to operate a calculating machine.</li> <li>14. Ability to operate address-o-graph equipment</li> <li>15. Ability to operate a key punch.</li> <li>16. Ability to operate a P.B.X. switchboard.</li> <li>17. Ability to operate a multigraph machine.</li> <li>18. Ability to operate tabulating equipment</li> <li>19. Ability to operate a billing machine.</li> <li>20. Etc.</li> </ol> <p><b>B. <u>Skills</u></b></p> <ol style="list-style-type: none"> <li>1. Knowledge of company products</li> <li>2. Ability to organize and direct the work of others.</li> <li>3. Ability to plan the work of others.</li> <li>4. Ability to exercise independent judgment</li> <li>5. Ability to work under hazardous conditions.</li> <li>6. Ability to create or design new products.</li> <li>7. Ability to develop new procedures and methods.</li> <li>8. Knowledge of accounting.</li> <li>9. Knowledge of sales techniques.</li> <li>10. Knowledge of engineering.</li> <li>11. Knowledge of library techniques.</li> <li>12. Knowledge of nursing.</li> <li>13. Knowledge of law.</li> <li>14. Knowledge of chemistry.</li> <li>15. Knowledge of buying techniques.</li> <li>16. Knowledge of employment techniques.</li> <li>17. Knowledge of traffic rates and tariffs.</li> <li>18. Ability to make designs or layouts.</li> <li>19. Ability to wire tabulating equipment.</li> <li>20. Etc.</li> </ol> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Source: Ralph W. Ells, *The Basic Abilities System of Job Evaluation*, Madison Wisconsin, University of Wisconsin, June, 1951. Wisconsin Commerce Reports, Vol. III, No. 2, pp. 20-21, Bureau of Business Research and Service.

**OFFICE WORK ABILITIES REQUIREMENTS —  
BASIC ABILITIES SYSTEM**

*Figure 95*

vertical grade. An example of Ells' Job Hierarchy at the Allen Bradley Company, Milwaukee, Wisconsin, for some of the salaried jobs is shown in Figure 96.

<u>Level of Responsibility</u>	<u>Salary Grade</u>	<u>Typical Job Classifications</u>
Unskilled	1	Messenger
	2	File Clerk
Semi-skilled	3	Typists
	4	Stenographers
Skilled	5	Steno-secretary
	6	Nurses
Specialists	7	Student Engineers
	8	Cost Accountants
Dept Head	9	Dept. Manager
	10	Dept. Head
Division Manager Mgr.	11	Ass't. Div. Mgr.
	12	Div. Manager
Executive	13	Vice President
	14	President

*Note:* The number of grades recommended is from six to eight for companies with less than 200 employees and from ten to fourteen for companies that are larger.

Source: Charles Walter Lytle, *Job Evaluation Methods* (The Ronald Press Company, New York, 1954), 2nd Ed, p. 427.

**JOB HIERARCHY, SELECTED SALARIED JOBS  
ALLEN BRADLEY COMPANY, MILWAUKEE, WISCONSIN**

*Figure 96*

*Other Plans.* There are many variations to the primary plans outlined in this chapter. Most firms, for example, fit one of the basic systems to their specific needs and in so doing, come up with a variation. In other cases, one finds that consulting groups develop specific programs for installation in their client companies. The details of such methods are usually rather closely held. For example, the Carney Method was originated and developed exclusively by Stevenson, Jordan & Harrison, Inc. There also are plans which seek to combine certain features of the point and factor comparison methods. The Guide Chart-Profile Method developed by E. N. Hay and Dale Purves is an example and is tailored to meet the needs of their client com-

panies.<sup>11</sup> (A recent survey of eighty-five Connecticut firms, by Richard M. Story Jr., showed four companies using the classification method, four employing the ranking method, four using factor comparison, and 60 using the point system.)

### TRANSLATING RELATIVE JOB VALUES INTO MONEY

The previous sub-divisions described methods for determining the "relative values" of jobs, the job-to-job evaluation of the importance of jobs to the end product or service. Regardless of money differentials between job levels, or fluctuations in money values, the "relative values" expressed in points, grades, or both will remain true if the evaluation has been properly performed.

Fluctuation of money values can be attributed to many economic reasons — cost of living, scarcity of personnel, wartime conditions. For example, in the steel industry the relationship of the common labor grade value to that of a highly skilled grade such as a "roller" is probably little different today from what it was two decades ago. The translation of these grades into money has resulted, however, in higher wages for both grade levels. It is difficult to claim that the determination of those two grade levels was made on the same basis two decades ago as it was this year. It is quite possible, however, that *if* the same method of analysis were used in both instances, the percentage relationships would remain rather constant as long as the jobs were identical.

Of course job content does change for various reasons. An important one is technological advance. The relationship between the lowest kind of unskilled labor and the various higher grade levels of job skills nevertheless borders on a constant percentage.

Salary surveys are made by the Commerce and Industry Association for a list of approximately 60 office positions in the New York City area. The figures indicate a rather constant relationship of the salary rates of these 60 jobs to the rates paid for the six "key" or benchmark jobs.<sup>12</sup> These jobs are identified as:

- |                                   |                           |
|-----------------------------------|---------------------------|
| 1. Messenger — office boy or girl | 4. Stenographer, senior   |
| 2. Clerk, junior                  | 5. Secretary stenographer |
| 3. Typist, senior                 | 6. Secretary              |

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<sup>11</sup>Edward N. Hay and Dale Purves, "The Profile Method of High-level Job Evaluation," *Personnel*, Vol. 28, No. 2 (Sept., 1951), pp. 162-170; "A New Method of Job Evaluation: The Guide Chart-Profile Method," *Personnel*, Vol. 31, No. 1 (July, 1954), p. 74, Charles Walter Lytle, *Job Evaluation Methods* (The Ronald Press Co., New York, 1954), 2nd Ed., pp. 427-430; L. C. Lovejoy, *Wage & Salary Administration* (The Ronald Press Co., New York, 1959), pp. 276-278. See also Richard M. Story, *Wage Administration in Eighty-five Connecticut Companies* (I. E. Thesis, Lehigh University, Bethlehem, Pa., 1957).

<sup>12</sup>*Clerical Salaries, Hiring Rates and Office Personnel Practices* compiled by the Survey Division, Industrial Relations Department, Commerce and Industry Association, New York City, each October.

Survey results indicate that the relationship between these six jobs and all the other fifty-four has not varied more than 1 to 1 1/2 per cent between 1944 and 1960.

Steel industry job evaluation plans call for 32 grades (in 1956, Job Class 1 and 2 were combined; the lowest grade is now Job Class 2), and the wage increment between each job class is 6.7 cents per hour. Once the price for Job Class 2 is determined, the rates for all other job classes can be computed arithmetically. This arrangement establishes a constant wage relationship among the various grades. The placing of specific jobs into their proper grade depends of course upon the content of each job — some jobs may be graded higher or lower, responding to changes in content as time goes on. The wage rates paid for the lowest job grade have changed over the years as shown in Figure 97.

*COMMUNITY SURVEYS.* One of the most commonly-accepted methods of effecting the translation of relative job values into money is through community surveys. Obviously the idea is to determine what the current wage practices of the area are and then pay one's own personnel a similar wage.

The money paid employees in a community represents, at any given time, the acceptable employer-employee relationships in terms of compensation. The phrase "at any given time" is important because an "acceptance" today may not be "acceptable" tomorrow. An acceptance does not mean that either the employer or employee is entirely happy, but the fact that the employee works and the employer pays for that work does represent acceptance by both parties. As we all know from reading about so-called wildcat strikes, acceptance can end in a hurry.

In the mid-1930's, the idea of management and governments making surveys became fairly standard practice. Prior to passage of the Davis-Bacon Act, the Walsh-Healey Act, and the Fair Labor Standards Act, many employers considered their pay rates "confidential." This legislation made it mandatory that the Department of Labor know the "going pay rates" in the country, however, particularly where the government was purchasing services and materials for its own use. The Department of Labor cannot approve any government contract if the contractor fails to pay at least the "going pay rates."

Community surveys are now relatively common. (In his survey of Connecticut firms, Story [fn 11] found that 79 out of 85 firms made or participated in regular wage surveys). When an employer makes a statement of compensation policy, he usually mentions the community rate. If policy proclaims payment in some relation to the community rate, naturally it must be determined periodically. Various employer associations, unions, individual employers, the Department of Labor,

Date when Rate was Established	Common Labor Rate or Minimum Plant Rate of a Major Steel Company Pittsburgh, Pennsylvania, area	
January 1, 1900		\$ 15
June 1, 1902		16
January 1, 1904		145
April 1, 1905		155
January 1, 1907		165
May 1, 1910		175
February 1, 1913		20
February 1, 1916		22
May 1, 1916		25
December 16, 1916		275
May 1, 1917		30
October 1, 1917		33
April 16, 1918		38
August 1, 1918		42
February 1, 1920		46
May 16, 1921		37
August 29, 1921		30
September 1, 1922		36
April 16, 1923		40
September 1, 1923		44
October 1, 1931		39
May 16, 1932		33
July 16, 1933		40
September 16, 1933		425
April 1, 1934		47
November 16, 1936		525
March 16, 1937		625
April 1, 1941		725
February 15, 1942		78
January 1, 1946		8725
February 16, 1946		965
	Minimum Plant Rate (Job Class 1)	General Labor Rate (Job Class 2)
February, 1947*	\$ 965	\$1 00
April 1, 1947	1 09	1 13
July 16, 1948	1 185	1 23
December 1, 1950	1 31	1 36
March 1, 1952	1 435	1 49
June 12, 1953	1 52	1 575
July 1, 1954	1 57	1 625
July 1, 1955	1 685	1 745
Aug 3, 1956	1 820	1 820
July 1, 1957	1 890	1 890**
July 1, 1958	1 960	1 960**
Dec 1, 1960	2 03	2 03**

\*Since the establishing of the standard hourly wage scale in February, 1947, the rates paid for common labor have generally been above the minimum rate. In many instances the rate for common labor was the Job Class 2 rate shown in the table, and the minimum rate then applied primarily to janitors, sweepers, and newly hired apprentices. As of August 3, 1956, the rate in Job Class 1 was combined with the rate for Job Class 2.

\*\*These figures do not include cost of living adjustments shown in table at left.

Source: *Wage Trends in the Iron and Steel Industry*, American Iron and Steel Institute, New York, April, 1961, p. 3.

### STEEL INDUSTRY RISE IN MINIMUM WAGE RATE

Figure 97

Departments of State, personnel associations, and chambers of commerce make periodic surveys of pay rates and practices.

*Objectives of Surveys.* Management's objectives in making community surveys can be stated as follows.

1. To prevent abnormal turnover due to low pay rates — employees normally will seek employment where they can command a maximum rate.
2. To establish competitive hiring rates.
3. To minimize employee dissatisfaction with compensation — pay dissatisfaction can be severe without any accompanying turnover.
4. To fulfill an avowed policy of paying community rates or better.
5. To keep abreast of pay and related trends for planning purposes. Surveys will reveal supplementary data such as insurance, pensions, vacations, leaves of absence, termination (severance) pay and other so-called fringe benefits
6. To attain or maintain the tactical advantage of prime knowledge for utilization in labor-management negotiations and arbitrations

*Survey Methods.* Surveys can be made through correspondence, telephone contact, or by personal visits. Companies can use the survey services of trade associations and the like or do it themselves.

Alert manpower managers (and/or their wage and salary administrators) find it expedient to combine procedures into one carefully-controlled system. They can:

1. Maintain daily contact with concerns known to be immediate users of the same labor skills. Notice that this remark carries back to procedure outlined in Chapters 10 and 11. Manpower people find it helpful to keep in daily contact regarding vacancies, rate changes, union activities, and other specific community problems affecting their labor supply. This will be a phone contact.
2. Maintain a weekly or biweekly contact with selected periphery concerns, that is, with firms using the same labor market, but on the fringe of that market and some other one. In this way it is possible to obtain an early picture of market-to-market variations in rates, vacancies, turnover, and the like. This can be either a phone or correspondence contact. In some instances, particularly if the labor market in question has a large diameter, a standardized correspondence system will be established through the area's personnel associations, the management associations, or chambers of commerce.
3. Maintain a monthly summary-report system. This would be developed as a standardized correspondence system. It would cover the immediate labor market and community, and the labor markets whose perimeters touch upon that of the firm in question. This summary is best handled as a service of the management organizations or chambers of commerce. Its magnitude requires a "clearing-house" ap-

proach which normally cannot be managed by a company's manpower unit.

4. Maintain an internal system of comparative analysis, that is, a system of comparing local and regional data regarding rates and the like with the published periodic data available through the Labor Department, trade publications, and other sources.

Many experts hold that the best survey approach is the personal contact. True! Personal contact allows explanation, development of rapport, and provides an opportunity to examine pertinent conditions. It is, therefore, particularly advisable to apply the personal contact method when establishing the reporting system. Once the system is established, however, personal contact can be limited to personnel association meetings and other organizational affairs.

The success of community surveys requires establishment of a truly good rapport among the manpower personalities involved. The reason is quite simple, but involves two points. *First*, few companies have jobs of identical content, those that do have only a limited few. Unless the people know each other and their respective situations well enough, they may fail to provide sufficiently accurate or descriptive data or to interpret the meaning and impact of high, low, and average rates properly. In addition they may completely misinterpret median (middle rate) implications or the background explaining mode rates (most commonly paid). *Second*, frequently in calculating job class pay averages, medians, or modes, a surveyor or respondent will ignore or omit rates for specific employees. Exclusion may result from the fact that such individuals are filling unusual jobs, although those jobs may have titles which on the surface make them appear common to other firms. Unless those using the survey information know about such circumstances, either the exclusion or the nonconformity (if reported) may raise doubts as to validity of data and the like. To eliminate any possible negative effect from such situations, it is wise for the wage and salary people of the community or labor market to agree as to exact procedure for handling "red circle" rates, "continuing bonus" rates, or "personal penalty rates."<sup>13</sup>

*Survey Results — Form.* Because individual wage and salary people may wish to use survey data in a manner found only in their particular concern, that data should be furnished in a generally utilitarian manner. The surveyors should avoid any attempt to "second guess" the users of the information. The data should be assembled so that

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<sup>13</sup>"Red circle" rates refer to rates left unchanged for an individual even though he has been demoted or given a temporary punitive assignment. "Continuing bonus" refers to a payment made today, or continued, for some past service or event, and not related to his present job assignment. "Personal penalty rates" are seldom found, but they refer to a punitive rate given because of (1) a violation, but (2) a desire to assure the employee of at least some income.

*all* information is available to the user — the raw data, calculations of weighted average, median, and the like as well as the averages, medians or modes themselves.<sup>14</sup>

**MAKING THE SURVEY.** Several extremely important considerations influence the making of the survey. These issues are as follows.

1. First is the extent of the "community" in which the survey is to be made. The community may be a geographical area; certain companies within the geographical area, rather than *all* the companies, a type of industry within a certain geographical area, or definite job classifications within a geographical area or industry. The establishment of the "community" is the first step. In establishing the community some organizations include only those firms in a given area whose hiring standards are the same or about the same as their own.

2. Second is the selection of the types of jobs in the community. For example, in making a survey of office salaried jobs, many common denominators exist; almost all offices in a company employ stenographers, typists, various grades of clerical help, messengers, telephone operators, etc. There is a wide difference in the types of wage jobs in a community. For example, in metal working companies there still may be a wide range, depending upon the type of metal working performed, in machine shops one usually finds lathe operators, operators of drill presses, boring mills, and various grades of machinist skills. In the endeavor to secure specific information about specific jobs, the selection of the identity of employers who engage employees having these special skills is important.

3. Once the identities of jobs to be surveyed have been decided, it is necessary to prepare job descriptions to explain the job titles. A job title may not mean the same to all participants in the survey, hence, a description is most necessary.

4. Making contacts with the selected participants is the next step. Some organizations which a company wishes to include in its survey may not desire to participate. Salesmanship would then be necessary.

5. If the survey is to be conducted by a surveyor through personal visits to each establishment, it is usual to mail the information about the survey in advance of the visit. Many times personal visits are unnecessary provided the participants in the survey know each other and have worked together previously. The first and fourth quartiles are eliminated from the collected data for the final calculations — just the center or the "meat" of the figures is used in obtaining the going pay rates.

6. After the figures are collected for each job or job class, a summary is made showing the number of employees at each pay rate for

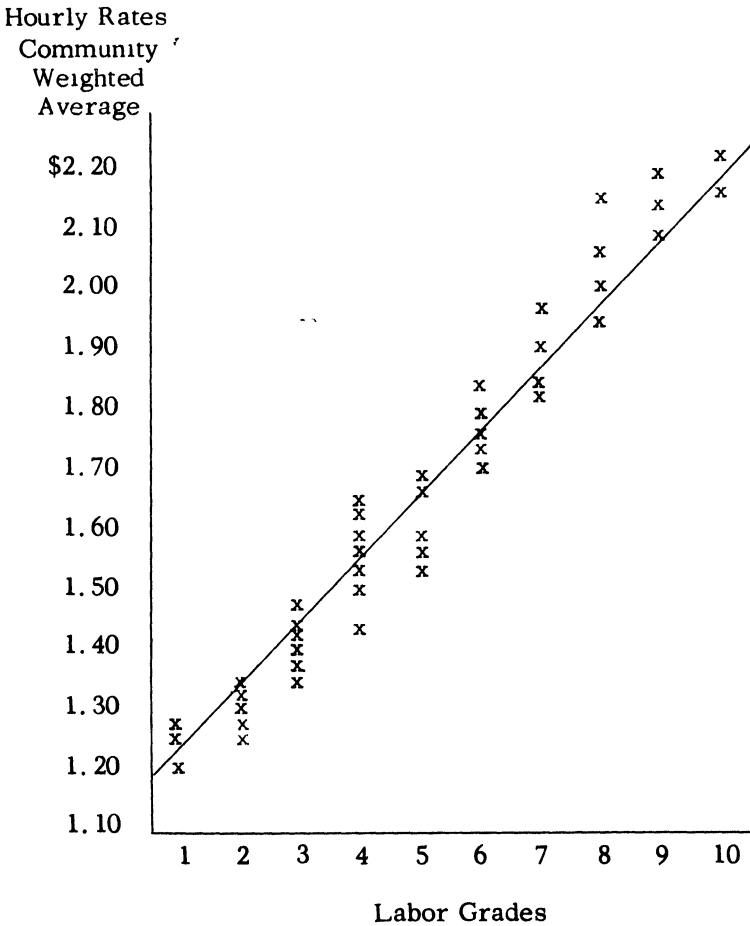
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<sup>14</sup>Well-known surveys include: federal and state labor department surveys, surveys by chambers of commerce, trade and personnel associations, and the monthly AFL-CIO Collective Bargaining Report (AFL-CIO Department of Research, Washington, D. C.).

each job or job class. Then a scattergram is made by entering an "x" on a chart which represents the number of companies having jobs in each grade or class. The "x" also may represent some "standard" number of individuals per company. See Figure 98.

7. A trend line is drawn freehand on this chart, or to be statistically correct, the calculations are made by the "Least Squares Method." This trend line will show the average or mid-point pay rate paid for each job class.

8. Now a company can prepare an identically sized chart which will show its pay rates for the very same types of jobs. If the com-



COMMUNITY WAGE AND GRADE DISTRIBUTION — 1961

Figure 98

pany chart is prepared on vellum or almost transparent paper, it can be superimposed upon the community chart. This combination will show whether the company figures are above or below the community. This will, of course, be a general picture of the rate structures.

9. The rates paid for each job class then can be analyzed to determine what should be done in order to match the rates of the community, if a company's rates are below community. This analysis also can be used to determine any revision of pay rates applicable to any particular grade or class. From one's own company pay rates, and those of the community, a pay schedule applicable to each job grade can be determined.

### MAINTENANCE OF THE JOB RATING PLAN

Once a job rating or job evaluating plan has been established, it must be maintained continually. If properly established, the plan should not need constant revision. Attention to administration or application of the plan is the real necessity.

In the *first* place, the day-to-day changes in job content necessitate constant attention to their assignment to the right grade. Administrators must know both the minor and major changes in job content. The minor changes will occur frequently, the question to be determined is "how minor are the changes?" It is quite possible that a series of these minor changes, when added together, may necessitate the reclassification of the job into a higher or lower grade. When there is a major change in a job due to a variation in materials, equipment, or process, a new analysis of all jobs affected should be made immediately. It is quite usual for a job evaluation plan to provide for a new analysis of each job when (1) the employee requests it, or (2) the supervisor requests the restudy. Once a year each job is to be restudied even though neither the employee nor his supervisor requests it.

*Second*, the pay rates for the various job grades should be reviewed in the light of periodic community surveys. Economic or labor market changes have an important impact upon the pay structure, and surveys help management keep abreast of the compensation rate changes.

*Third*, management also keeps abreast of all new legislation and the interpretations of legislation already on the books. New legislation which may affect the legal minimum pay rate always requires that an employer determine what his plans will be concerning pay rates of jobs not affected by the new regulations. For example, if a change in the minimum of \$1.00 per hour to \$1.15 per hour is legally established, obviously the job rates under \$1.15 per hour will have to be raised to the new minimum. What about the jobs which formerly were paid \$1.20 and \$1.25 per hour? If the relationship of the \$1.00 per hour to the \$1.20 was proper before the new minimum rate was established — a 20 cents per hour differential — this relationship will

be destroyed when the change to \$1.15 takes place, making a differential of only 5 cents per hour. The change in the minimum affects the "minimum" paid jobs and those others just above them.

### MERIT OR PERFORMANCE RATING

The compensation program most likely to result in an equitable wage and salary situation includes job evaluation, to permit creation of a just rate structure; an incentive system, where logically applicable, and a mutually acceptable contractual agreement with labor, either tacit and individual in application, or formal and involving organized labor. A program with such broad requirements almost automatically focuses attention upon the capacities of people. It presupposes the ability of personnel to move through the rate structure.

If, therefore, people are to benefit from planned wage and salary increases, promotions, and transfers, the means of determining them becomes an integral consideration of the compensation methodology. This "means" involves seniority and merit.

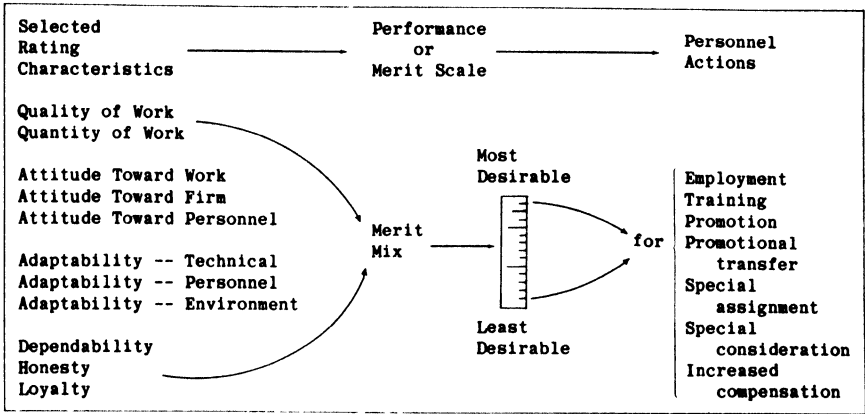
*A POINT OF VIEW.* By definition, the over-all evaluation of employee merit, of performance and capability, can be termed "merit rating," "service rating," "employee rating," or "performance rating." It is important to avoid the term "merit rating." Industrial history reveals too many instances of misuse and improper application of the concept. The term has become a "red flag" to entirely too many people. Instead of this title, the term "performance rating" is preferred.

### PERFORMANCE RATING AND MANPOWER MANAGEMENT.

The effectiveness of manpower is the constant interest of every manager. The more effective the personnel of an organization, the greater the likelihood of competitive success; the more effective the individual employee, the greater the likelihood that his earnings can bring him the material things he considers important. For these reasons, at least, one must hold that man's performance and capability to perform in the future are important to the totality of any organization.

If man's effectiveness is, in fact, of such importance, then managers must be able to measure it. Performance rating techniques facilitate that measurement. As pointed out in Chapter 14, this rating can be handled in several ways, and is significant to several manpower activities. The following (Figure 99) depicts that functional significance. Clearly the individual's performance is of interest to every manpower management activity. Unfortunately, however, this is often overlooked.

*Performance Rating Error.* A serious error of application often reduces the effectiveness of performance rating or turns the activity into a source of costly labor disputes. Frequently wage and salary



THE FUNCTIONAL SIGNIFICANCE OF PERFORMANCE RATING  
 — A SCHEMATIC VIEW —

Figure 99

administrators assume that the only use for such rating is in determining the difference between those entitled and those not entitled to a wage increase. The results of such a misconception are several. *First*, it may mean that employees are faced by more than one different rating procedure. *Second*, if faced by several procedures, the employee may find himself reviewed critically in one instance and uncritically in another. This does not increase his feelings of security. Then too, he may be considered worthy under one procedure and not worthy under another, again security is shattered. *Third*, such duplication of function may mean that the organization has no true conception of facts regarding the individual. Personnel-actions decision hence may be fallacious. *Fourth*, such duplication usually indicates complete lack of plan or controlled planning. This tends to mean that production interruptions occur and operating costs of one sort or another increase. In total, conflict runs rampant.

*Performance Rating Recommendation.* Every bit of logic points to the wisdom of establishing one carefully planned and controlled system of performance rating. The procedure adopted should facilitate manpower decisions relating to employment, development, conservation, and compensation of manpower.

Furthermore, the procedure used properly concentrates upon *performance*. What the employee does accomplish and has accomplished deserves full consideration. Potential action requires consideration as well; however, potential is at best a nebulous matter and to make wage

increase, promotion, and training decisions on this basis alone is, at present, a dangerous approach.

It appears, then, that the effective rating system combines testing and interviewing, and that the rater's interest will concentrate on accomplishment before it focuses upon potential. Methods of evaluation include the ranking method, the use of forced choice scales, and the like, all mentioned previously.<sup>15</sup> The *incident-evaluation technique* (critical-incident) also can be applied.<sup>16</sup> Use of this approach requires that supervisors maintain a "log" of incidents in which employees become involved. The log is designed to show the event, the reaction, the result of the reaction, and the supervisor's estimate of the case. Figure 100 shows the title headings from a page of such a daily log.

**PERFORMANCE RATING AND THE SUPERVISOR.** If performance rating is to succeed, every supervisor, regardless of his hierarchical position (vice-president or foreman), must be trained in the concept and in the specific technique. One distinct advantage of a properly developed rating system is that the supervisor is forced to review his own responsibility for the effectiveness of the employee he is rating. The managerial responsibility for performance rating provides, in itself, a measure of a boss's effectiveness.

*Supervisory Requirements.* The "red flag" view taken by many, when performance or merit rating is suggested, stems from supervisory malpractice. As a concept, performance rating is *not punitive!* On the contrary, it is an instructional or counseling device and serves to inform as well as discover.

Success demands that certain points be brought home firmly to every supervisor, every manager, and these individuals must conform. *First*, the rating system must be periodic, scheduled, known to all. If formal testing and interviewing are backed up by the maintenance of incident-evaluation (and this is recommended), that fact must be known to all. *Second*, the system's objectives need to be stated clearly and known to all. In fact, where all employees have at least some part in the development of the system, it is more likely to work. *Third*, all employees should know that performance rating is a line responsibility, even though supervisors may be supported very closely by the manpower staff. *Fourth*, supervisors must impress their subordinates with the importance of the factors used in the rating, as well as with the importance of the rating. *Fifth*, actual rating may take place over

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<sup>15</sup>cf. Chapter 14; also, see L. W. Cozan, "Forced Choice: Better Than Other Rating Methods?" *Personnel*, May-June, 1959, p. 80, Joseph F. Tripican, "Profile of Performance: Guide to Effective Management Training," *Personnel*, March-April, 1960; J. C. Flanagan and R. K. Burns, "The Employee Performance Record; A New Appraisal and Development Tool," *Harvard Business Review*, Vol. XXXIII, 1955, p. 95-102.

<sup>16</sup>Flanagan and Burns, *Ibid.*

EVENTS RECORD Date \_\_\_\_\_  
 Dept # \_\_\_\_\_ Shift \_\_\_\_\_ Budget Period \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_ pages  
 Section # \_\_\_\_\_

MANNING DATA

#Authorized \_\_\_\_\_ #Authorized Absent \_\_\_\_\_ Grade Levels \_\_\_\_\_  
 #Assigned \_\_\_\_\_ #Unauthorized Absent \_\_\_\_\_ Authority \_\_\_\_\_  
 #Present \_\_\_\_\_ #Vacancies Outstanding \_\_\_\_\_ #Assigned \_\_\_\_\_  
 Total Annual Labor Budget \$ \_\_\_\_\_ Expended \$ \_\_\_\_\_ Remaining \$ \_\_\_\_\_  
 Last Manpower Requisition No \_\_\_\_\_ Date \_\_\_\_\_ Action \_\_\_\_\_  
 Requisition Made Today, No \_\_\_\_\_ Reason \_\_\_\_\_  
 Adjustment made to staff forecast, and reason \_\_\_\_\_  
 \_\_\_\_\_  
 #Accidents to date \_\_\_\_\_ Class A \_\_\_\_\_ Class B \_\_\_\_\_ Class C \_\_\_\_\_ Minor \_\_\_\_\_

Incident or Event	Person Involved	DAILY PERSONNEL EVENTS		Result of His Action	My Action or Reaction
		His Action	His Reaction		

Signature of Supervisor \_\_\_\_\_

**DAILY LOG HEADINGS FOR MANAGER'S RECORD OF EVENTS —  
PERSONNEL (A SAMPLE)**

*Figure 100*

a period of time when incident-evaluation is used, and when the supervisor is completing his portion of a rating form, he calls upon memory as well as recorded fact. He thus must be prepared to support his conclusions. *Sixth*, the supervisor must review the rating — good, bad, or indifferent — with the employee; the employee is entitled to a full and careful explanation of the rating given. That explanation must be informative and instructional. Where deficiencies exist, the supervisor outlines an approach whereby the employee can overcome them. If deficiencies require training, it must be given.

It all boils down to a simple, but too frequently neglected, rule of supervisory conduct — or good leadership. The supervisor is responsible for the performance of his subordinates. He therefore is obligated to take those steps necessary to improve that performance. Before this can be done, the supervisor must *know* the strengths and weaknesses of the subordinate; hence, he must rate that performance.

### PERFORMANCE RATING AND COMPENSATION

The equitable compensation program involves establishment of labor grades. As employees improve their ability to meet production requirements, they are entitled to better financial returns. The compensation program therefore uses employee performance rating to detect those who warrant wage and salary increases.

The employee's financial improvement may occur within the labor grade or as a promotion or a movement to another labor grade. Instances will occur when no vacancies exist in the next superior labor grade. In such cases, an otherwise fully qualified employee may find himself blocked from financial betterment. This must be guarded against or the compensation system will be considered unjust. Furthermore, there are jobs which require skills easily learned in a few hours. Such jobs do not lend themselves to the employee's technical improvement over a long period. If wage increases are limited strictly to improved performance, it is possible for the employee to be blocked from a raise because improvement cannot take place. Both these conditions point to the necessity of tying seniority *and* accomplishment into the compensation program.

If this is to be done effectively, jobs require careful definition through job analysis and the other procedures used in job establishment work. Those jobs which require only limited or easily learned skill will necessitate a wage increase system based upon "time in grade." One thus may find that the initial increase in the base rate will depend upon performance and that future increases will be automatic until the top of the grade is reached, as long as the employee's performance does not deteriorate.

To protect against the first possibility, that is, where promotion is blocked because of no vacancy, a different approach is required.

The compensation program should permit some "special" increase for those who continue to show excellence of performance.

Finally, where the technical complexity of jobs is such that long experience and training are required before one can say fairly that the employee has become "expert," increases in wages should be related to both seniority and performance. Seniority can be used as a part of an increase and performance as the balance. For example, in recognition of the long term trend of the increase in the cost of living, each permitted wage increase would have two portions: (1) the seniority portion, or base-of-increase, and (2) the merit portion. The seniority portion might be set to reflect an increase designed to keep the employee in fiscal alignment with the times. The merit portion would reward the continued improvement in performance, but it would not be given unless there were improvement.

### **UNION ATTITUDE TOWARD PERFORMANCE RATING**

Over the years the union attitude toward performance rating has been antagonistic. (Perhaps this explains why, of the 85 Connecticut firms surveyed by Story [fn 11] 78 used some form of job rating, 70 used wage incentives, but only 58 employed any form of merit rating.) In all honesty one must sympathize with this view. We cannot deny that management handled merit rating poorly in the past. Alert managers realize, however, that where there is a correct performance rating system, union resistance must be limited to political expediency.

Legitimate complaints about performance rating will involve the following.

. . . Lack of consistency, of reliability in ratings. Where this is true, management is not doing its job.

. . . Limitation of ratings to wage and salary decision. Where this practice exists, the union may find it important to challenge the relationship between training opportunities and promotion.

. . . Punitive rather than instructional use of results. Where management uses this approach, it is violating the concept of performance rating.

. . . Lack of consistency in personnel actions. If some people receive wage increases and promotions even though their performance ratings are low, while others with high ratings do not receive comparable benefit, management is guilty of malpractice.

. . . Use of ratings to penalize union members or officials. Naturally this action deserves challenge.

Although labor's attitude has been negative, management can find a strong ally in the union if it handles performance rating properly. Competent union leaders usually object to retaining incompetent employees. If management's actions prove that punitive effects of ratings

are limited to incompetents, the union can be expected to support the activity.

On the other hand, the political nature of a labor union often makes it imperative that the hierarchy attack any program management may develop which can or does threaten the employment security of minimally effective people. Furthermore, painful though it is to admit, one often finds that the union's leadership and the international representatives are interested in only those practices which maintain or improve *their* control over the workforce. Performance rating focuses everyone's attention upon competence and accomplishment, it makes initiative a virtue.

### ERRORS IN PRACTICE

Job evaluation and performance rating are systems founded upon years of research and practical experience, however, managements still misuse them.

**Blue Monday** The company had undertaken a costly job evaluation program. By the time the jobs had been studied and the grades established, it was clear to the management that they had been paying far more than the general community practice for the lower skill jobs.

The company employed only 65 rank-and-file people. Of that number six would fall into the new Grade 1 jobs, six into the new Grade 2 jobs, 11 into the Grade 3 and 10 into the Grade 4 jobs. Of these 33 people, 28 were now earning from 5 to 15 cents per hour more than the top rates for the grades into which their jobs would fall.

Management was shocked to think of the licking they had been taking on their labor costs. They immediately moved to notify the employees involved that beginning with the next quarter (two weeks off), their rates would be brought into line with the grade rates of the new wage program.

Notification went out on Friday. The employees struck the plant on Monday.

Management and managers stand responsible for their errors. A job evaluation program can, and often does, show that management's compensation practices have been unsatisfactory — that they paid too much, or too little. Whatever the past error, management bears the blame! It is incorrect to reduce a man's wages or wage potential by bringing a high rate into line with the grade levels. Such cases instead must be handled individually. The man's rate must be "flagged" and treated as a "red circle" rate. He must continue to get the high base pay. When he moves on — through promotion, transfer, or turnover — then the person moving into his job will receive the new rate.

On the other hand, the "red circle" principle cannot be used to defend continuing to pay a low rate when the job evaluation program indicates that the labor grade for a man's job requires a higher base pay. In such cases management's mistake has been failure to recognize true worth — just as is true of the "red circle" instance — and management cannot hold another responsible for a management error.

**Till Death Do Us Part** Ed developed a technique which reduced the firm's operating costs. The reduction was very significant.

Because of this, Ed was told that he would share in the savings at a rate of 5 per cent of the first year's savings for the next two years, and that afterward he would receive 5 per cent of the first two years' savings for the remainder of his service with the company. Furthermore, he was given a special base rate which put him in an earning position comparable to his foreman.

Several years went by. Some of management changed. A job evaluation program was introduced. A work simplification program was introduced. The production process changed.

Ed was called into his foreman's office one morning and told that his job had been evaluated and he would now be in Grade IV. The top rate for Grade IV was 3 cents an hour less than what he was currently making. Further, he was told that since the production process now in use no longer involved the technique he had devised, his bonus would come to an end with the beginning of the next pay period (two days away).

Ed mumbled about fairness and such and left. An hour later the foreman was called into the plant manager's office. He found himself confronted by the plant manager (who had told him what to say to Ed), the controller (who had told the plant manager), the executive vice-president of the corporation, the vice-president in charge of manufacturing (who had originally given Ed the bonus and the special base pay), and Ed.

Need we explain the outcome?

True, few people in Ed's shoes would have been able to call the "brass." True, more is wrong in this case than Ed's pay situation. Let us note, however, that special compensation arrangements *are not* normally to be effected by a job evaluated rate structure. Such arrangements are in the nature of a contract between individual parties and not to be violated by a system foreign to that arrangement.

On the other hand, if management feels that special or "continuing bonus" rates may jeopardize a rate structure, they may seek a new arrangement with the individual. The arrangement might take the form of a contractual agreement to pay a lump sum, thereby clearing the slate; it might take the form of a promotion and agreement to dissolve the past arrangement, or it might involve some other consid-

eration of value. Whatever is done should be done in a legal and defensible manner. Alert managers will realize that any other approach on their part immediately opens the door to organized labor's charges of malpractice.

**My Jobs Are Different** Mr. R. was manager of the test department. He was a member of the job evaluation committee.

He had pronounced "political" power in the company. As evidence of his organizational strength, note: on three occasions his department had received budget increases when every other department received cuts; and, if he felt that some other department should do a piece of work, that was it, no matter how much the other department's boss might protest.

The firm was undertaking a re-evaluation of clerical jobs. Over the past four years the clerical base rates and median rates had slipped some 3 cents to 11 cents an hour behind the community base rates.

It was noticed during the meetings of the committee that Mr. R's personnel all received a ranking which placed them in Labor Grades D and C. Only two other clerical personnel were to be found in Grade C — the two executive secretaries. In only four cases were clerical personnel found in Grade D — one executive secretary, one executive secretary, junior, and two senior statistical secretary-typists.

Mr. R. kept insisting that his clerical personnel belonged in "new" Grades C<sub>1</sub>, C, and B respectively. Actually his personnel were:

one secretary-typist	two senior clerk-typists
one secretary	two clerk-typists
one file clerk	

The Grade C requirements included handling original report preparation, college level algebra, and matters of similar level. Grade B requirements included a knowledge of statistics, ability to organize and conduct special projects and to prepare and present (if necessary) technical reports at management meetings.

Mr. R's secretary was the only person in his group (of the clerical personnel) required to do any of these things. All her job called for was computations of a routine nature done in accordance with established formulae, preparation of three of the routine (simplest) periodic reports, and the typical functions of a secretary. Her job called for no special knowledge beyond college algebra.

Unfortunately, Mr. R's views were put into effect. One wonders if this situation explains why clerical labor turnover was severe in every department except Mr. R's.

Management must be alert to the presence of the "kingdom builder." His influence upon the success of a compensation program can be great. Mr. R's influence was magnified by his "political" strength, a condition that further aggravated the problem. When handling job evaluation problems, management — particularly manpower managers and members of an evaluation committee — must guard against the biases of those who, for one reason or another, seek special treatment for specific jobs. This easily can distort an entire wage structure. Furthermore, it is very important to remember that people affected by an evaluation program must feel that the resulting structure is fair. If they do not, labor turnover and work stoppages of many kinds may occur.

**But It's in Line With the Area** The company had just finished a job evaluation. Rates were directly in line with the community — right on the community scale. Though part of the so-called community, however, the company was located in a difficult-to-reach area. The average employee would have to travel at least 15 miles to reach the plant. The road net was very poor and dangerous, and some employees traveled as much as 11 miles out of their way in order to reach the plant.

Prior to the job evaluation, most skilled jobs were drawing from 30 cents to 80 cents more than the community average per hour. The firm held to this differential for the existing employees.

The reason for undertaking the evaluation program was to prepare for an ensuing expansion program. The company wanted its compensation system in order.

In presenting his final report to top management, the vice-president of industrial relations recommended, among other things, that: (1) existing base rates be retained if above the new grade rates for those now on the payroll in those jobs, (2) individuals entering those jobs be given the "new" grade rates, (3) the company's wage line be adjusted above the evaluated rates, (4) the adjustment be a flat 8 per cent above the community average, (5) an incentive system be developed for supervisors, and one be established for "indirect labor cost" personnel.

The controller took the view that: (1) no adjustment was needed because the evaluation resulted in a rate structure directly in line with the community, and (2) if manpower people were making the recommendation because of a desire to forestall union demands, the most the company could afford would be 1 1/2 cents across the structure — anything more would throw the relationship between labor cost and contribution to value of product out of balance. He pointed out that manpower people in general, and the vice-president of industrial relations in particular, had completely immature views regarding costs.

The manpower group advanced the additional arguments that unless this 8 per cent increase were authorized, it would be extremely difficult to attract new personnel because of the travel problem. They further pointed to the *facts* (in this case) that: (1) although the community could supply labor for the lower skilled jobs, and such people would be glad to work for the company because of area unemployment for people of their skills, the area could not supply the higher skills needed unless they could be attracted away from their present employers, this seemed unlikely unless the company offered a better-than-area base rate because of the travel problem; (2) the other sources for the skills required were such that people would have to enter the community as residents and this meant housing would be required, housing was available only in either the undesirable sections of the area, or at a distance of some 28 miles from the plant.

So-called "sweetener" adjustments sometimes are required if the rate structure of a firm is to meet local conditions. Such adjustments to a rate structure may be necessitated by community conditions, as in the foregoing situation, or by area job differences; they also may be required as adjustments to a single labor grade or some small number of grades. In one case, for example, the fourth and fifth grades were given much higher top rates than any other labor grade in a 12-grade structure. This was done to help attract, as well as hold, competent people. The need arose from the fact that once in those two grades, the likelihood of an employee's being able to move on to grade six or seven was very slim. These grades were, in fact, dead-end. Let us recall that a firm's wage structure must help to attract and hold the kind of personnel needed if the competitive position is to be retained and/or improved. Furthermore, current and potential employees must feel that wage structure is fair.

**What Was, Ain't** Bill had been working in the final connection section of the assembly department for six years. Jim had been in the cone-forming section. Bill was in grade five. Jim was in grade four. Bill's base rate was 7 cents an hour more for his grade; his median was 5.5 cents more, and his maximum was 9 cents more. For a number of years the promotional scheme had been, obviously, from top of grade four to bottom of grade five.

A new production process was developed. New equipment was purchased. The work flow, the product, materials, and the inspection techniques were changed. The firm elected to continue producing the old products while introducing the new one. Although the new product was immediately successful, the old one continued to market well enough for the company to maintain a dual operation.

One thing about the new product had a direct effect upon Jim and Bill (and all others in their relative positions). The new unit was such that the cone-forming operation, with minor alterations in equipment, methods, and materials became the prime skill operation.

Jim was the senior employee in the section. Furthermore, he was the most adaptable member of the original crew, and turned out to be extremely efficient with the new procedure. The new "cone connector-unit-molding" department was evaluated. Two jobs fell into grade eight, two into grade seven, and five into grade six. Jim's particular job assignment placed him in grade eight.

In the process of staffing the new operation, Bill was given an opportunity to bid for openings. He failed to meet the requirements for any, but was promised that hard work and attendance at the company's pre-promotion training sessions (after hours, on his time and at his expense) would assure his regular promotion from grade five to grade six.

Before all this took place, Jim had been working for promotion into grade five. Do you suppose this series of events has anything to do with the fact that Bill's wife won't allow their daughter to go out with Jim's son, or why Bill and Jim no longer go "Friday-nighting" together, or why work coming out of Bill's area is below par nowadays, or why there is a move afoot to beat Jim in the next union election (he had been secretary for three terms)?

Job evaluation can easily disturb status hierarchies and promotional sequences. It can reverse traditional social structures both on and off the job. Unfortunately, however, one cannot merely warn others of the danger. Drawing attention to the potential harm really may not resolve existing or potential problems. As in the case of Bill and Jim, technological improvements may suddenly reverse relationships of long standing, or require realignment and redefinition of jobs. In such cases, it is foolish to suggest that the status relationships deserve prior consideration to the firm's profit and progress and the present and future welfare of an entire workforce. Of course, disturbance of status hierarchies and promotional sequences should be avoided if possible.

At times such avoidance is possible, even in the face of major changes in a production process. The method of doing so will, however, be situational. There is no pat set of rules for managers to follow. Only one set of considerations can be pointed out, and they *may* not be pertinent. That set includes: (1) remembering that participation by the workforce in the development of evaluation or re-evaluation may at least minimize problems; (2) remembering that careful explanation of reasons for evaluation and re-evaluation may

relieve personal feelings of insecurity; (3) remembering that careful explanation, development, and application of rewards may increase employees' willingness to co-operate; and (4) remembering that co-operation is more likely when senior people are assured of an opportunity to try to meet new requirements, and when their effort is supported by necessary training.

**Moonlight Performance** One of the common manpower problems today is "moonlighting." The term applies to people who, for one reason or another, work at two jobs. Normally this occurs as a result of financial need. Sometimes people take on a second part-time or full-time job because they can't stand being idle — when a man had to work a 40-hour week this was no problem, at least not as much of a problem. Once in awhile "moonlighting" results from real or imagined inequities in the individual's primary job situation.

Frank and Ed had worked for "the" company for a period of ten years — ever since they returned from Korea. The two had been "bunkies" since high school. Three years ago, as a result of conversation with their foreman during their performance rating interviews, they decided to take a series of courses in computer technology.

Six months ago they applied for transfer to the section of "the" company where computer work was the general functional requirement. They were turned down.

Instead of allowing themselves to get huffy about the matter, they took a day off and went over to the Craft Company. They applied for, and received employment in the test department on the third shift. This meant that they went to "the" company directly from the third shift in the Craft Company.

They did so well at Craft that within four months they both received a promotion with the net result that each was making 50 cents an hour more on the "moonlight" job than on their so-called regular job.

During the recent performance rating interview at "the" company their foreman told them: "Frank, your work isn't any good any more. (What Frank was told was very much akin to what Ed heard). Since you went to that school, you think you're too good for us. Your attitude is poor. You think you know more than I do. Either you shape up or you're through!"

Frank and Ed now work full-time on the first shift at the Craft Company. Both are in line for promotion into management's ranks.

Too many first echelon supervisors (and too many managers in general) take for granted that performance rating involves only an honest appraisal of the individual's accomplishments. When confronted

by poor performance, or individuals whose performance has shifted from good to poor, many managers forget that *they* have a responsibility for this deficiency. Those who recall their responsibility look into the matter. They try to find out why. In the case of Frank and Ed, had the foreman thought, he might well have realized that there could be a connection between their decreased efficiency and the fact of their refusal when the transfer request was made. He might have investigated. True, he might have been unable to do anything, but at least he could have made the manpower people aware of the problem. Perhaps two valuable people could have been saved.

**Double Talk** The Error Company hired a consulting firm to establish a performance rating system and tie it into the compensation program. The consultants tried to get management to hold training sessions for the supervisory personnel so they could be taught the right way to handle the rating procedure, and so forth. Management's attitude was: "Our supervisors are competent to do their jobs, that is why they are supervisors."

Among the many things which took place, and destroyed the rating system's effectiveness right from the start, were the following. A key supervisor was overheard discussing the rating system with a member of the industrial engineering group. Said he: "Ira, if those fools in personnel think I'm going to bother checking back over everyone's quality and quantity record, they're nuts. When I rate those guys I'm going to do it the way I've always done it. Sure I'll fill in the forms; but I don't need any record check to tell myself what's what."

Another conversation was overheard between the foreman of the first shift and the foreman of the second shift in the plating department. It went: "Marty, sign those rating slips I made out for you. I'll drop them off at personnel tomorrow."

If performance rating is to succeed, the employees must have every reason to trust the consistency and fairness of the ratings. In this case there was no reason to have such trust, and the program did not work. Furthermore, those charged with the rating must be trained to the job and convinced of its worth. If this is not the case, their negative attitude will carry over to their subordinates, and their incompetence will hurt the entire production effort. An improperly developed or administered performance rating system will cause employee unrest.

## SUMMARY

No matter how adequate the rest of a manpower management program, if the compensation system is inadequate everything else will tend to fail. Financial reward is a very real motivating force.

That reward is important in at least two ways: in terms of the actual amount paid, and in terms of the difference between what one man receives and what is given another. In other words, people want to feel not only that the amount they earn is fair, but also that it is relative to the difference between their jobs and those of their companions.

Job evaluation is the technique used to establish the relative importance of jobs in a monetary sense. Based upon accurately established jobs and their careful definition, job evaluation orders the rate structure so that job-to-job variations in skill, effort, responsibility, working conditions and the like are reflected in the base pay of the workforce.

There is a rather wide variety of evaluation systems. In general, however, they all can be classified as nonfactor-evaluative or factor-evaluative. Factor-evaluative systems are more likely to result in a defensible rate structure. They require a more carefully analytic examination of jobs and job relationships than the nonfactor-evaluative systems.

Equitable compensation requires that there be effective job evaluation and performance rating. It also necessitates an effective incentive system, where such systems are applicable. Over and above these requirements there are the matters of "fringe" benefits and the problem of executive and technical compensation. It is with these matters that the next chapter is concerned.

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*Let the reward fit the deed. Yet recall that some deeds bespeak of future as well as present reward; face too that some deeds and some rewards cannot be seen with clarity.*

## Compensation: The Special Problems

Today men have come to believe that rewards may be deserved both in the present and in the future. The problems of compensation thus force attention not only to the current payroll, but also to the payroll of the future. Executives, research and engineering personnel, and certain technologists provide such special problem jobs; and the pressures exerted by unions and the mores of a changing society influence the extent and nature of benefits not included in the everyday payroll.

### **EXECUTIVE COMPENSATION**

Executives hold positions sensitive to public and employee sentiment. What they do, no matter where it is done, reaches the attention of the general public as well as the stockholders and company personnel. Their life and work are in most ways so integrated that the one is the other. Their pay, though often the result of personal decision, must sooner or later stand the test of public scrutiny.<sup>1</sup> In fact, both the amount and the nature of executive compensation become more a matter of moral than economic concern.

Who are these executives? Definition can be found by reference to the Fair Labor Standards Act. More specifically, executives fill the jobs of president, executive vice-president, the vice-presidential slots in manufacturing, sales, finance, manpower, and research. Depending upon the size and operational character of the firm, factory managers and regional or specific product sales directors also can be classified as executives.

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<sup>1</sup>The recent exposures in the electrical industry suggest the power of public scrutiny. Although aimed at bidding practices, top executives were the targets.

Top executive compensation usually is determined or approved by the board of directors representing the stockholders. Stockholder reaction can exert a powerful influence upon executives who seek to establish their own pay. It is not impossible for dissident stockholders to reach out and severely curtail executive income. Furthermore the government, the unions, the securities people, and even creditors exert pressure upon those who establish executive pay.

Figure 101 shows a sample of top executive compensation. The executive levels mentioned fall into a broad salary spectrum. Some command less than \$30,000 a year, while some (see Figure 101) will claim more than \$500,000 a year.<sup>2</sup> The actual amounts vary from

	SALARY	OTHER COMPENSATION*	TOTAL BEFORE TAXES	FEDERAL INCOME TAX (US&NR EST)	AMOUNT LEFT AFTER FEDERAL INCOME TAX
Frederic G. Danner, chairman, General Motors Corporation	\$201,275	\$372,750	\$574,025	\$418,675	\$155,350
Sherrod E. Skinner, executive vice president, General Motors Corporation	\$151,200	\$399,000	\$550,200	\$399,162	\$151,038
John F. Gordon, president, General Motors Corporation	\$181,000	\$336,750	\$517,750	\$372,585	\$145,165
Cyrus R. Osborn, executive vice president, General Motors Corporation	\$141,000	\$372,000	\$513,000	\$368,695	\$144,305
Henry Ford II, chairman, Ford Motor Company	\$187,500	\$275,000	\$462,500	\$327,336	\$135,164
Louis C. Goad, executive vice president, General Motors Corporation	\$161,000	\$299,250	\$460,250	\$325,493	\$134,757
Carl H. Kindl, vice president (retired), General Motors Corporation	\$110,800	\$304,000	\$414,800	\$288,548	\$126,252
James E. Goodman, vice president, General Motors Corporation	\$131,100	\$276,000	\$407,100	\$282,311	\$124,789
George Russell, executive vice president, General Motors Corporation	\$122,333	\$271,500	\$393,833	\$271,565	\$122,268
Robert S. McNamara, president (resigned), Ford Motor Company	\$141,667	\$245,000	\$386,667	\$265,760	\$120,907
J. W. Schwab, chairman, United Merchants & Manufacturers, Inc	\$100,300	\$284,205	\$384,505	\$264,010	\$120,495
John Dykstra, vice president (formerly—now president), Ford Motor Company	\$135,000	\$240,000	\$375,000	\$256,310	\$118,690
Roger M. Kyes, vice president, General Motors Corporation	\$126,100	\$245,250	\$371,350	\$253,354	\$117,996
William T. Gossett, vice president, Ford Motor Company	\$135,000	\$225,000	\$360,000	\$244,160	\$115,840
Samuel Bronfman, president, Distillers Corporation-Seagrams, Ltd	\$359,750	-----	\$359,750	\$243,958	\$115,792
John S. Bugas, vice president, Ford Motor Company	\$122,500	\$225,000	\$347,500	\$234,035	\$113,465
C. M. White, chairman (retired), Republic Steel Corporation	\$346,680	-----	\$346,680	\$233,371	\$113,309

1960 PAY OF 38 TOP MEN IN INDUSTRY — BEFORE AND AFTER TAXES

Figure 101

<sup>2</sup>cf. *Compensation of Top Executives*, (Studies in Personnel Policy, No. 173), National Industrial Conference Board, Inc., N. Y., 1959; see also the report on top executive salaries and bonus during 1959 as presented in *Business Week*, May 21, 1960, pp. 48-76.

Figure 101 (Continued)

	SALARY	OTHER COMPENSATION*	TOTAL BEFORE TAXES	FEDERAL INCOME TAX (US&WR EST)	AMOUNT LEFT AFTER FEDERAL INCOME TAX
<b>Charles G Stradella, chairman,</b> <i>General Motors Acceptance Corporation</i>	\$101,350	\$224,250	\$325,600	\$216,378	\$109,222
<b>W K Whiteford, chairman,</b> <i>Gulf Oil Corporation</i>	\$175,000	\$150,012	\$325,012	\$215,907	\$109,105
<b>Irving A Duffy, vice president,</b> <i>Ford Motor Company</i>	\$122,500	\$195,000	\$317,500	\$209,890	\$107,610
<b>Theodore O Yntema, vice president,</b> <i>Ford Motor Company</i>	\$125,000	\$190,000	\$315,000	\$207,887	\$107,113
<b>Nelson C Dezendorf, vice president,</b> <i>General Motors Corporation</i>	\$101,200	\$209,250	\$310,450	\$204,242	\$106,208
<b>Thomas J Watson, Jr, president,</b> <i>International Business Machines</i>	\$141,000	\$166,543	\$307,543	\$201,914	\$105,629
<b>Crawford H Greenewalt, president,</b> <i>E I du Pont de Nemours &amp; Company</i>	\$205,200	\$101,000	\$306,200	\$200,838	\$105,362
<b>Arthur B Homer, chairman,</b> <i>Bethlehem Steel Corporation</i>	\$300,000	-----	\$300,000	\$195,872	\$104,128
<b>Morse G Dial, chairman,</b> <i>Union Carbide Corporation</i>	\$300,000	-----	\$300,000	\$195,872	\$104,128
<b>Frank Stanton, president,</b> <i>Columbia Broadcasting System</i>	\$150,000	\$138,750	\$288,750	\$186,861	\$101,889
<b>William S Paley, chairman,</b> <i>Columbia Broadcasting System</i>	\$150,000	\$138,750	\$288,750	\$186,861	\$101,889
<b>Thomas E Millsop, president,</b> <i>National Steel Corporation</i>	\$285,100	-----	\$285,100	\$183,937	\$101,163
<b>Roger M Blough, chairman,</b> <i>United States Steel Corporation</i>	\$283,333	-----	\$283,333	\$182,522	\$100,811
<b>Ralph J Cordiner, president and chairman,</b> <i>General Electric Company</i>	\$280,044	-----	\$280,044	\$179,888	\$100,156
<b>L L Colbert, president and chairman,</b> <i>Chrysler Corporation</i>	\$251,050	\$ 9,600	\$260,650	\$164,353	\$ 96,297
<b>Leslie B Worthington, president,</b> <i>United States Steel Corporation</i>	\$258,333	-----	\$258,333	\$162,497	\$ 95,836
<b>Frederick R Kappel, president,</b> <i>American Telephone &amp; Telegraph Company</i>	\$256,600	-----	\$256,600	\$161,109	\$ 95,491
<b>Thomas J Hargrave, chairman,</b> <i>Eastman Kodak Company</i>	\$250,000	-----	\$250,000	\$155,822	\$ 94,178
<b>Albert K Chapman, vice chairman,</b> <i>Eastman Kodak Company</i>	\$250,000	-----	\$250,000	\$155,822	\$ 94,178
<b>T F Patton, president,</b> <i>Republic Steel Corporation</i>	\$250,000	-----	\$250,000	\$155,822	\$ 94,178
<b>Augustus C Long, chairman,</b> <i>Texaco, Inc</i>	\$250,000	-----	\$250,000	\$155,822	\$ 94,178

NOTE Tax figures assume taxpayer has a wife but no dependents, and that deductions amount to 10 per cent of total pay

\*"Other compensation" includes bonuses or other extras granted in 1960 in some cases these funds are payable over a period of years, with the executives receiving each year installments on bonuses awarded in the past Taxes in this chart are figured as if 1960 bonuses had been paid in full during the year

Basic data company reports filed with U S Securities and Exchange Commission

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company to company and industry to industry. In fact, specific individuals receive varying amounts of compensation from year to year.<sup>3</sup>

*COMPENSATION PROCEDURE.* Although some executives do, in fact, determine their own salaries, many insist upon more orderly practice. Where orderly procedure is required, the general practices found at lower levels are applied, but in modified form.

The orderly approach includes application of job analysis, job evaluation, performance rating, and some form of incentive system. Total compensation usually includes other financial benefits also found at lower levels.

*JOB ANALYSIS.* At the executive level, job analysis concentrates upon certain difficult-to-define factors. In the first place, the executive directly influences his job. Although analysis should not consider "how well" he does his work, it must concentrate upon "how *he* does his work" Analysis requires attention to channels of communication, degree of authority exercised and how it is exercised. In lower level jobs the analysis concentrates upon degree of skill; skill in the executive sense becomes very difficult to measure. Generally, the description must focus upon the kind of decisions required, the kind of planning and controlling, and the amount of detail the executive himself handles as compared to what is assigned subordinate personnel.

*JOB EVALUATION* Development of executive job evaluation is difficult, yet it is necessary for the good of the executive as well as the firm.<sup>4</sup> Perhaps the importance, as well as the complexity, of the activity is best recognized by realizing that a corporation may have several "plant managers," that each such manager is responsible for a particularly vital link in the firm's operation, that although each is a manager, each has a different job — the contribution of the manager of the research center is no less important than that of the manufacturing center, yet it is very different. Unless the compensation program recognizes these relationships, someone may be faced by inequity.

*Evaluation Factors.* At this time there is no really standard system of executive job evaluation. However, a number of systems have

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<sup>3</sup>In some cases, top executives will insist upon a compensation system which enables a direct relationship between their total income and the year-end profitability of the firm. Their year-to-year variation in total income may, therefore, be quite large.

<sup>4</sup>cf. Henry H. Albers, *Organized Executive Action* (John Wiley & Sons, Inc., N. Y., 1961), pp. 514-516.

been developed which follow more-or-less similar patterns.<sup>5</sup> The factors evaluated must permit comparative consideration of the several executive positions. It is probably wise to limit these factors to elements such as: (1) required knowledge, (2) required mental activity, (3) degree of accountability, and (4) impact of activity.

*Required knowledge* refers to the intensive and extensive nature of the knowledge necessary for correct performance of primary functions. A research director, for example, will require intensive knowledge, but not as extensive as the vice-president of manpower. Evaluation of this factor thus will challenge the degree of intensive and extensive knowledge of specific and general content. *Required mental activity* challenges the nature and quantity of original or creative activity needed in the job. It also considers the nature and amount of judgment, analysis, planning, organizing, and the like. *Degree of accountability* refers to the extent to which the incumbent is responsible for the success or failure of the firm, and to the extent to which he shares (if at all) responsibility with others for the success or failure of his or their sphere of influence. The *impact of activity* challenges the effect of his actions upon the success or failure of the firm. Accountability refers to the *manner*, whereas impact refers to the *money*. The degree of accountability of the manpower manager may be identical to that of the head of manufacturing, however, the financial impact of the manufacturing manager upon the success or failure of the firm may be twice that of the manpower manager.

*Evaluated Grades.* The salary grades for executive personnel tend to be of greater width than those used in lower level jobs. Ranges of four, five, and six thousand dollars are not at all unusual, and some ranges may exceed ten thousand dollars. Basically, the grade dimensions depend upon: (1) the number of jobs and people involved in given grade breakdowns, (2) the estimated effect that individuals may have upon the value of a given job, and (3) the competitive advantage of salary range in the matter of attracting and holding executive personnel.

**PERFORMANCE RATING.** Although it is doubtful that a case can be developed for insisting that a given president or executive vice-president be subjected to a performance rating, it is possible to defend such rating as it would apply to the other executive ranks. The real value is not, however, related to pay. Real worth develops if such rating is directly tied to the executive replacement problem, to the

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<sup>5</sup>cf. Edward N. Hay and Dale Purves, "The Profile Method of High Level Job Evaluation," *Personnel*, Vol. 28, No. 2, March-April, 1951; Robert E. Sibson, "Plan for Management Salary Administration," *Harvard Business Review*, Vol. 34, No. 6, Nov., 1956, p. 104, and John K. Hemphill, "Job Descriptions of Executives," *Harvard Business Review*, Vol. 37, No. 5, Sept., 1959, pp. 55-67.

executive conservation function. This connection naturally relates to development, promotion, transfer, and compensation. Rating should follow the same basic pattern of factor consideration used in the job evaluation program. It may include other considerations, but it must include those used in the evaluation process.

*EXECUTIVE INCENTIVE PLAN.* The purpose behind executive incentive plans and the rules of good development are the same as when studying rank-and-file compensation. Plans, however, are considerably different. The belief has long existed that incentive bonuses for executives help motivate full effort. Furthermore, such systems tend to justify high income, for they generally relate the executive's total compensation to the firm's profitability.

Plans are generally either "current" or "deferred." *Current* plans result in full payment of bonus while the individual is still employed by the firm. Payment may be a one-time event, made soon after the close of each fiscal year, or it may occur in installments subsequent to the end of the fiscal year in which the bonus was earned. Bonus payments may be in stock, cash, or some combination. Sometimes the bonus is tied directly to the individual's contribution to profit in terms of his evaluated "accountability" or "impact" factor, sometimes the amount is merely an agreed-upon share of profit. Bonus can be distributed also as a reflection of group effort, with each member of the executive group receiving a share of the total bonus commensurate with his rank.

*Deferred* bonus plans are designed to provide payoff at the end of the executive's service with the firm. In general the bonus is payable upon retirement, disability, or death. Payments can be in stock, in cash, or in some combination of the two. Payments can be in one lump sum or in installments.

Frequently executive incentive plans combine the "current" and the "deferred" approaches. In addition, the deferred aspect may be tied to the pension plan and result in stock option programs as well as installment payments. When dealing with compensation of such magnitude, the tax factor is important, and, of course, installment payment is more advantageous. Stock option plans permit purchase of stock at stated values. If these are below market, the ultimate tax will be developed in terms of "capital gains."

Additional compensation can be provided through improved insurance programs, and special payments or allowances for travel, housing, and the like.

*THE MANPOWER DIVISION'S RESPONSIBILITY.* The wage and salary administration personnel *might* be charged with maintenance of the "treasury payroll" compensation program, with administration of the evaluation system and the performance ratings, and with handling

the development and allocation of incentives. It seems far more reasonable, however, that this will be a responsibility of the board of directors, some special custodial committee (or individual) appointed by the board, or of one of the top executives of the firm. It may be charged directly to the vice-president of manpower management, but a more peaceful environment (to put it mildly) will exist if it is not administered by clerks or low level staff personnel.

The one place where the wage and salary administration group correctly can enter the picture is in study of existing plans in an effort to prepare data for eventual decision by top management. In addition, the wage and salary people should prepare and maintain careful annual records of the compensation programs at the lower levels. These records would be forwarded to top management for periodic study. The executive group wants to be certain that its compensation is not out of line with either the pattern of the industry or the pattern of the lower levels in the industry (the executive-rank-and-file relationships), and that the fiscal needs of the organization are not jeopardized by exorbitant executive payoff.

### COMPENSATION OF SPECIALIZED PERSONNEL

The so-called "treasury payroll" does not cover many of the "exempt" payroll jobs of a company, which include those positions excluded from coverage by the Fair Labor Standards Act and other legislation defining wage and hour limitations. Exempt positions include engineers, research people, middle and lower level management, and some groups of technicians. Industry in fact is undergoing so many changes that increasingly large numbers of jobs, which may finally be "exempt," appear to be developing.

**ENGINEERS AND SCIENTISTS.** The application of job evaluation to engineers and scientists is difficult, even more difficult than to executive groups in some cases.<sup>6</sup> However difficult it may be, job evaluation, performance rating, and incentive programming are needed if engineering and scientific personnel are to receive equitable compensation.

The problem of equitability is magnified by several points. *First*, what these individuals receive must be realistic in terms of attracting and holding competent personnel. *Second*, their compensation cannot be so completely different from middle and lower level management people that the latter feel themselves to be "second-class" citizens. *Third*, the pay differentials between these specialists and lower level specialists — technicians — must be fair in the minds of both groups.

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<sup>6</sup>cf. James L. Wyatt, "Are Creative People 'Different?' Developing Incentives in Scientists and Engineers," *The Management Review*, Vol. 48, No. 7, July, 1959, pp. 20-24, 82-85.

The search for an easy way out of this compensation problem has led many organizations to relate the pay of engineers and scientists to their levels of education and experience. In addition, the professional societies have stepped into the picture by publishing salary statistics. One can suppose that before long these groups may begin applying determination pressure upon management, as is the case in the nursing profession and certain technical positions related to medicine.

Whatever compensation system is decided upon, it is important that management reward its specialized personnel for individual excellence as well as performance of jobs of given importance. Regardless of the difficulties involved, correct manpower concept thus demands that incentives, performance ratings, and job evaluation exist as the basis of compensation rates.

*Job Evaluation* can be developed in terms similar to those mentioned under the executive program. What must be evaluated is the set of component requirements to which an individual applies himself in performing his work. *Performance rating* must be developed to provide relative evidence; that is, the rating must reflect the same factors used in job evaluating. *Incentives* can depict or reflect contribution to company profit. In some cases, incentives can be tied to actual work standards. The issues here can be simplified by realizing that in some organizations several different compensation programs may be required.

**EXEMPT MANAGERS.** Orderly compensation of middle and lower level managers is far easier than rewarding the specialized personnel and executives. Generally speaking, all the factors considered in the last three chapters apply to these jobs and individuals. The key problem is maintenance of pay differentials between managers and subordinates. Probably the easiest means of assuring that differentials are maintained is either to develop a "differential-factor" table or to utilize some standard table available through trade associations, professional societies, and the like.<sup>7</sup>

The importance of some form of guarantee of differential cannot be overemphasized. One of the key problems in industry is the impact of rank-and-file overtime upon the first echelon supervisor's differential. Where these supervisors have no assurance that they will receive more than their subordinates, the difficulty of filling the jobs becomes pronounced. In one plant, for example, supervisors had a so-called guarantee of 20 per cent above the rank-and-file median rate. It turned out that few supervisors actually had as large a pay check as their subordinates. Naturally these men became disturbed, and when management refused to correct the situation, most left the firm.

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<sup>7</sup>cf. "Pay Differentials for Exempt Supervisors," *Management Record*, October, 1956, pp. 350-355, *passim*.

Differentials usually are computed as a percentage of some base amount. The problem is to be certain that the base selected is representative, and kept representative, of a factor relative to the supervisor-subordinate relationship. For example, if the base selected is the median rate of the subordinate labor grades, but the subordinates average 48 instead of 40 hours a week and have an incentive program which enables base plus 100 per cent of saving, the poor supervisor will not fare too well by comparison.

*A SPECIAL PROBLEM.* Among the specialized personnel one finds engineering and research managers. These are exempt personnel. A special problem arises if the majority of their time is spent in the engineering or scientific activities rather than the management actions. An even more difficult matter arises if these men are being supported by special administrative personnel.

Consider, for example, this situation. The department head is classified as director of engineering controls. He is a manager. The particular person in this job has for many years been the top controls designer and researcher in the firm. He dislikes handling administrative affairs. He wants to be in the shop, the test house, the chambers, but not the office. To make certain that the administrative matters do not get pushed into a dark corner, top management has provided the department with a "senior administrative assistant." Actually the person is the executive officer of the department. Now when the matter of pay comes up, a problem arises. Do you pay the department head as a manager or as a scientist? Do you pay the administrative assistant for doing what he does in fact do, the work of the manager, or do you pay him as an administrative flunky?

Answering such questions is a situational affair. One can hardly advance a pat set of standards for handling such cases, at least not in this type of text. Note, however, the rather obvious implications possible if the questions asked are allowed to become the basis of organization, communication, and control analysis as indicated in Chapters 3, 4, and 6, and if personal competence is challenged as indicated in Chapters 14 and 15.

Problems of this kind may become significant in today's industrial world. Notice the vast increase in the number of technical employees since World War II. In one firm, for example, the engineering staff is 25 per cent of the total workforce. In another it is 28 per cent. The heads of the departments, sections, and divisions utilizing these talents usually are engineers and scientists. Often they react as in the foregoing case. The matter of differentials in pay between the titular head of such groups and the administrative assistant is a serious issue. There cannot be too great a difference or administrative personnel will avoid the jobs. The differential cannot be too little or the technical people will avoid the jobs. Careful job evaluation can straighten out

such matters. Furthermore, development of career rate structures, that is, establishment of separate rate structures and promotion chains for each group, can help. Labor grade or "career grade" differentials can be established in terms of education and experience — the easy way — or in terms of some measure of the value of the effort exerted (as with the executive system) to the value of the product.

**INCENTIVES.** Specialized or exempt personnel are as much in need of incentives as executives and rank-and-file people. The approach taken should parallel that used for the executives. More emphasis will be placed upon "current" as opposed to "deferred," bonus and group bonus arrangements become more desirable. Foremen and department heads in particular can be justly rewarded by tying their incentive to the quantity-quality output of their personnel.

### FRINGE BENEFITS

Today an employee's total compensation includes many indirect financial benefits. Many of these are part of the over-all program to conserve manpower. Other benefits are tied directly into the compensation program. In addition, many of the services directly related to the conservation effort are a part of the labor cost computation and therefore can be considered related to the compensation program.

There is no strict definition for the term "fringe benefit." It achieved popularity during World War II when it was used to refer to the many items of compensation other than basic wage and salary rates. During those years ceilings were imposed upon wages by the federal government. By offering "indirect" wages, a company could circumvent those restrictions, and unions and managements found it to their mutual advantage to argue for improved fringe offerings.

Historically, however, the concept of fringe benefits can be traced to the shift of population and industry from small rural communities and small firms to city living and large scale organization. As people moved into the cities they tended to become dependent upon others for their living. It is an unfortunate truth that as man moves toward large scale manufacturing and city living he breaks away from traditional self dependency. The benefits and services he provides for himself when he is his own master become the business of someone else.<sup>8</sup>

The need of the employer for continuity in his workforce also influences the development of fringe benefits. Aside from the pressure of World War II wage stabilization efforts by government, there has developed a need to take steps to assure the retention and acquisition

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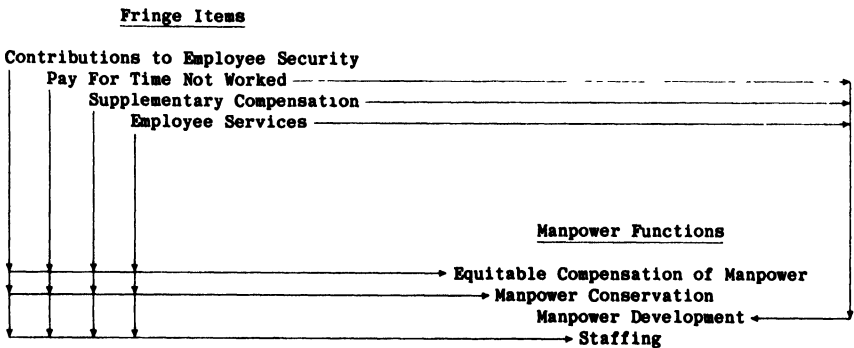
<sup>8</sup>Lawrence C. Lovejoy, *Wage and Salary Administration* (The Ronald Press Company, N. Y., 1959), pp. 371-373, *passim*, George Strauss and Leonard R. Sayles, *Personnel: The Human Problems of Management* (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1960), Chapter 30, *passim*.

of "totally" competent personnel. Services and benefits become a means of doing this. In fact, as we have seen throughout the text, fringe factors count heavily in the selection or staffing function and in efforts to reduce turnover. Furthermore, organized labor has realized that the "welfare" programs are important to them as bargaining matters, and most of the items that the National War Labor Board declared "fringe benefits" have been declared proper matters for collective bargaining.

*FRINGE ITEMS.* In the broadest sense of the term, fringe benefits apply to the following<sup>9</sup>

- . Employee services
- Pay for time not worked
- Supplementary compensation
- . Contributions to employee security

Each item included may, in a sense, be considered as an incentive. Each item reflects upon labor cost; in fact each item adds to the cost of labor. Figure 102 relates the benefits typically considered fringe items to the specific manpower functions where they have primary influence.



FRINGE RELATIONSHIPS TO THE MANPOWER FUNCTIONS

Figure 102

Employee services have been discussed at some length in Part V of the text. One should recall, however, that although these factors are considered an integral part of the conservation effort, they do

<sup>9</sup>Lovejoy, *op. cit.*, p. 373.

pertain to labor cost. Manpower people, particularly the wage and salary group, will find it helpful to maintain a careful record of the cost of these services. Such a record should be retained to expose the three significant relationships: the cost in cents or dollars per hour, the cost as a per cent of payroll, and the cost per employee. Such data may be of great value when bargaining with labor and when meeting top management's demands for cost information.<sup>10</sup> Figure 103 indicates the column titles useful in maintaining the wage and salary administrator's record of these costs

Fringe Benefits Program Title	Total Annual Cost (1)	Total Hours Worked (2)	Cost Per Hour (1) + (2)	Cost Per Employee (1) + (E)	Per Cent Of Payroll (1) + (P)
<b>Totals</b>					

Number of employees for period \_\_\_\_\_ Number of hours worked for period \_\_\_\_\_  
 Total payroll for period \_\_\_\_\_ Period (check one) 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_

**WAGE AND SALARY RECORD FRINGE COSTS (SAMPLE)**

*Figure 103*

**PAY FOR TIME NOT WORKED**

The general rule is that compensation is given for work performed. Society is, however, moving toward recognition that not all instances of failure to perform work are due to employee controllable factors. In addition, management has come to realize that, to some degree, more efficient production can be expected over the long run if reasonable amounts of time off are granted and paid for.

Pay for time not worked includes a number of specific items. Some of them, not necessarily typical of every industrial organization, are the following.

1. *Rest Periods and Coffee Breaks* — Rest periods can be incorporated into work standards as allowances or they can be scheduled. Typically they are given where work is confining, strenuous, and

<sup>10</sup>Lovejoy, *op. cit.*, pp. 379-383.

repetitive. Coffee breaks are generally scheduled, although there is some merit to the argument that unscheduled breaks are more beneficial. These breaks or rest periods, particularly when scheduled, often result in longer periods of no-production than have been estimated because people "prepare" for scheduled time off.

2. *Down Time* — This term refers to periods when the employee cannot work because of some problem beyond his control. Delays due to material or work flow, equipment failure and the like apply here. Traditionally, down time was paid for at the base rate for the employee's job. Today the practice is developing of paying for down time at the employee's average incentive earning rate. This makes down time far more expensive to management, yet the added expense may make management insist upon better engineering and management of jobs and result in improved profits.

3. *Meal Time* — Generally employees are provided with time to eat — lunch, dinner, or midnighite meal. In some states time off for this purpose has been made mandatory by law. Usually this time off is not paid for by the company. Where an employee must work overtime, however, it is not uncommon to find that the labor contract provides for payment either for the time he takes to eat or for the meal (an allowance on a standard rate), or both. In the case of executives, other managers, and engineering and scientific personnel, meal time, down time (where it might apply), and rest periods are normally *not* calculated, and are paid for. One might say that if a clock is punched, or if work involves piece work computation, meal time is not paid for; otherwise it is.

4. *In-Plant or Company-Required Travel Time* — On some jobs it is necessary for the employee to travel extensively throughout the plant or to give service outside the plant. Generally such time is paid for. "Trifling" time away from the workplace is not considered as work time, however, nor should it be.

5. *Wasted Time* — Employees do waste time. Management pays for this, and in the long run the consumer pays. This element of labor cost cannot be considered a fringe benefit, although it appears that some employees consider it their right to waste as much time as they like.

6. *Call-in Pay*. — Frequently maintenance and production planning personnel are called in to work either after they have ended their day's operation or at times when they are not normally scheduled to work. In many such instances overtime is not involved, and the actual time spent in the plant does not constitute a full day's work, or even a half day's work. Such instances of call-in are an inconvenience to the employee. To compensate for this, management has adopted the technique of paying a set minimum-rate, a call-in rate. A maintenance man thus may spend an hour in the plant on a Saturday but receive four hours' pay.

7. *Reporting-time Pay* — In some cases employees must report to the plant before they can know whether or not there is work for

them. In other cases employees get to the plant before their foremen can notify them that there is no work. In either case, contract arrangements have led to the practice of paying some set minimum for having reported. Four hours' pay is a typical minimum.

Exempt payroll personnel usually receive no salary reduction if they report for work but there is none. On the other hand, exempt and treasury payroll people may receive no special benefits if they come in to straighten out some problem.

8. *Vacation Pay*<sup>11</sup> — The vacation program was discussed in Chapter 19. Normally vacation pay for salaried employees is merely the continuation of their regular earnings. Hourly-rated employees receive pay computed from a variety of formulas. These may be based upon total hours worked during the year; an average of straight-time earnings, or some computation of earnings in a "base" period. Furthermore, vacation pay is typically included in the "severance" compensation check if employees leave the firm before having taken their earned vacation. Employees who come under a labor contract usually have the vacation factor as a contract item. Exempt payroll personnel and treasury payroll people receive *at least* the same benefits as the non-exempt; however, more and more firms are coming to recognize the importance of granting greater vacation benefits to such personnel.

9. *Holiday Pay* — Salaried employees have a long history of receiving pay for holidays. Wage employees, however, have this benefit as a relatively recent allowance. Although the Common Law has held that one day in seven should be a day of rest, until recently if work had to be performed on that day it was paid for at normal rates. Now the practice is to pay a premium rate.

Since World War II, Saturday *and* Sunday usually have been excluded from the regular work week. In addition, and as a result of Executive Order No. 9240, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas have become firmly defined holidays. Some labor contracts go beyond those six to include a total of fourteen<sup>12</sup>. Holiday work calls for premium pay, and employees generally receive some compensation for holidays whether they work or not. Furthermore, recent practice indicates that if an employee has a vacation and a company holiday falls during that period, he gets an extra day with pay. In addition, holidays falling on Saturday or Sunday tend to be celebrated on Friday and Monday.

10. *Sick-time Pay* — Many organizations now grant specific sick-time pay. In some cases so-called "sick leave" is granted at no pay. The question of sick-time becomes a matter of contract arrangement with hourly rated personnel. In the office, area practices tend to govern.

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<sup>11</sup>References to procedure by permission from *Personnel Policies and Practices Report*, April 11, 1961, Prentice-Hall, Inc., Englewood Cliffs, N. J., pp. 281-286.

<sup>12</sup>*cf.* Lovejoy, *op. cit.*, pp. 394-404, *passim*; *Time Off with Pay*, Studies in Personnel Policy, No. 156 (National Industrial Conference Board, Inc., N. Y., 1957); and *Personnel Policies and Practices Report*, April 11, 1961, Prentice-Hall, Inc., Englewood Cliffs, N. J.

11. *Military Leave* — Current law merely makes it mandatory that an employee be granted time off, at no loss in status, for military service. Many organizations, however, give members of the military reserve units some form of compensation while they discharge their annual two weeks of active duty. Practice varies from continuance of base pay or salary during the two week period to payment of the difference between base pay and military pay. The feeling in both military and management circles is that a man should in no way be penalized for performing his military obligation. Many firms provide that the employee arrange his vacation to coincide with his summer training; this means, of course, that the employee's family may not get any benefit from the vacation period.

12 *Severance Pay* — Severance pay normally is considered as compensation supplementary to regular pay and will be discussed later in the chapter.

In addition to the items listed, a wide variety of special benefits can be found defined under the "pay for time not worked" classification. The National Industrial Conference Board's *Fringe Benefits, Studies in Personnel Policy No. 143*, reports many of these. One such additional benefit is "election day" pay. Some 26 states have passed laws guaranteeing time off to employees for voting purposes. Not all these laws assure employee compensation for this time off, but many firms offer it regardless of legal requirement.

**THE COST COMPUTATION — PAY FOR TIME NOT WORKED.** Manpower people constantly are plagued by the problem of cost. The pay given employees of all ranks represents a significant element of labor cost. Each wage and salary administrator should maintain a computation table for use in determining "time off" costs. His ability to show these costs can be quite helpful when dealing with organized labor.

Table 31 presents the computational base in terms of an individual's straight time pay rate. It shows the per cent of annual payroll represented by number of days off. If an employee's straight time earnings are \$5,000 in a 365-day year, and he is paid for one unworked day, the cost of that day is determined by  $\$5,000 \times .383$  per cent which equals \$19.15. The manpower people can develop similar tables for use where wages are computed on other than straight time.

For every expenditure of money there must be at least an equivalent return. Pay for time off may represent unjustifiable cost because the return from such benefits may be far less than the outlay. The manpower responsibility is to measure this relationship and avoid, or attempt to avoid, pressures which would force expenditure to exceed return.

TABLE 31  
 PERCENT OF ANNUAL PAYROLL REPRESENTED  
 BY NUMBER OF DAYS OFF

Number of Days	Percentage of Normal Year of 261 Work Days (365 -- 104 Saturdays and Sundays)	Percentage of Leap Year of 262 Work Days (366 -- 104 Saturdays and Sundays)
25	.09577	.0954
50	.19155	.1908
75	.2773	.2862
1	.383	.3817
2	.766	.7633
3	1.149	1.145
4	1.532	1.527
5	1.915	1.908
6	2.299	2.290
7	2.682	2.672
8	3.065	3.053
9	3.448	3.435
10	3.831	3.817
11	4.214	4.198
12	4.597	4.580
13	4.980	4.962
14	5.363	5.344
15	5.747	5.725

Source. By permission from Lawrence C Lovejoy, *Wage and Salary Administration* (The Ronald Press Company, N Y, 1959), p 387

**SUPPLEMENTARY COMPENSATION**

Like every fringe benefit, this group of financial rewards acts to some degree as an incentive. In some cases the reward given is deferred or put off until full opportunity to measure the value of work has accrued. In other instances the reward is immediate. In every case, supplementary pay increases the employee's total compensation.

Supplementary payments can be granted in the form of:<sup>13</sup>

- Premium pay for time worked
- . . Bonuses and awards
- Profit sharing and stock ownership
- . . . Expense and travel pay (subsistence and quarters)
- . Severance pay

In addition to increasing the employee's income, such payments represent a major increase in labor cost. Again it is imperative that manage-

<sup>13</sup>cf Lovejoy, *op. cit.*, pp 407-408

ment recognize and control this cost factor. The wage and salary people maintain a careful and continuing study of these costs and are prepared to furnish accurate advice concerning the value of supplementary programs. Manpower people in general, and wage and salary personnel in particular, must be fully alert to the fact that personnel programs cannot be "give-away" plans.

**PREMIUM PAY.** The general aspects of premium pay, including overtime and shift differentials, were discussed in Chapter 23. Let us concentrate here upon a brief examination of the premium pay factor as it applies to exempt personnel.

In general, exempt personnel receive salaries which include payment for all work performed. Foremen, technical personnel, engineers and scientists may be assigned a normal work week of 40 hours. They are expected, however, to work as long as necessary to accomplish their jobs. Such people often have to report a half an hour early and leave a half an hour late — not because someone commands such action, but because it is the only way of being certain that necessary communication, planning, and the like are completed. Clearly the compensation program these men come under must, in all justice, take such activity into account. Their salaries must be sufficiently above those paid their subordinates to compensate for this extra performance.

If, upon investigation, it turns out that management, technical and scientific personnel are not receiving more than rank-and-file personnel when overtime is high, then overtime premiums should be given the exempt people as well as the rank and file. The War Manpower Commission recognized this necessity in 1943, and the stabilization authorities permitted payment of overtime to previously unrewarded exempt personnel.

*Premium Methods — Exempt Personnel.* Today's compensation practices reveal certain patterns.<sup>14</sup> *First*, those firms which ignore the premium for exempt personnel are usually relatively small. On the other hand, and as might be expected, those applying more complex systems for rewarding their people are the large firms. *Second*, the method found workable in one firm is not necessarily adequate for another, even of the same relative size. *Third*, the trend is toward payment, in some form, for overtime. In a number of firms, a cut-off on premium payments has been set so persons whose monthly salaries range above \$800 to \$1,000 receive no additional payment for extra hours worked. Methods used to provide premium pay generally include one or some combination of the following approaches.<sup>15</sup>

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<sup>14</sup>E. M. Gottlieb, *Overtime Compensation For Exempt Employees*, AMA Research Study 40 (American Management Association, Inc., N. Y., 1960).

<sup>15</sup>Lovejoy, *op. cit.*, pp. 408-412, *passim*.

- . . Straight time added to regular salary
- . . . Time-and-a-half
- . . Compensatory time off
- . . Year-end bonus
- . . . Time-and-one-half up to a certain salary and then a sliding downward scale
- A fixed rate or flat per cent (generally not equal to time-and-a-half or straight time)

*Premium Pay — An Opportunity.* Employers and employees at one time looked upon overtime work as a burden. Employers in particular considered it as a penalty. Apparently this is no longer the case. Many firms use the opportunity for premium pay as a “come-on” to attract personnel. Many employees consider it a natural part of their total compensation. In fact, it is not unusual to find people “making overtime work” so they can fatten their paycheck.

Clearly, management must be alert to this human, but costly, practice of wasting time during normal work hours and building overtime. Just as clearly, management cannot overlook the importance of paying for extra hours worked. To do so will cause unrest, even in management ranks. Unfortunately the problem is magnified by 25- and 20-hour work weeks

**BONUSES AND AWARDS.** Many organizations give bonuses or special awards over and above those related to a production incentive plan.<sup>16</sup> The term “bonus” refers to a payment above what is usual. The term “award” refers to a prize, a special honor. In manpower work the two terms are used rather loosely, and often bonus is used where award should, in the strictest sense, be applied.

*Typical Awards.* Several awards are typical in industry. The *length-of-service bonus* is an award given for seniority, for long service. It is not related to production, nor is it properly considered a portion of an individual’s base or normal pay rate. Although the military and many industrial firms do increase base pay according to years of service, correct procedure sets the base pay into one column of the record and longevity pay into another, with total pay in still a third. If incentive value is to develop from a length-of-service bonus, the employee (and his friends) must be able to distinguish the bonus from the base pay.

The *attendance bonus* is another award. When used, it is given for periods of perfect attendance. It may be a financial reward or a grant of extra time off. This type award actually pays for what people are supposed to do. Its value is open to some question. If severe absenteeism plagues a firm, however, such a bonus might help combat the problem. A better approach, of course, is to determine

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<sup>16</sup>*Ibid.*, p. 413.

the cause. No firm should install an attendance bonus merely because some other organization found it useful.

*Outstanding action* or *merit bonuses* also are given. They are one-time awards, not pay increases. Such awards are typical in sales work, and are given as a prize for attaining or exceeding some quota. In factory and laboratory situations these awards may be given for beating a deadline. Although money is the typical prize, many employees seem to prefer all-expense vacation trips.

*Suggestion awards* also fall into the "prize" category. As mentioned in Chapter 19, if such awards are to have incentive value, they must be just. Some firms use a suggestion system which grants a nominal reward for almost any suggestion made, and recognize really important contributions with only slightly more significant rewards. Such systems usually do not have much value as incentives to better production or as morale builders.

*Typical Bonus.* There is merit to the idea of the "good will" bonus. Many firms provide a *Christmas* or *year-end bonus* as a means of assuring their employees of the company's good will. In some cases the year-end bonus is nominal, say \$25. Such amounts are legitimately considered merely as gifts. On the other hand, some firms distribute the bonus by formula, say some per cent of straight time, annual earning, incentive rates earned, and the like. These amounts are significant and represent a true bonus. A few firms distribute a year-end bonus based upon a formula which combines the good will idea with an effort to reward outstanding performance.

The Christmas bonus concept can create serious problems for the manpower people. Consider, for example, the following illustration.

**Illustration #1** The Wire Company was a closed corporation owned by a family that took a rather personal interest in the welfare of the employees. For many years the president had seen to it that the fourth quarter profits were distributed as a year-end bonus to all employees. Distribution was made according to a formula which recognized: (1) length of service, (2) the individual's contribution to the general profit through his incentive earnings, his sales in excess of quota, or his department's absentee, accident, and/or scrap rate (depending upon nature of work). The formula was complex. Executives shared in the distribution, but their share was a small fixed percentage of the total quarterly figure.

For years the firm had experienced really booming production and sales. Times had been good and the year-end bonus was always very significant.

Suddenly the company's economy began to slip. That year the distribution was not very big (in fact the executives agreed not to take any share). During the next year a union fight developed,

an internal fight for control of the local hierarchy. One faction used as their rallying call the idea that they would force management to return to the large end-of-year bonus all had experienced for so long.

Management saw the danger. They immediately made very clear announcements concerning the reason for the small bonus that last Christmas, the history of the bonus, and the fact that the bonus was in no way connected with the contract or the established pay system.

This pronouncement was pounced upon by the union.

Without going further, it should be clear that a bonus may be considered as a traditional part of the compensation program by a union seeking a bargaining angle, or by a faction seeking some tactical advantage. Furthermore, there is always the danger that employees will react negatively if a bonus is cut or removed because of bad times. Perhaps it is wise to hold year-end bonuses at a nominal rate, graduating the reward in terms of length of service, but keeping it small.

*PROFIT SHARING AND STOCK OWNERSHIP.* In the foregoing illustration the bonus arrangement outlined appears very much like profit sharing. Actually, many firms use an informal profit sharing system no different from bonus plans. This appears unwise. We must emphasize the importance of using a formalized profit sharing system when such a means of supplementary compensation is established.

*Profit Sharing Defined* Profit sharing is one of the oldest forms of supplementary compensation, it has been practiced as long as free enterprise has existed.<sup>17</sup> Although E. J. LeClaire is generally credited as the so-called father of formal profit sharing, Albert Gallatin used profit sharing at his glass works in New Geneva, Pennsylvania in 1794.<sup>18</sup> There are many acceptable and accepted definitions of the term.<sup>19</sup> Because the Internal Revenue Code and the Fair Labor Standards Act recognize "formalized" profit sharing, however, let us consider the definitions legally accepted.

. . . a plan established and maintained by an employer to provide for the participation in his profits by his employees or their beneficiaries

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<sup>17</sup>cf. *Profit Sharing Manual* (rev. ed.; Council of Profit Sharing Industries, Chicago, 1957), and Lovejoy, *op. cit.*, pp. 418-426, *passim*.

<sup>18</sup>cf. Col. Donald Despain, "The History and Development of Profit Sharing in Industry," *Congressional Digest*, Vol 18, No 1, Jan., 1939, p. 7; N. P. Gilman, *A Dividend to Labor* (Houghton Mifflin Co., N. Y., 1899).

<sup>19</sup>cf. K. M. Thompson, *Profit Sharing* (Harper & Brothers, Publishers, N. Y., 1949), p. 24; Lyle W. Cooper, "Profit Sharing," *Encyclopaedia of the Social Sciences*, Vol. VII, p. 487; *Profit Sharing Manual* (rev. ed.; Council of Profit Sharing Industries, Chicago, 1957), p. 14; and C. C. Balderson, *Profit Sharing for Wage Earners* (Industrial Relations Counselors, N. Y., 1937).

based on a definite, predetermined formula for determining the profits to be shared and a definite predetermined formula for distributing the funds accumulated under the plan after a fixed number of years, the attainment of a stated age or upon the prior occurrence of some event such as illness, disability, retirement, death or severance of employment<sup>20</sup>

The profit-sharing plan or trust constitutes a definite program or arrangement in writing, communicated or made available to the employees, which is established and maintained in good faith for the purpose of distributing to the employees a share of profits as additional remuneration over and above wages or salaries paid to employees, which wages or salaries are not dependent upon or influenced by the existence of such profit-sharing plan or trust or the amount of the payments made pursuant thereto.<sup>21</sup>

The Internal Revenue definition refers specifically to deferred payment of profit shares, whereas the Fair Labor Standards Act specifically excludes profit-share payments from an employee's regular rate of pay. Both definitions or references fill a specific need, yet it seems wise to be guided by these points in order to obtain the legal benefits. In a loose sense, then, one can define profit sharing as a system of distributing some percentage of a firm's profits to employees in accordance with some specific formula.

*Reasons for Profit Sharing.* Many accuse the proponents of profit sharing of using the device to avoid payment of a "living wage." However loud such accusations may be, they are far from the truth. In fact, the concept fits the idea of "participation" to a tee. Specifically, manpower people advance the following as their reasons for supporting profit sharing programs.

- . . . They stimulate employee interest in the welfare of the firm.
- . . . They are effective indirect incentives for increasing production.
- . . . They may help stabilize basic pay — escalator clauses are designed to do this, but profit sharing will accomplish the same thing and provide greater advantage to the employee.
- . . . They encourage saving on the part of employees and help build retirement and emergency funds.
- . . . They tend to improve the general climate of industrial relations.
- . . . They tend to increase the likelihood that the workforce will contribute its ingenuity and intelligent self-interest to the improvement of the organization as a whole.
- . . . They tend to make employees more fully aware of the interdependent relationship between management and labor and between

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<sup>20</sup>Internal Revenue Code, Regulation III, Section 29, 165.1.

<sup>21</sup>Fair Labor Standards Act, Regulations Part 549, Sec. 549.1(b).

organization and ownership. In fact, where the profit sharing scheme is directly related to stock ownership, employee proprietorship becomes a real benefit.

Not all profit sharing plans have succeeded.<sup>22</sup> Industrial history provides ample evidence of failure; however, failure has been due largely to malpractice, poor design of system, or inadequate communication during times of depression.

*Profit Sharing and the Union.* Unions have been accused of resisting profit sharing plans. In some cases the accusation is justified. There is however nothing about profit sharing that violates the principles of unionism. True, the existence of an effective profit sharing (and/or stock ownership) program may completely eliminate the need for a union; however, when properly developed and administered, such programs actually can strengthen the union-management relationship.

Many firms in the United States find it entirely possible to live comfortably with their unions and still maintain excellent profit sharing systems. Several firms in this country and Canada are owned wholly by the employees.<sup>23</sup>

The so-called Scanlon Plan puts the union and management on the same team. It has been adopted by some 40 or more firms, and has proven a successful arrangement. In essence the plan requires that the union submerge its normally militant attitude and establishes an agreement between management and labor which: (1) calls for joint effort on production and other problems, and (2) provides an incentive and reward to the employees in the form of a percentage of the profits of the business.<sup>24</sup>

Union officials who object to profit sharing usually do so because of reluctance to change their role. In the usual situation the union leader adopts the view that the company is wrong and the member is right. With profit sharing this loses its logic, whatever that might have been. With profit sharing the union leader must take a broader view. Doing so may jeopardize the leader's position with the rank and file. Furthermore, some managements resist the idea of having union officials participate in company matters. Where there is such a management attitude, the union people will react in kind.

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<sup>22</sup>cf. P. A. Knowlton, *Studies in Profit Sharing* (Profit-Sharing Research Foundation, Evanston, Ill., 1953); see also, *Memorandum of Understanding* (Industrial Relations Section, Massachusetts Institute of Technology, Cambridge, Mass., n.d.).

<sup>23</sup>Lovejoy, *op. cit.*, pp. 423-424.

<sup>24</sup>*Ibid.*, p. 424; see also, Frederick G. Lesieur, ed., *The Scanlon Plan: A Frontier in Labor-Management Cooperation* (John Wiley & Sons and The Technology Press, New York and Cambridge, 1958); and Russell W. Davenport, "Enterprise for Everyone," *Fortune*, Vol. 41, No. 1, January, 1950, pp. 55-59.

*Profit Sharing Plans.* Basically, profit sharing plans fall into two classifications: deferred payment and cash payment. *Deferred* plans put the allotted profit share into an irrevocable trust. The individual employee has his account credited whenever the share is declared. Receipt of the funds comes with retirement, disability, or severance of connection with the firm, or the payments go to his beneficiary if he dies. Other arrangements also can be made; all should be in keeping with the Internal Revenue Code.

*Cash payment* plans call for periodic distribution. The basic wage and salary problem involved in this form of payment is making certain that the provisions of the Fair Labor Standards Act are not violated.

*The Manpower Responsibility.* Actually the handling of payments under profit sharing are the business of the fiscal division of a firm. The manpower responsibility is largely advisory, but wage and salary personnel will properly become involved with trouble-shooting and analysis, and certainly will represent the firm when dealing with the union hierarchy or the individual employees.

**STOCK PURCHASE PLAN.** Stock ownership has already been mentioned in connection with executive compensation. Let us remember that the employee who owns stock in his firm is an owner of the firm. One cannot deny that ownership is a strong incentive, though indirect in the case of ownership through stock (unless one has a major block). Management must tread with caution, however, for stock purchase plans are bargainable.<sup>25</sup>

**EXPENSES AND TRAVEL PAY.** A particularly important segment of some employees' total compensation is the allowance for travel and expenses. Sales personnel, staff men on plant visits and business, and executives on company business generally receive some special compensation to cover their living expenses and travel away from home. Rank-and-file personnel seldom benefit from this type of supplementary compensation, but seldom have the need. When they do travel on the firm's business, however, they are entitled to such pay.

Generally speaking, no one makes money from "subsistence and quarters," or travel pay. Those receiving such payments do save money, however, and this is a form of payment.

Such supplementary income can become quite significant, however, if one considers special cases. For example, if a firm provides its executives with regular housing plus a new car every two or three years, the individual is actually receiving a very large piece of supplementary income. Clearly such provisions need to be considered carefully before adoption.

**SEVERANCE PAY.** Severance or dismissal pay is given to provide the individual with funds to tide him over while seeking new

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<sup>25</sup>Richfield Oil Corporation vs. N. L. R. B., 56 A. L. C. 164 (D. C. Cir. 1956).

work. Generally it is not given persons who have been discharged for cause, or merely laid off. Although such allowances are considered supplementary income and not unemployment benefits, some states do permit personnel to receive both. In those cases one can consider severance pay as part of the unemployment benefit.

Severance pay can amount to a considerable sum of money. In one case, for example, an individual was given six months' pay when discharged. The party had another job in two weeks — obviously his total income for the year was supplemented quite significantly. The amount given usually is based upon some formula, say one week's pay for each year of employment. In some cases a maximum number of weeks will be established, in others the amount has no specified ceiling. In most cases the severance payment is separate from earned vacation pay and the like.

### **CONTRIBUTIONS TO EMPLOYEE SECURITY**

Fringe benefits involve considerations relating to employee security. Most such benefits have this reference point, some more so than others. We are concerned here with benefits specifically directed at improvement of worker security. Because of the security factor, however, these fiscal benefits not only relate to the equitability of compensation, they also pertain to the conservation of manpower and facilitate the staffing function.

Security benefits have a particularly important effect upon staffing because of human interest in the subject. Such benefits help attract personnel, they help build the important image that "this is a good place to work." Furthermore, security benefits help maintain a workforce for the same general reasons. More than that, where the benefit involves a vesting of interest (as many do) the employee may think twice before risking a reduction or loss of that interest.

In general, contributions to employee security include programs that have been mentioned in Part V, and to some extent in the earlier chapters of this portion of the text. They include:

- . . . Insurance programs
- . . . Retirement programs
- . . . Programming to assure annual earnings
- . . . Supplementary unemployment benefits
- . . . Considerations relating to Federal Social Security and Workmen's Compensation.

All programs concerned with these benefits cost money and increase the labor cost. Great care must therefore be exercised in both their development and administration. Obviously, as is the case with all fringe benefits, manpower personnel must maintain effective communication with the fiscal personnel of the firm, the employees them-

selves and their union representative, and with any other units of the company directly concerned with these benefits. Furthermore, because most contributions to employee security involve outside agencies, the manpower group must actively maintain external communications channels.

**INSURANCE PROGRAMS.** Insurance programs are typically "group" plans. Group insurance generally covers life, various medical benefits including hospitalization and surgical benefits, maternity expenses, and accident costs. Such insurance also provides for accidental death and/or dismemberment, and some programs give benefits for special cases such as polio.

Generally, group insurance programs are "contributory," that is, the company shares the expense of the program with the employee. Unions however are placing increased emphasis upon the idea of employer-supported programs.<sup>26</sup>

There are several sound reasons why a firm installs group insurance plans, reasons beyond meeting union demands or living up to community practice. These include the following.

1. Contributory insurance, if properly administered, can become one more way of bringing the employee closer to management. In at least one company the maintenance of the program is one of the functions of "junior management committee." This group is developed according to rather strict standards and composed of personnel from the shop and the management. It is designed, and functions, as described in Chapter 18 with reference to safety committees.

2. Group programs have the effect of enabling closer control over employee health. They at least stimulate interest to some degree in company efforts to maintain safe conditions.

3. Such programs enable planned, systematic benefit payments. Generally speaking, the company is kept out of the courtroom — at least, for every little incident. Then too, insurance programs minimize the need for charitable collections.

4. The employee receives greater protection for less money than he could afford if he sought to handle his own benefit plan.

5. The employee's anxiety concerning disability and death is to some degree reduced.

Manpower management's responsibility for the insurance program generally is centered either in the group charged with safety and health functions or in the wage and salary section. Wherever it is centered, close liaison must be maintained between the two sections of the manpower division. Furthermore, the individual charged with ad-

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<sup>26</sup>Although the tendency is to call employer-supported plans "non-contributory," the original meaning of the term was that the employee maintained his own payments into the group fund.

ministration, or the committee involved, must be familiar with the many details of the plans applicable to his firm and should know the general facts related to all plans. Although many firms assign the insurance function to a clerk, this may not be a desirable practice unless the clerk is merely held responsible for clerk-like activities.

*Compulsory vs. Voluntary Programing.* Some debate exists over the desirability of making group insurance compulsory. True, any plan which compels is in a sense a violation of the rights of the individual. However, several facts point to the reason, if not the wisdom, of adopting the compulsory system. *First*, few insurance carriers will accept a contributory group contract unless 75 per cent of the employees are enrolled. Of course, if the employer is paying the entire cost, the number included is less important. *Second*, the N. L. R. B. has declared that group insurance plans are bargainable.<sup>27</sup> Thus, like it or not, management finds the union involved. *Third*, compulsory programing can be established so that new employees do not have to sign up until they become permanent personnel. In any case, the argument can be made that people need not accept employment where there is a compulsory arrangement, if they object to such an arrangement. In effect, this enables their exercise of freedom of choice.

One notes that the so-called compulsory approach is not quite as rigid as the term implies. Seventy-five per cent of the people employed must be covered. This leaves management with several problems. *First*, the manpower group must maintain a careful record of proof that the necessary number do, in fact, participate in the program. *Second*, since some will not belong to the plan, a careful record of non-covered personnel must be maintained. If it is not, the company can find itself fighting annoying battles where the employee who needs the benefit claims he is a member, and the company claims he is not. To handle this, all employees should be required either to "sign up" or sign a "waiver" The waiver can be reversed annually.

Another administrative problem — regardless of whether the plan is compulsory or non-compulsory, contributory or noncontributory — is the matter of beneficiary designation. Care must be taken in assuring that designation has taken place. At least once a year this designation should be checked. Still another burden on the company is the matter of program continuance in the advent of employee absence (long periods) or upon termination of employment.

If a strike occurs, for example, and the program is contributory, then "who pays?" In some cases the employer may elect to pay the employee's share and then deduct that share from earnings when the individual returns to work. Naturally this increases the burden upon

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<sup>27</sup>General Motors Corp., 81 N. L. R. B. 779.

management. In some instances the firm has refused to pay the employee's share. This may seem like a simple way of escaping the burden; however it may give rise to continued altercation with the union.

Generally, an employee may convert his membership in a group policy to some form of standard insurance if he acts within 31 days following his termination of employment. This provision applies to life insurance; with the exception of Blue Cross and Blue Shield plans it usually does not extend to the health and accident provisions. Unions and a number of management people believe that arrangements should be made to extend this conversion privilege. Another and more practical approach might be to develop transfer arrangements so that an individual can take his vested interests with him to another employer.

*RETIREMENT PROGRAMS.* These fringe benefits involve pensions, formal or informal plans, and certain non-financial considerations. Like insurance programs, retirement provisions help attract and retain personnel. Like insurance programs, the monies involved require actuarial consideration, and the communications channels involved include external as well as internal maintenance. Since pensions are subject to collective bargaining, communication with the union is relatively constant. It is interesting to note the impact of the 1962 steel agreement which clearly ties pensions and vacations together (an equivalent of an extra week's retirement pay is granted for each five years of service.).

*Informal Pension Plans.* The term "informal" is used to identify systems which: (1) treat pension funds as current operating expenses; (2) make payments on the same or relatively the same basis as current wages; (3) leave eligibility as a relatively unformalized determination dependent upon operating management's decision in each case, and (4) do not provide for uniform treatment of beneficiaries. Since the funds involved normally remain the direct property of the employer, payments may be discontinued almost at his discretion.

These identifying characteristics should, in themselves, explain why most pension arrangements today are formal. They should also indicate the reason why so many informal plans were discarded during the depression years of the thirties.<sup>28</sup>

*Formal Pension Plans.* Formal plans reverse these procedures. They provide for the accumulation of necessary funds over the years of the individual's employment. Furthermore, the funds are held in trust under the supervision of an outside agency, or they may be

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<sup>28</sup>cf. Hugh O'Neill, *Modern Pension Plans* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1947); see also Murray Webb Latimer, *Industrial Pension Systems* (J. J. Little & Ives Co., N. Y., 1933).

supervised by an individual or group agreed upon by labor and management. Under the formal plans, funds thus are already available to meet pension payments when an individual retires. Furthermore, under formal plans, carefully developed criteria for payment are established, and payments and eligibility requirements are subjected to rather close supervision.

*Pensions and Social Security.* When Social Security first became law, pension systems provided that Social Security benefits be deducted from the total pension payments. This so-called "inclusive" or "deductible" arrangement is becoming increasingly unpopular because of the actuarial problems which arise.<sup>29</sup> Since 1954, an increasing number of firms have developed pension systems not related to Social Security payments.

*Types of Pension Plans.* Generally pension plans are spoken of as "trusteed" or "insured," and as "contributory" or "noncontributory." *Trusteed* plans do not always assure the individual a fixed payment. Such funds are invested by a trustee. Variance in benefits can arise due to the interest earned by the fund. On the other hand, the fund may be established so that at least a minimum payment is guaranteed. *Insured* plans are handled by insurance firms and assure a fixed payment. There is a guarantee of benefit even though the investment of the fund may not provide necessary monies, and the assurance of a fixed payment is a desirable feature. *Trusteed* funds, however, have the benefit of having all earnings from investment accrue to the fund. *Contributory* plans are either trusteed or insured. As the name suggests, employees contribute to such funds. *Noncontributory* plans also can be either trusteed or insured; however, the employee does not contribute. The arguments for and against contributory plans are many. In general they follow the points made concerning contributory insurance.<sup>30</sup>

*Manpower Problems Relating to Pensions.* Four specific issues require the active attention of the manpower people (and, of course, the trustee or insurance representative). These issues involve: vesting, short-term or "past service" credits, options, and withdrawal.

*Vesting* refers to an individual's interest in the employer's contributions to a pension fund.<sup>31</sup> An employee has an inalienable right to his own contributions in a pension fund, but often the language of the pension agreement denies any right to the company contributions unless and until retirement occurs. As logical as such denial may

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<sup>29</sup>Lovejoy, *op cit*, pp 433-434; see also, L. J. Ackerman and W. C. McKain Jr. "Retirement Programs For Industrial Workers," *Harvard Business Review*, Vol. XXX, No. 4, July-August, 1952.

<sup>30</sup>For a comprehensive presentation of these points see Lovejoy, *op. cit.*, pp. 451-453.

<sup>31</sup>cf. O'Neill, *op. cit.*, p. 208.

be (and sound from an accountant's point of view), it may be one cause of continued employee dissatisfaction, regardless of his hierarchical rank. The employee's view that he is deserving of some "vesting" of interest in a noncontributory plan seems to hold some merit. This is equally true of the contributory plan. In the first place it can be argued that, if the company considers the employee important, and his real or potential past service sufficiently significant to the firm's present and future welfare to invest funds today for his future well-being, then his future welfare is a continuing interest beginning from time of employment and gathering credit through the years. If this is true, then regardless of how many years go by, the employee has accumulated relative interest in his welfare fund. Such an argument is, of course, subject to many counter arguments and opinions. None can deny, however, that when a firm puts its pension fund in the hands of an outside agency (trustee or insurance carrier) handling other such funds, and when the employee leaves one firm and moves to another whose funds are supervised by the same agency, then that employee has the right to retain his vested interests.

Manpower people might be wise to emphasize use of common trustees or insurance carriers in given areas. This could mean a real decrease in the number of contests waged over vested rights. Naturally reduction of such contests implies saving of costs.

*Short-term* or "past service" credits also require attention. Pension plans do not just happen, and employment cannot be restricted to individuals whose potential is 30, 35, and 40 years of service with the firm. Some people will have only a few years of service remaining when hired or when a pension system is initiated. Clearly, such individuals cannot be denied pension rights. The fund thus must be bolstered by amounts sufficient to cover the short-term employee. The amounts involved may be large. Tax laws permit an annual write-off of not more than 10 per cent of such an amount as a current expense.

Unless credits for short service are provided, the manpower group can expect to face serious grievance problems relating to inequity of pension payments. In addition, they may become the buffer group between managers who have "made work" for oldsters rather than retire them with nothing, and those who protest such actions. On the other hand, the short-term problem becomes a reason why some firms adopt a policy of refusing employment to people beyond a given age. Such a policy naturally complicates the job of recruiters and employment specialists. Such a policy may in fact injure the reputation of a concern within the community.

*Options* also present difficulties. True, every pension system should permit the employee the right to assign beneficiaries and certain other options. Such administrative matters require careful control, however, and can increase the work load of the responsible personnel. One

may say, in essence, that work loads of this kind do not pay for themselves; hence another problem is raised for the personnel group.

Typical options include provisions for maximum payments with no consideration of beneficiary after death of the employee; a split of some proportion between payment in event of death and payment given periodically upon retirement; the naming of beneficiaries, and the right to have payments withheld until some specific time after retirement. Many other options are possible. Manpower people realize the importance of drawing the individual's attention to providing for loved ones in the advent of his untimely death, thus pension work involves counseling. Normally a manpower group can call upon the trustee or insurance carrier for help in these matters, but it pays to have the manpower group trained to handle them.

*Withdrawal* presents still additional difficulties. The funds contributed by an employee are his. He is entitled to withdraw them if and when he leaves the service of the firm. Unless vesting rights exist, however, he is not entitled to any portion of the company's contribution. Some people may not wish to withdraw their funds when they leave a firm. The question arises as to their right to keep themselves linked to the fund. Such problems must be foreseen and provisions made to handle them. Then too, some employees are "job hoppers," they may take their "savings" from the pension funds each time they move. If those monies are expended instead of reinvested with each movement, the employee will have no pension rights when he does finally retire. Problems of withdrawal necessitate careful counseling by the manpower group. They must be trained to understand the fund, the motives of people regarding such funds, the advantages and disadvantages of withdrawal, and the effective withdrawal procedures.

**ASSURANCE OF ANNUAL EARNINGS.** Some of the contributions to employee security occasionally contained in fringe benefit studies relate to employment security. Included are such matters as the guaranteed annual wage and guaranteed annual employment. Neither item is really a fiscal program used to increase the total compensation of an employee. As we all know seasonal, cyclical, and secular factors influence the stability of employment and earnings. If such factors can be stabilized then labor costs can be stabilized, at least to some degree. Earnings could also be stabilized. Both aims are important to management and labor.

The individual firm can do little about the causes of variation in the economy as a whole. It can, however, attack the causes of variation within its immediate sphere of influence. Such attack comes through efforts to improve production scheduling, stimulate off-season consumer demand, diversify production, establish funds in escrow to enable some payment of wages during slack employment, and the like.

On the surface it might seem that manpower people would have little responsibility in such matters; however, consideration reveals a different picture. The problem is a conservation problem, as mentioned in Part V of the text. In part, the problem may relate to failure to tap the ideas of the workforce; improved suggestion systems are needed. In part, the problem may relate to poor layoff, transfer, and promotion practices, and improvement may help. Then too, if selection of manpower is such that merely "warm bodies" are being hired, production may suffer and one result may be significant variation in consumer demand. Naturally the manpower group would be involved here. All these points, and the many others possibly pertinent to specific cases, indicate that manpower personnel have an important advisory function relating to employment and/or earnings stabilization. Also indicated is the fact that effective liaison will be necessary with the firm's industrial, product, and process engineering groups and the fiscal division.

Also important to the success of efforts to assure annual income or employment is the general nature of labor relations. If that climate is poor, guaranteed employment programming will fail. The manpower group must recall this not only when handling its side of the labor-management relationship, but also it must bring this point home to foremen, department heads, and division officials.

*SUPPLEMENTARY UNEMPLOYMENT BENEFITS.* Referred to as "S. U. B." supplemental unemployment benefits are about as close as the unions have been able to get to the true guaranteed annual wage (G. A. W.). The auto workers negotiated the first contract containing S. U. B. in 1955. The benefits were increased in 1958. UAW contracts provide laid off employees with 39 weeks of income at 65 per cent of their straight-time earnings up to a maximum of \$30.00 a week. Some states prohibit receipt of both S. U. B. and unemployment compensation. In such cases the unions have been able to gain contracts which permit drawing of S. U. B. and the unemployment benefits on alternating weeks — naturally, the state commissions had to be prevailed upon to accept such an arrangement. Furthermore, many contracts call for partial payments of the supplementary benefit to employees on reduced time. Some UAW contracts require severance payments after an employee has been laid off for more than a year. The 1962 steel agreement improved S.U.B. in steel by an extra 4.5 cents an hour company contribution. The funds are used to guarantee each worker weekly pay for 32 hours.

S. U. B. funds are placed in trust. The trustee plan is financed by company contributions *only*, and the amount is computed in terms of the number of man hours of work. This has the tendency to hold the cost of the program within fairly reasonable bounds. Nevertheless, that cost must be and is passed on to the consumer in some form.

Since most consumers do not receive such benefits, S. U. B. represents one more instance where a powerful minority has been able to benefit itself at the expense of the majority. Strangely enough, many favor this pattern and advance the idea that the way to equalize the situation is to increase government unemployment allowances. One cannot help but wonder where the spiral ends!

*Other Stabilization Efforts.* Proctor and Gamble initiated a guaranteed annual *employment* program in 1923. The program has been successful from both an employee and an employer point of view. One notices, however, that in this, and other similar programs, success hinges upon certain points not developed in the union-sponsored G. A. W. and S. U. B. arrangements. *First*, the employee must be willing to accept transfers in job and shift as deemed necessary to maintain production and sales. *Second*, the company must be in a position to exercise fairly good control over its sales and production — variations must be stabilized. *Third*, the product must lend itself to stabilization of scheduling, or sufficient diversification must be possible.

Nunn-Bush also operates a stabilization program. This, however, is based upon wages rather than employment. As already indicated, one also can point to the stabilization effect possible from correctly developed profit-sharing and stock ownership programs.

The important point for manpower people to remember is that the best answer to the stabilization issue is determination of the causes of variation for their specific firm, and then an attack upon those causes designed at least to reduce their effect. It would seem that support of expanded government unemployment benefits or union-sponsored S. U. B. programs merely hides the true causes of the problem. One doubts that continued ignoring of the cause will eliminate the problem!

**SOCIAL SECURITY CONSIDERATIONS.** The Social Security provisions do not add to an individual's current total income. If anything, they reduce that total, however, they do provide for deferred income.

Current provisions establish two nationwide systems of social insurance: old age, disability, and survivors insurance operated through the Social Security Administration, and unemployment insurance, a federal-state plan under which each state sets up its own law and administrative body, with the federal government paying all operating costs.<sup>32</sup>

Under the old age, disability, and survivors program, disability benefits are payable to an insured disabled worker between the ages of 50 and 65, and old age benefits at retirement age 62.

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<sup>32</sup>Bulletin 123, *Federal Labor Laws And Agencies*, U. S. Department Of Labor, Washington 25, D C., and the 1960 supplement present in detail the specific points necessary for a thorough understanding of these and other pertinent legal provisions.

The Social Security legislation, signed by President John F. Kennedy, provides benefits for many previously not covered, and increases the receipts of those already covered. Some of the pertinent factors under the new law are as follows.

. . . Men have the option of lower immediate benefits at age 62, or may wait until age 65 and collect higher benefits.

. . . Minimum benefits are increased.

. . . Widow's benefits are increased approximately 10 per cent.

. . . Work requirements needed to qualify for payments are lowered.

. . . Survivors of workers who died in 1958 or after, and who were previously not eligible for benefits, may now be eligible.

. . . Deductions from benefits due to earnings over \$1,500 are reduced. It is possible to earn up to \$1,700 and receive more in total earnings and benefits.

. . . Social Security taxes increased January 1, 1962. An additional 1/8 of 1 per cent will be paid by employers and employees on earnings up to \$4,800. Self-employed persons will pay 4.7 per cent instead of 4.5 per cent.

Table 32 presents some of the monthly benefits possible under the new legislation. Clearly, retirement and survivor benefits have become a major item of concern in our society. More important to the manpower and fiscal personnel of a firm, current labor cost is

TABLE 32

## SAMPLE MONTHLY BENEFITS UNDER 1961 SOCIAL SECURITY LAW

Factors	Monthly Payments Beginning August, 1961 For Average Yearly Earnings After 1950 of --				
	\$800 or less	\$1800	\$3000	\$4200	\$4800
Retirement at 62	\$ 32.00	\$ 58.40	\$ 76.00	\$ 92.80	\$101.60
Retirement at 63	34.70	63.30	82.40	100.60	110.10
Retirement at 65	40.00	73.00	95.00	116.00	127.00
Wife's Benefit, 62	15.00	27.00	35.00	43.50	47.70
Wife's Benefit, 65	20.00	36.50	47.50	58.00	63.50
Widow 62 or over	40.00	60.30	78.40	95.70	104.80
One Surviving Child	40.00	54.80	71.30	87.00	95.30
Lump-sum Death Payment	120.00	219.00	255.00	255.00	255.00

vastly increased by the many deferred income plans management is asked to meet. Both the retirement and unemployment provisions of current legislation add also to the administrative cost of operating a business. The company is not only an agent of the union by collecting dues through check-off, it is an agent of the government by collecting retirement, unemployment, and income tax monies.

### SUMMARY

We have been concerned with two specific issues in this chapter: the question of special compensation as it relates to executives, engineers, and other exempt personnel, and the matter of fringe benefits. Regarding the latter, specific attention was given such deferred income as pensions and profit sharing — items which have become important in the computation of labor cost.

The apparent effects of plans which develop the proprietorship attitude in employees should, we believe, be given more attention than they are today. The most effective fringe benefit to be developed is the program which enables employees to become equity holders in their firm.

What will the future bring? We cannot know. One cannot help but wonder if perhaps in days to come the matter of deferred income may not double present costs to make and sell. The present suggests that pressure for constantly increasing compensation will not diminish. Management must therefore be constantly alert to ways of optimizing the cost-income relationship. Clearly, a vitally important matter in that connection is to keep its "compensation house" in order.

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*Decisions through fact or "educated" estimate are superior to those founded upon emotion or "years of experience," to learn to make such decisions is a goal of every alert manager.*

## Appendix of Statistical Methods With Emphasis on Probability

Factual information aids the process of managing. Regardless of the specific environment, the effectiveness of management decisions depends largely upon the ability to collect and apply fact. Often unknown to managers are techniques to determine realistic probabilities of events — they can be the most useful of the facts the manager needs.

In this book the reader has seen a few illustrations, in appropriate spots, of statistical methods used to gather, arrange, analyze, and draw probability conclusions from data. This chapter explains certain statistical approaches found useful in the work of managing manpower. Some readers will want to go into the subject further than it is possible to do here, and yet avoid the difficulties of a mathematical volume on statistical methods. For them, the authors suggest an excellent paper-bound Pelican Book (A236), *Facts from Figures*, by M. J. Moroney, 1958.

### **STATISTICAL METHODS — A DEFINITION**

By "statistical methods" we do *not* mean primarily how to handle long columns of figures meticulously compiled over a period of time. Instead we emphasize the analysis of variability (lack of agreement) of data gathered, usually in a special way with regard to how they will be analyzed to reveal some information we do not have. Objectivity of approach must be inherent. We do not know what the data may reveal; we do *not* get data to "prove" something we should like to show. Perhaps they will show something we suspect, perhaps they will not.

**MEANING OF PROBABILITY.** Expressed as a number ranging from 0.00 to 1.00, probability can be defined *from a prior knowledge of what can happen or as the empirical result of observations.* In the

first case we know all the likely outcomes of an action and have as the probability the ratio of “total number of equally likely ways an event can occur” to “total number of equally likely ways it can *and* cannot occur.”

The probability of a head in one fair toss of a coin having one head and one tail is 0.5: one way to get a head divided by two ways — a head *or* a tail. The probability of *either* a head *or* a tail in one fair toss is 1.00; two ways divided by “two ways plus zero” (no way to get neither a head nor a tail; we are saying the coin cannot end up standing on its edge, unless deliberately placed that way). Notice an “either-or” statement means we *add* the separate probabilities: 0.5 for a head plus 0.5 for a tail equals 1.00.

The probability of two heads in a single toss of two fair coins is not 0.333, although one might think that there are three ways the event can and cannot happen:

- . . . two heads,
- . . . two tails,
- . . one of each,

thus giving the ratio of one to three, or 0.333. These ways are *not* equally likely; “one of each” can happen twice as often as, say, two tails! Here are the equally-likely ways:

#### Equally-Likely Ways of Fall

Coin No. 1	Head	Head	Tail	Tail
Coin No. 2	Head	Tail	Tail	Head

So, the probability is one divided by four, or 0.25. Notice that *when two independent events are considered simultaneously, we multiply* the separate probabilities: 0.5 for coin No. 1 being a head times 0.5 for coin No. 2 being a head equals 0.25.

To make sure you have this addition and this multiplication rule well in mind, it is suggested that you similarly reason out to your satisfaction the probabilities for a pair of fair, six-faced dice (also a case of having prior knowledge of what can happen, as we have with a coin):

- . . . In one throw of a pair of dice, what is the probability of a pair of “ones”?
- . . . In one throw of a pair of dice, what is the probability of a total of either two or twelve?
- . . . In one throw of a pair of dice, what is the probability of a total of seven?

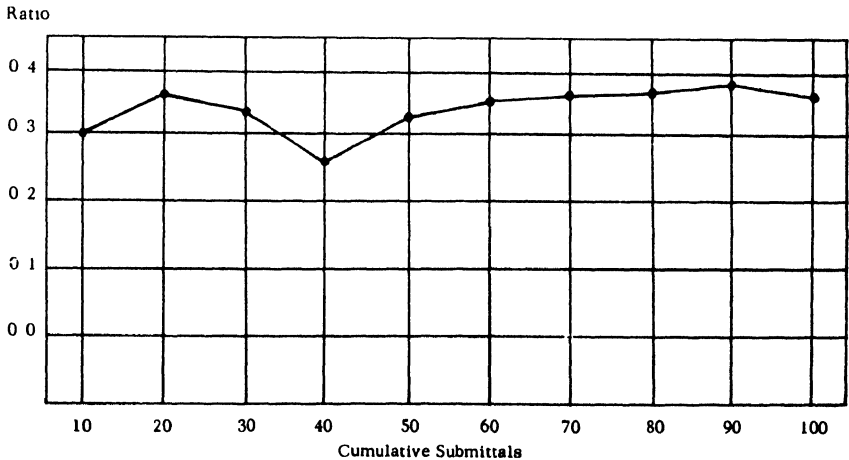
After you think you have the answers, turn the page and compare what you get with the footnote (#2) appearing there.

Probability also is defined from the empirical result of observations as the long-run ratio of "total number of occurrences of the event 'to' the total number of trials."

Suppose we ask what the probability would be of our hiring a person submitted by "agency W"? We have no prior knowledge of what can happen as we do in the case of the coin or dice. Although we never have the infinite amount of data represented by the phrase "long run," we can make an estimate of the true, unknown probability<sup>1</sup> which will be more precise the more data we have. Say our historical record shows that for each ten names submitted, the following were the number of put-ons issued (hires made).

<u>Cumulative Submittals</u>	<u>Cumulative Put-ons</u>	<u>Ratio</u>
10	3	0.300
20	7	0.350*
30	10	0.333
40	10	0.250
50	16	0.320
60	20	0.333
70	26	0.372
80	31	0.387
90	35	0.389
100	38	0.380
etc.		

Plotted, these results would show the following.



<sup>1</sup>It is, of course, assumed that this *true* probability is not changing while the data are being generated (and will not change during the period ahead for which the estimate is intended to apply).

The wider swings up and down of the ratio (to be expected for a relatively small total of trials) tend to narrow down for larger numbers of trials and average out at a level representing a reasonable estimate of the true probability — in this case, about 0.38. Additional trials will help in making a still better estimate.

## GETTING INFORMATION

Sampling provides opportunities for economies in information gathering and for better decisions. It often takes much less time to get the data. The advantages become so great that manpower managers should develop a facility for effective sampling. The efficient manager knows how to determine, within limits of known confidence, the significant characteristics of a large body of data by analysis of a small part of it. Typical applications would be a survey of some manpower situation in the country or in a region; getting information for better forecasting of needed figures; auditing a personnel or other situation; determining the proportion of time employees spend in each of several useful and non-useful operations in manufacturing or office work; or simply developing certain numerical information from a file of cards.

Often a manager will feel that to get a reliable answer he must have a tremendously large body of data. The sheer difficulties of compilation may be enough to discourage even trying to get the information; however, *samples that are representative* open a whole new approach to making decisions.

Getting complete information for some purpose often can be impractical. Suppose one wanted to know, month by month, the size and composition of available manpower inventory around the country. Aside from the cost and time involved to get complete information, there still could be other reasons making it impractical to attempt to acquire such data from all employment sources.

Furthermore, in other situations acquisition of complete information may be quite impossible. For example, finding out minute by minute for several weeks how gainfully each person in a plant or office is occupied would serve well in evaluating organization, methods, and job instruction; it would help to determine manpower requirements for new projects and, as indicated in Part VI, is important to job establishment work. It cannot be done, however, by having each person observed continuously by another who records all activity. People just will not act the same while someone watches them. A

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<sup>2</sup>Answers for previous page:  $1/6 \times 1/6 = 0.0278$ ;  $1/36 + 1/36 = 0.0556$ ; 1 and 6, 6 and 1, 2 and 5, 5 and 2, 3 and 4, 4 and 3 = 6 equally likely ways, so  $6/36 = 0.167$ , after you show 36 total ways for a pair of dice.

special form of sampling, called work sampling or "ratio delay," makes this impossible job quite practicable.<sup>3</sup>

### TYPES OF DATA

There is a difference between discrete and continuous data. We say, statistically, we are working with *discrete* data when we count results, as in the foregoing: heads, tails, total spots on dice, numbers of submittals, put-ons. In contrast, statistical methods generally differ when we work with *continuous scale* data such as employee age, salaries, distances people travel to work.

The ability to get fractional results characterizes continuous data. Age could be expressed in years, months, and even days, minutes, seconds, etc., if there were any need to do so. In contrast, you cannot have  $2\frac{1}{3}$  submittals; it has to be 2, 3 and so forth. Do not be confused by the apparent continuous nature of the ratios we formed, viz., 0.372, 0.387, 0.389. Percentages or ratios formed from discrete numerators and denominators are properly handled by statistical methods applying to discrete data. As one gets further into statistical work, he will encounter cases where analytical work with such ratios is aided by sometimes reasonably good approximations from continuous scale statistics. Managers should recognize that approximations are being made.

### DISCRETE STATISTICS – SAMPLING

In Chapter 4, on Communications, we were told that the number of combinations of the executive with "n" subordinates, "r" at a time is:

$$C_r^n = \frac{n!}{r!(n-r)!} \text{ called the combinatorial formula or the hyper-}$$

geometric relation, where –

$n!$  and  $r!$  are read as  $n$  "factorial" or  $r$  "factorial."

Where  $r! = r(r-1)(r-2) \dots (2)(1)$ ; and,

$$0! = 1 \text{ since}$$

$$n(n-1)! = n!$$

and if we let  $n = 1$ , then

$$1(1-1)! = 1!$$

$$1(0!) = 1$$

$$\text{so, } 0! = 1$$

<sup>3</sup>cf. Bertrand L. Hansen, *Work Sampling For Modern Management* (Prentice-Hall, Inc., Englewood Cliffs, N. J., 1960); Robert E. Heiland, and Wallace J. Richardson, *Work Sampling* (McGraw-Hill Book Co., Inc., N. Y., 1957).

It is well to understand this relation for the number of combinations of  $n$  things taken  $r$  at a time, since it aids us in calculating models of likely outcomes in many sampling applications. Such models provide the comparative information necessary to permit an intelligent selection of an appropriate plan for sampling. Remembering our definition of probability from prior knowledge of what can happen, the number of combinations can give us the number of equally likely ways events can and cannot occur. Take a simple example:

The probability of a sample of 3 cards showing 2 terminations when taken at random from 10 cards (6 of which are terminations) is.

$$P_2 = \frac{C_2^6 \times C_1^4}{C_3^{10}}$$

The numerator shows the number of equally likely ways 2 terminations can be taken from 6 at the same time 1 current employee card is taken from 4. The denominator shows the total number of equally likely ways 3 cards can be taken from 10, which means it is the number of ways the event (2 terminations in 3 cards) can and cannot occur. See again the definition at the top of page 826.

Solving the ratio, we find that:

$$P_2 = \frac{\frac{6!}{2!4!} \times \frac{4!}{1!3!}}{\frac{10!}{3!7!}} = \frac{6!}{2!4!} \times \frac{4!}{1!3!} \times \frac{3!7!}{10!} = .5$$

Note in this example that the sample 3 is more than 10 per cent of the population 10, whenever the sample is more than 1/10 of the population, the hypergeometric relation must be used to account for the change in the remaining population as items are drawn from it.

**SAMPLE SIZE AND UNIVERSE.** Proper sampling gets more information for every information dollar spent. A sample of one or two selected items of data tells very little about the nature of what statisticians call the "universe" — that is, the particular class or group of things about which information is desired. As the sample grows it more adequately represents the entire body of data. It can be shown mathematically that enlarging a sample improves its representative nature rapidly at first, but the degree slows markedly after the sample reaches a certain size. Beyond that, any further sampling alters the statistical results very little. This statistical result of representative sampling means that large universes do not require correspondingly

large or proportional samples. The *sample size* is important, but the universe size need have practically no effect on the size of the sample required. It should be kept in mind, though, that the size and nature of the universe can affect the ease with which the proper kind of sample can be taken.

At first thought it would seem logical that sampling cannot be as accurate as securing complete information in finding out about a universe. Actually, proper sampling generally describes the universe *more* accurately! The repetition necessary in observing and recording a large number of data items almost always leads to human errors — transpositions, oversights, recording some items more often than they actually occur, and the like. In practice, if the sample is not too large, a record of the sample will be much more likely to be correct than will a record of the universe.<sup>4</sup>

*SOME "FACTS OF LIFE" ABOUT SAMPLING.* A proper sample should "truly" represent the condition of the universe. How can any sample, which by definition is only a part of the whole, be known to *represent* the items not in the sample? Consider the analogy of a blood sample taken by a doctor as being truly representative of all the blood in a person. It is representative because a person's blood is essentially uniform or the same throughout his system. It has been pumped and mixed by the action of the heart long enough to have distributed the white corpuscles, red corpuscles, and proteins evenly throughout the blood. A sufficient sample of such a homogeneous universe should contain the same proportions of components as in the whole universe.

As to our statement that the universe size has practically no effect on the size of the sample required to represent it adequately: consider two men, one twice as big as the other, at the doctor's office for blood samples. The sample of blood taken in each case is the same — approximately 5cc. This never strikes anyone as strange — the doctor is not expected to take twice as much blood from the bigger man. As a matter of fact, the sample size would adequately represent a volume equivalent to a lake, if the lake had been thoroughly stirred to make it uniform.

Unfortunately, however, in industrial and business situations one usually encounters non-uniform universes. How does one secure a representative sample, or more technically, an "unbiased" sample?

If the universe consists of items which we know are not already arranged in a way that could influence results, a representative sample can be secured by skipping — that is, taking, say, every tenth or every twentieth item. For example, if we had a directory of all adult women, we could take every tenth or twentieth name, even if they are already

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<sup>4</sup>cf. Dorian Shainin, "Sample at Random for Correct Statistical Control," *The Iron Age*, 12, October, 1950.

listed alphabetically, since the answers we would be seeking — for example, their opinion of the company as a place to work — would not be influenced by the first letters of their names. This approach seems logical until you consider that certain nationalities may be represented more frequently in certain segments of an alphabetical list. Such a method, termed “ordinal selection,” must be used with care for still other reasons. If the list from which the sample is taken does not contain *all* of the universe, it must itself be truly representative. This was demonstrated by the famous *Literary Digest Poll* of 1936 which failed spectacularly in its prediction of the presidential election because it relied heavily on lists of telephone subscribers which were not representative of the voting population.

**PRECAUTIONS ABOUT SAMPLING.** To obtain the desired effect, the universe to be studied must be thoroughly mixed before taking the sample. One way to do this would be to assign a number to each item of the universe, and then stir the numbers thoroughly (imagine them written on separate pieces of paper and mixed). You could then take a sample of the mixed numbers, and use as your test sample the items or persons attached to those numbers. Those items would then be equivalent to a sample taken from that universe made homogeneous by thorough mixing. In other words, the people themselves or things comprising a heterogeneous universe need not be stirred to obtain a representative sample!

We repeat that the numbers must be thoroughly mixed. To achieve this, use is made of published tables of so-called “random numbers” from which lists of the required length can be compiled.<sup>5</sup> Such a table appears as Table 1a.

It is easy to see the reasonableness of this approach from a simple example: there is a universe of 5,000 cards, each carrying a record of the employee's education. Say you wanted to obtain a quick idea of the proportion of employees who did not finish grammar school, high school, college, and those that did get a degree, by picking a sample of only 100. If you took the first 100 cards, conceivably you could be getting all of those with high school diplomas. You want to be sure that the cards are not “stacked” in some sequence or cluster of categories that would throw off any group of 100 selected. Your natural reaction would be the same as in a card game — you would like to shuffle the whole deck of 5,000 thoroughly, after which you would feel fairly confident about the randomness of any 100 picked. The same effect is achieved by numbering the cards from 1 to 5,000, then selecting from a table of random numbers a list of 100 random

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<sup>5</sup>Many texts concerned with statistics carry such tables. For example see pp. 142-145 of *Tables for Statisticians* by H. Arkin and R. R. Colton, (Barnes and Noble, Inc., New York, 1950).

draws (numbers), and finally recording the results found from the cards identified by those numbers.

Even when the universe is thoroughly mixed (or mixed in effect, by use of random numbers), it is to be expected that there will be some slight difference between the proportions taken from one random sample and the proportions taken from a second random sample of the same size. In addition, except by great coincidence, the proportions in the samples would be different from the true proportion of the whole universe, if that could be obtained. The objective is to have some means of knowing with what degree of confidence the results of any sample can be interpreted. Statisticians have developed relatively easy ways for interpreting the data.

Tables and graphs make it possible not only to answer questions as to the degree of confidence with which results of a given sample can be interpreted, but also how big a sample must be designed in order to obtain results within a desired degree of precision.

TABLE 1a

## TABLE OF RANDOM NUMBERS

01 15 96 32 67	20 85 77 31 56	79 37 59 52 20	10 62 24 83 91	70 28 42 43 26
55 82 34 76 41	15 63 38 49 24	33 52 12 66 65	86 22 53 17 04	90 41 59 36 14
66 82 14 15 75	92 69 44 82 97	59 58 94 90 67	49 76 70 40 37	39 90 40 21 15
96 27 74 82 57	77 61 31 90 19	20 55 49 14 09	50 81 69 76 16	88 15 20 00 80
43 94 75 16 80	38 68 83 24 86	59 40 47 20 59	43 85 25 96 93	45 13 46 35 45
71 85 71 59 57	25 16 30 18 89	41 29 06 73 12	68 97 11 14 03	70 01 41 50 21
92 78 42 63 40	65 25 10 76 29	05 87 00 11 19	18 47 76 56 22	37 23 93 32 95
04 92 17 37 01	36 81 54 36 25	82 44 49 90 05	14 70 79 39 97	18 63 73 75 09
45 19 72 53 32	64 39 71 16 92	20 24 78 17 59	83 74 52 25 67	05 32 78 21 62
15 19 11 87 82	04 51 52 56 24	48 46 08 55 58	16 93 03 33 61	95 09 66 79 46
01 29 14 13 49	83 76 16 08 73	60 83 32 59 83	20 36 80 71 26	43 25 38 41 45
38 38 47 47 61	14 38 70 63 45	43 52 90 63 18	41 19 63 74 80	80 85 40 92 79
66 16 44 94 31	51 32 19 22 46	88 72 25 67 36	66 91 93 16 78	80 08 87 70 74
54 15 58 34 36	72 47 20 00 08	94 81 33 19 00	35 35 25 41 31	80 89 01 80 02
72 84 81 18 34	05 46 65 53 06	74 45 79 05 61	79 98 26 84 16	93 12 81 84 64
18 61 91 36 74	39 52 87 24 84	48 54 53 52 47	18 61 11 92 41	82 47 42 55 93
74 62 77 37 07	81 61 61 87 11	75 12 21 17 24	58 31 91 59 97	53 34 24 42 76
32 39 21 97 63	07 58 61 61 20	92 90 41 31 41	61 19 96 79 40	82 64 12 28 20
78 46 42 25 01	90 76 70 42 35	69 90 26 37 42	18 62 79 08 72	13 57 41 72 00
62 09 53 67 87	40 18 82 81 93	94 97 21 15 98	00 44 15 89 97	29 59 38 86 27
12 30 28 07 83	34 41 48 21 57	19 15 20 00 23	32 62 46 86 91	86 88 75 50 87
76 37 84 16 05	63 43 97 53 63	36 02 40 08 67	65 96 17 34 88	44 98 91 68 22
05 04 14 98 07	67 04 90 90 70	94 95 87 42 84	20 28 83 40 64	93 39 94 55 47
46 97 83 54 82	79 49 50 41 46	54 15 83 42 43	59 36 29 59 38	52 16 29 02 86
47 66 56 43 82	91 70 43 05 52	75 05 19 30 29	99 78 29 34 78	04 73 72 10 31

TABLE 1a cont'd

## TABLE OF RANDOM NUMBERS

84 60 95 82 32	03 99 11 04 61	66 08 32 46 53	88 61 81 91 61	93 71 61 68 94
29 73 54 77 62	38 55 59 55 54	08 35 56 08 60	71 29 92 38 53	32 88 65 97 80
59 07 60 79 36	17 54 67 37 04	55 12 12 92 81	27 95 45 89 09	92 05 24 62 15
76 35 59 37 79	32 64 35 28 61	00 91 19 89 36	80 86 30 05 14	95 81 90 68 31
29 54 98 98 16	69 57 26 87 77	14 06 04 06 19	33 56 46 07 80	39 51 03 59 05
61 95 87 71 00	24 12 26 65 91	14 84 54 66 72	90 89 97 57 54	27 69 90 64 94
17 26 77 09 43	61 19 63 02 31	41 83 95 53 82	78 03 87 02 67	92 96 26 17 73
10 06 16 88 29	30 53 22 17 04	39 68 52 33 09	55 98 66 64 85	10 27 41 22 02
35 20 83 33 74	03 78 89 75 99	74 41 65 31 66	87 53 90 88 23	75 86 72 07 17
35 66 35 29 72	48 22 86 33 79	53 15 26 74 33	16 81 86 03 11	85 78 34 76 19
01 91 82 83 16	60 36 59 46 53	42 61 42 92 97	98 95 37 32 31	35 07 53 39 49
70 07 11 47 36	83 79 94 24 02	34 99 44 13 74	09 95 81 80 65	56 62 33 44 42
11 13 30 75 86	32 96 00 74 05	99 38 54 16 00	15 91 70 62 53	36 40 98 32 32
78 13 86 65 59	19 32 25 38 45	66 49 76 86 46	19 64 09 94 13	57 62 05 26 06
27 48 24 54 76	11 22 09 47 47	48 50 92 39 29	85 24 43 51 59	07 39 83 74 08
88 65 12 25 96	31 75 15 72 60	15 47 04 83 55	03 15 21 91 21	68 98 00 53 39
74 84 39 34 13	88 49 29 93 82	20 09 49 89 77	22 10 97 85 08	14 45 40 45 04
28 59 72 04 05	30 93 44 77 44	73 78 80 65 33	94 20 52 03 80	07 48 18 38 28
74 02 28 46 17	22 88 84 88 93	60 53 04 51 28	82 03 71 02 68	27 49 99 87 48
65 74 11 40 14	78 21 21 69 93	44 37 21 54 86	87 48 13 72 20	35 90 29 13 86
74 91 06 43 45	41 84 98 45 47	34 67 75 83 00	19 32 58 15 49	46 85 05 23 26
61 31 83 18 55	46 35 23 30 49	45 30 50 75 21	14 41 37 09 51	69 24 89 34 60
76 50 33 45 13	11 08 79 62 94	59 74 76 72 77	39 66 37 75 44	14 01 33 17 92
11 65 49 98 93	52 70 10 83 37	16 52 06 96 76	02 18 16 81 61	56 30 38 73 15
92 85 25 58 66	57 27 53 68 98	68 65 22 73 76	88 44 80 35 84	81 30 44 85 85

## Instructions For Table 1a (Random Numbers)

1. Select a series of random numbers from the table equal to the number of observations required, the sample size. An observation requirement of 20 means that one selects a series of 20 numbers from the random table.

2. Match the numbers selected from the random table to the numbers assigned or affixed to the cards, observations, tests, scores, etc.

3. Perform the sampling in accordance with the run of the numbers taken from the table.

Note that the groups of digits can be combined to permit development of numbers containing the necessary digits.

Example: draw a sample of 250 jackets from the personnel-actions file of 6,500 jackets. The file or jacket numbers involve a maximum of four digits, therefore, four-digit number groups will be used from the table. In selecting the random numbers, one can start anywhere in the table, using the jacket numbers which correspond to the first 250 groups of four-digit numbers selected from the table. If numbers

exceeding the last number in the file (6,500) appear, discard them and use the next random number. Do not count the discarded numbers in the total of 250 selected.

Glance at the table, suppose you started at the beginning and therefore selected 0115 as your first number. Draw the personnel jacket bearing that number from the file. Continue in this manner. The next would be 9632 which must be discarded. The next, 6720, also must be discarded, however, you will note the number 3156, which will be kept. As stated, continue until the 250 have been selected. Read your table as a book, from your left to your right as you are looking at the page. You are warned, however, to avoid using the same set of random numbers repeatedly. Always start at some new random spot, for the next task.

Two examples will serve to indicate the principles and techniques involved. Simple graphs (Figures 1a, 2a, and 3a) short cut the probability mathematics involved.

Suppose you were planning to open a new plant convenient to a major residential area at some distance from your present factory. Another company occupied the buildings and is moving out, taking along only certain supervisory individuals. What portion of the few thousand personnel record cards show experience which might be useful to your operations?

A random sample of 200 cards indicates 20 per cent. Figures 1a through 3a make it possible to draw inferences from such sample results for three levels of assurance — 90, 95, and 99 per cent respectively. For example, Figure 1a enables us to say for any given proportion, read on the bottom scale, that we can be 90 per cent sure that the true proportion lies within a “scale of error” band, or “confidence band,” read on the left vertical scale. This band, as one might expect, is wide for small samples, and gets narrower as the samples are increased. If the sample got to be as big as the total number of cards, obviously there would be no band at all. The band is read by noting the upper and lower bounds associated with any given sample size as shown on the numbered curves. More correct statistically would be the statement that 90 per cent of a very large number of repeated random samples of the same size would be expected to include the true proportion within the band.

Look at Figure 1a. For the proportion of .20, the band between the two curves for a 200 sample extends from 160 to 250. The sample said .20, and we are “90 per cent sure” that the true answer is somewhere between .16 and .25. For a bigger band, we could be 95 per cent sure, as indicated by Figure 2a — from .15 to .26. If we want to make a statement with assurance of only 1 per cent of being wrong, we would read the band from Figure 3a. We could be almost certain that the true value lies somewhere between 13 per cent and 28.5 per cent.

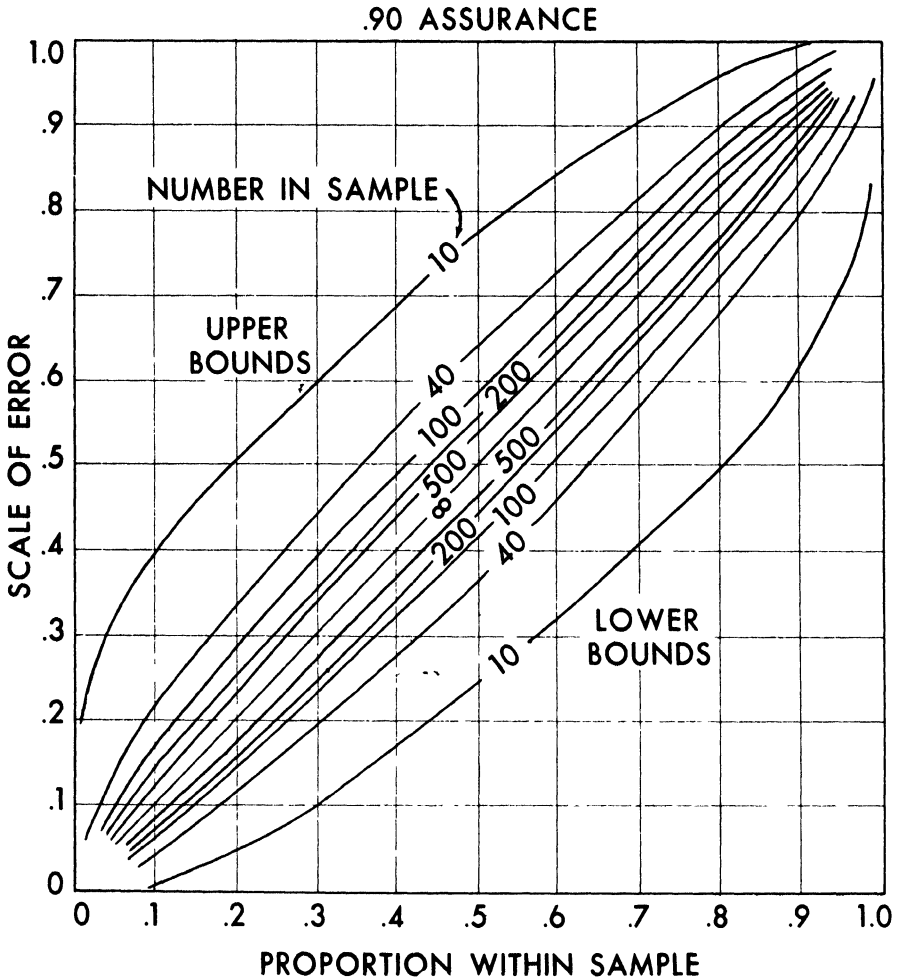


Figure 1a

If you assert that for your business decision you want to be 95 per cent sure of an answer, but that you want an answer within a narrower band, you would go back to Figure 2a and say, "Well, we're 95 per cent sure that the value is between .15 and .26. Let's check some more cards until we have a sample of 500." For whatever value *that* sample showed — let's say 19 per cent — you would go to Figure 2a once more and find that the scale of error has been reduced to a band of .17 to .22.5.

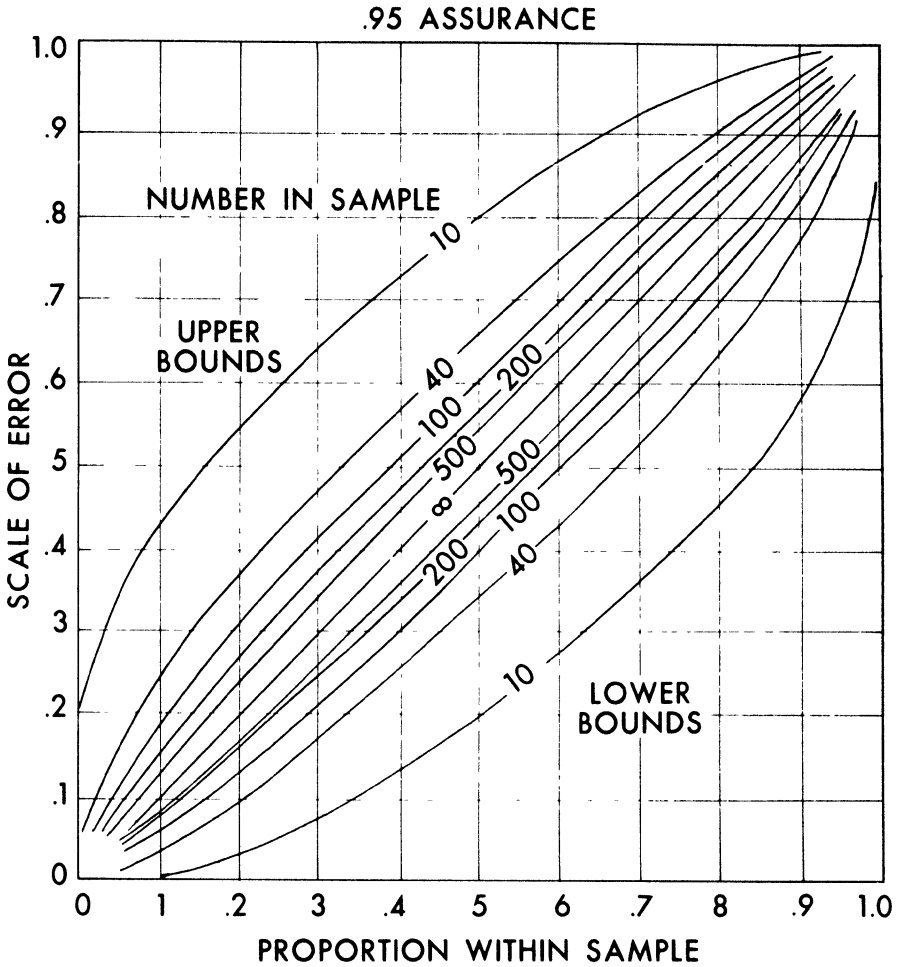


Figure 2a

One practical point always must be kept in mind in connection with the choice of assurance levels desired. Is a higher level of assurance worth the cost of additional sampling?

In the case of the 300 additional cards, the cost would probably be small. If the situation had required additional personal interviews instead of looking at cards, however, the band for 95 per cent assurance achieved by 200 interviews might well have been considered close enough for a decision.

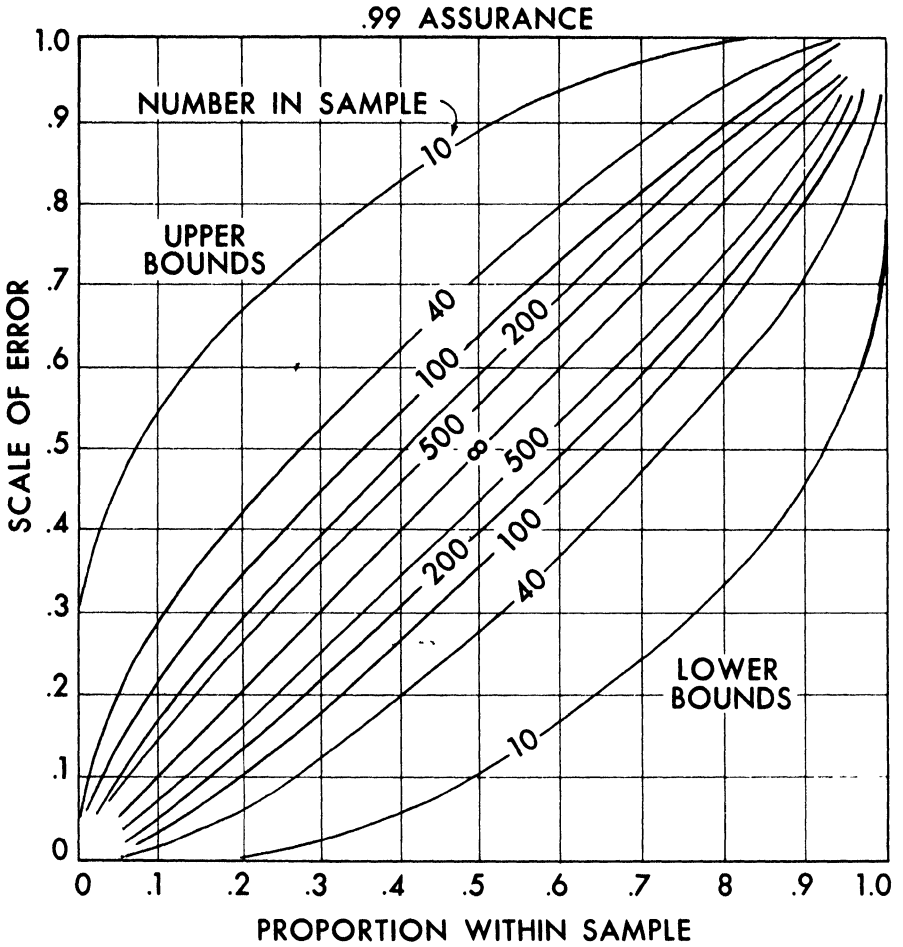


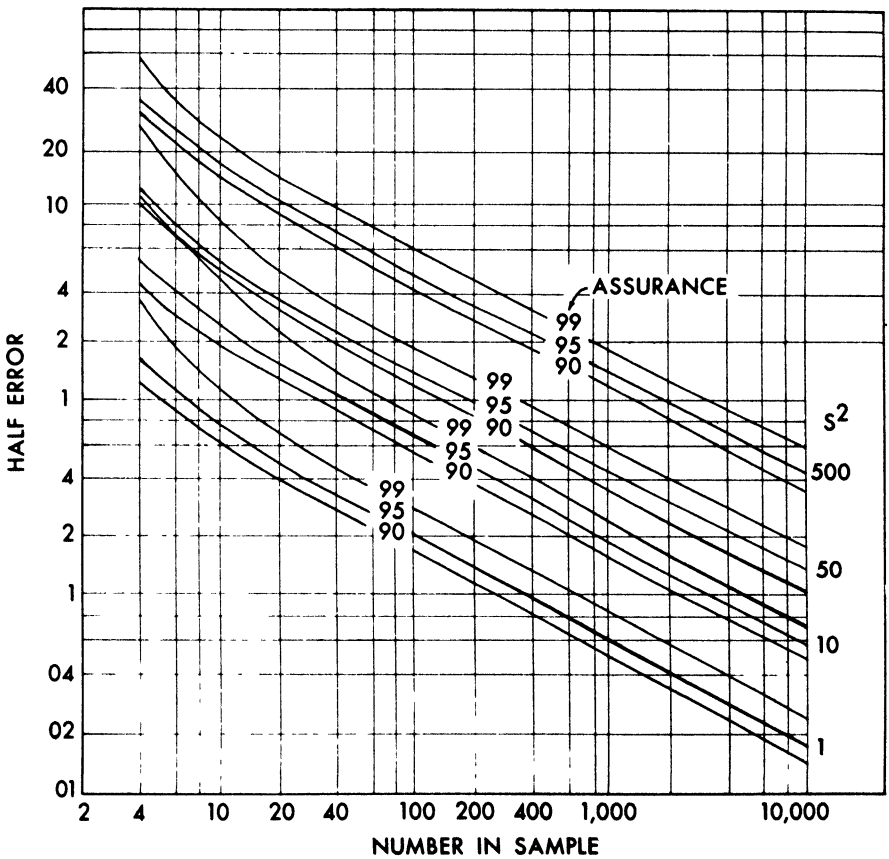
Figure 3a

**CONTINUOUS STATISTICS – SAMPLING**

Similar principles of mathematical probability, but a different type of chart, are involved in analysis of continuous data. Sampling here consists of averaging sets of wage amounts (or sets of other continuous data). These averages, or *means*, are subject to a plus-or-minus error which must be taken into account, as well as the spread or range between low and high readings which obviously must affect the confidence with which you interpret the *means* of the readings.

Figure 4a is the chart to be used. It is handier than the others since it combines the curves for three levels of assurance in one chart. The logarithmic scale used, wherein the numbers are bunched as they get higher, permits more data on a single sheet.

A small arithmetic computation is required for any given set of readings to determine the value of  $S^2$  shown at the right of the chart. This is the value for the spread in the data, and leads you to the



CONTINUOUS-SCALE ASSURANCE CURVES

Figure 4a

appropriate group of assurance curves to use in reading the error at the left.

Note that the error is designated "half error." This is because the error will be plus or minus that amount in either direction from the average reading, and the total confidence band runs across the whole plus-minus range. If an observed sample average is 22.5 and a half-error is 1.5, the confidence band thus runs from 21 to 24, namely,  $22.5 \pm 1.5$ .

Suppose you are reading wages for a quarter year. These readings are to be taken in successive sets of seven readings each. Seven is used for the sets because that tends to give an optimum range for statistically estimating variance. Your total sample, say, is to be 70 so that there will be 10 such sets of readings. (Reliability of the estimated spread in the data increases as the number of sets of seven becomes greater.)

Your average value for all 70 readings is \$980.50, let us say, but for each set of seven, the readings ranged from a low to a high, with varying values in between. In order to make use of Figure 4a to determine the plus-or-minus range about \$980.50 for various levels of assurance, you must first determine  $S^2$  so that you can get the right family of curves. There is an exact method of arriving at  $S^2$ , involving all of the readings. While it is not complicated, it calls for considerable arithmetic, so first we shall indicate an easier method which gives an approximation good enough for most practical uses:

Simply average the ranges obtained from each of the sets of seven — that is, in each set, the difference between the highest and the lowest reading. You then can refer to a table (an abbreviated form is given in Table 2a) which will give a factor "x" corresponding to the number of sets of seven used. In our case this value, for 10 sets, is 1.022.  $S$  is determined by multiplying the average of the ranges by 1.022 and then by a constant factor, .37. Squaring the value thus obtained gives  $S^2$ . In our case, the average of the ranges was, let us say, 18.60, so that the arithmetic yields a value of 49.50 for  $S^2$  leading us to take the second family of curves from the top.

The values of assurance have the same meaning as explained for Figure 1a, 2a, and 3a. We had 70 in our sample. For an assurance level of 95 per cent, the value for the plus-or-minus half-error thus turns out to be \$1.60, which means that we can be 95 per cent sure that the true value is somewhere within the band of \$978.90 and \$982.10. Obviously a small  $S^2$  keeps the half-error small, and as seen by the curves, the more readings taken — that is, the bigger the sample — the smaller the half-error. This, of course, is something we would reasonably expect.

TABLE 2a

Number of Sets of 7	X
1	1.215
2	1.095
3	1.066
4	1.047
5	1.036
6	1.029
8	1.026
10	1.022
15	1.011
20	1.011
30	1.004
60	1.004
120	1.000

One question will arise: What to do if  $S^2$  turns out to be a figure, say 300, which is not on the chart (or any other, in-between figure). The answer is that the families of curves are related to one another by the square root of their ratios. The next family of curves below 300 thus is for 50, 300 is 6 times 50, and so the half-error values for 300 will be  $\sqrt{6}$ , or 2.45, times those obtained from the curves for 50.

In estimating the variance from ranges of sets of numbers, only the largest and smallest of each set are used. The remaining in-between numbers are neglected. The exact method for determining  $S^2$  uses all the data. It requires substituting values in this relation:

$$S^2 = \frac{A - \frac{B}{C}}{C - 1} \left\{ \begin{array}{l} \text{called the unbiased mean square} \\ \text{estimate of the population variance} \end{array} \right\}$$

Where C = number of individual readings

B = square of the sum of the individual readings

A = sum of the squares of each individual reading

**“SUB-UNIVERSE.”** Whenever it is known that a relationship exists between the results being sought and some known factor, it is advisable to divide the universe into sub-universes and to take random samples within each, rather than treat the entire universe as one. This procedure will keep down  $S^2$  in each sample, and yet permit reconstructing the entire picture, as long as the relative sizes of the sub-

universes are known. An example would be finding out how the length of job tenure can be related to income levels. (The premise is that it does vary with income; what is wanted is to know by how much). To obtain this answer, the company's population is divided by income levels, with a random sample selected from each division.

In the *planning* stage of any sampling operation, one must always remember that the size of the sample must be such as to give the required reliability which may be wanted for any sub-universe. A manager *must curb* his inclination to load the research with extraneous questions, which always mean more sub-universes. These quickly can build up the total sample required all out of proportion to the importance of some of the information requested. Such temptation easily can mean that the technique will cost instead of save monies; more than that, however, the manager may attempt to force the approach into applications it is not designed to handle.

### DISCRETE STATISTICS — THE BINOMIAL

When the sample size is less than 1/10 of the population size, the binomial can be used in place of the hypergeometric relation previously mentioned. In Chapter 11 we indicated that if we find the *proportion of an item or category* existing in the population is *greater* than 1/10, the binomial relation should be used in place of the Poisson. The *binomial* then applies for *all* proportions, *as long as the sample is less than 0.10* of the population. The *Poisson* applies *only* when the proportion as well as the sample *are both* less than 0.10. Manpower managers as well as all managers should learn how to employ an extremely useful graphical device, called the Binomial Probability Paper. (See Figure 7a. in this connection.)

Utilization requires that we let  $p$  be the decimal or fractional proportion of a population having a particular characteristic in which we are interested. Then  $q$  can be the remaining proportion of the population, so  $p+q = 1.00$ , representing all the population.

The binomial relation is  $(q+p)^n$ , where the power or exponent  $n$  is the sample size. As an example of the applicability of the binomial consider the following.

Suppose we learn from a reasonably authoritative source that 2 per cent of the executives in this country have developed into virtual managerial geniuses. Their performance of all necessary executive tasks outstrips that of the conventional executive who may be quite good in only one or two of the multitude of skills required of such a person. Say we hire two young men who will be groomed to grow into executive positions. What are the probabilities that neither will develop into such a genius, that one of the two will, and that both will?

In this case  $p = 0.02$  and  $q = 0.98$ . We learned earlier in this appendix that when two (or more) independent events are considered

simultaneously, the probability of their joint occurrence is the product of their separate probabilities. So the probability that neither will develop into such a genius is.

$$P_0 = 0.98 \times 0.98 = 0.9604$$

Similarly, the probability Fred will, but John will not, (another joint occurrence) is  $0.02 \times 0.98$ . But we get one genius if *either* this happens or if Fred will not and John will. So we also follow the either-or rule and add the two joint probabilities to get.

$$P_1 = 0.02 \times 0.98 + 0.98 \times 0.02 = 0.0392$$

Finally, the probability that both will be geniuses is.

$$P_2 = 0.02 \times 0.02 = 0.0004$$

Notice that these results add to unity, as they should in confirmation of the fact that everything that could happen is covered.

$$\begin{array}{r} P_0 = 0.9604 = q^2 \\ P_1 = 0.0392 = 2qp \\ P_2 = 0.0004 = p^2 \\ \hline 1.0000 \end{array}$$

The expansion of the binomial gives these terms:

$$(q + p)^2 = q^2 + 2qp + p^2$$

So the binomial takes unity,  $(q+p)^n = 1.00$ , and expands into a number of separate parts or terms always one more than the sample size.  $q^n$  being  $P_0$ , and the next terms in sequence being  $P_1, P_2, P_3$ , etc., with the last term being  $P_n = p^n$ .

It is not too difficult to expand the binomial for an exponent of 3 and still greater, although one can use certain aids to reduce the amount of arithmetical work as the number grows.

For example, let's get  $(q + p)^3$  by:

$$\begin{array}{r} q^2 + 2qp + p^2 \\ \quad \quad \quad q + p \\ \hline q^3 + 2q^2p + qp^2 \\ \quad \quad \quad q^2p + 2qp^2 + p^3 \\ \hline q^3 + 3q^2p + 3qp^2 + p^3 \end{array}$$

In a similar way we could expand the binomial to exponent 4 and 5, getting:

$$\begin{array}{l} q^4 + 4q^3p + 6q^2p^2 + 4qp^3 + p^4 \\ \text{and} \\ q^5 + 5q^4p + 10q^3p^2 + 10q^2p^3 + 5qp^4 + p^5 \end{array}$$

Still considering the example of  $p = 0.02$  and  $q = 0.98$ , this last expression shows:

$$\begin{aligned} P_0 &= 0.9039207968 = q^5 \\ P_1 &= 0.0922368160 = 5q^4p \\ P_2 &= 0.0037647680 = 10q^3p^2 \\ P_3 &= 0.0000768320 = 10q^2p^3 \\ P_4 &= 0.0000007840 = 5qp^4 \\ P_5 &= \frac{0.000000032}{1.0000000000} = p^5 \end{aligned}$$

It can be a help to know that this general expression will represent any term of the binomial  $(q + p)^n$ .

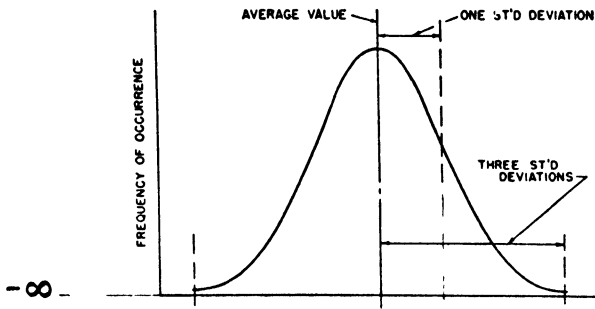
$$P_r = C_r^n \cdot q^{n-r} \cdot p^r$$

Where  $r$  is either 0, 1, 2, etc., representing the term we want. Suppose, as in the last table, we want  $P_4$  when  $n = 5$ . Using the general expression,

$$P_4 = \frac{5!}{4!(5-4)!} q^{5-4}p^4 = 5qp^4$$

*BINOMIAL PROBABILITY PAPER.* Binomial probability paper, designed by Professors Mosteller (Harvard) and Tukey (Princeton) — printed by the Codex Book Company, Inc., of Norwood, Massachusetts (No. 32,298) — is a graphical way of handling many binomial probability situations. In addition to being easy to use, the paper automatically performs a very important function with the data plotted thereon. It transforms the usually non-symmetrical variably-shaped distribution of fraction or percentage of events (a discrete statistic) to a symmetrical, normally distributed angle (a continuous statistic) on the paper. With the aid of Figure 6a, the probabilities associated with such events can be determined.

This normal distribution (Figure 5a) describes, by its height from the base line, the relative frequency of values of a continuous-scale measurement, in this case an angle in degrees (and minutes and seconds if one wanted to indicate it that finely). It applies when several (usually at least four) factors combine by chance, some at one moment increasing the continuous-scale result, some reducing it. The bell-shaped curve is the long-run outcome of many such chance combinations. If the entire area under the normal curve, mathematically extending from minus infinity to plus infinity, is set equal to 1.00 — representing certainty that every possible value of the result will occur somewhere on the base scale — then the probability of a result occurring between any two points on the scale is represented by the area directly above that segment, under the curve. Notice how Figure 6a shows, cumulatively from minus infinity, the area swept over by a vertical line



THE NORMAL DISTRIBUTION

Figure 5a

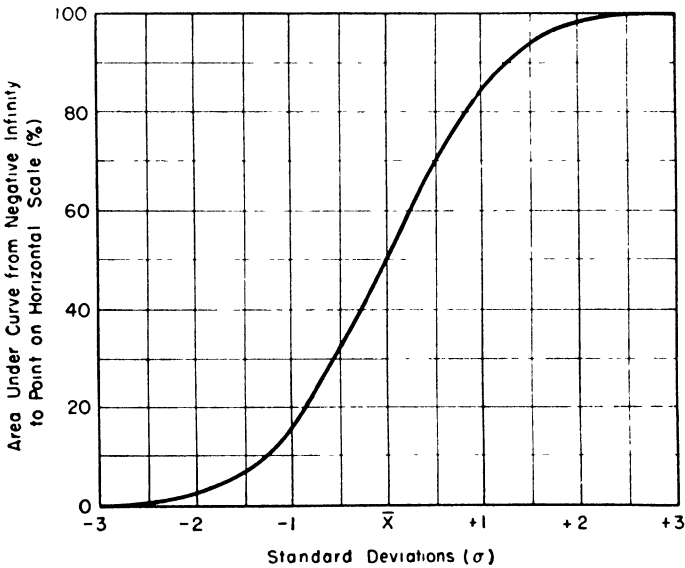


Figure 6a

moving to the right from minus infinity to some position on the base line identified by a number of standard deviations from the location of the average.

So, in summary, *binomial probability paper will take a ratio of discrete data and transform it into a "continuous scale" angle shown on the paper.* Probabilities of such sample result ratios can be estimated by the number of standard deviations they are away from the average ratio. This graphical construction changes for special situations, as will be illustrated. That number of standard deviations represents a probability which corresponds to the tail area of a normal distribution.

Another example of the size of a pool of potential executives, initially illustrated in Chapter 11, now can be described for the case when the average number of executives leaving per year is greater than 10 per cent of the population of executives. Say, in this instance, from among 20 executives the average number leaving per year is 3.0.

On binomial probability paper we plot a point at the intersection of 3.0 on the vertical scale with 17.0 (= 20-3) on the horizontal scale, and draw a radial line from the origin through it as shown in Figure 7a.

To find the probability of 0 leaving (and 20 staying) plot the (0,20) point then draw a pair of lines, increasing each ordinate by one, and so form a right angle. The situation is thus represented as a triangle, with the perpendicular distance to the radial line from the vertex (acute angle) nearest to the line, measured as a number of standard deviations in (reference to the "Full Scale" circle and marked-off line at the top left of the paper). These can be read to the nearest 0.1 standard deviation with the aid of a millimeter scale, since 5mm. will be seen to equal one standard deviation (on the full size paper)

The corresponding probabilities are the tail areas of a normal distribution as read from Figure 6a

<u>Number Leaving</u>	<u>Number Staying</u>	<u>Distance In Std. Deviations</u>	<u>Probability</u>
0	20	1.6	.05 (.0388)
1 or less	19 or more	0.8	.21 (.1756)
6 or more	14 or less	1.6	.05 (.0673)
7 or more	13 or less	1.9	.03 (.0219)

(This last point is also plotted in Figure 7a as an illustration.)

(For comparison, the *exact* binomial probabilities are shown in parentheses)

So if we wanted to have a trained replacement in the pool 95 per cent of the time, we are looking for a probability of 0.05 of having more than *n* people leaving in a year. Since that number is about 6

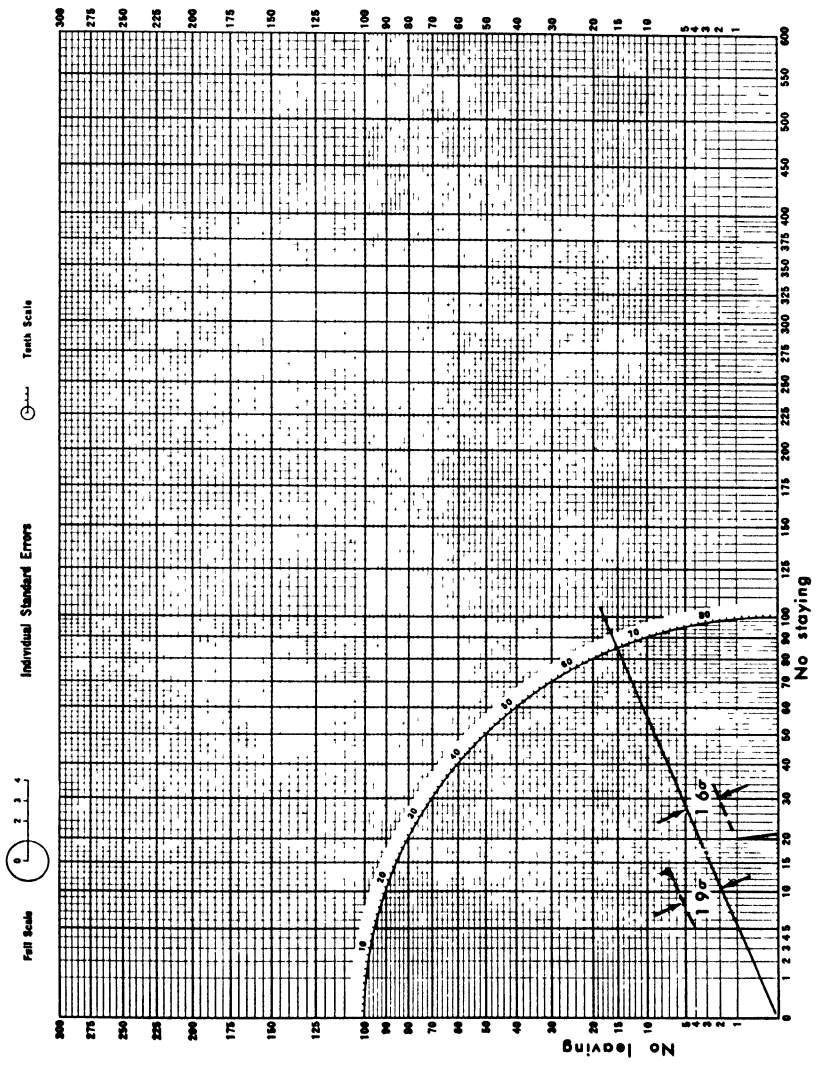


Figure 7a

we could decide not to take on trainees when we have 5 in the pool, unless an exceptional candidate appears.

At the other 5 per cent end of the scale, we see that no man in the pool would be all right only 0.05 of the time, and 1 man in the pool would protect us only about 21 per cent of the time. So we might hustle our efforts to add to the pool if we ever get down to 2 men. Notice that the more accurate figure, if we performed the mathematical work rather than using the graphical solution, would be 18 per cent; the graph serves us well enough even in this less accurate region (its lower left-hand corner).

Another useful binomial probability paper construction is shown on Figure 8a.<sup>6</sup> A company embarked upon a program of hiring a group of engineers in June, trained them for several months, and then had them available for whatever technical positions might be open in the firm as the training program drew to a close.

They hired 23 graduates for the first class. During the training program five resigned. Termination interviews with these men indicated they were unhappy with the material presented by the instructors and the methods of instruction. Interviews with those staying revealed that they were pleased with the program and what they received from it.

Management's question was whether they might have a program here that really would hold only 50 per cent of the men hired. If so, they would seriously consider either making some sweeping changes or, perhaps, abandoning the whole idea. Binomial probability paper was used to determine, with 95 per cent confidence, the interval within which the true, unknown per cent leaving the company might lie — from the single observation of 5 people out of 23 leaving.

The number leaving, 5, is plotted on the vertical scale (Figure 8a) with the number staying, 18 ( $23 - 5 = 18$ ), on the horizontal scale. Each entry is then increased by *one* to form a triangle: 5 to 6, and 18 to 19. The upper and lower vertices of the triangle are used as centers to scribe an arc of radius 2 standard deviations (as measured on the "Full Scale" printed at the top left of the paper) above the top vertex and below the bottom one. This use of plus and minus 2 standard deviations represents the exclusion of an area (or probability of a result) of 2.5 per cent in each of the two tails of a normal distribution. We thus have an expectation between plus and minus 2 standard deviations of 95 per cent of the possible outcomes.

The final graphical construction is to draw a pair of straight lines from the origin tangent to each of the arcs, and extended to cross the

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<sup>6</sup>Binomial Probability Paper has been reproduced with permission from its producer, the Codex Book Company, Inc., Norwood, Massachusetts. This very useful paper is available in most book stores or by contacting the company.

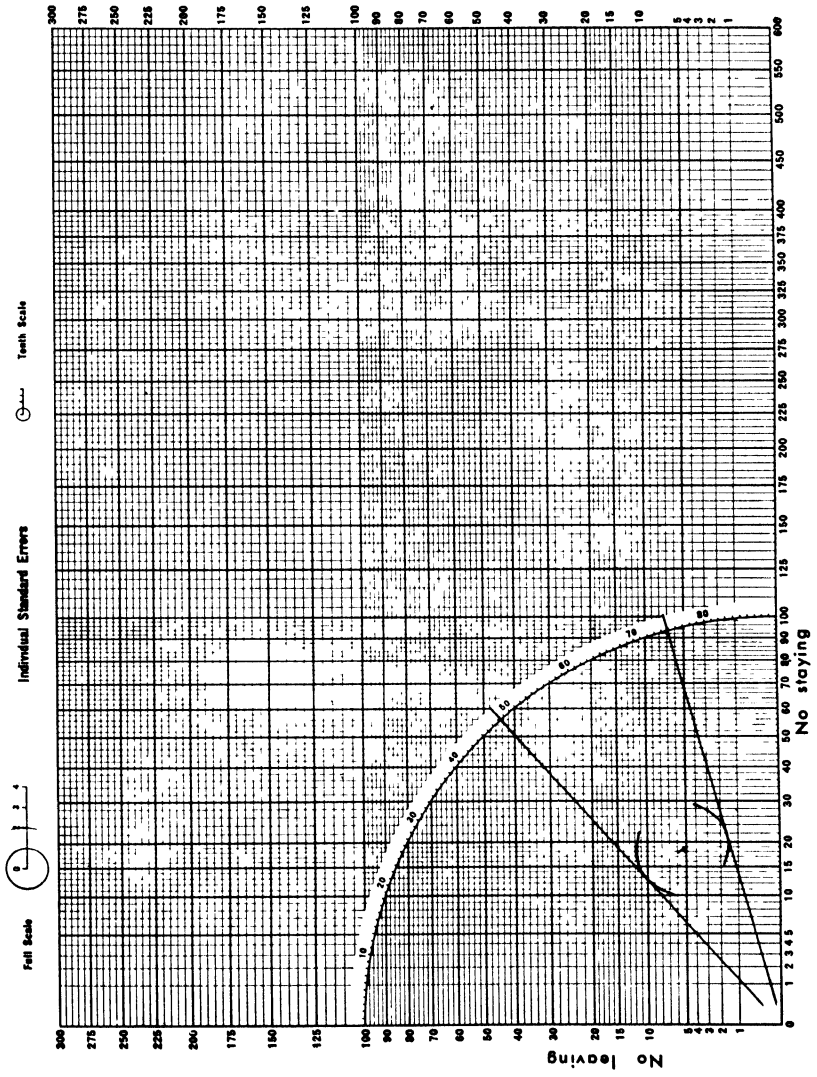


Figure 8a

printed quarter-circle on the graph. On the vertical scale read the heights at which these two straight lines crossed the quarter-circle: 44 and 7. Statistically, we have found the 95 per cent confidence interval to extend from a minimum of 7 per cent to a maximum of 44 per cent leaving the firm.

While management was pleased that there was less than a 2.5 per cent chance that the true fraction leaving (the long term average) from such a program was 0.50, they were impressed that it also was unlikely to be below 0.07. They decided, therefore, to get anonymous evaluations from the 18 men staying, of each subject taught and of each instructor. Based on these frank comments, whenever there was substantial agreement, changes in the program were planned. Next year's results would then also be statistically assessed on binomial probability paper.

### CORRELATION ANALYSIS

The extent to which one factor is correlated with another has, in text after text, been a favorite statistical device of authors. Simple linear correlation, fitting a straight line to a series of points representing how a result (the dependent variable) changed when some other factor (the independent variable) changed, will be described here.

Although linear correlation will take care of most applications in the manpower management field, *any* correlation analysis should be approached with particular caution. The manpower manager must realize that an attractive-looking correlation may be "spurious" (that the expected relationship is unreal), or that other factors of greater weight are influencing the dependent variable.

Suppose, for example, that during the past 19 years we have collected data plotted as following

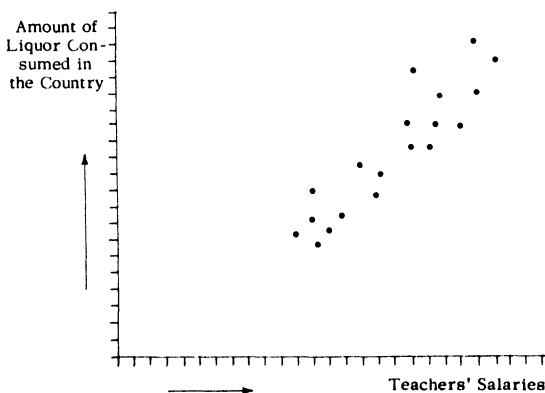


Figure 9a

As teachers' salaries (the independent variable) have increased, the amount of liquor consumed in the country (the dependent variable) also tended to increase. In the case of such a trend we can always safely say there is an *association of the change* of one factor with the change of the other, but we can *never* say such a plot necessarily shows that the change of the independent variable *causes* or *influences* the observed change of the dependent variable. Remember that even when (contrary to this example) the horizontal factor logically seems to influence the vertical one, such a clear correlation does not at all establish "proof" of a cause and effect relationship.

Managers frequently overlook this fact when they seek to apply correlation to selection or promotion testing. Consider the situation where one notes that test scores show a good correlation with later employee performance on the job, and therefore concludes, *per se*, that tests in current use are "good" predictors of future performance. Since other factors may be importantly involved, such a conclusion may be dangerous. Two hypotheses thus must be considered when trying to evaluate whether high scores can be sufficient evidence of good job performance in the future.

*First*, consider that test scores really *do not* indicate subsequent performance.

Say 17 people were involved in the case. The first 5 hired did well on the test and in their later work, the next 4 did poorly in both, and the remaining 8 varied from moderately well to very well.

The 4 came as a group from a foundry in town which recently shut down. The nature of their past work and employee relations were, say, responsible for their poor job performance, but their low test scores, say, were the result of family life in a particular part of town and their specific educational background.

The first 5 hired, and 2 of the last 8, came from another company where their past work was almost exactly what they are now doing. Their good results, both at work and on the tests came from repeated exposure to, and long practice with, the elements of the work.

The other 6 had nothing particular in common and, as a matter of fact their scores and job performance results were not correlated.

An alert manager will conclude that it was the strong influence of the other 11 cases combined with these 6 that resulted in the reasonably good numerical measure of correlation.

*Second*, consider that test scores really *do* indicate subsequent performance.

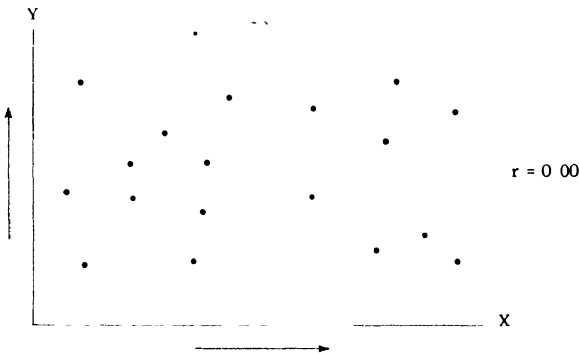
With the same foregoing 17 "test-score, job-performance" results, with (in this case) no other independent, common, causal factor affecting most of the low and/or most of the high results, there would be no

other major or controlling factor and the test scores would be indicative of subsequent performance

Of course, logic warns the alert manager that he cannot safely conclude that major or controlling factors do not exist *merely* because they have not been found.

In essence then, the manager should stop and carefully consider both possibilities. His attention should habitually be directed to a situation-audit so that major and/or controlling factors are recognized. One notes the important relationship of the foregoing example to the procedure recommended in Chapter 11. One reason for "fussy" records keeping and background analysis is to facilitate development of the evidence upon which one can base his confidence in — for example — test-score and job-performance correlation.

**THE MEANING OF CORRELATION.** Correlation is quantitatively described by a single number, represented by  $r$  (the correlation coefficient). The coefficient,  $r$ , approaches 0.00 where there is a lack of association, as in the following Figure 10a.

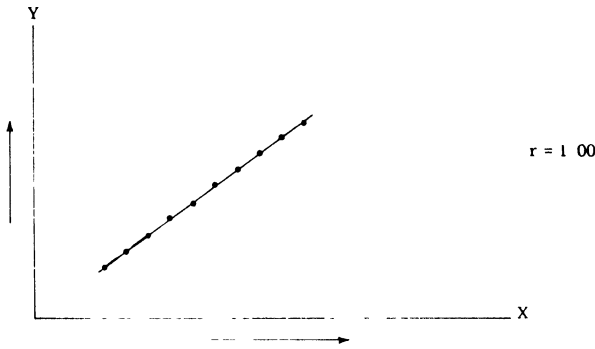


#### LACK OF ASSOCIATION

Figure 10a

On the other hand, the coefficient is 1.00 when all the points of a relationship fall on a single line as plotted in Figure 11a.

In the first of the three illustrations (Figure 9a),  $r$  would be computed to be, say, 0.80. We interpret the observed  $r$  from two points of view: the square of its value ( $r^2 = 0.64$ ) means that 64 per cent of the variation in  $Y$  is associated with the change in  $X$ , the remaining 36 per cent ( $1.00 - 0.64 = 0.36$ ) is associated with other



COMPLETE ASSOCIATION

Figure 11a

things than X. The following Table 3a shows the chance value of  $r$  which will be reached 5 per cent, and in another column 1 per cent, of the time when there really is *no* association of Y with X. If, therefore, the computed  $r$  comes out greater than the .05 column value, we are more than 95 per cent sure there is a real association (greater than the .01 value, more than 99 per cent sure).

TABLE 3a

ASSOCIATION TABLE FOR .05 AND .01 LEVELS

Number of Points On the Plot	Critical $r$ 's	
	.05	.01
3	.997	1.00
5	.878	.959
7	.754	.874
10	.632	.765
15	.514	.641
20	.444	.561
25	.396	.505
30	.361	.463
50	.275	.356

This Table is adapted from George W. Snedecor, *Statistical Methods* (Iowa State University Press, Ames, Iowa, Fifth Edition). By permission of the publisher.

COMPUTATION OF THE CORRELATION COEFFICIENT.

The computation of the correlation coefficient,  $r$ , comes from substituting the observed data in this equation:

$$r = \frac{\Sigma(XY) - N(\bar{X})(\bar{Y})}{\sqrt{(\Sigma X^2 - N\bar{X}^2)(\Sigma Y^2 - N\bar{Y}^2)}}$$

where:  $XY$  = the product of the coordinates for each point.

$\Sigma$  is the symbol meaning "sum up the term directly following this sign."

$N$  = the number of points.

$\bar{X}$  = the average of the  $X$  values.

$\bar{Y}$  = the average of the  $Y$  values.

$\Sigma X^2$  = first square each  $X$  value, and then take the sum of these squared values.

... and so forth ...

Table 4a, which appears following, assists in getting the terms for substitution in the equation.

TABLE 4a  
CORRELATION COMPUTATION TABLE

Points	X	Y	(XY)	X <sup>2</sup>	Y <sup>2</sup>
1					
2					
3					
N					
Totals					
	$\Sigma X$	$\Sigma Y$	$\Sigma(XY)$	$\Sigma X^2$	$\Sigma Y^2$

$$\bar{X} = \frac{\Sigma X}{N} =$$

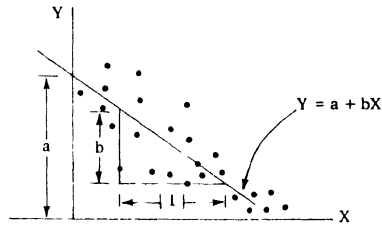
$$\bar{Y} = \frac{\Sigma Y}{N} =$$

To obtain the equation of the best-fitting straight line, find the  $a$  and  $b$  values for the general equation:

$$Y = a + bX$$

where:  $a$  = the value of the intercept of the line on the  $Y$  axis (where  $X = 0$ ).

$b$  = the slope, the change in  $Y$  for each unit of increase in  $X$ . (In the following sketch,  $b$  is negative.)



To find the  $a$  and  $b$  values, enter the proper values from the previous Table 4a in these two equations:

$$Na + b\Sigma X = \Sigma Y$$

$$a\Sigma X + b\Sigma X^2 = \Sigma(XY)$$

Then, solve these simultaneous equations.

### DETERMINATION OF CAUSE AND EFFECT RELATIONSHIP

There is a proper way to find statistically whether a valid cause and effect relationship exists. You first must be able to set  $X$  at any level or value within a range in which you are interested. Next you measure and record the  $Y$  result obtained for each  $X$ .

A firm wanted to evaluate a proposed training program for new employees being considered for a particular kind of future work.

Seventeen people were hired for that work, and their performance over a reasonable period of time in the future could be numerically determined — opinion had no part in influencing or determining the number. Three levels of training were to be evaluated: intensive, short, and no training.

The 17 names were put in a hat, and five drawn at random for no training, nine for the short course, and the remaining three for the intensive training. Note that two or more should be picked for each level of  $X$ . If convenient, an equal number can be selected for each level. In this example an unequal number is used to illustrate the more general situation.

Tying up fewer people for the long course seemed to be a good idea, at least until it was objectively determined that it did significantly improve the results.

One notes, here, the reappearance of the random selection concept. Assigning people at *random* to each level of X is very important. If any other factor (in addition to the training) has an influence, it will thus cause a difference among people exposed to the same level of X. If one or more of those unknown factors is sufficiently important to be controlling, the lack of agreement among results within each level of X will be large enough to cause the statistical test of the "average to average to average" difference among the three X's to show a lack of significance.

In this particular case, the following data (Table 5a) was developed and recorded.

TABLE 5a  
TRAINING DATA — PILOT PROGRAM, ABC CO.

	Level of Training		
	None	Short	Intensive
Subsequent Job Performance Results	50 = R <sub>1</sub>	82	90
	24 = R <sub>2</sub>	57	36 = R <sub>16</sub>
	37 = R <sub>3</sub>	85	83 = R <sub>17</sub>
	74	88	
	30	30	
		50	
		49	
		98	
		76	
Totals	215 = T <sub>0</sub>	615 = T <sub>s</sub>	209 = T <sub>1</sub>
Averages	43 0	68.3	69 7
	n <sub>0</sub> = 5	n <sub>s</sub> = 9	n <sub>1</sub> = 3
	GT = 1,039		N = 17

Where  
 R represents an individual Reading  
 T represents a column Total  
 GT represents the Grand Total of all readings  
 n represents the number of all readings in a column  
 N represents the total Number of all the readings

From these data, the following “analysis of variance” of the results of the pilot program was performed, utilizing this table.

TABLE 6a  
ANALYSIS OF VARIANCE TABLE

Source of Variance	Sum of Squares	Degrees of Freedom	Mean square = sum of squares - degrees of freedom
Course to course	$\sum \left( \frac{T^2}{n} \right) - \frac{GT^2}{N}$	One less than number of courses	
Within course	$\sum (R^2) - \sum \left( \frac{T^2}{n} \right)$	N less the number of courses	

The following data utilization then takes place.

$$\begin{aligned} \sum \left( \frac{T^2}{n} \right) - \frac{GT^2}{N} &= \frac{215^2}{5} + \frac{615^2}{9} + \frac{209^2}{3} - \frac{1039^2}{17} = \frac{46,225}{5} + \frac{378,225}{9} + \\ &\quad \frac{43,681}{3} - \frac{1,079,521}{17} \\ &= 9,245 + 42,025 + 14,560.33 - 63,501.24 \\ &= 65,830.33 - 63,501.24 \\ &= 2,329.09 \end{aligned}$$

$$\text{Mean square} = 2,329.09 / (3-1) = 1,164.55$$

$$\begin{aligned} \sum (R^2) - \sum \left( \frac{T^2}{n} \right) &= 50^2 + 24^2 + 37^2 + \dots + 83^2 - 65,830.33 \\ &= 73,229 - 65,830.33 \\ &= 7,398.67 \end{aligned}$$

$$\text{Mean square} = 7,398.67 / (17-3) = 528.48$$

The ratio of the "mean square" (for course-to-course) to the "mean square" (for within course) now is compared to a pair of tabled values. This ratio, called  $F$ , is listed for its size which can occur 5 per cent of the time, and a greater size which can occur 1 per cent of the time, purely by chance. So if our pilot-program, observed  $F$  is larger than the .05 tabled value, we are more than 95 per cent sure we have a real difference among column averages — thus we say we are significant at the .05 level. If the  $F$  comes out larger than the .01 tabled value, then we are significant at the .01 level, more than 99 per cent sure of a real, rather than a chance, difference.

In this case, the ratio is  $\frac{1164.55}{528.48} = 2.21$

Referring to a table of  $F$ ,<sup>7</sup> we see the .05 value for 2 degrees of freedom (column of the table) and 14 degrees of freedom (row of the table) is 3.74, the .01 level is 6.51. Our observed 2.21 did not exceed the .05 level, hence we *are not* 95 per cent sure the training made any difference.

Referring back to the original listing of performance results for this case, we see an average performance of 43.0 for no training, 68.3 for the short course, and 69.7 for the intensive course. It *looks* as if no training gives poorer results. We cannot be 95 per cent sure because there was too great a within-course variation for the amount of data and for the observed differences among the averages. There were factors other than the course influence that affected job performance.

In this situation apparently there either is, or is not, a worthwhile influence of the short course over no course at all. It would seem advisable to get more data with more people on these two alternatives. If the resulting  $F$  ratio gets closer to the tabulated  $F$  ratio, as more data are available, we can be optimistic; if it exceeds the  $F$  ratio, the short course is clearly an advantage. If the ratios instead move farther apart, we can begin to get pessimistic.

Mathematically, the greater amount of data increases the number of degrees of freedom for "within course." If other factors are not really stronger than represented in the earlier data, the sum of squares for "within course" will not change much. So the resulting quotient, the mean square, will then be less, and the  $F$  ratio greater. Since the tabulated, critical  $F$  ratio decreases somewhat with greater degrees of freedom, the tendency in this case would be for the same "course to course" effect to show up relatively stronger — to move toward a significant  $F$  ratio.

Popular in other texts is the use of Student's  $t$  test for comparing a pair of observed average results in an effort to determine whether

<sup>7</sup>A convenient source, among many statistical texts, is Arkin and Colton, *op cit.*, pp. 117-120.

their difference is statistically significant. In the foregoing, we used an F test for comparing three observed average results. The t test has to be limited to *two* average results, but *not* the two extreme (or any other pair) selected from more than two averages. In such cases the tabulated probabilities in the t table do not apply. The F test will apply equally well to two or more observed averages. It gives the correct statistical significance level for concluding that all of the averages do not come from a single source.

### GENERAL REMARKS

Statistical techniques are becoming increasingly useful every year in a great many fields, including manpower management. Fundamentally this is so because more people are understanding how to use them.

Those who become experienced in an industrial field, and who combine with this knowledge an ability to plan, procure, and analyze data will add substantially to the objectivity of the "facts" they use in combination with judgment to make better decisions. A man who makes better decisions is more useful to himself and to his firm.

Manpower management people not only will find it to be to their advantage to obtain a working knowledge of many statistical methods, but also should plan activities that expose key men in the company to them. A small but important proportion of these men should be expected to see the merit of further training in this way of thinking.

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