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KING WORK HUMAN

# Making Work Human

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# Preface

The purpose of this book is to present a philosophy and psychology of work, which, if applied, will justify the title of the book by making work human. The book was written for representatives of management who are responsible for the work of others, and for those workers who are interested in the problem of work adjustment. The plan of development has been to mix fundamental theory with practical suggestions, in the hope that both will be put to the test of application by those most responsible for the development of sound and workable human relations in business and industry.

The primary thesis of the book is that work can be made fully as satisfying as leisure-time activities. Fundamental principles of human nature and their general application in work situations are discussed in the earlier chapters of the book, whereas the application of these principles to the solution of problems of work adjustment is stressed in later chapters. Chapter headings will indicate to the reader the relative emphasis on theory and practice. Each chapter may be read with understanding without reference to other chapters. However, since the first four chapters are a general introduction to those which follow, thorough mastery of the principles presented in the introductory chapters will prove helpful to the reader in extending his thinking beyond the work activities referred to in the practical suggestions presented in later chapters.

The reader seeking ready-made techniques for use in personnel administration will frequently be disappointed because "ready-to-use" procedures fall outside the scope of this book. However, those who believe that the handling of personnel problems requires thoughtful study and the exercise of carefully

reasoned judgment in making work human will find the book useful, both for general orientation of thinking and as a reference volume to be consulted when faced with special problems in human relations. It is to the leaders in business and industry, actual and potential, who believe that problems relating to men are equally as important as those relating to machines and materials in production, that the book is dedicated. Persons wishing to formulate procedures for applying principles of human relations in industry to local company situations will find suggested sources in the footnotes for each chapter. Several sample problems showing appropriate applications of principles are included in a chapter by chapter recapitulation in the Appendix. Topical references to these suggestions and problems are included in an elaborate index.

The author wishes to express his sincerest gratitude to many persons who have directly or indirectly assisted in making the publication of this book possible. The number of such persons is large; however, public acknowledgments must be limited to those whose assistance has been most direct. I am deeply indebted to Max Schoen, Emeritus Professor of Psychology, Carnegie Institute of Technology, who originally suggested the need for this type of book and without whose constant encouragement and helpful suggestions it would not have been written. Numerous persons actively engaged in management, production supervision, and personnel relations work have assisted in formulating and testing many of the principles and procedures presented in the book. Special mention is due M. A. Kraft, R. F. Royster, S. W. Carter, and J. V. Waits, who have collaborated with the author in experimental application of psychological principles in industrial relations. To Dorothy McCarroll, my sincere thanks for painstaking care in the preparation of the manuscript, checking proof, and assembling the index.

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CHAPTER ONE

# *Work is What We Make It*

ACTION IS THE BASIC LAW OF LIFE. FROM THIS FUNDAMENTAL PRINciple is derived the physical science concept of work which assumes that *when action occurs work is performed.* To understand this functional definition of work it is necessary to develop subsidiary concepts of energy and force. Thus, it is said that a body possesses energy when it has capacity to do work and that a body possesses this capacity of doing work either by virtue of its position or by virtue of its motion. Energy of two kinds is recognized: potential energy, that which is stored or held in reserve, ready to be released, and kinetic energy, that which is capable of doing work because of motion. Subsidiary to these concepts is the principle of conservation of energy, which holds that energy can neither be created nor destroyed, merely transformed.

Up to this point, physical science and the science of man have much in common. However, the concept of physical science which defines work as the product of a force acting and the distance through which it acts, and the concept of force as the mass of a body times its acceleration, are far too simple and too mechanistic to describe work in human terms.

To describe work in terms of the science of man, the elements of responsiveness, purpose, adjustment, habit, interest, motive, drive, intelligence, aptitude, self-direction, and adaptive behavior, along with other minor complexities, must be introduced. For example, work, in the sense in which the term may be applied to man's efforts, is activity directed toward the accomplishment of

a set purpose. Human work is activity with an end in view. Work, predicated on the laws of motion, and as conceived in the theory of conservation of energy, is human; but work described in terms of the physical science concepts of energy and force is not human. Because of the internal operations of human nature, energy and force in work by man become unmeasurable variables rather than constants or measurable variables. Employers who utilize human energies are fully aware of the variable quality of individual work output. However, despite desperate efforts to maximize human energy output, they often fail to capitalize on forces which can only be brought into action through application of psychological principles and concepts that go far beyond the material concept of work.

Experimental studies in psychology have demonstrated the existence of certain basic principles of human nature. If these principles are recognized and applied in establishing better conditions of work, the individual makes a better adjustment. However, it is but fair to warn those who attempt to make work human by applying psychological principles that they may expect to be confronted with paradoxical contradictions, and that they will discover numerous limitations and qualifying elements in psychological principles. Nonetheless, application of these principles may be expected to prove advantageous in the following ways:

1. Industrial strife and unrest will be reduced—*although these elements can never be wholly eliminated.*

2. In the long run, more efficient production should result —*but such improvement in efficiency may not become evident immediately.*

3. A healthier mental state of the employee group as a whole should be achieved—*but individual and group conflicts can never be fully resolved.*

4. The work of management will become more satisfying to those who are the managers—*but the task of management will not necessarily be made easier.*

The objective of work from the viewpoint of industrial management is productivity. In fact, this has become so strongly emphasized as the objective of management that high-level production is openly espoused by certain leaders of industry as the key to the economic and social welfare of the nation.[1] To carry forward the objective of high-level production, management quite naturally must establish and strive to attain certain quantity standards of production. These standards are, in essence, goals toward which management directs the activities of business organizations entrusted to it by society. These production goals, pursued with zeal and without reference to the worker's interests and capacities, often lead to ruthless exploitation of the worker's energies. Work under such conditions becomes inhuman.

Over a period of years, to protect itself from grosser forms of exploitation of the labor of human beings, regulatory legal restraints have been established by the social group. These, in a limited way, reflect the social ideals which exist as a part of the framework of the society in which business enterprise is operated. But these regulations lag far behind social ideals of human relations, and it is improbable that they will ever protect the worker against anything more than extreme forms of exploitation. Indeed, it would be impossible to write regulatory measures which would take into account all of the intricacies of human nature. Therefore, if management wishes to make work human, it must take a broader view of human relations in work than is reflected in the rules of the game, embodied in law and in the mandates

[1]This viewpoint varies somewhat from the theories of other professional students of society who claim other measures as criteria of the ultimate "economic good," i.e., full employment, national income, equitable and universal distribution of wealth, regulated production and distribution, controlled production and distribution, etc. The author holds no brief for any particular view, because, regardless of the ultimate objective of social organization, the problem of humanizing work remains equally important.

of regulatory bodies. Even when operations are managed with full consideration of ethical principles as well as laws and regulations, the achievement may fall far short of humanization. This is true because many ethical principles are not only impractical, but inhuman as well, especially when literally interpreted. Demonstrated principles of human nature are surer guides in making work human than laws, regulations, social ideals, or ethical principles.

Use of production standards and application of so-called laws or principles of "scientific" or industrial management have unquestionably brought higher industrial output. This has been demonstrated by the work of Frederick W. Taylor, Frank B. Gilbreth, and their followers who have modified production methods, particularly through motion and time study. Sometimes operation changes resulting from methods analysis have actually made work more human and have, at the same time, resulted in production gains. But, frequently, applications of the findings of "efficiency experts" have reduced human beings to mere automatons without providing compensatory means for dealing with the boredom and sense of frustration thereby created.

All too often, principles of efficiency in production have had as their purpose: "Get the work done speedily and the goods sold at the greatest possible profit regardless of the consequences to the worker as a human being." Now, there is certainly nothing wrong with the objective of high-level production, nor with high profit levels, for that matter. But when management attempts to achieve high production levels or high profit levels without due regard to the elements of human nature, then (1) industrial strife results; (2) slow-downs or complete interruptions of work occur; (3) unnecessary deterioration of worker health and well-being results; and (4) the job of management becomes a somewhat disagreeable one.

Since work is often accomplished by a physical agency other than a human being, it is easy to look upon work contributed by

human beings in an impersonal or mechanical sense. In that sense, human work becomes merely a source of energy to be utilized in the same manner that energy obtained from water power, coal, oil, or other natural sources is exploited. It is in the impersonality of management's attitude toward work contributed by human beings, arising either from ignorance or avarice, that errors of human relations are committed. Such practices are wasteful, just as attempts to utilize non-human sources of energy for production without recourse to principles of science and engineering would be wasteful.

Through science and engineering, energy from natural sources is released and transformed for man's use. In a properly ordered world, work done by human beings would supplement work done by physical agencies because it is in the release, conversion, and utilization of energy that man's work originates. Unfortunately, as a consequence of production specialization, many of the things which man is asked to do as work are so far removed from this simple formula of origin that the work arising therefrom often seems purposeless to the worker. This is inevitable in a complex society in which specialization is emphasized. Consequently, human purposes not inherent in the resulting simulated forms of work must be supplied if work is to become human.

Some scientists who like to engage in speculative imagination have pictured a world in which no real work would be done by human beings; it would all be done by captured forces of nature. In an earlier electrical era this dream world was a sort of push-button world; with recent progress in electronics, the button pushing would presumably be supplanted by a wave of a hand or a lazy man's sigh. Such a conception, in addition to being ridiculous in terms of basic principles of science, reveals almost complete ignorance of the principles of biology and psychology, a rather common lack of understanding on the part of physical scientists. *Man does not wish to escape work; he does, however, wish to engage in work in a humanly satisfying manner.*

We have said that the law of life is action. Activity occurs at birth; in fact, it occurs in the foetal stage and continues until death. Activity is not only a corollary of life, but is necessary to growth and health. Many of the common ailments which plague man today are traceable to lack of activity; therefore, the aim of social well-being cannot, except by spurious logic, be further reduction of the necessity for activity. It is the state of mind that exists in connection with work activity that makes work seem dull, dreary drudgery in some instances and highly satisfying natural activity in others.

Clearly, the basic principle of human nature is the biological need for activity. Not only is there a fundamental need for activity in human living, but it is through such activity that every form of animal life, including man, adjusts itself to its environment Sometimes activity is engaged in for its own sake; sometimes it is reflexive, in that it is an automatic response to an environmental stimulus; and sometimes it is purposive, in that it is engaged in with an end, objective, or purpose in view. Activities engaged in for their own sake and activities which are purposive are satisfying in a primary sense. Activities engaged in through necessity often are annoying. If not annoying, they may be endured without any particular feeling of satisfaction. Only through coupling of such activities with secondary satisfactions can they become satisfying. Management and workers alike, under a price economy such as we live in today, are prone to emphasize necessity as the motive for work and to overlook both the primary and secondary satisfactions by which work can be made human. Too often, work becomes something the worker does not like to do simply because he feels that economic forces give him no other choice.

The most natural form of activity engaged in for its own sake is play. This is the same as saying that play is an activity engaged in for the satisfaction the activity itself provides. Work, in human terms, and play have sometimes been differentiated by defining play as an activity engaged in for its own sake, and work

as effort or activity directed toward a purpose or end. This is a superficial distinction. It would be more accurate to say that there are three types of work, namely, (1) play type of work, (2) responsive type of work, and (3) purposive type of work.

The most satisfying type of work is work which is enjoyed for its own sake, or work in which the means and the ends are at least in harmony. The next most satisfying type of work is purposive work, especially if the purpose carries sufficient strength to overcome any feelings of dissatisfaction toward the activities engaged in. The least satisfying type of work is responsive work, or work directed toward the accomplishment of objectives which are more clearly those of someone else than one's own. Perhaps more correctly described, responsive work is work done solely from economic necessity as directed or demanded by one's employer. When an activity is carried on for the sole thought of accomplishing an intermediate purpose, such as earning wages, without any feeling of satisfaction in the means, the work element becomes inhuman.

When work is play, either in its purest form as in a self-directed activity, or in its modified form as in an organized game, it is human. When work is merely responsive it often becomes drudgery. When work is drudgery, the employer is buying human effort in the same sense that he is buying work capacity of inanimate objects, and the worker is selling his capacities with total disregard of the self-respect to which he is entitled as a human being. Neither the employer nor the worker in such instances can rightfully blame the other. Both usually are equally responsible for the arrangement whereby human energies are bought and sold in a commodity sense.

In a free society, the man who labors can exercise a certain degree of choice in selecting the form in which he expends his energies. In so doing, he has but to observe the means and not become enamored by superficial ends born of pride or avarice. The employer can do his part in making work human by pro-

viding opportunity for self-expression on the part of the worker and by granting individual recognition to workers regardless of the nature of the job. Society can contribute to proper work adjustment by providing the means of discovering aptitude and by making appropriate training available for developing inherent capacities. Public opinion can assist in making work human by recognizing that any task performed well is worthy of favorable acclaim and by acknowledging the dignity of human effort, regardless of its form. Work is what we make it; it can be worthy and satisfying whether it be digging a ditch, putting nuts on a bolt, building a house, managing an enterprise, painting a portrait, conducting research, or rendering professional service.

To contend that the element of drudgery can be wholly eliminated from work would be ridiculous. But drudgery can be removed from work to a greater extent than has been accomplished. It can often be transformed by the injection of the play motive; it can be ameliorated by the recognition of human needs that go beyond material needs; it can be managed so as to reduce the emotional fatigue that it usually induces; it can be more appropriately distributed in time and sequence.

The untutored slave who complained that "It's not the work I hates; it's the continuosity of it," revealed in his complaint that the work he was doing held no challenge for him. Likewise, industrial unrest today reveals widespread lack of satisfaction in work. The employer, the worker, and society must find ways of making work challenging, more exciting, and more satisfying if work is to be made human. To be human, work must become play, a game, an adventure. Where this is not possible, the by-products in human relationships, satisfaction in mastery of technique, the zest arising out of friendly competition with others, and pride of workmanship should be fully capitalized. Even routine, repetitive work can be made satisfying if the worker can be made to feel that someone is interested when he does his work

well, and if he can be made to feel that someone recognizes the importance of his work contribution.

It is a fundamental element in play that a child at play likes to do that which, by his own standards, he can do well. In play, a child repeats movements in stacking blocks, rolling a ball, skipping rope, or piling sand without evidence of boredom; he does these things over and over, to a point that would be deadly monotonous to an adult. The child does this without becoming disinterested because, by his own standards, he is doing a "bang-up" job. A billiard player persists if he feels he is doing well by his own standards, if he can sense possibilities for improvement, if he is challenged to exert skill within his recognized limits, and if he is not ridiculed and ordered about by his companions. The more his skill develops, the more he persists. Human beings like to do a thing they can do well; they like to engage in an activity in which they can develop craftsmanship, in which they can feel a sense of artistic self-expression. Those who direct the work of others can encourage better human relations by recognizing and applying this principle of human nature. Industry has placed a major hindrance in the way of capitalizing on the worker's feeling of accomplishment in what he does by subdividing work into numerous simple activities. But, even so, there still remains an opportunity for developing satisfaction in work by recognition of the human traits of liking to do that which one can do well and liking to have someone praise or admire one's achievement.

Industrial management makes one of its greatest mistakes when it lets the worker feel that he is "expected to produce or else." When the worker is made to feel that his job is one that can readily be filled by another if he does not measure up, he loses interest in what he is supposed to do and centers his attention on holding his job in any manner possible. He is no longer interested in his work, but usually becomes deeply interested in protecting his right to the job. The immediate result of such an

attitude is for the worker and others on the same job to band together to protect their jobs. The next step is to set their own standards of performance, and to magnify the importance of the work being done by providing means of work stoppage through strikes. They then demand wages which will reward outraged dignity as well as pay for the work being done. These things are not done, as some suppose, out of a spirit of "cussedness" merely to plague the employer. They are the worker's way of seeking recognition, for if a person cannot gain adequate recognition as an individual, he seeks it through joint action in a group with common interests.

If an employer will neither recognize the contribution of a given worker as being important, nor recognize him as an individual, then the worker actually achieves satisfaction in pitting the power of the union to which he belongs against the power of his employer. To strengthen the power of his union, the worker often accepts leadership which operates to his eventual detriment. He may accept leadership which grafts and steals from him openly, or he may even accept leadership which subscribes to violence and incites him to act contrary to his own and the public interest. The worker does this because, in such joint action, he feels a power of achievement and activity satisfaction that his job, his immediate boss, and the company he works for fail to provide.

There is an art to sweeping a floor and there are basic skill elements in wielding a shovel, lowly as these forms of work may seem. Many jobs in industry are likewise simple and are highly repetitive, yet there is art and skill in their proper accomplishment and satisfactions to be gained in their performance. The problem of determining the art and skill in simple jobs has frequently been approached from a wholly inappropriate point of view in industry.

The study of the elements which are involved in industrial jobs is usually approached from management's point of view,

rather than the viewpoint of the worker. Operation analysis, motion study, time study—worthy management techniques, if properly applied—are, all too often, applied with speed-up and added profit as their objectives. When Taylor designed shovels which would handle more ore, he had mechanical production efficiency as his primary objective. When Gilbreth studied motions to simplify the laying of bricks, he had a similar objective in mind. Yet both of these pioneers in production efficiency reveal in their writings that they clearly recognized the human element, an aspect of production organization which their followers have sometimes grossly neglected.

Mechanical efficiency is an appropriate management objective, because it leads to greater production. But mere production as such is remote satisfaction to the worker. His thinking and feeling toward the job are in terms of doing the job well and in gaining recognition for so doing; consequently, his satisfactions arise therefrom.

Such techniques as methods analysis, motion study, and time study should be used primarily to determine the *training* possibilities of a job. Having determined these possibilities, management should see to it that the training and subsequent supervision of production emphasize the human elements of job performance. Emphasis should be placed on proficiency of the individual gained through performance, which brings personal satisfaction, rather than the abstract objective of mechanical efficiency. Training and supervision are the important agencies for humanizing work because they provide opportunities for person-to-person contacts with the worker. Through training with emphasis on satisfaction in a job well done, and through training and supervision with emphasis on the importance of the contribution made by each individual to the finished product, the worker can be induced to feel that his work is recreative and productive and that what he is asked to do is a challenge to his skillfulness. Through

a "find-out-the-hard-way" break-in on a job, usually accomplished by teaming a worker up with an unsympathetic fellow worker, or through pressure supervision, administered by a foreman harassed by production schedules, work becomes drudgery. It isn't human.

*(For suggestions on techniques to be used in applying the principles of work relations set forth in this and later chapters consult the Appendix to this book. Suggestions are classified by chapters and also are listed in a special index for quick reference on pages 281-282. Persons wishing to study selected topics of work relations will find an elaborate and exhaustive index on page 313* et seq.

CHAPTER TWO

# Human Desires and Needs

IF WORK IS TO BE MADE HUMAN, IT IS ESSENTIAL THAT THOSE WHO direct the work of others not only have a broad understanding of the facts and principles of psychology, but that they also be able to analyze work situations in terms of the human relations factors involved. Much that may be learned about human relations through psychological analysis is qualitative rather than quantitative. Although psychology has made significant progress during the past half century in providing techniques for making quantitative measures of basic human traits, most of these measures are useful only when applied and interpreted by a trained specialist. Therefore, it seems appropriate to leave measurement in human relations to the specialist and confine our presentation to the qualitative aspects of human nature. This can best be done by examining the things in life which men seek and by considering their capacities for attaining them.

If we accept the principle that action is the law of life, then it becomes important to determine the mainsprings of action in man. Biologically, and to a great extent psychologically, activity by man arises out of attempts to satisfy certain fundamental needs and desires. In most work situations the employer seeks to exploit these needs and desires for the purpose of obtaining profit from the worker's productive efforts. This in itself is neither good nor bad, merely human. However, exploitation may be humane or it may be socially degrading.

The worker, in turn, exploits his own capacities, along with the materials, machinery, markets, and the managerial talents of

his employer, for the purpose of sharing in the products of his efforts and the things created by the efforts of other workers. Again, such exploitation is neither good nor bad, in and of itself. It is merely a means whereby the worker seeks to satisfy certain needs and desires, and is, therefore, human. However, while it is true that exploitation of the worker by the employer may either be human or degrading, depending on the manner of exploitation, it is equally true that the worker may often exploit his own capacities in a manner that provides little opportunity for genuine self-realization.

Since the early days of history, when man first began to record his thoughts, much has been written about the improvement of the worker's economic status; and, usually, emphasis has been placed on the propriety or impropriety of exploitation of the worker by his employer, without reference to ways and means and motives. Unquestionably, the economic relationship of the worker and employer is an important social issue; and, doubtless, the issue will be debated perennially. To many it will continue to appear that it is only the worker who is exploited. Others will contend that certain practices by labor groups constitute exploitation of management. Hence, it is clear that exploitation operates in many directions. The employer may exploit the worker, the worker may exploit the employer, and both may exploit the public. Who wins in this game of life is determined by the interplay of individual abilities, economic forces, social customs, and public opinion, all of which are human in origin.

Exploitation—whether it be of one individual by another, of one group by another, of an individual by a group, or of a group by an individual—is a phenomenon of social relations, and, as such, must be viewed objectively. Presumably, no form of exploitation is economically degrading if an equitable balance is maintained. It is not our purpose to define equitable balance in distribution of returns from work, nor is it our purpose to pass judgment on any of the economic issues involved. However, it

is our purpose to make clear the means whereby work activities may be made human, regardless of their economic setting. It is our contention (1) that work is a natural activity which will be engaged in regardless of the plan of social organization; (2) that work is necessary to the mental health and physical well-being of the individual, as well as essential to the welfare of society; and (3) that more efficient utilization of human efforts and greater satisfaction will accrue through the application of principles of psychology in work situations.[1]

Misconceptions of the nature of work are widely held. The means for satisfying basic physical needs, such as the need to satisfy organic cravings, are, in infancy and childhood, ordinarily provided by the parent or someone else in the social environment. However, as the individual matures, it becomes necessary for him to foresee needs, to devise ways of meeting them, and to engage in activities which will provide the means of meeting those needs. Hence, the individual unconsciously becomes adjusted to the point of view that one of the chief purposes of work is that of providing resources for meeting physical needs. As a consequence, he begins to think of work as the price which he must pay for the privilege of satisfying physical needs. Unfortunately, the recurring nature of needs and desires is such that the individual often is seemingly driven to activity by the never-ending cycle of anticipated need, planning to meet that need, working to carry out the plan, and, ultimately, satisfying the need with things or services purchased with the wages of work. Work carried on in this manner, without an attendant satisfaction in work itself, is degrading; it resembles animal living more than human living.

Unless work is lifted above the animal level, and unless interest in work itself is aroused, work activities become drudgery.

[1]For a philosophical development of the thesis that work is the fundamental element in changes in civilization, see Paul Schrecker, *Work and History: An Essay on the Structure of Civilization*. Princeton University Press, 1948.

However, work can be a naturally satisfying activity itself. Unfortunately, this truism is not widely accepted in industry, or if recognized, it is quite generally ignored. In fact, it is not unusual to encounter the viewpoint that work must be engaged in solely for the purpose of providing means for satisfying physical needs. For example, the following opinion has been publicly expressed by a personnel and labor relations manager of a large chain of retail grocery stores: "Almost all of us would like to get satisfaction as well as income from our work. Most of us, however, must work in order to live, even though our jobs are dreary drudgery." The philosophy that one must work in order to live, which is a viewpoint all too prevalent among both workers and employers, inevitably leads to the establishment of work conditions that are needlessly vicious. Such a philosophy encourages personnel practices which violate the elements of human dignity by placing the worker on the level of the goods and machinery used in work.

Work practices in a company which directs personnel relations on a "work or starve" basis make its workers little more than selfless automatons. Therefore, it is not surprising to find that the company cited in the preceding paragraph is lagging behind its main competitor in sales because its employees, in an effort to find substitute means of self-expression, engage in compensatory types of behavior which interfere with work and offend customers. Efforts by the management to apply disciplinary restrictions have proved futile. This is to be expected, because application of discipline under such circumstances is an attempt to regulate the effect without removing the cause. The difficulties encountered stem from the shortsighted policy of assuming that "most of us must work in order to live, even though our jobs are dreary drudgery."

Unintelligent exploitation of the worker defeats its own purposes. It defeats purposes by failing to take into account the fact that, in human relations, management is dealing with a total

personality, not just that part of the worker which management wishes to direct, control, or utilize. It is true, of course, that human beings have certain organic needs which they must satisfy in order to live. It is likewise true that in order to satisfy such needs as those for food, clothing, and shelter, the worker must work. Consequently, it is easy for the employer to assume a "work or starve" attitude and also natural for the employer, at times, to trade upon the worker's fear of unemployment to force him to do tasks in a manner and under conditions which are often destructive of self-respect. Many persons who direct the work of others do not fully understand the highly important principle that *the maintenance of self-respect in work is as necessary to mental health and balanced personal adjustment as the satisfaction of bodily needs is to physical health.*

If work is to be made human, wants and desires of man which rise above the level of biological or organic needs cannot be ignored. Some of these additional wants and needs relate to activity, communication, self-regard, and relationships with other human beings. Many attempts have been made to catalogue and classify such needs, with the result that complicated systems of psychology have been formulated. Obviously there are distinct limitations to the presentation of a detailed survey of the fundamental elements of the psychology of human needs and wants in a single chapter. However, the following simplified list of needs and wants of man will be discussed as a basis for conclusions presented in subsequent chapters:

1. The need for food and correlative needs for air and moisture.
2. The need for bodily well-being and comfort.
3. The need for activity.
4. The need for mating.
5. The need to share thoughts and feelings with others.
6. The need for dominance—power in exercising control over persons and other elements in one's environment.

7. The need for self-determination—individuality and independence.

8. The need for achievement, acquisition, and possession.

9. The need for approbation—recognition and admiration by others.

10. The need for ideation—realistic, artistic, projective.[2]

### 1. THE NEED FOR FOOD, AIR, AND MOISTURE

The need for food and correlative needs for air and moisture manifest themselves in economic behavior in the procuring of food and related products which are necessary for sustenance. Complicated systems of production and exchange are built around such needs. As life becomes socially more complex, wide varieties of cultivated wants are developed as a consequence of customs and personal tastes. Exploitation of these needs, both to command the services of man in various forms of work and for the development of markets, is widespread. Such exploitation is easily understood and almost universally acknowledged; therefore, no extended discussion is required. However, if human relations in industry are to operate satisfactorily, it is our contention that the motivation of work must go beyond exploitation of physical needs.

In directing the work of others, it is important to recognize that "needs" must be converted into "desires" or "wants" to become motivating. Although a need may exist and be clearly perceived, the person concerned must "feel an urge" to do something about the need before action can occur. Hence, needs as

[2]Although it is not necessary to do so in order to understand the various selected topics presented in this chapter, the reader who is interested in a comprehensive treatment of psychology may wish to consult one or more basic textbooks on psychology and its applications. The following are suggested: Laurance F. Shaffer, *The Psychology of Adjustment.* Houghton Mifflin, 1936; Laurance F. Shaffer, B. von Haller Gilmer, and Max Schoen, *Psychology.* Harper, 1940; Joseph Tiffin, Frederic B. Knight, and Eston J. Asher, *The Psychology of Normal People.* D. C. Heath, 1946; Joseph Tiffin, *Industrial Psychology.* Prentice-Hall, 1942; Norman R. F. Maier, *Psychology in Industry.* Houghton Mifflin, 1946; Edwin E. Ghiselli and Clarence W. Brown, *Personnel and Industrial Psychology.* McGraw-Hill, 1948.

such are preliminary to motivation; they provide the basis for motivation but are not the substance of motivation. Providing the auxiliary elements which will promote desires is the major task of those who direct and supervise the work of others.

While thoughtful planning is required to convert more subtle needs into desires which will motivate work, ordinarily no such planning is necessary to convert physical needs into desire to work to satisfy those needs. Nature forces action by creating feelings of hunger and other types of discomfort when, for example, the need for food or protection arises and when satisfaction of such needs is delayed. Admittedly, the most direct motivation for work is associated with physical needs, but this type of motivation is at the animal level; it is not human.

Somewhere and at some time in the long-past unrecorded history of man, someone discovered the magic formula, "work to satisfy needs," and found that in gaining control of the means of satisfying physical needs, man could be made to work by withholding the means of satisfaction until desires compelled effort in the form of work. Systems of social organization developed which forced men to work in spite of themselves. History is replete with a wide variety of examples of societies organized for the purpose of exploiting the work capacities of human beings through control of the means of satisfying physical needs. Such systems are inhumane to the extent that they fail to provide auxiliary means of self-realization and attainment of self-respect through work for work's sake.

Although a social system should provide opportunity for self-realization through work and opportunity for the worker to feel pride in the dignity of work, monetary rewards for work have normally been a part of those types of social organization which have proved most successful. Sometimes such systems have been inhuman in the degree to which the effort demanded of the worker is inadequately rewarded. However, appraisal of a social system in this respect is not easy because there are no abso-

lute standards by which adequacy of reward for work can be measured; but, as will be pointed out in a later chapter, there are techniques for establishing relative approximations.

Although the question of adequacy of rewards is too complex to permit adjudication here, it is a question that must be answered equitably by worker and employer if human values are to be recognized and sought as social objectives. That widespread abuses have existed in the past in the form of greedy exploitation of the worker makes more difficult the solution of the problem through collective bargaining in the present. The solution is likewise made more difficult today through the exploitation of workers by certain types of political leaders and representatives of labor.

It would be ridiculous, of course, to claim that the worker should forget that he is working for economic rewards which provide the means of satisfying physical needs. But the worker who is motivated solely by economic forces is only slightly more human than a donkey pursuing a sheaf of oats dangled in front of him by his master to motivate the operation of a treadmill. And the employer who drives for production on the basis of such motivation alone is operating with debased labor, regardless of any generosity shown in wages paid.

To reiterate: *one of the primary factors in the debasement of labor throughout all periods of history has been the philosophy of work which holds that the primary function of work is the satisfaction of physical needs.* In this sense, work is considered only as a means, never as an end in itself. Thus considered, work becomes a necessary evil to the worker and, in turn, becomes merely an item in cost of production to the employer which he seeks to purchase as cheaply as possible. Seizing upon this situation, so-called labor leaders frequently inject themselves into the labor market as brokers vending the potential energies and skills of workers as a commodity for which they attempt to create an artificial scarcity. This chain of circumstances gives the politician an opportunity to come upon the scene and garner votes by sup-

porting first one side and then the other in issues created because of the pernicious philosophy on which the system is founded.

The true worker loves his work and finds a multitude of rewards in it, among them the satisfaction of engaging in a pleasurable activity. The humane employer seeks to provide opportunity for realization of these satisfactions. The labor leader and the politician who have the worker's interests at heart will likewise strive for the establishment of those conditions which make work satisfaction possible, rather than strive for personal power at the expense of both the worker and his employer.

### 2. THE NEED FOR BODILY WELL-BEING

The need for bodily well-being and comfort includes bodily protection, disposing of bodily wastes, rest, sleep, and health maintenance, and like the need for food, these additional biological needs have a distinctly physical basis. Such needs manifest themselves in the procurement of clothing, housing, home appliances, sanitary facilities, drugs, medication, items of personal hygiene, and, to a great extent, items of ornamentation. Here again such needs have been broadened in scope by custom and habit. When so broadened, they become a part of the worker's standard of living, which he seeks to maintain through earnings resulting from work.

As his standard of living, both real and potential, rises, the more the worker wants to earn. In the mind of the worker, the desire for a higher standard of living often becomes separated from his work, and, frequently, is a source of great personal conflict and distress. For that reason, industrialists are becoming aware of the fact that part of the task of maintaining satisfactory personal adjustment among workers is that of providing employment and wages at a level which is as high as possible within the limits of a reasonable operating profit. Workers as a group also are learning to exert force to command a larger share of corporate earnings and are trying to relate wages to profits. The appropriate

balance to be achieved cannot be defined here because the problem is one in economics, not psychology. However, it should be clear to any observing person that for society to dangle a potentially higher standard of living before a worker, through advertising and sales promotion, and then not provide the means of attaining that standard not only creates industrial unrest and strife, but is socially destructive.

The employer's problem, in a situation in which the standard of living desired by workers cannot be attained within the limits of the wages the company can pay, is made easier by providing conditions of work which are satisfying in themselves. *The provision of physical conditions and the maintenance of work relations which encourage satisfaction in work for work's sake should not be used as a substitute for equitable wages; however, the provision of attractive physical and psychological conditions of work can and should be used as a supplement to the wages paid for services rendered by the worker.*

### 3. THE NEED FOR ACTIVITY

The human machine is a dynamic one, responding incessantly to inner and outer forces; hence, it can be observed quite definitely that the need for activity is a distinguishing characteristic of human life. In infancy, the need for activity is expressed by reflexive movements, such as grasping, holding, manipulating, exploring, observing, smiling, laughing, crying, vocalizing, walking, running, and struggling. It would be necessary to include more than one hundred of these reflexive and responsive movements to exhaust the list. But a complete list of responsive movements would be of no significance in this discussion because we are chiefly interested in their existence as objective evidence of the need for activity.

Starting in infancy with random behavior and teleological responses to specific bodily functions, the need for activity emanates in play in childhood. The need is evident in games and other

limited but constructive activities in the life of the growing child. In youth and early adulthood, work activities are engaged in as a consequence of a basic desire for activity and as an expression of constructive habits. They usually occur without reference to remunerative employment. At various age levels, particularly in old age, the need for activity is attested to by the fact that everyone feels, at some time or another, the necessity of "doing something just to keep busy." Activity for activity's sake is a natural phenomenon at all levels of life. The boredom of repetitive work is mild compared with the boredom of "time on one's hands and nothing to do." Hence, it is not unusual for a person to engage in work activities rather than suffer the unpleasant aspects of idleness. To engage in work is a natural phenomenon; not to do so is abnormal.

The fact that the need for activity is unusually strong does not assure that any type of work under any kind of circumstances will be engaged in because "most of us must work in order to live" or that activity in itself will be satisfying. Even though work is remunerative and is a means of keeping active, it may not be satisfying. In fact, the tediousness and drudgery of work activities that present no challenge to the person inevitably cause a lowering of productive output, nervous tension, and a desire to escape. However, the need for activity remains a basic force of life; even the loafer engages in activity to escape that which others call work. *The problem in making work human is that of making the work activities of a given person coordinate with the integrating forces of his individual personality.*

In saying that making work human is a problem of coordinating work activities with the integrating forces of an individual personality, we are emphasizing the greatest psychological fault in industry. That fault is one of failing to recognize the worker as an individual; sometimes, even failing to recognize the worker as a human being. This is particularly true in mass production industries. Mass production is the product of engineer-

ing minds and engineering methods. The engineering way of thought and engineering method have made remarkable progress in organization of machines, materials, and processes for production. But, unfortunately, the human element is often considered only incidentally, if at all, in setting up a plan of production. It should not be surprising, therefore, that production often falls far below the machine capacity provided by careful engineering. So evident is this lag becoming that engineers are beginning to realize that *no production problem is fully solved until the human factors involved have been analyzed and solutions have been found.* Had engineers and industrialists given more attention to human problems in production for the past generation, the humanizing of work would not currently be our most serious social problem.

#### 4. THE NEED FOR MATING

In human nature, the need for mating is a particularly strong force in bringing about normal social adjustment through the integration of personality traits. However, under certain situations presented by environment, and with the presence in the individual of glandular malfunctioning, this need may become the source of marked physical and social maladjustment. If sex maladjustment is characteristic of a given worker, an irritating work situation may accentuate the maladjustment. On the other hand, good adjustment with reference to sex and mating may enhance the affective tolerance of an otherwise distasteful work situation.

*Individual adjustment varies more widely in respect to sex drives than with any other element in human personality, and is often the basis of strikingly abnormal behavior which seemingly has no relation to observable circumstances.* It is particularly important that the employer take this principle into account when dealing with individual workers, yet it is the most difficult of all human relations problems to solve. So difficult is it, in fact, that most employers feel incapable of rendering assistance. Some

employers have met the situation by advising employees needing assistance to seek counsel through clinics and through consultation with professional persons specializing in such service. A more enlightened public opinion on these matters would speed the day when personnel officers would feel more free in offering advice to the worker on this type of problem. Under existing attitudes, sexual maladjustment often interferes not only with work efficiency, but also frequently affects markedly the individual's general health and happiness as well.

In the natural expression of mating activities there arises a wide variety of social behavior. Such behavior in normal development is related to family organization. Typically, it is displayed through providing food, clothing, housing, and other means of satisfaction of physical and social needs of mate and children which constitute the individual's immediate family. Sometimes it is displayed in providing for remote members in the family structure and may cover two or three generations. Consequently, an individual is often more highly motivated to engage in work activities to provide for other members of his family or household than he is to provide for himself. This frequently results in the acceptance of work situations that might otherwise arouse resentment and rebellion in the worker. If it were not for the strength of this feeling of regard and sense of family obligation, many commonly found conditions of work would not be tolerated. It is also true that many choices of work activity would change radically.

The employer who fails to recognize and use the strength of family ties in according recognition to workers is overlooking a strong motivating force. Interest displayed by the employer in the worker's family, especially in matters which go beyond mere physical welfare, strengthens employer-employee relationships. However, such interest cannot take the form of social work without offending the worker on the ground of individual independence. Here again, if work is to be made human, the worker must

be treated as a unified personality rather than as a person who must "keep his nose to the grindstone" in order to support his family.

Extensive studies of worker attitudes have shown that married workers are more stable in their jobs. However, these studies have also shown that the haunting fear of losing one's job and being unemployed is often a deterrent to effective work. Presumably, economic motivation is inherent in our form of society. It seems to be true also that productivity slacks off in those forms of social organization which minimize economic rewards. However, higher productivity occurs and more satisfactory morale exists in those situations in which the employer encourages conditions which make possible the fundamental satisfaction inherent in work itself. This satisfaction and the satisfaction arising out of economic competence for one's self are greatly augmented when interrelated with the desire to provide the means of comfort, health, and happiness for one's dependents.

*The love of family, which is a sublimated form of sex drive, is the most powerful force in human motivation.* Work situations which aid in the attainment of well-adjusted family life are highly satisfying; those which impede or hamper this sublimated drive become highly distasteful. On the other hand work may have a therapeutic value in overcoming sex maladjustment. Many sex and mating maladjustments arise out of social conditions which have no relation to the job situation. Where this is true, as has been implied in the foregoing discussion, an irritating work situation augments the maladjustment. However, a satisfying work situation greatly reduces the tensions arising from both normal and abnormal sex drives, and, sometimes, work provides an escape from an otherwise unbearable family situation.

### 5. THE NEED TO SHARE THOUGHTS AND FEELINGS

It is natural for an individual to wish to share thoughts and feelings with others. This is done through oral and written com-

munication and other expressive types of behavior. Alliances of various kinds develop through such activities. These include personal friendships, supplemented by formal and informal membership in groups. The tendency to form such alliances manifests itself in various ways, the most conspicuous being attendance at meetings held by certain types of social, business, and fraternal organizations. Projectively, such affiliations become elements in the individual's personality to the point, in many cases, of close personal identification with the associated persons or groups. This projective identification is the source of many prejudices and biases in feeling and thought. Since the process of identification is selective, the individual develops both positive and negative attitudes of varying degrees, which become characteristic of him to the point that those who know him well can usually predict his thoughts, feelings, and behavior. It becomes important, therefore, in every business organization that someone in an administrative or managerial position become acquainted personally with every employee if intelligent personnel relations are to be established.

In industrial relations it is also necessary to take into consideration the strength of ties arising from the need to share thoughts and feelings with others which bind the worker to his fellow worker. Even though individuals who have a sense of belonging together intellectually, socially, or economically, may appear at times to be in conflict with each other, they are quick to band together for a common cause or join forces to wage battle against a source of real or threatened danger to individual or group well-being. For that reason, where loyalty to fellow workers or group leaders comes into conflict with a bid for loyalty to the company or company representatives, the strongest ties will favor fellow workers or the leader of the worker group. Recognizing this fact, company representatives should seek to develop favorable attitudes toward the company and its management.

There should also be carefully planned efforts to provide conditions which will develop in the employee a strong attachment for his work. *Projective identification can be made to include the work we do, the tools and machines we work with, the place of work, the company we work for, as well as close personal friends and the ones we love. However, it should be remembered that negative projective relationship can also develop; a man can hate as well as love his work.*

Where business organizations are small, close personal association of workers with all levels of company personnel makes possible those normal bonds and ties of human relations favorable to the company. Smallness also permits the individual worker to seek out the employer for the purpose of "talking things over." These elements are lost in large companies. Consequently, various plans for permitting individual workers to confer with representatives of management have been developed by leading corporations. Facilities for advising and counseling workers on matters of a purely personal nature as well as those relating directly to work are also being introduced. All such developments are movements in the right direction because the closer the personal relationship between the worker and his work, the greater the satisfaction he gets from it.

### 6. THE NEED FOR DOMINANCE

Every urge or need is basically selfish in the broad sense of the word. Self-interest is present in all desires, needs, and wants. The egoistic aspect of such urges is probably most obvious in the need to exercise control over persons, objects, and situations within one's environment. It is natural for an individual to seek opportunity to assume authority over another, to dominate in some manner. The varieties of expression of this urge are extremely numerous, and such expressions may have physical, social, political, moral, or spiritual aspects.

In business, the trait is easily recognized in leadership practices. Upper, intermediate, and lower levels of managerial, supervisory, and administrative jobs require a high degree of development in the tendency to dominate. Unfortunately, most jobs in industry run counter to and suppress the tendency, especially the social aspects of the tendency. However, even though most industrial jobs do not provide opportunity for the worker to control other persons, work can be arranged so that mastery over machines and materials is realizable on the part of the worker. It is possible for goals to be set for the worker by means of which he can gain satisfaction through sheer mastery of the elements in the situation. Furthermore, it is usually possible to establish conditions which permit wholesome rivalry among workers. Often, the worker can also find in home life and other personal affairs outside his work an opportunity for compensatory activities.

The desire for dominance or mastery enters into union-management relationships. One reason for the strength of unions lies in the fact that workers have found that in joint action they can often exercise more power than their employers. Unusual zest attends the display of this power where a company has a record of exercising authority over workers ruthlessly. Dominance invites a counterstruggle for superiority.

Quite often unnecessary overemphasis on authority takes place at the straw-boss level. As a consequence, industrial strife and unrest result because the leader at the straw-boss level is the least respected among leaders whom the worker is obliged to accept. The boss whom the worker respects least is the bossiest of his bosses. Resentment built up by an autocratic leader colors the worker's attitude toward his work and toward the company for whom he works. Paradoxically, then, it may be said that the fundamental tendency which makes for leadership and qualifies men to fill managerial positions, is, if indiscreetly applied, the source, directly or indirectly, of much industrial strife.

Because of the strength of the urge to dominate, it is human for an individual to admire the trait in others. Hence, we see the seemingly inconsistent phenomenon of persons wanting to lead, but likewise wanting to be led if the leader has other qualities which command respect, admiration, and friendly regard. *The executive, administrative, or supervisory officer who can transpose the need to dominate into capacity for sympathetic and tactful leadership does much to make work human for those persons whose work activities he directs or supervises.* But the industrial leader must expect competition from labor leaders in the exercise of leadership. And he must reckon with the fact that labor leaders are not only in a very favorable position to appeal to the needs and desires of workers on the score of common interest, but that such leaders can often win follower strength through promises which representatives of management cannot make.

### 7. THE NEED FOR SELF-DETERMINATION

The need for self-determination, freedom from limiting restraints, the exercise of choice, individuality, and independence is strong even in infancy. The new-born infant struggles, cries, and gives other evidence of anger if held in a manner which hampers freedom of movement. As any parent or teacher can testify, physical restrictions placed on growing children bring forth numerous forms of escape behavior. They also stir up feelings of rebellion, as any child can testify. Through the capacity to adapt, the maturing individual finds ways of adjusting to, overcoming, or avoiding physical restraints. To a lesser degree, ways of maintaining a degree of autonomy in social situations are also sought. Therefore, certain traits of individuality, and related ways of asserting independence, are developed.

Many work situations run counter to the need for assertion of independence. This occurs in relation to the physical environment of the job, the operations performed, and the supervisory arrangements of the work situation. As a consequence, feelings

of resistance and rebellion are unconsciously aroused in the worker. Hence, it is desirable to provide work conditions which will not be unduly irritating; furthermore, the wisdom of providing speedy alleviation for such feelings, which will inevitably arise, becomes obvious.

An interesting expression of this need is found in the widespread desire of people to "go into business for themselves," and to be "one's own boss." This is evidenced by the number of small business and farm units in America. The extent to which people will strive to escape burdensome regulatory restraints has frequently been shown by group resistance, for example, public defiance of the Volstead (Prohibition) Act and wartime regulatory measures when continued beyond the close of the war. *It must be expected that needless regulations in the office or workshop, or those recognized as such, will be responded to by employees with resentment and rebellion.*

The whole question of freedom of choice and self-determination has been one of extended scientific and philosophical debate. Hence, no attempt can be made in this volume to answer the question. Whether the individual is a free agent or a product of environmental influences acting on the endowments and limitations of nature matters little, so long as the individual likes to believe in freedom of choice and self-determination. The fact that there must be rules and regulations and that operating routines of jobs must often be explicitly defined in the interest of speed of production and reduction of fatigue is inescapable. But irritation and feelings of restraint may be retarded by giving workers a part in determining the rules and regulations affecting their behavior and the operating procedures which they are expected to follow. If this is not possible then explanations which make clear the reasons for the rules, regulations, and operating procedures should be made in all cases where the worker requests them and in other cases where he may not understand, even though he does not seek an explanation or justification.

### 8. THE NEED FOR ACHIEVEMENT

The need to attain short-run as well as long-range goals is easily inferred from human behavior. The motivating force of more immediate objectives is readily observable. Motivation of long-range objectives is not always evident in individual responses; however, it may safely be assumed that every person has, buried within himself, purposes toward which he is either consciously or unconsciously striving. If this need for achievement can be directed toward work improvement, it serves the purpose of making the man's job more important to him.

Just as the individual, through projective identification, incorporates into his own personality past memories associated with childhood experiences along with feelings toward persons and conditions of the present, his hopes and aspirations also become a part of his personality. Without hope for achieving some of the things aspired to, life becomes less significant and escapes in compensatory or substitute behavior are sought. *If the man's work can be fitted into his long-range goals (in the sense that there is hope for greater achievement in work) or if hope that present work, even though satisfying, leads to a more challenging type of work, then a better adjustment is made by the worker.*

Too often, in industry, jobs fall short of providing adequate means for satisfying biological needs. They may also fail to offer psychological satisfaction because they seem to the worker to be blind alley routines. In fact, many industrial jobs not only appear to be blind alley routines—they are just that. Frequently, by reorganization and reclassification, even blind alley jobs can be made to lead to something within the range of desire for achievement of the worker. Even a job in which "there is no future" can be made more attractive by providing means of satisfaction in the job itself.

The tendency to acquire and possess, to consider certain things as one's own, is displayed from childhood throughout life. Although the things prized change with developing maturity

and differ to some extent from person to person, pride of ownership can be detected in the most casual day-to-day conversations of people. This characteristic is also fundamental in causing people to wish to "own their own business." Thus the need for achievement often runs counter to the trend of economic organization which permits people to work only at jobs in a company owned by others.

If opportunity can be provided whereby the worker owns part of the company through bonds or stocks, interest in work is increased. However, it must be fully recognized that the fault of most plans of employee shareholding is the speculative risk involved. Hence employee ownership plans should be formulated with a view to capitalizing on the desire to possess while protecting against risk of capital loss. To meet this condition, some companies have provided a special type of stock for employees which has prior equity, thus removing the element of risk, which, if present, destroys the value gained through participation in ownership.

It is natural for the worker to develop a possessive interest in his job. This is desirable from a psychological point of view. Therefore, it is good management of human relations to encourage workers to think in terms of "my job." In fact, from an economic point of view, it can be demonstrated that a worker's job is his most valuable possession, his greatest economic asset. The employee should be encouraged to understand the economic significance of that fact, and employers should recognize the equity of such a point of view.

### 9. THE NEED FOR APPROBATION

*Every person is pleased when he, as an individual, his actions, his work, or the things he has produced are admired by others.* That the need for approbation is basic is demonstrated by the universally favorable reaction to admiration by others. The two aspects of the tendency are seen in an individual's positive response to praise and negative response to criticism.

Persons who have had experience in directing the work of others have varying opinions as to what constitutes appropriate use of praise and criticism as motivating forces. Since experience seems to indicate that it is easier to find things to criticize than to praise, criticism is used more freely than praise. This is unfortunate because the worker gets the impression that good conduct and efficient work will be taken for granted, whereas he will be "bawled out" for his transgressions, poor work, and errors, however minor such may be. The impression is often gained that representatives of management are convinced that a "tough" attitude is necessary for the maintenance of a well-disciplined working force. Thus the positive values which might result from the motivating power of praise are lost.

Investigations conducted for the purpose of determining the relative effect of praise and blame make possible the following conclusions:

1. It is difficult for most persons to do satisfactory work without some kind of recognition by others.

2. Individuals differ in their responsiveness to approval or disapproval, praise or criticism.

3. As a motivating force, praise is normally stimulating while criticism is depressing.

4. Less intelligent or less skillful persons improve more rapidly in their work when praised and are easily discouraged by criticism.

5. Intelligent, able, and skillful persons are spurred on to greater effort by a mixture of praise and criticism.

6. Criticism is more effective if offered in a friendly manner in the form of helpful suggestions, than if offered in the form of a reprimand.

7. Criticism is more readily accepted when the justification for it is either quite obvious or made clearly evident to the worker.

8. Sharp reprimands when clearly justified and appropriately administered have a more lasting effect than praise. However, the effect is undesirable if the individual is placed in a position which prevents him from regaining the confidence and approbation of the person who administered the reprimand.

9. If a worker requires repeated criticism or prodding to do good work, either the work situation is inadequate or the worker is a maladjusted personality.

10. Praise or blame may be indicated in many ways other than by direct statements. Even though not intended, praise or criticism is inferred by the worker from almost everything his "boss" says or does.

11. Criticism is more effective if it is offered by a person the worker likes, respects, or admires.

12. No worker should be criticized in the presence of others, nor should one worker be spoken of critically to another worker.

Systems of award which provide opportunity for favorable recognition of a large number of workers are part of the employee relations plans of many companies. Their existence is concrete evidence of the importance to the individual of high regard by others. But making formal awards by no means exhausts the possibilities of making work more human. The worker's pride in himself and his work can also be aroused through informal recognition. The alert supervisor in industry should not only seek opportunities for commending workers, but should actually go out of his way to make such opportunities.

### 10. THE NEED FOR IDEATION

Man is a thinking animal. Although the scope of thinking may range all the way from daydream imagery to carefully reasoned logical analysis, ideation is always present in waking hours. Even in sleep, there is evidence to indicate that ideation is always present in the form of dreams, although only fragments are remembered.

The process of thinking is highly individual; it is the one activity above all others that the individual reserves to himself. It is likewise an activity that can be concealed. Although other persons and events influence a person's thoughts and are usually the source of at least ninety-five per cent of one's ideas, every individual claims the right "to think for himself." Even the most autocratic despots have not been able to control all that transpires in the minds of their subjects. It is in the process of ideation that the individual most closely approaches the ideal of a "free man." This conception to the logician is, of course, pure sophistry, for no one ever enjoys "freedom of thought." But the demonstrable fact that there is no such thing as freedom of thought is of less significance in human relations than the fact that man believes that he "thinks as he pleases" and the added fact that he usually considers the product of his own thinking to be more important than the thoughts of others. *It should be obvious, therefore, that ideation is highly self-centered and personally biased. For the employer to expect the worker to be otherwise is contrary to the facts of human nature.*

The most difficult of all conflicts to resolve are conflicts of ideas. This is particularly true when ideas relate to political, economic, moral, or religious matters. On these matters, the worker will often have ideas that are impelling. On economic and social questions he will often be at variance in his thinking with his employer. He will also have ideas about company policies and practices both within and outside the area of his job, and he often has ideas in disagreement with those of his employer on the question of wages. There is no way to prevent the worker from thinking in this manner. Therefore, it is important that management try to find out what is on the worker's mind and to make adjustments which will reduce the impelling force of conflicting points of view.

Contrary to popular belief, the worker has strongly motivating ideas, attitudes, and interests outside the question of hours

and wages. Two officials of a labor organization have recently asserted: "The dynamic quality, the militancy and crusading spirit of the labor movement, especially of CIO, in the last decade were nurtured by the failure of management to satisfy the non-economic needs of the workers."[3] Examples of some of the things which the worker thinks about or toward which strong negative or positive attitudes are formed include the following:

1. How the company compares with others as a place to work.
2. The things about the job which cause inconvenience and discomfort.
3. Lunchrooms, cafeterias, club rooms, locker and dressing rooms, drinking fountains, parking facilities, etc.
4. The fair-mindedness of supervisory workers.
5. The friendliness or lack of it on the part of the boss and others with whom he works.
6. Things done or not done by the company for the worker's family.
7. Being rushed or required to do overtime work.
8. Being delayed in work by faulty scheduling, lack of materials, or failure of someone else to do his share of work.
9. Being spied on (real or imagined instances).
10. Being checked by time-study or methods men.
11. Inspection of work.
12. The manner in which orders or instructions are given.
13. Promptness or delay in handling grievances and the manner in which they are handled.
14. The extent to which credit is given for good work and conversely the extent of favoritism, real or imagined.
15. The extent to which pay inequalities exist.
16. Opportunity for advancement.
17. Rules of conduct.

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[3]Clinton G. Golden and Harold J. Ruttenberg, *The Dynamics of Industrial Democracy*. Harper, 1942.

18. Changes in schedules, rules, and working conditions.

19. Layoffs, discharges, penalties, and deductions.

20. Any evidence of "stalling" on a question to which the worker is seeking an answer.

In an article prepared for a publication of the American Management Association, the author has summarized the "state of mind" of the worker. The summary is repeated here as an illustration of the type of thinking which the employer may expect of the employee when planning actions to be taken in employee relations.

1. Most employees have false ideas about the profits being made through their efforts and are prone to excuse their personal shortcomings for this alleged reason.

2. Reasoning is biased by feelings and emotions; hence, things that seem logical to management may not appear to the employee to have a sound basis in reasoning.

3. Employees' daily experiences cultivate greater loyalty to their fellow workers than to the company.

4. There is often a feeling of insecurity among employees based on false beliefs concerning the attitudes of foremen and supervisors.

5. Workers often feel that they deserve a better job than the one they now hold.

6. Employees are subjected quite frequently (almost continuously in recent years) to propaganda unfavorable to their employers.

7. The immediate supervisor is the company to many workers, and, in many instances, he may be failing to carry out the policies of the company with respect to employee relations.

8. Every worker wants individual recognition—he wants to be known, praised, and given evidence of confidence in his work.

9. The worker must have explicit and detailed instructions. Human capacity for misunderstanding is almost limitless.

10. Workers like to express opinions and make suggestions, and, if given an opportunity to do so, they are likely to strive to do their jobs in a more acceptable manner.

With such knowledge of the worker's point of view, the following types of action will be found appropriate:

1. False ideas about exorbitant corporate profits can be offset by providing facts in graphic form. Most firms do not object to revealing such information, but few take the trouble to provide it.

2. Since reasoning is often biased, repeated appeals to logic must be made. A lesson in the effect of repetition and dramatic presentation, using emotion to supplement reason, may be learned from advertising practice.

3. Inter-employee loyalties are not in themselves destructive. Where antagonism to company policies has been reduced to a minimum, this sense of group loyalty may be an asset.

4. The feeling of insecurity prevailing among many workers can be reduced by using discharge as a means of clearing out undesirables and incompetents rather than as a threat to assure compliance with regulations.

5. Pride in one's job should be encouraged. Some firms play up the importance of jobs in carefully written leaflets, house organ stories, and special awards for competent performance.

6. Propaganda of an unfavorable nature can be met better by counter-propaganda than by criticizing and cursing the source of the unfavorable propaganda. However, it must be recognized that long-term effectiveness of propaganda depends upon the extent to which it is founded on fact or defensible logic.

7. Since the immediate supervisor represents the company to employees, the selection and training of foremen and supervisors is extremely important. Lack of skill and judgment on the part of a foreman often creates disciplinary problems. A foreman who knows human nature and likes men can secure employee co-operation and thereby reduce the necessity of having cases brought to the attention of higher ranking officials.

8. Foremen should know their men by name, should show an interest in some of the personal elements in the lives of individual workers, and should be ready to find many occasions for praising men under their supervision.

9. Instructions should be patiently and clearly stated. Some instructions should be given both verbally and in written form. Repetition is often necessary. Every supervisor must be a good teacher.

10. Employees should be encouraged to offer suggestions and due credit should be given for such suggestions.

Since every human being is a "thinking organism," the worker is mentally active. Whether his mental activity will be destructive to employer-employee relations depends on the extent the employer thinks with the worker. The worker wants to know about company plans, objectives, methods, and accomplishments. He has a natural curiosity about things going on about him, even though he might admit that many of the things he is curious about are not directly his concern. Keeping workers informed through posters, pamphlets, company magazines, and conferences, gives the worker something constructive to think about. Concealing information arouses suspicion and promotes the spreading of rumors.[4]

It is inevitable that management and workers will not always think alike. On major issues, it may be necessary to iron out differences through collective bargaining, grievance committees, or general labor-management group conferences. The object of all such procedures is the promotion of better understanding. As pointed out by Walter Dietz, a leading industrial relations authority: "Better understanding between management and employees means leading instead of bossing, teaching instead of telling,

[4]Why workers think as they do and act as they do is set forth in an article entitled, "A Challenge to American Management" by Austin S. Igleheart, President, General Foods Corporation. *Trained Men,* Vol. 28, No. 6, 1948. Mr. Igleheart stresses the importance of helping workers understand the nature of production and management problems in the companies they work for by giving them facts.

listening more, talking and arguing less, more frankness, less diplomacy. Start with trust in the place of suspicion, understanding instead of logic. Interpret and feel, don't jump to conclusions. Advance discussions and agreements are the modern substitute for arbitrary orders. It costs more to correct than to prevent. Responsibilities make for better thinking than do rights. Over all, and through all, the spirit of friendliness."

The worker likes to think about his job and likes to have a job that will require a certain amount of thinking. Because of job simplification there are many jobs in industry which give little food for thought either in their structure or in the performance of job routines. In such cases, management can make the job more challenging by providing information (1) about the job itself, (2) its relation to other jobs, (3) its relation to the finished product, (4) the materials used and their source, (5) the machines and tools used, (6) alternative materials that might be used and reasons they are not used, (7) quantity and quality standards of production, and (8) unit costs and their relation to cost of assembled product. Among these, emphasis on quality standards is often overlooked as an important means of encouraging pride of workmanship. Even a janitor can be made to understand the difference between a dust-free floor and one which has the appearance of a stable that has been policed with a pitchfork. Proper instruction and appropriate commendation can help in the attainment of a satisfactory quality standard.

With proper appeal to intellect, a careless worker can be made to feel a glow of satisfaction in looking on the result of work well done, no matter how menial the task of doing the job may seem at first glance. There is little difference basically between pride of workmanship or in neatness and good housekeeping and the feeling of artistry of the craftsman in a finished carving which delights the eye of both the producer and the observer. It is largely a point of view—one which can be developed by proper training of the thinking processes of the worker. It is

a question of lifting the mental processes of the worker from the realm of dull realism into that of imaginative idealism. The failure of management to encourage the same vigor of enthusiasm and imagination in routine production jobs that it encourages in sales and advertising, and its failure to insist on the same incisive analysis in the solution of human relations problems that it demands in the solution of engineering problems has established a tradition of drabness and drudgery in factory work that far-sighted leaders in industrial relations are seeking to overcome.

We have presented a brief survey of some of the fundamental needs, desires, and sources of satisfaction in man. That the list might be augmented and that there are marked individual differences in their manifestation in any group of workers is freely admitted. However, that is not the issue. The purpose in presenting these qualities is twofold: (1) to suggest ways in which work is and can be motivated and made satisfying, and (2) to urge that work be motivated above the level of biological necessity, especially at the level of satisfaction in work for its own sake.

These purposes are in support of a basic thesis that it should be the objective of society to make man less of a trained work animal and more of a human being at work. To do so we must understand the American workman, who has been described by one employer as follows:

"He is an individual, and an optimist with a sense of pride and a sense of fairnenss; he is short on knowledge but long on intelligence. He is exceedingly concerned with his working environment, his boss, and fellow employees. His primary needs are security, opportunity for advancement and improvement, and what is almost the most important, recognition as an individual."[5]

[5]Excerpt from an address by Stacy R. Black, Assistant to the Vice-President, Thompson Products, Inc., Cleveland, Ohio.

CHAPTER THREE

# *Self Realization Through Work*

BEHAVIOR OR ACTIVITY IS THE MEANS OF EXPRESSING NEEDS AND DESIRES. Self-realization is achieved through activity engaged in for the purpose of satisfying needs and desires. To the extent that opportunity is given in work for self-realization, it is satisfying and constructive; however, it has been shown that work may provide this opportunity or it may restrict it.

Even though opportunity is provided for self-realization through activity, attainment may be limited or facilitated through individual capacities. Therefore, it is important in seeking appropriate work adjustment that the worker be given an opportunity to discover his capacities. It is equally important that the employer obtain measures of developed and potential capacities of the worker in placing him in a work situation. A worker whose capacities are not equal to the requirements of the job, fails; one whose capacities are placed under strain by the job becomes maladjusted; and one whose capacities exceed the demands of the job, deteriorates in his work or leaves the job. Frustration in work may actually result in the development of subconscious desires for self-destruction, the destruction of property, or the destruction of other persons.

Work will never be made completely human until all jobs have been analyzed in terms of the activity and capacity correlates involved in them. Here psychology can aid management because reasonably satisfactory functional descriptions have been made of human capacities, and definitive procedures for measuring indi-

vidual capacities have been developed for the more important abilities. However, application of this knowledge is difficult because analyses of jobs in terms of the human elements involved have been made with a reasonable degree of thoroughness in only a very limited number of work situations. The basic elements to be considered in making such analyses are presented in this chapter.[1]

The capacities of man are both physical and mental. Where one aspect of capacity ends and the other begins is not always clearly determinable. Therefore, both biological and psychological capacities must be considered without reference to their distinction, if, indeed there be any such distinction.

Because of the multiplicity of factors found in human nature, classifications of capacity must be arbitrary. For the same reason categories cannot be mutually exclusive. Many such classifications have been made by students of human nature for use in experimental laboratory investigations. However, none of these has proven wholly satisfactory in making applications of psychology to daily life situations. As might be expected, classifications of capacity commonly found in psychology textbooks are somewhat abstract and are often more confusing than helpful in understanding people at work.

The classification herein presented is functional and has been deliberately chosen because we are interested in capacities as they relate to work; in other words, we are concerned with capacities for work. The capacities of man, functionally arranged, fall into ten broad groups, namely: (1) movement, (2) strength and energy, (3) receptivity, (4) assimilation, (5) adaptation, (6) coordination, (7) analysis, (8) synthesis, (9) social responsiveness, and (10) unification. The reader should bear in mind that any classification serves a purpose purely as a basis for description. Human activity always involves a constellation of capacities. Man

[1]For a more conventional presentation of job and worker analysis see E. E. Ghiselli and C. W. Brown, *Personnel and Industrial Psychology*. McGraw-Hill, 1948. pp. 23-60.

responds as a total personality to persons and things about him; he responds neither as a mechanical robot nor as a loosely associated set of capacities.

### 1. CAPACITY FOR MOVEMENT

If we accept the principle that "action is the law of life," then we may conclude that the capacity for movement, which is essential to activity, is a basic element in life. This is equivalent to saying that movement is a basic element in work because work is a phase of life, whether it be organized work or work spontaneously engaged in. But we need not resort to the logic of operationalism to demonstrate that movement is basic in work; casual observation of persons at work will provide verification.

Depending on the level at which it occurs, movement may be (a) reflexive, (b) exploratory, or (c) purposive. Reflexive movements are made in response to environmental or internal stimulation and such responses are usually unrelated to conscious attempts to control action. Excellent examples are breathing, winking, pupillary adaptation, and instantaneous withdrawal of the hand from a hot object or flame. The number of these reflexive movements which the new-born infant is capable of exercising exceeds one hundred, and their combinations are practically unlimited.

Despite their involuntary nature, reflexive movements are fundamental to proper work adaptation. They are present in all adaptive behavior and are the structural elements in all movement patterns. Reflex coordinations are basic to the development of performance habits and to the applications of such habits in work, as, for example, in the acquisition and use of skills. Indeed, so significant are basic reflexes to psycho-physical adjustment that the neurologist considers properly functioning reflexes in an individual to be the primary index of a healthy nervous system.

If marked reflex deficiencies exist they may become apparent in early-life behavior through exploratory activities of childhood. The extent to which such deficiencies are likely to affect work activities often becomes known to the individual, and he may not attempt work for which he is unsuited as a consequence of psychophysical limitations. However, the individual may remain unaware of reflex deficiencies until confronted with the necessity of using them on the job because: (1) some persons thus limited make unconscious adaptations to daily life activities, and (2) certain types of work require a highly complex form of neuromuscular coordination, timing, sequential combination, and interrelated control, of which the individual may be unaware until he has tried to establish the reflex coordinations involved subsequent to employment.

To assure proper work placement, which is essential to work satisfaction, a medical examination including neurological elements is necessary to prevent the persevering reflexive deficient from becoming an occupational misfit. For work requiring a high degree of specialized neuromuscular coordination, as in the case of an operator of a traveling crane or driver of an urban bus, placement through controlled, systematic tryouts on the job or through appropriate tests has become standard practice in many companies. Where tests or reflexive coordination are used, it is extremely important that they be appropriate for the job.

Unfortunately, many tests now used in selecting workers for complex motor coordination jobs are demonstrably inadequate, even though sponsored and widely publicized by reputable persons and organizations. For example, notable for their lack of validity are some of the so-called motor vehicle driver testing devices, involving special variations of simple reaction time measurement. Most of these devices measure only simple reflexive responses, whereas the operation of passenger-carrying vehicles in congested traffic calls for highly selective and complexly interrelated physical and mental responses. Isolated measurement of

a series of reflexive capacities will no more reveal work capacities than tests of flour, eggs, milk, butter, spices, and other ingredients will indicate the quality of a cake before it is mixed, baked, and served. Patterned sampling of reflex coordinations in association with several other capacities, extending beyond the reflex level, is the only valid method of predicting work potentialities of a psychomotor type.[2]

Exploratory movements are engaged in by human beings, particularly during infancy and childhood, as a sort of testing or trying-out of reflexive capacity. But unlike lower forms of animal life, whose exploratory movements are instinctively guided and directed, exploratory movements by human beings are random and the resulting patterns are kaleidoscopic rather than teleologically or mechanistically systematized. As a consequence, such organized movements as walking, talking, running, jumping, skating, and dancing are ordinarily achieved through trial and error exploration and practice. This often results in the formation of awkward habits of movement and inadequacies of skill. Therefore, previously formed motor coordinations or stereotypes may prove to be momentary handicaps in the initial activities of a worker when he is introduced to a new work situation. Such previously formed coordinations may seriously interfere with effectiveness of work if they are transferred without adjustment to the routine of job performance. Consequently, psychomotor training for work frequently requires the unlearning or dissociation of previously formed motor coordinations.

The tendency to form random combinations of movements, when undirected, highlights the necessity for careful visualization of desired movements before attempting to plan a training routine for a specific job. Job training should develop the exact sequence,

[2]This has been demonstrated by the Army Air Forces in the selection of aviators, and by a few transit companies, cooperating with the American Transit Association, in selecting street car and bus operators. See J. V. Waits, "Use of the American Transit Motor Ability Test in the Selection of Bus and Street Car Operators." *Proceedings of the Highway Research Board,* 1947.

form, style, and timing required in producing the exact type of performance desired of the worker. Permitted to develop his own series of movements through trial and error and unanalytical imitation, the worker may unconsciously adopt a mode of performance which is far from being the "one best way" of doing the job.

Being accustomed to doing things by arriving at a goal through random exploratory movements and crude imitation, the worker may prefer to learn in that manner rather than by a more systematic and effective approach. However, movements are subject to purposive direction, that is, movements may be self-directed with a given pattern of response as the objective. Sometimes the worker can establish a satisfactory pattern of movements in work performance through self-directed practice, and can also develop appropriate form and speed. But usually he cannot and, therefore, must be taught. Teaching of purposive movements requires prior analysis, demonstration, individual supervision of practice, and self-checking. Verbal explanation and photographic illustration aid materially because visualization speeds acquisition. The use of motion pictures to guide and pace the learner, with the learner consciously trying to duplicate in exact form the motions being demonstrated, has been found effective in developing job movements for simple tasks.

Motion analysts, striving for job simplification, have contributed generally to the ease of job adjustment through elimination of useless and nonfunctional movements. They have also shown the desirability of using the most direct and "just-necessary" motions required to accomplish the task-goal. However, where such simplification is carried to the point of subdividing jobs into a series of meaningless motion-tasks, the work involved often becomes an insult to human intelligence. Analysis which makes possible the subdivision of a job into its simplest components is commendable, but the simplification of the worker's task to the point where he merely grasps, places, and releases

makes the worker no more than a machine. Such being the case, it would be far better to carry work simplification one step further and construct a machine or attachment to eliminate even the simple remaining movements.

A human approach to methods engineering includes not only operation analysis but job synthesis as well. After production operations have been taken apart to establish the motions required, they should be put together to provide a job which will command the respect of the worker. If job synthesis is to be used to make work human, the operations to be performed must be fitted to human capacities. To that end it may be necessary to sacrifice production goals in order to accomplish satisfactory work adjustment. However, production goals and adjustment objectives can ordinarily be synchronized if job synthesis is carried far enough, and if the human element is given careful consideration. The importance of the job to the worker can then be extended by adding to the movements to be made certain challenges to be met, such as:

1. Establishing quantity production goals which the worker will accept, and above which he is rewarded by recognition of his accomplishment through citation as well as through monetary rewards.

2. Establishing quality standards which the worker will accept, and through which he can be placed in competition with others and with his own accomplishments.

3. Rotating the worker on a series of simple operation jobs which, taken together, represent a contribution to total production of noticeable significance.

4. Having one group of workers relieve other workers on jobs requiring different movements.

5. Providing a series of alternative job-performance movements, and permitting the worker to shift from one procedure to the other at his discretion.

6. Suggesting that the worker observe possibilities of changing or improving routines on his job, thus making each worker a methods study man on his own job.

7. Affiliating workers in groups for the purpose of attaining a group objective in production; and, where possible, placing one group or team in competition with another group.

8. Making one group of workers dependent on the productivity of another group in the chain of operations, but always allowing fair margins.

9. Introducing elements which will give opportunity for ideation.

10. Encouraging suggestions relative to work performance and production organization.[3]

### 2. STRENGTH AND ENERGY CAPACITY

One of the reasons for the debasement of work in the minds of men stems from the idea that man must often expend strength and energy in work in animal fashion. This association of ideas may be found throughout literature, from biblical days to the present. To make matters worse, the allegorical significance of the judgment placed upon man to eat bread in the sweat of his brow has been woefully distorted by the literalists. The theories that no one works unless forced to do so and that every person is as lazy as he dares be are based on a misconception of work. The fallacy arises from failure to take into consideration the existence of needs and urges of man which release energies toward desired ends, which, in turn, bring their own satisfactions. Note, for example, the expenditure of energies in childhood play activities and in adult sports and social activities for which no rewards

[3]These points cover the psychological aspects of time and motion study—a phase of methods engineering which is frequently overlooked. For discussions of the philosophy and techniques of time and motion study, see: Ralph Presgrave, *The Dynamics of Time Study*. McGraw-Hill, 1945; Stewart M. Lowry, Harold B. Maynard, and G. J. Stegemerten, *Time and Motion Study*. McGraw-Hill, 1940; William Gomberg, *A Trade Union Analysis of Time Study*. Science Research Associates, 1948; Morris L. Cooke and Philip Murray, *Organized Labor and Production*. Harper, 1940.

are sought save satisfaction in the activities themselves. To the extent that work activities can be made equally satisfying, they can be made human. When work is made human, the expenditure of strength and energy is not tedious and distasteful to the worker.

Strength in human beings may be defined crudely as the capacity for physical endurance as distinguished from momentary display of power as illustrated by lifting, pushing, or carrying a heavy object, or by bending, tearing, or breaking an object of high cohesion. True enough, these or similar momentary, power-output, skeletal-muscular responses are significant factors in certain jobs, but man has learned how to use the physical forces of nature to do the things which tax his power of strength. If such harnessing of physical forces has not been applied in a particular job, then the job has not been humanized; perhaps it would be more appropriate to say the job has not been engineered. Despite progress that has been made in transferring power exertion to machines, much remains to be accomplished in the mechanization of certain industries. Mechanization of work is one thing, while organization of the human element remaining in a production task after mechanization is another. That these two aspects of production organization require separate consideration is easily overlooked. Human beings should use machines in production rather than become an extension of the machine.[4]

It is easy for the production engineer to fall into the habit of thinking of the worker as an extension of the machine, whereas to make work human the machine should be developed as an aid to the worker in accomplishing production tasks. Even though the idea that he is using a machine to make a product, rather than operating or tending a machine which in itself makes the product, is nothing more than a distinction in the worker's mind, that

[4]How the burden of excess energy output can be removed from jobs is illustrated in an article entitled, "Making Work Simple." *Mill and Factory,* August, 1948. pp. 129-134. See also, P. M. Fitts (ed.), "Psychological Research on Equipment Design." *AAF Aviation Psychology Research Report* 19. Government Printing Office, 1947.

distinction should be cultivated. There is a difference between making cloth by servicing a loom and tending a loom which makes cloth, although the measurable strength and energy theoretically required are the same. Actually, the capacity for endurance under the two situations differs and favors the more human situation.

In a physical science sense, energy is the capacity for performing work. From a human point of view, energy is power efficiently and effectively exerted. Abstractly, the capacity for energy output in individuals can be measured, and widespread individual differences in strength and energy, as physiological phenomena, are known to exist. Furthermore, there are differences in jobs in terms of physiological requirements in strength and energy. Where such requirements are determinable, it is possible to set up measures of human capacity and thereby take a first step toward fitting the worker to the job. However, the psychological elements involved require more complex measures—measures of capacity to apply human strength effectively and efficiently to the job in association with special elements of interest and motivation. In dealing with the human element, it is essential to know whether an individual *will* perform in a certain way, as well as to know that he *can* do so.

That there are limits to human endurance beyond which an individual may not go, save at the cost of sheer exhaustion, has long been recognized. But not until studies were made in industry, during and following World War I, did it become clear that there are points beyond which expenditure of energy brings diminishing returns in productivity. Once initiated, such studies have been continued and a vast store of knowledge on the effects of fatigue has been accumulated. Such knowledge is being reasonably well applied in industry today. Except to refer the reader to such studies, discussion of the negative aspects of work as related to fatigue will be omitted. However, it should be pointed out that fatigue may result not only from energy output, but from con-

ditions of work. Many of the factors in the work situation which contribute to fatigue can be changed to favor fatigue reduction through careful analysis of work conditions.[5]

Work is human when energy is effectively and efficiently applied; however, human energy cannot be effectively and efficiently applied unless conserved. In the human sense, conservation of energy has a quite different meaning than the concept involved in the principle of conservation of energy in physics. Conservation of human energy refers to wise utilization, a problem which the worker and the employer must solve jointly. Perhaps its solution lies somewhere between the two extremes of the "speed-up" and "stretch-out" practices of the rabid efficiency planners and the "feather-bedding" practices of certain labor groups.

Properly organized and motivated, work may be carried on with a degree of intensity which maximizes the output of the worker without undue stress and strain. This condition of work should be sought in the interest of conservation of the worker's strength and energies. In this connection, it should be clearly borne in mind that certain types of nervous stress and strain of psychological origin often produce more pronounced fatigue effects than physiological activity.[6]

### 3. RECEPTIVITY

As a biological organism, man is in continuous and constant contact with his environment during waking hours and, to a certain extent, during sleep. Receptor cells in his sense organs are attuned to a wide variety of physical stimuli. Certain of the

[5]For reports of systematic studies of fatigue in work see: Howard Bartley and Eloise Chute, *Fatigue and Impairment in Man.* McGraw-Hill, 1947; Herbert Moore, *Psychology for Business and Industry.* McGraw-Hill, 1942, Chapter XIII; Morris Viteles, *Industrial Psychology.* Norton, 1932, Chapters XXI and XXII; Thomas A. Ryan, *Work and Effort.* Ronald Press, 1947, Chapters III-IX; and E. A. Cyrol (A. T. Kearney and Co.), "The Matter of Fatigue." *Mill and Factory,* July 1948. pp. 110-115.

[6]See the chapter entitled, "Definition and Meaning of Effective Work," Ghiselli and Brown, *op. cit.* pp. 216-238; A. G. Bills, *The Psychology of Efficiency.* Harper, 1943; and H. E. Burtt, *Psychology and Industrial Efficiency.* Appleton, 1929.

stimuli to which the eyes, ears, nostrils and skin respond, respectively, such as light, sound, odors, and atmospheric temperature and moisture, are nonexcludable. This means that an individual is constantly receiving impressions of these types and must either respond to them or develop adaptations of a negative nature. Other receptor cells are located within the body but are likewise involuntarily stimulated. These include organic stimuli associated with hunger, thirst, fatigue, sex, and pain; muscular or kinesthetic stimuli, such as tension, strain, and motion; and static sensations relating to posture, position, and balance. Certain sensory stimuli, such as those related to taste and touch, may usually, but not always, either be accepted or excluded.

Two facts relative to the receptive capacities of man are highly important in work adjustment: (1) acuteness of sensitivity to sensory stimuli differs with individuals, and (2) stimuli arising within the work environment may facilitate or restrict work adjustment.

Since certain types of work require high visual acuity, sharp color discrimination, high auditory acuity, or close pitch or tone discrimination, it is commonplace to observe that individuals placed on such work should be carefully tested for required receptive capacities. The same holds true where other senses such as touch, taste, smell, and kinesthesia are involved, but it is rarely the case that high acuity in these sensory fields is a critical factor in job adjustment. Yet, if critical, that fact should be taken into consideration in employment. Usually, careful attention is given the problem of vision and visual skills in industry. This is a step in the right direction, but much remains to be done in the investigation of the bearing of other receptive capacities on work adjustment.

An ideal work environment is one which meets two conditions: (1) it provides the greatest possible comfort for the worker, and (2) it is relatively free from sensory distractions. Totally inhuman work conditions have existed in many places of work

since the days of the Industrial Revolution. The worst of these conditions are no longer found, but almost all work situations could be improved. The practical problem for the employer to decide is usually one of determining the extent to which the cost of change can be met. Unfortunately, many of the costly changes could have been avoided had thoughtful planning been applied in the original construction of the place of work, for it costs little more to construct a comfortable, distraction-free factory or office than a crude, traditional one.

Fortunately, the added production arising from changes in the work environment often offsets the cost of making the change. Some changes, in fact, are quite simple and inexpensive but careful study must enter into the making of such changes, if they are to be effective. The points of attack which yield highest returns in making the work-place suited to human needs in receptivity adjustment are: (1) illumination; (2) temperature and humidity; (3) ventilation, including control of dust, fumes, and other atmospheric elements; (4) arrangement of work space and equipment; (5) flow and handling of materials and finished products; (6) color of walls, floors, and equipment; (7) type of floor surface; (8) sound control; (9) vibration control; (10) posture; (11) length and spacing of work periods; (12) proximity of other workers; and (13) exposure to hazards.

#### 4. ASSIMILATION

Various stimuli from the outer world and those internally initiated produce an initial response of mere awareness. Such awareness is a function of a highly complex nervous system which makes possible the development of meaning or significance of the stimuli to the individual. Through processes too intricate to be fully comprehended by the human mind, various stimuli come to be associated with ideas, feelings, and actions. This process of assimilation is a never-ending one, is highly individualized, and is limited or facilitated by other capacities.

The assimilative process is not always a conscious one; in fact, it seems probable that most patterns of ideas, feelings, and behavior are based on qualities inherent in the stimuli themselves, such as intensity, motion, abruptness of appearance, frequency, form, and contiguity. Nonetheless, meanings emerge from the hodgepodge of sensory experiences. The development of concepts by which the individual tests his experience thus comes about through the joining together of sensory experiences to form a unity of unconsciously remembered associations. As a consequence, the individual exercises the capacity for receiving stimuli, perceiving relationships, and responding to new situations in conformity with that which is already familiar.

The practical significance of the capacity for assimilation in work may be summarized as follows:

1. Concept development through assimilation of stimuli is continuous—new concepts are always in process of formation and old ones are being modified.

2. In concept development, sensory experiences from different sensory fields supplement each other and frequently blend together to form basic patterns or constructs.

3. Concepts formed by the worker in daily life experience are almost certain to conflict with those which the employer holds.

The existence in the human organism of an intricate nervous system makes receptivity and assimilation possible. Assimilation may occur at different levels of functioning of the nervous system. Many unanalyzed forms of behavior result; in these the individual is aware in a vague way of many of the things he does, but, since they are automatically accomplished, there is little reason for giving attention to them. Thus, the spinal cord and lower brain reflex centers provide for an automaticity in certain phases of activity which require sensory-motor adjustments. This makes possible the development of skills, which, though formed at a highly conscious level with the assistance of the brain centers of

the cerebellum and cerebrum, may be relegated to an automatic reflex or habit control level.

The foregoing physiological and psychological facts are not presented as an explanation of the process of acquisition of knowledge from environment through assimilation of sensory stimuli, nor do they represent an attempt at explanation of the manner of adjusting to these stimuli through the development of ideas, concepts, habits, and modal behavior patterns. Rather, they are offered as an indication of the complexity of the human organism. It is obvious that nature meant for man to live in a complex environment and provided him with capacities to do so. The high degree of specialization which is characteristic of much of the work of the world appears to run counter to nature's intent. This results in certain types of work becoming dull, monotonous, and frustrating because of their simple repetitive nature, wherein only a small fraction of total human capacity is utilized.

The nature of monotony is well illustrated by the experience of unfilled time, such as the seeming interminable waiting for a late train or for a friend who is less than prompt in keeping an appointment. The elements in the situation obviously are (1) diversion from attaining a preconceived goal, and (2) the dead-level or wearisome sameness of events or stimuli present. In short, a monotonous situation presents no challenge and no change or variety. These two elements are interestingly related and suggest the probability that lack of variety in work is less contributory to monotony than lack of challenge, goal, or directed interest. Herein, then, appears to lie the key to overcoming much of the monotony of repetitive tasks, namely, purpose in work, regardless of its nature.

Monotony is a characteristic of stimuli. A tone held at a given pitch continuously over a long period of time is deadly monotonous, and unless, in the process of assimilation, the sensory mechanism adapts itself negatively to such a stimulus, nervous tension, strain, and exhaustion result. The same tone presented

intermittently is less monotonous than a continuous tone and when a repeated tone is intermingled with other tones, it is still less monotonous. Even a repeated pattern of varied tones can be monotonous, if the characteristic of sameness is prominent, as witness the effect of piano scale practice by the neighbor's daughter. The continuous tone, the intermittent tone, and the repeated scale can be made less monotonous by increasing the span of attention to include other things in the environment. In like manner the monotonous aspect of work situations can also be controlled.

It is concentration of attention on the monotony element in work that has a harmful effect. In repetitive work, broadening the span of attention reduces the attritional effect. Repetitive work should be organized to permit this broader pattern of assimilation and the worker should be encouraged thus to use his capacity for assimilation. Other means of reducing the effect of monotony include (1) rest pauses; (2) shifting workers on jobs; (3) varying methods of work; (4) allowing conversation where it does not interfere with work; (5) use of music; (6) intermittent broadcast of news or other information; (7) encouraging study by the worker of his work activities; (8) feeding work in small units, thus breaking the continuous flow; and (9) providing a visual record of accomplishment. Experimental study is necessary in applying these counter-agents to monotony in work activities because both the work situation and workers are variables to be considered.

Employers should recognize that there is a psychological environment as well as a physical environment in work. A pleasant but challenging psychological environment can offset some of the monotony stress of repetitive work. The attitudes of other workers and of the supervisory force have a marked effect on quality of work and contribute to the seeming ease or difficulty with which work is accomplished. The elements of rivalry, competition, dignity, and purposefulness should be injected into the

work situation as subtly as possible. And above all else, every worker should be encouraged to feel that his contribution to the total accomplishment of the working force is highly important; otherwise, the worker will give his time grudgingly and, as far as possible, will live his life elsewhere. If treated as a machine, the worker will be a machine and usually not a highly efficient one.

The capacity to adjust to monotony is highly individual, consequently, people differ in this respect. Basically, these differences relate to the sensitivity of receiving organs, capacity for negative adaptation, observation, attention, concentration, memory, intelligence, characteristic level of assimilation, and social habits. It is not difficult to establish a pattern of psychological measures to determine the probable response of the individual under work conditions which require the worker to engage in continuous repetitive job operations. The use of such patterns makes possible the determination of the degree to which an individual is suitable for such work. However, it should always be remembered that the human organism is adaptable, hence the margin of tolerance is usually greater than arbitrary measures indicate. This is especially true if the psychological environment is favorable. On the other hand, in an unfavorable psychological environment only those of broad tolerance can adjust, whereas in a favorable psychological environment, the majority can find compensations.

It is obvious that the capacity for assimilation has both physiological and psychological aspects. Although these phases cannot be separated in human activity, their varying nature must be taken into account in planning the place of work, job routines, and supervision of work. In such planning, it should be borne in mind also that the high plasticity of the nervous system of man permits many solutions which might be objectionable as judged by other standards. Further reference to this point will be made in the discussion of the capacity for adaptation which follows.

### 5. CAPACITY FOR ADAPTATION

Thanks to a loosely organized nervous system, man is a highly plastic organism, subject to broad adaptation. Theoretically, an individual can adapt as a physiological mechanism to widely varying types of physical environment. However, there are zones of easy adaptation, zones of optimum adaptation, and tolerance limits. These zones or limits apply to movement, energy expenditure, receptivity, and assimilation—capacities which have already been discussed—and to coordination, analysis, synthesis, social responsiveness, and unification—capacities to be considered later.

In a sense, adaptation is a capacity overlapping all others, therefore constant consideration must be given to this quality in dealing with other capacities. From a practical viewpoint, the degree of adaption sought of the worker should not require that he be obliged to attempt adaptation beyond the optimum zone for him. To require him to put forth energy, to perform coordinations of movement, or to work in a physical environment which forces him to approach tolerance limits destroys the possibility of satisfactory work adjustment. The fault of much so-called efficiency planning lies in the fact that the capacity for adaptation is exploited beyond the optimum zone. On the other hand, left to his own choice, the worker will tend to restrict his activities to the zone of easy adaptation.

Plasticity, the characteristic of the nervous system which makes adaptation possible, is highest in the periods of childhood and youth. Through random and imitative repetition, many adaptations necessary to survival and social adjustment occur, and, since there are many common elements in the environment in which individuals grow to maturity, the adaptations or habits of response which evolve are much the same in a group of individuals of the same approximate age.

These stereotypes make the general run of applicants who call at the employment office appear to be quite similar in degree

of competence. However, examination of the capacities of each individual quickly dispels this illusion. Other adaptations of a learned type, which are not readily on display, may be the ones sought. Since there is no way of truly determining by observation the extent of competence possessed, or determining it from what the applicant claims, the employer is left little choice except to use psychological tests or to try out the applicant on the job to ascertain the extent to which adaptations already made have job performance value.

Since the adaptations or habits of work performance required on most jobs are highly specialized, most employers have found it necessary to set up special training procedures for specific jobs. Because plasticity becomes less evident with age, some employers discriminate against mature applicants. Such employers appear to believe the adage that "you can't teach an old dog new tricks." The adage is, of course, false, and the discrimination unfortunate. Except for complex craft skills, most persons, regardless of age, can make the necessary adaptations which will equip them to perform most job operations. Of course, mature learners must be taught with greater patience and they, in turn, must have a keen desire to master the procedures required.

The preceding statements with reference to adaptation by mature persons apply more significantly to the development of sensory discrimination and motor skills than to capacity for analysis, synthesis, and social responsiveness. Mental and emotional adaptations are extremely difficult for persons beyond the age of 35 unless they have been active mental learners throughout life and have already developed a reasonable degree of emotional adjustment. Adaptations of a mental and emotional nature are possible in more mature years, but such adaptations require immensely more time, extensive directed practice, encouragement, and self-motivation than is required of the less mature person. Individual differences of mature persons in this respect are marked, but there is no known method for measuring poten-

tiality of mature persons for such adaptations except by actual trial at making them.

Adaptations required to become a capable performer may be made at great cost in time, effort, and emotional stress, if undirected, or if not appropriately directed to assure the greatest economy in learning or adjusting. Because of the tendency for random response inherent in a plastic nervous system, and the interference of previously formed habits, we are likely to strive to make new adaptations by "learning the hard way." Because the skilled performer is not likely to be cognizant of the learner's problems, his efforts to direct and help the learner may actually interfere with speedy and effective adaptation. This problem is sufficiently important to warrant treatment in a separate chapter. (See Chapter VII.)

### 6. COORDINATION

No capacity of man functions as a separate phenomenon. Sensory impressions from different fields blend to form concepts, movements occur simultaneously or in sequence to form responses, and feelings color thoughts to form attitudes. What may seem to be simple habits or elementary ideas are in reality intricately coordinated patterns. The reason they do not seem to be complex coordinations is that, through experience, they have become commonplace in the ideation and behavior of the individual. The complex and intricate nature of coordinations becomes clearer if we but recall the experiences one has as a child in learning to write. If the reader finds it difficult to remember the experience of learning to write, let him imagine the elements involved in trying to teach an adult, who has never learned to write and who does not understand English, to write the simple sentence, "This is a warm day."

Attention is directed to the complexity of coordination in order to emphasize the necessity for care and patience in the development of occupational skills and knowledge. Learning is

an intricate process, even though the performance requirements be quite simple. Equally important for the development of occupational skills is the fact that, unless the development of coordinations is carefully directed, resulting stereotypes are likely to be awkward and inefficient. Ample proof can be found in observing the walking and speaking habits and gesture mannerisms of a group of individuals selected at random. Fewer than ten persons in ten thousand have made the best possible adjustment in these commonplace life skills. It might be said that instead of merely having capacity for coordination, human beings have capacity for such a wide variety of coordinations that any resulting stereotype is usually more complex than it need be and that such complexity reduces the effectiveness of the adjustment.

It is also a phenomenon of coordination that human nature is parsimonious in providing conceptual associations for behavior stereotypes. The tendency of the nervous system to relegate coordinations of movement to an automatic, non-thinking level is convenient from a crude environmental adjustment point of view, but it results in little conceptualization. To illustrate this point, observe how little you or I as adults really know about walking. Perhaps we know all we need to know, but in certain jobs it is necessary to possess certain job knowledge in addition to being able to do important things related to the job. Where such job knowledge is essential to efficient performance, it must, for the majority of persons, be taught in addition to teaching the way of doing the job. That only the exceptional worker will acquire job knowledge by observation and chance-directed conceptualization is attested by the woeful ignorance displayed by most workers in this respect. Many employers explain this phenomenon by referring to workers as being dumb or stupid. Such is not the case; the widespread lack of job knowledge is the result of the employer's failure to explain fully or to teach, in a formal manner, the information which the worker needs to know. This is especially true in respect to standards of performance. A worker

who does not know good standards of workmanship cannot be expected to meet such standards, regardless of urging, threats, or rewards.

The complexity of work coordinations, even though they may seem simple to a casual observer, makes it difficult to apply the techniques used in psychological laboratories to the measurement of job aptitudes. For that reason efforts have been made to develop "work-sample" types of tests patterned to fit the requirements of particular jobs. These have proved more successful than a series of analytical tests. The reason seems to lie in the fact that work-sample tests more nearly parallel the coordinations used in job performance. If this experience proves anything in particular, it supports the theory that coordination is a significant capacity apart from the separate things required in job performance.[7]

The objectives which industry should strive to attain in making work human with reference to coordination would seem to be (1) provide means of determining in advance the coordinative capacity of the prospective employee, and (2) provide the type of training which will develop the desired job procedures and job knowledge. A worker likes to do a thing he can do well, therefore, developing in him the degree of skill which makes possible superior job performance will not only produce more satisfying work adjustment for the worker, but will bring about the higher degree of productivity constantly sought by management. This means that far greater attention to selection and training is justified than management now grudgingly gives to these important elements of human relations in work.

### 7. CAPACITY FOR ANALYSIS

Man has capacity not only to respond to his environment, but to make dissociated observations of it as well. He likewise has capacity to observe himself. True, these observations, especially

[7]See C. L. Hull, *Aptitude Testing.* World Book Company, 1929; W. V. Bingham, *Aptitudes and Aptitude Testing.* Harper, 1937.

those relating to himself, are not always detached and objective. However, the capacity for analytical mental activity exists in every individual and can be cultivated.

The simplest form of analysis is comparison. For the most part, such comparisons are automatic and involuntary. An impression from the outer world is received and an unconscious association is made with already formed concepts or ideas buried somewhere in memory. Likenesses and dissimilarities are cued and an almost instantaneous classification is made. Many of these analyses go no further than passing recognition. Others take on greater significance in that they call for more extended responses in the form of acting upon, feeling toward, or relational thinking about the impression made. The level of response and its form, whether involuntary or at the level of relational thinking, depends largely on the coordinations which have previously been made. The extent to which the response varies from previously formed stereotypes depends on the conscious control of thought, feeling, and movement exercised by the individual.

The amount of choice which can be exercised by the individual in controlling the response which he makes to a stimulus or stimulus pattern is a question which has been widely debated, but at least it is known that such exercise of choice includes the ability to delay, modify, redirect, or inhibit. These restrictions of response give time for conscious analysis, which may be fragmentary or may be extensive and deliberative. Most analytical responses are of a free association type, wherein one idea leads to another with no conscious purpose in evidence. For example, seeing a tree may bring a train of ideas relating to "woodland, farm, house, grandfather, snow, sled"—a sort of analysis in the form of a leapfrog journey through memory, obviously of a subjective nature and going farther and farther away from present reality with each leap. However, analysis can rise to a high plane of realistic reference through conscious control of relational thinking.

Probably less than ten per cent of relational thinking rises above the free association level. However, through deliberate choice, analysis of a controlled association type is possible wherein a basic impression is held in conscious focus of attention and various ideas are related to it in a search for special significance. This search may be for the purpose of reconstructing an already formed and previously applied pattern, as in playing a game of bridge, or it may be for the purpose of constructing a new co-ordination which will result in the formation of a judgment or conclusion, such as studying the relative merits of several houses in order to choose one for purchase.

Points of significance with reference to the capacity for analysis in work may be summarized as follows:

1. The process of analysis used by the worker is likely to be simple comparison through free association. This process draws on past experience and is almost wholly subjective, hence, may result in opinions and conclusions more closely related to individual desires and needs than presently realized.

2. If objective analysis is required on the job it will probably be necessary to teach the worker the step-by-step procedure to be used.

3. Objective analysis is a way of thinking which includes basic steps, sometimes stated as follows: (a) get the facts; (b) classify the facts; (c) apply tested principles of knowledge; (d) get additional facts if needed; (e) use formulae where applicable; (f) supplement by insight based on experience; (g) draw conclusions and formulate judgments; (h) test conclusions and apply judgments; and (i) check results of application.

4. Capacity for objective analysis is facilitated by knowledge; analysis clarifies and extends knowledge.

5. Capacity for analysis is directly related to the level of intelligence of the individual.

6. Capacity for analysis is facilitated or restricted by previously formed habits of thinking.

The fact that capacity for analysis is related to intelligence has special significance in work adjustment for two reasons: (1) different occupations require varying amounts of capacity for analysis, and (2) individuals vary widely in intelligence, which when properly directed is fundamental to the capacity for analysis. An individual makes the best work adjustment in that occupation or job which requires the use of the level of intelligence possessed. Therefore, the probable placement most likely to prove satisfactory can be determined by applying mental tests in advisement and selection. Reasonably satisfactory measures of intelligence in the form of mental tests have been devised and are widely used. However, the most effective use of such tests has been found to be that of establishing effective ranges rather than trying to place job requirements at absolute levels.

One difficulty has been noted in the application of mental tests to work situations. Such tests measure capacity for abstract analysis, i.e., analysis of abstract material closely related to organized fields of knowledge, such as science, mathematics, and word relations. They do not measure capacity for mechanical or social analysis. Since many, though not all, persons of high capacity for abstract analysis are distinctly lacking in mechanical and social "sense," they may be found unsuited to work requiring mechanical or social analysis, despite requisite capacity for abstract analysis. It is likewise true that some persons displaying high mechanical aptitude are stupid in social relations, and vice versa. It follows then that appropriate job placement frequently requires the determination of capacity for mechanical or social analysis in addition to optimum capacity for abstract analysis.

### 8. SYNTHESIS

Analysis, as has been shown, is selective thinking. In a sense, it is a means of dissecting coordinations for the purpose of examination and evaluation. The point at which examined evidence is used to formulate conclusions and judgments may bring into

play capacity for synthesis. However, this is true only to the extent that imagination and insight enter into the process of formulation. Matter-of-fact conclusions drawn from evidence require little imagination or insight, therefore, drawing routine conclusions is largely a function of the capacity to analyze. In synthesis, something new emerges through creative thinking as an extension of experience. Often, mental and motor stereotypes which are new for the individual emerge as a result of the processes of assimilation and coordination, but they usually occur without the application of creative thinking by the individual and frequently do not even require the use of capacity to analyze.

In the process of synthesis there is a putting together of ideas to express something that arises from within. In the first stages of the process there may be little more than an unanalyzed feeling or urge to express something not too clearly visualized. Then, with the aid of imagery, the ultimate end-product begins to take on form and substance which can be recognized by others as well as by the person creating. The process is an involutional one which takes on objectivity through projective extension. Although not fully evident to the creative mind at work, it is probable that the end-product usually exists in almost complete form before it is committed to paper or canvas, or is transformed into a mechanical construct. Certainly, before the product emerges in finished form it must exist in the mind of the person doing the creating, even though not recognized in final synthesis as having existed in more than fragmentary elements.

Lines such as

> "Sun-splashed willows by the brook
> Lattice-line each shady nook,
> Where sun-flecked leaves and flowers bring
> The bounteous joy of newborn spring"

are not a mere assemblage of words, sounds, and images. They are not produced by putting down on paper first one word and then another. They are the product of an urge to express and to

share a feeling with others, to reveal a discovery or experience that seems important to the discoverer. Behind such syntheses lie numerous memory constructs which are only partially revealed by the final product.

It is a rare person who has not at one time or another felt the urge to synthesize, to create. Unusually valuable contributions to literature, art, science, and invention have often come into being from seemingly lowly sources. Unfortunately, most work situations do not encourage this urge; it is also an unfortunate fact that encouragement will not always produce creativeness. However, there is more potential capacity for creativeness among workers than the average employer recognizes. The least that could be done is to provide a means for the employee to be rewarded for ideas which he believes to be constructive or creative. To destroy the possibility for exercise of the capacity for synthesis in relation to the work situation makes work inhuman.

Previsioning of a goal or finished product is an essential element in creative thinking. The employer knows where creative thought would bring forth important contributions to product, method, or organization. For this purpose he employs research workers and others whose specialized services provide the solution to many of these problems. But the employer could make work more challenging and frequently obtain important ideas from workers on jobs which are not in themselves creative in nature by revealing such needs to them. Inviting suggestions along specific lines will produce more creative synthesis than a general invitation to workers to submit suggestions.

### 9. SOCIAL RESPONSIVENESS

The individual is a social unit in every situation where he is a member of a group. There is no reason to expect a person to be less socially responsive in the work situation than elsewhere, therefore, the problems of social responsiveness cannot be solved in the work situation by ignoring the fact that the worker is a

social unit or by condemning the social responsiveness of the work group. Social tendencies of the worker should either be given an outlet on the job, or otherwise provided for in activities apart from job routines. This can be done, in part, through organization of the psychological environment of work. If not done, the worker will often exercise the capacity for social responsiveness in ways detrimental to work efficiency.

The employer must accept responsibility for the psychological environment of the place of work as well as the physical aspects of that envirnoment. Whether a satisfactory psychological environment exists in a place of work depends to a marked degree on the attitudes and actions of those who direct the work of others. It is the task of those who supervise and manage to make the worker *want* to work. This is in contrast to the belief of many straw bosses, foremen, superintendents, managers, and top executives that their task is merely one of *making* the worker work.

Industry needs leaders of men, not drivers of men. The leader is characterized by certain qualities:

1. He has abundant physical and mental energy reserves that exceed those of the average person.

2. He is dynamic, enthusiastic, and buoyant, yet even-tempered and calm in dealing with critical situations.

3. He possesses technical knowledge which commands respect.

4. He makes decisions promptly and with a keenness of judgment greater than average.

5. He can be firm but friendly, dignified but courteous, determined and purposeful but not pompous.

6. His integrity is beyond question and he plays no favorites.

7. He uses explanation and instruction frequently in dealing with mistakes and misbehavior, reprimands rarely, and then in privacy, never publicly.

8. He knows how to resolve conflicts by integration of differences.

9. He is a perennial student of human nature.

10. He initiates change, yet maintains a sense of balance in assessing values.[8]

As an individual, every worker seeks a responsive social relationship with management. In this respect he wants:

1. Leadership which he can like, respect, and admire. (The traits of leadership which impress him have been set forth above.)
2. Surroundings which promote physical well-being.
3. Acceptance as a recognized member of a group.
4. Recognition as an individual, a partner, not a servant.
5. Fair treatment in relation to others.
6. Reasonable sense of permanency.
7. Knowledge of the results of his efforts.
8. Knowledge of company plans and policies.
9. Approval for special effort or good results.
10. Respect for his religious, political, moral, and social beliefs.
11. To feel that other workers are doing their share.
12. To be favorably considered as a desirable associate by other workers.
13. To be favorably considered by his superiors.
14. A friendly social atmosphere.

When a person becomes a member of a group he is influenced by the attitudes and opinions of the group. He is affected by and contributes to the morale of the group. This emergence of morale in group relations merits careful recognition by management. From time to time and by various means, management should ascertain the attitudes of workers toward their work and should then try to determine the probable effect on productivity. A survey of employee attitudes made by a disinterested party is probably

[8]For an analysis of leadership qualities in relation to managerial functions see Glen U. Cleeton and Charles W. Mason, *Executive Ability: Its Discovery and Development.* Antioch Press, 1946. See also a series of essays by prominent business leaders, published under the title, *The Responsibilities of Business Leadership,* H. F. Merrill (ed.). Harvard University Press, 1948.

the most accurate method of assaying this highly elusive factor. When determined, if unfavorable, probable causes should be sought. Those most often found are poor leadership, unpleasant or uncomfortable working conditions, and opinions which conflict with management policy. Sometimes, the sources of attitude conflict will be found to generate from strongly held views by one or more individual members of the group. When such is the case, carefully planned handling of the situation becomes necessary, particularly if the troublemakers have organized support within the group or from labor leaders.[9]

A certain amount of dissatisfaction may be expected in any group. Furthermore, it is a phenomenon of group organization that grievances inevitably arise. Prompt handling of such grievances and fair adjudication of the differences involved will prevent them from detrimentally affecting group morale. However, heading off potential grievances by intelligent supervision is preferred management technique in dealing with human relations with reference to group morale.

### 10. UNIFICATION

The ultimate goal of self-realization is unity and balance of personality. The capacity for unification makes possible the development of the individual into an integrated, well-organized personality. Such a person is stable and capable of self-direction and self-control in the never-ending search for ways and means of expressing inherent capacities for movement, assimilation, adaptation, coordination, analysis, synthesis, and social responsiveness and in the satisfaction of the basic desires described in Chap-

[9]For a general discussion of sources of dissatisfaction see E. J. Benge, *How to Make a Morale Survey*. National Foremen's Institute, 1941; Ghiselli and Brown, *op. cit.* pp. 434-458.

For evidence of the things workers seek in their jobs see "A Survey for Employee Thoughts," (Koppers Company, Inc.) *Mill and Factory*, August 1948. p. 114; "How Big is Our Job," an address by L. R. Boulware, Vice-President in Charge of Industrial Relations, General Electric Company (published as a pamphlet by the company, 1948); "My Job and Why I Like It" (published as a pamphlet by General Motors Corporation, 1948).

ter II. Work should contribute to personal unification rather than disunity.

While the center of integration of personality is the individual self, the "I-me-mine" or ego point of reference, there are subcenters within the environment with which the individual makes strong projective identifications. These include the home, mate, offspring, parents, deity, country, work, close friends, and hobbies or recreational activities. There are, of course, other points of ego attachment which vary with the individual, however, those mentioned are the ones commonly found to be the most impelling and most enduring. The significant fact for consideration here is the importance of one's work as a point of personality unification.

The average individual wants to engage in work activities with which he can identify himself with self-respect and pride; he wants his work to become a part of him; he wants to "live" his work. Work situations that deny these possibilities are not human. They may even act to produce an unbalanced personality and force the individual to seek unification through the other major points of ego attachment indicated above. Failing to achieve unity of purpose and action in other centers of ego attachment, the individual may engage in compensatory activities, some of which may be anti-social. Pride in accomplishment and satisfaction in work are the elements which encourage favorable projective identification with work.

Though provided with a satisfying work situation, there is no guarantee, of course, that the individual will also unify at the other commonly found stabilizing points. Hence, disunity of personality and lack of balance may be found among some individuals in any work situation, however adequate such work may be in serving life purposes for the majority of workers. On the other hand, if the work situation is inadequate, the number of unstable personalities is increased. Unfortunately, lack of understanding of the requisites for balanced personality adjust-

ment permits the existence of conditions which promote disunity. Employers cannot be expected to provide work conditions which serve primarily as therapy for neurotic personalities, however, it is to be presumed that no employer would deliberately encourage neuroticism.[10]

An individual may fail to achieve a degree of unification which results in a balanced personality regardless of favorable home or work situations. This simply means that there are a certain number of persons in the world who are mentally-emotionally ill, just as there are many who are physically ill. The employer protects himself through medical examinations against the employment of physical misfits. As far as is possible he should also avoid employment of personality misfits. When not avoided or where emotional maladjustment develops on the job, recognition of a pathological personality condition should result in more humane handling of such cases. Dealing with such situations is not always easy and, with the best of intentions, the result is sometimes tragic. Recognizing the seriousness of this problem, some employers have established special services for handling such problems.[11]

The explicit purpose of the worker who seeks employment is to earn wages. The frank purpose of the employer is to get production from the worker's efforts and to profit thereby. Both of these purposes are no more than an expression of the philosophy of necessity, an inhuman philosophy of despair. To be truly human the purpose of the worker and that of the employer should be to seek and to provide an opportunity for self-realization through work which contributes to unification of personality. This means that opportunity for the exercise of fundamental capacities and the satisfaction of basic wants must be found in work. If such is not the case, then work is inhuman.

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[10]See Laurance F. Shaffer, *The Psychology of Adjustment.* Houghton Mifflin, 1936.

[11]Studies of the problem of the maladjusted worker are reported in books by V. V. Anderson, *Psychiatry in Industry.* Harper, 1929; and V. E. Fisher and J. V. Hanna, *The Dissatisfied Worker.* Macmillan, 1931.

CHAPTER FOUR

# *Interest in Work*

IN THE PROCESS OF UTILIZING CAPACITIES FOR RECEPTIVITY AND ASsimilation, every individual develops mental and emotional associations which projectively become a part of the things observed and perceived. The ability to devote attention to elements in the environment, which is a function relating to the operation of sense organ capacities, is translated through highly personalized motivation into varying degrees of concentration or mental and emotional absorption with things observed. Consequently, the exercise of capacities for receptivity and assimilation becomes selective as a result of the excitement of feelings, either pleasant or unpleasant, which an object, person, or idea elicits. Hence, it is a trait of human nature for an individual to develop typical attitudes of liking or disliking people and objects observed, and to develop similar attitudes toward the ideas which they arouse.

By the time an individual has become sufficiently mature to engage in work, he has acquired certain tastes and interests which are typical of him. These influence his actions, because they color the process of ideation and motivate the adaptations and coordinations made. Therefore, individual tastes and interests limit or strengthen dissatisfaction or annoyance of work activities. If the interests of an individual are such that they are in harmony with and stimulated by conditions of work, then the natural satisfaction in work as an activity is greatly enhanced and the worker develops a generally favorable feeling tone toward his work.

## INTEREST PATTERNS

Extensive research into the phenomenon of interest as a factor in individual adjustment has shown that there are occupational, intellectual, and social patterns or clusters of interest. The results of these studies warrant certain generalizations which closely approach the status of basic principles or laws of human nature. These principles may be applied in a large variety of human relations situations, but they are particularly significant in occupational or work adjustment.

People interested in the same things are likely to be interested in each other. Therefore, people with similar interests work together in a common group with greater efficiency and fewer conflicts. That common interests arouse mutual respect is illustrated in a very simple manner by the fact that discovery of common interests stimulates and heightens the feeling tone of conversation, whereas failure to strike common ground in interests is a severe deterrent to conversation. People who through conversation or other person-to-person activities become interested in each other usually find means of heightening the stimulating effect of common interests. Observation of people in the everyday activities of life furnishes ample proof of the theory of the binding force of common interests. In a practical sense, it may be said that better work adjustment occurs when an individual is associated in work with persons whose interests coincide with his.

Interest patterns differentiate themselves not only in terms of common elements, but are also distinguishable through the range, variety, and intensity or strength of specific likes and dislikes. These elements can be measured with a reasonable degree of exactitude, thus making possible the classification of miscellaneous specific likes and dislikes into interest patterns. It then becomes possible to determine the interest patterns which characterize a given individual. From a practical viewpoint, it is desirable that a person seeking a suitable work field should select

one which matches his most distinguishing interest pattern or patterns, because people whose interest patterns resemble those of persons already successfully engaged in a given occupational field are more likely to make a satisfactory work adjustment in that particular occupational field than in any other. Reasonably satisfactory tests or interest scales have been developed which may be administered to prospective employees in somewhat the same manner as mental tests. This makes possible the determination of the probabilities for satisfactory adjustment of a candidate for employment and provides a basis for the advisement of employees on the kind of training which would lay the foundation for promotion to a field of work most likely to coincide with individual interests.

The kind of information that can be obtained for use in employment and vocational advisement through application of interest scales is illustrated by the accompanying analyses of test results for three applicants for employment in a department store. (See p. 80.) An examination of the case analyses indicates that "M. J." would probably make a satisfactory work adjustment in clerical or counter sales occupations, whereas "J. F." would find greater interest and stimulation in work involving the application of creative capacities, for example, advertising planning and production. With appropriate training and experience "J. F." might also make a satisfactory adjustment as a buyer or department manager. The third applicant, "L. J.," would probably find department store occupations highly unsatisfactory, because the interest areas of that applicant lie outside the fields of work ordinarily found in retail sales. If she were employed for department store work, a personnel department assignment would doubtless be the most satisfactory work opportunity for her.

Interest patterns as measured by interest scales usually include a broad range and wide variety of environmental objects, characteristics of people, kinds of people, and activities engaged in by people. For a given individual a list of things liked, or of interest,

## *Variations in Measured Vocational Interests*

(Based on Scores on a Standardized Interest Test)

CASE "M. J."

1. Below average vocational motivation.
2. Low interest discrimination.
3. Favorable occupational fields:
   a. First field—office occupations, non-recording type.
   b. Second field—retail sales, specific type.
   c. Third field—domestic and personal service occupations, social contact type.
4. Unfavorable occupational fields:
   a. Professional work requiring specialized training.
   b. Mechanical work requiring special skills.

CASE "J. F."

1. High vocational motivation.
2. High interest discrimination.
3. Favorable occupational fields:
   a. First field—creative occupations of design or statistical type.
   b. Second field—child direction occupations, specialized teaching type.
   c. Third field—merchandise management occupations, general promotion or individualized sales type.
   d. Fourth field—health protection occupations, personal service type.
4. Unfavorable occupational fields:
   a. Office occupations of a routine type.
   b. Mechanical occupations of a routine type.

CASE "L. J."

1. Average vocational motivation.
2. Above average interest discrimination.
3. Favorable occupational fields:
   a. First field—child guidance specialist, educational or clinical type.
   b. Second field—teacher of remedial or corrective work in elementary school or high school, particularly language arts.
   c. Third field—personnel service with female workers.
4. Unfavorable occupational fields:
   a. Office occupations.
   b. Retail sales occupations.
   c. Nursing and related occupations.
   d. Mechanical occupations.
   e. Household and related occupations.

would include an unusually large number of items which would, in many ways, appear to be highly dissimilar from the point of view of logic. This would also be true of things disliked, or of things in which the individual claimed little or no interest. Since the link between things liked or disliked and the individual is feeling rather than logic, a single item of interest has little significance apart from the experience through which it was developed, except as a motivating force, and then only if the interest

attachment is particularly strong. Therefore, interest tests gain their validity through comparability of interest patterns of individuals, rather than through the logic of interrelation of things in which a person is interested.

A group of interests taken together as an interest pattern tends to characterize the person in a general sense. That fact is utilized in an unsystematized way in forming casual judgments of people through conversation with them. An interest scale is merely a systematized means of establishing and evaluating interest patterns. People in given occupational fields tend to think alike, feel alike, and act alike to a surprising degree, even though individuality is not surrendered. It is for the reason that interests are a rough index to the way an individual will think, feel, and act that interest patterns become indicators of the probable adjustment which the individual will make in a defined social activity situation, such as working at a given occupation.

Occupational interest scales, established through discovery of the close relationship of a large number of specific interests, include reference not only to activities and things directly related to a job or occupational field, but also include some points of reference which are only indirectly related; they may even include some references which appear to have no obviously logical relation whatever. The existence of interrelated interests has greater significance for persons who construct interest scales than for persons who are attempting to place the worker in the occupation for which he has the greatest prospect of satisfactory work adjustment. However, the existence of interest patterns has significance in underscoring the fact that the worker brings a total personality to his job and is, in common with others associated with him, interested in certain things which may not directly relate to the things which workers in that field must know or do. These common interests are facets of typical personalities found among occupational groups. Assessment of such common interests is not only helpful in vocational advisement

and selection, but may likewise be helpful to the supervisor who must deal with these personalities.

The fact that interest patterns typical of different occupational groups are distinctly different is shown by the following contrasting lists of interests expressed by persons engaged in selling, as compared with persons engaged in mechanical work. The information was obtained by asking persons in these occupations to indicate their probable interest in a list of more than 1,000 items and then sorting out the 50 items which, in each instance, were most frequently selected by the persons in the two groups. No particular significance is to be attached to the order in which the items are presented here.

| Sales Group | Mechanic Group |
|---|---|
| 1. American history | 1. Arts and crafts |
| 2. Literature | 2. Blueprint reading |
| 3. Penmanship | 3. General science |
| 4. Physical training | 4. Industrial history |
| 5. Spelling | 5. Industrial arts |
| 6. Politics | 6. Mechanical drawing |
| 7. Friendly arguments | 7. Trade mathematics |
| 8. Golf | 8. Trade magazines |
| 9. Poker | 9. Athletics |
| 10. Bridge | 10. Handcraft magazines |
| 11. Musical comedy | 11. Outdoor life |
| 12. Short story magazines | 12. Making models |
| 13. Travel magazines | 13. Popular mechanics magazines |
| 14. Persuading others | 14. Popular science magazines |
| 15. Smokers | 15. Physical activity |
| 16. Entertaining others | 16. Newspaper stories |
| 17. Outside work | 17. Skating rinks |
| 18. Living at hotels | 18. Shooting galleries |
| 19. Social gatherings | 19. Boxing and wrestling |
| 20. Summer resorts | 20. Adventure stories |
| 21. Acting as a yell-leader | 21. Operating machines |
| 22. Raising money for charity | 22. Woodworking as a hobby |
| 23. Living in a large city | 23. Repairing furniture |

24. Selling a new machine to the public
25. Preparing advertisements for a new machine
26. Managing publicity campaigns
27. House-to-house canvassing
28. Being chairman of membership committee of a society
29. Receiving a commission on work done
30. Chance to make money most important part of a job
31. Attending conventions
32. Interviewing prospects in selling
33. Opening a conversation with strangers
34. Presenting a report verbally instead of writing it
35. Can usually liven-up a dull group
36. Can usually get other people to do what I want done
37. Dealing with people instead of working with things
38. Having to remember names and faces
39. Steadiness and permanence of work
40. Work involving few details
41. People who use nicknames
42. People who spend freely
43. People who are "good sports"
44. People who have many acquaintances
45. People who can get along easily with others
46. People who loan and borrow frequently
47. People who are approachable
48. People who win friends easily
49. People who gamble occasionally
50. People who do not worry

24. Reading a drawing
25. Discussing politics
26. Doing work requiring close measurement
27. Carrying out orders given by others
28. Tinkering with machinery
29. Taking chances if involved in the job to be done
30. Improving work through inventions
31. Doing work requiring little study after it is once learned
32. Work of a mechanical nature
33. Making household repairs
34. Making repairs on the family automobile
35. Working with things instead of people
36. Observing machines in operation
37. Solving mechanical puzzles
38. Regular hours for work
39. Working for wages rather than commission
40. Installing electric fixtures
41. Men who chew tobacco
42. People who pay little attention to personal appearances
43. People who believe in labor unions
44. People who are skillful mechanically
45. People who are not afraid of hard work
46. People who say what they think
47. People who can handle groups of laborers
48. People who can work in noisy surroundings
49. People who are practical minded
50. People who are physically strong

### ADAPTATION OF INTERESTS

The occupations in which an individual is likely to make the most satisfactory adjustment can be determined by using check lists for basic occupational groups or "families." However, exact determination is not possible because (1) adaptation is a fundamental element in human nature and (2) interests change with experience and maturity. For these reasons, interest scales should be clinically interpreted when applied for the purpose of vocational guidance or job placement.[1]

Regardless of the specialized nature of the interests of an individual worker, there are important points of attachment which call for a transference of feeling from within toward the world without in making suitable work adjustment. These points of projective attachment include: (1) the work activities themselves; (2) things which are done outside work hours that relate directly or indirectly to work; (3) the physical conditions of work; (4) other workers with whom the individual is brought into association; (5) the men who supervise the workers; and (6) the sometimes-remote management, "the brass hats." If the interests and attitudes of the worker in these areas can be developed in a manner which makes them positive and strong, suitable work adjustment is ordinarily attained. Conversely, negative attitudes and interests in these areas are detrimental to work adjustment.

### AROUSING INTEREST THROUGH SHARING INFORMATION

There are many fields of natural interest to the worker relative to his job and the company he works for, as illustrated by the worker's desire to be informed about such matters as company policy, the products which the company produces, finances of the company, and conditions relative to the industry of which the

[1]See Oscar J. Kaplan (ed.), *Encyclopedia of Vocational Guidance*. Philosophical Library, 1947. pp. 590-627, for descriptions of available interest tests.

company is a member. Working through natural interests to promote desired interests is a recognized principle of motivation. Capitalizing on the worker's thirst for information on matters in which he is interested is good human relations technique in industry, because it helps to make work human.

Fellow employees form points of strong interest concentration for the worker for psychological reasons already indicated. The appetite of the worker for news and gossip about his associates and their activities is insatiable. A tremendous amount of information of this type, as well as misinformation, circulates by "grapevine." Deaths, births, marriages, and other items are prime news. Feeding this interest area by providing for organized distribution of news helps make work seem more interesting and stimulating.

Many companies satisfy the appetite for news about fellow workers by publishing employee magazines or newspapers. These publications are probably read with greater thoroughness than the daily newspapers purchased by the workers at the newsstand. Items include reports about the worker's family as well as himself, stories about sports and social events participated in by representative workers, and selected reports on community affairs. For greatest effectiveness, news items should be liberally supplemented by photographs and cartoons. Enterprisingly managed employee newspapers and magazines follow an editorial policy of seeking, in addition to routine coverage of spot news, items which bring every worker into the news periodically, even though the person's life at home or in the plant does not encompass happenings that are particularly newsworthy. Nowhere in the publication field nor in the human relations field is the theory that "names make news" a more appropriate one than in relation to employee news organs.

The employee news publication is also a good medium for catering to interest in company policy, products, changes, new developments in plant and equipment, finances, safety, training,

and other personnel problems. However, better employee relations are cultivated if such material is kept at a minimum in the employee magazine or newspaper, because it is better human relations to give priority and broad coverage to news about employees themselves. Other matters in which the employee is interested can usually be more satisfactorily covered by pamphlets, leaflets, catalogues, bulletins, posters, movies, film strips, displays, and pay envelope inserts. In dispensing "official" information, better results are obtained by frequent issuance of brief, concise, down-to-earth releases than by intermittently issuing brochures containing wordy, highbrow material. Graphic presentation, in the form of photographs, illustrations, drawings, and charts, helps make such material more widely read and makes it easier to comprehend.

Under modifications of national labor laws which have recently been made, freedom of speech has been restored to management, hence, management has greater leeway in the distribution of information in which the worker may be interested. However, companies which take advantage of this new freedom and feed questionable propaganda to employees, instead of disseminating news, may find that the ultimate returns in improved employee morale are not too impressive, for it is human nature to resent misrepresentation or one-sided self-praise by employers. A better policy, by far, is to give employees the facts, to provide clear and sound explanations of these facts, and let the worker draw his own conclusions.

It is good human relations practice to present information about the company to the employee in a manner which will make him feel that he plays an important part in all of the affairs of the company. Some companies have gone to great lengths in sharing information in order to gain and hold the worker's confidence. Members of top management in some companies assume that the worker is interested in problems which might appear to managers of former days to be "none of the employee's business."

Apparently, the feeling that everything about the company is of interest to the employee is held by a few firms. Consider, for example, the following excerpt from a special letter addressed to employees by the president of a large manufacturing firm (Caterpillar Tractor Company) on the subject of a $25,000,000 bank loan negotiated by the company:

> These new borrowings become available because the banks have been impressed with the past performance and profits of Caterpillar and have confidence in the future profitable operations of the company. This is the same kind of confidence bankers and other investment people have in you and me when we borrow to buy a home or for other personal needs.
>
> As our new facilities are completed and we produce more diesel engines, tractors, motor graders, and earthmoving equipment of high quality, I expect to report that we are making profits from which to retire our special indebtedness, meet all other obligations, and pay dividends which compensate stockholders for the use of their savings. These profits, of course, will be possible only if we work with efficiency and economy in continuing to provide our customers with the kind of machines they want at prices they can afford to pay.
>
> It is highly necessary that we make efficient use of the buildings, tools and materials which this borrowed money provides, for only in this way can the sound financial position of the company be maintained. Your personal future and the company's future are tied very closely together in this important matter.[2]

While it is true that many likes and dislikes, which are the underlying factors in interest, are primarily emotional in nature, many interests are related to comprehension or understanding. However, the presence of mutual interests does not always promote mutual agreement. Therefore, it is not only necessary to share information with employees in order to stimulate interest in work, but such sharing is necessary to bring about mutual understanding. Paradoxical as it may seem, the more intelligent and enlightened the policies of a company, the more necessary it

[2]Quoted in the *Pittsburgh Sun-Telegraph*, p. 28, August 7, 1947.

is to provide complete lines of communication and understanding throughout the organization to avoid conflict. This is true because intelligent and enlightened policies are not matter-of-course and ordinary. They are the product of thought and planning and, consequently, are likely to be unusual.

In any company where it is taken for granted that policy information will trickle through an organization simply by being announced at the top, and that understanding arises out of mere knowledge of the existence of such policies, an examination of the thinking, attitudes, and practices in several departments would bring forth surprising evidence to the contrary. It would likewise reveal many departures from authorized policy as a consequence of lack of knowledge and understanding. This is especially true where changes in policy are attempted. It is easy to cling unconsciously to old ideas and practices, and likewise, human nature to be suspicious of the new until it is fully explained and becomes understood. No lack of interest on the part of the worker is involved in such situations; rather, it is the failure of management to capitalize on interest by explaining things to workers in terms and in a form or style which will encourage understanding.[3]

## AROUSING INTEREST THROUGH SUGGESTION SYSTEMS

An excellent method of arousing and maintaining interest in work, and for promoting mutual understanding between worker and employer, is the use of a well-conceived and properly administered suggestion system. An invitation to employees to pass along constructive ideas to management stimulates interest in work and thereby provides a means for improving morale. However, the company which overemphasizes the material gain to workers and directs attention to the company's hope for gain through such suggestions may find that the suggestion system, even though

[3]A program for sharing information with workers is outlined in an article by Austin S. Igleheart, President, General Foods Corporation. "A Challenge to American Management." *Trained Men*, Vol. 28, No. 6, 1948. pp. 3-10.

otherwise carefully planned, will not contribute to amicable relations between workers and management. In fact, it may be found that industrial relations are impaired rather than improved through improper or inadequate application of suggestion techniques.

Since general spread of interest among all employees and the encouragement of constructive synthesis are primary purposes of a suggestion system, effort should be made to secure suggestions from as many employees as possible. This point is emphasized because it has been the experience of many companies that a relatively small per cent of employees are the source of all suggestions received. This defeats the interest and morale purposes of the plan. A goal of one suggestion per year from each employee and an average of two suggestions each year per employee is a goal which will produce more widespread interest and satisfaction in work. Suggestions need not be limited to production improvement, nor need the plan provide for payment for each suggestion. Some of the things on which employees wish to express their ideas have little to do with actual production problems.

Building a relationship of mutual confidence and trust through examination and discussion of mutual interests of employer and employees should be sought in all employee relations activities. Therefore, it is important to bear in mind that the essence of a suggestion system is its spirit rather than its mechanics or its material elements. This has been set forth clearly by the National Association of Suggestion Systems in the following published statement:

> All suggestions should be handled in a way of which all employees will heartily approve; all relations with the suggester should, as far as possible, be kept on an individual man-to-man basis. Again, an appointed company representative should act as the personal agent of the suggester, somewhat as an attorney-in-fact, in giving him every necessary aid in working out and properly presenting his idea. Further, improved industrial relations should be promoted by constantly emphasizing fair and open-minded decisions, by striving to

> make every employee feel that a suggestion award is recognition of personal ability, a badge of honor, a symbol of merit—something in which to take great personal pride entirely aside from the cash value of the accepted suggestion. . . . One thing must never be lost sight of in the organization or operation of a suggestion system: a suggestion system is not an object in itself. It is merely a means to an end.[4]

It is the sense of personal importance generated in employees through wholehearted and sincere invitation by management for workers to submit suggestions that stimulates interest in work. Hence, a suggestion system to be successful in this respect must have the open support and encouragement of top-ranking executives in the company. Without such backing, the suggestion system is likely to become merely a routine vaguely related in the minds of employees to a company policy, implemented by a set of rules and administered by persons who have no voice in determining company policies or practices. Employees soon sense such a situation and the goodwill which might accrue is rarely generated; may actually be negated. The *form* becomes both the *means* and the *end;* the real objective becomes lost in administrative red tape.

Interest can be aroused and employee goodwill can be elicited at several stages in the installation and use of a suggestion system. In introducing the system, opportunity is provided for the company to impress employees with the importance which management places on the intelligence of its worker associates. Both in introducing the system to employees and in promoting its operation, avenues are opened for presenting information about company purposes, policies, and practices. While it is true that this type of information can be presented in other ways and under other circumstances, it is likewise true that by associating such information with a suggestion system, motivation is automatically provided. Information thus disseminated more nearly resembles

[4]"Suggestion Systems: A Brief Survey of Modern Theory and Practice." Chicago, 1944. pp. 3-4.

facts with a purpose than management propaganda and, as a consequence, has stronger appeal to employees.

In a properly organized procedure for handling suggestions, person-to-person relationships between management and individual workers are also motivated and promoted. Normally such relationships between management and workers are on the issuing of orders, instructional, or disciplinary level. In these situations management is in the driver's seat. The handling of suggestions gives opportunity for men and management to meet person-to-person on a common problem and for a common purpose. Mutuality of interests is thereby promoted.

It has sometimes been claimed that suggestion systems are used as a means of exploiting the worker. That impression is conveyed when emphasis is placed on the monetary reward which the worker receives for accepted suggestions. It is natural for the worker to compare his possible gain from suggestions with imagined profits which he believes would accrue to management through the use of his suggestion. Consequently, to make a suggestion system serve the purpose of improving industrial relations, appeal must be made to needs and desires above the physical level—appeal to motives not directly associated with monetary gain.

As has been repeatedly emphasized in these pages, the employer should, in all employee relationships, constantly recognize that every individual has needs and aspirations above the physical level. That such is the case is demonstrated by the natural human tendencies to share thoughts and feelings with others, the desire to receive recognition and praise from others, the desire for achievement, the desire to exercise control over persons and other elements in one's environment, and the need for formulation of ideas which will attract the attention of others. These are elements underlying interests of workers, not because they are workers but because they are human beings. They are needs and desires which are present in every individual to some degree. They are as char-

acteristic of workers as they are of persons who have the capacity and good fortune to become managers, supervisors, and administrators in business organizations. While the work done by members of management and their representatives gives opportunity for satisfaction of needs beyond the physical level, the average job in industry does not provide such opportunities. For that reason, anything that can be done which will give opportunity to the worker to live on his job above a physical level has industrial relations value. The suggestion system should be planned to serve such purposes. (See Chapter II.)

The elements of a good suggestion system are few and the plan may involve quite simple procedures. Any arrangement that permits ideas to be transmitted from workers to management and which results in prompt and satisfying recognition of the value of the worker's contribution is a suggestion system. Details of operation of a suggestion system will differ from company to company, and their relative importance will depend on the economy of handling of the routine elements involved. The spirit of the system is its essence as a management technique in seeking to make work human.[5]

## THE PROBLEM OF BOREDOM

The antithesis of interest in work is boredom. The problem of boredom in work is a complicated one, made more complex by confused thinking which fails to differentiate between boredom and fatigue and between boredom and monotony. Physical fatigue, which is discussed in Chapter III, is a factor intermittently affecting the capacity for strength and energy and as such is readily identifiable and measurable. Mental fatigue is not as easily identified, nor is it as easily measured. That which ordinarily appears to be mental fatigue is not such at all, but, rather, a

[5]For further information on procedures in the promoting and handling of suggestions, see Glen U. Cleeton and Charles W. Mason, *Executive Ability: Its Discovery and Development.* Antioch Press, 1946. pp. 464-471.

lowering of interest, a form of ennui ordinarily referred to as "being bored." Physical fatigue may contribute temporarily to the state of boredom, but for the most part being bored occurs without reference to fatigue. It occurs when there is no sustaining interest association after the elements of intensity, surprise, newness, or novelty—prime attention-arresting factors—have lost their initial force.

Boredom is a characteristic of persons, not of things or situations. It may range in form and intensity all the way from a feeling of listlessness to a more activating feeling of dissatisfaction or irritation. Monotony is frequently associated with boredom, but monotony is a characteristic of things and situations. Monotony may encourage boredom but it may have effects on workers, as indicated in Chapter III, wholly apart from boredom. Monotony is a quality of sameness, uniformity, or lack of variety in a thing or situation. To some persons this may be boring, while to others, the effect may be soothing or "restful." Repetitive work, by its very nature, could be described as monotonous; however, repetitive work does not always induce boredom, because of individual differences in worker responses.

Even though the incidence of boredom and its extensity may be found, through investigation, to be common to a group of individuals, its intensity is highly individual. A study of a group of workers has shown that boredom as a characteristic mental-emotional state tends to follow a normal distribution curve. About 5% of the group reported almost continuous boredom and an equal number reported that they were seldom if ever bored. For those who are seldom bored nothing need be done; for the persons who report that they are always bored probably little can be done to relieve the effect of boredom, because they are probably fed up with life in general. For the constantly bored, a change of jobs sometimes helps, but alleviation often proves temporary unless a field of high basic interest is found. However, since more than half of the group studied reported that they felt the drag of dis-

interest and wished the day's work would end fully half of the time, it is obvious that interest supplements must be provided for many workers if satisfactory work adjustment is to be attained.

Probably the tasks of work, and even of life itself, seem endless and dull at times for everyone. Every moment of the day cannot be expected to be stimulating, exhilirating, and exciting; some dull moments exist for everyone, except for euphorically unbalanced personalities. However, the fact that half of a typical group of workers find their work dull and uninteresting fully half of the time presents a serious challenge to business and industry. Such a situation is not only damaging emotionally to the worker, but boredom cuts into production through slowing down output and through encouragement of mistakes which cause spoilage and waste.

Proper job placement with reference to interest and capacity is the most appropriate means of circumventing the possibility of boredom. However, because of personal differences, this is not always an effective measure. Furthermore, there is often a positive relationship between competence and boredom. An incompetent worker is usually not bored with his work; the work he does usually presents sufficient challenge to hold his interest, even though he is not efficient in performance. It is the overcompetent worker, in the sense of possessing capacities not demanded by the job, who has the greatest opportunity to become bored. For example, it has been found that the more intelligent workers are the ones who indicate the greatest degree of boredom on routine jobs, whereas persons of lower intelligence usually find such work interesting.

Strangely enough, it is not among workers doing routine, automatic work, requiring little thought or marginal attention, that the greatest amount of boredom is reported. Nor is it on jobs requiring close concentration. Rather, it is on jobs of a semi-automatic type that greatest boredom occurs. Seemingly, the automatic job, which leaves the worker free to observe the activities

of other workers and which gives opportunity to think or daydream about other matters not related to the job, is less conducive to boredom than the semi-automatic job. The job which neither frees thought and attention, nor has in itself enough elements to permit the worker to become absorbed in it, is the one most conducive to boredom.

Where the boredom factor on a job runs high and where the job cannot be made either more automatic or more complex, alleviation of boredom can be provided by: (1) encouraging the worker to appreciate the importance of his work; (2) providing an incentive plan that has features which are personally favorable to the individual; (3) providing for change of pace; (4) permitting work interruptions which allow workers to engage in interesting diversions for brief periods; and (5) introducing mild accompanying diversions, such as music, which can be included in the span of attention without interfering with work.

In passing, it may be noted that some of the claims for the value of music at work are exaggerated. No claim for the value of music at work should be accepted until a careful investigation of the elements in the work situation has been made. The value of music as a means of reducing boredom is one thing; the extent to which music at work stimulates production or retards it is another. The effect of music at work depends on the kind of work, as well as the tastes in music of the individual. For certain kinds of work requiring close attention and clear thinking, music, if listened to, would be a distraction. Many persons who believe they are able to do mental work and listen to music simultaneously are deceiving themselves. They either do their mental tasks and listen to music alternately in quick-cycle intervals, or they block out the music for extended periods, occasionally attending to the music, or vice versa. Listening to music while doing mental work may assist the listener in glossing over lack of interest—but there is no gain under such conditions in time devoted to concentrated study; rather, there is a loss. The same

holds true for any type of work which requires concentration and thought. If accomplishment of a certain output in a certain length of time is a fundamental requirement, interest in work for its own sake is the only escape from boredom.[6]

### JOB SATISFACTION AND DISSATISFACTION

Investigations seeking to determine the extent to which workers like or dislike their work have provided results which show that interest in work is decidedly not universal. As might be expected, the extent of interest in work varies from company to company. One investigation revealed that only 39% of office workers in one company were willing to say that they were interested in their work, whereas 76% of factory workers in another company definitely stated that they found their work interesting. The average proportion of workers interested in their work in a combined survey of several companies representing a wide variety of types of work was 56%. Mild to strong dislike of their work was claimed by 25% of workers in these companies, and among the groups, 19% said they could express no feeling either way. Since obviously almost half of working groups either dislike their work activities or have no positive inclination toward interest in work, it can be observed that much remains to be done in industry on this particular phase of work adjustment.[7]

The ideal to be sought in work adjustment is full job satisfaction on the part of every worker. However, it is quite natural, in any group of people, that there will be some who dislike their work and that there will be a difference in the degree of job enthusiasm among those who say that they like their work. The quota of workers who, on a normal statistical basis, might be expected to dislike their work is approximately 5% to 7%. Therefore, if it is found that more than 10% of persons working at a given job dislike their work, it is reasonable to suppose that

[6]See M. L. Blum, *Industrial Psychology*. Harper, 1948. pp. 256-271.

[7]May Smith, *Handbook of Industrial Psychology*. Philosophical Library, 1944.

the job should be reanalyzed and the qualifications of the workers on the job re-examined. However, it must always be remembered that the reasons for job dissatisfaction often lie wholly outside the work itself and frequently are related to physical conditions of the plant, supervision, or company policy. Surveys involving several plants selected at random have shown that from 17% to 36% of workers dislike at least some features of their work, the degree of dislike and number of things disliked varying considerably, of course, from individual to individual. Expressions of complete and thorough dislike found in the survey varied from 2% to 20%.

The responsibility for work interest and liking one's job is not wholly the employer's. The employer should have a human philosophy of work, should strive for optimum matching of interests and abilities through use of adequate job placement techniques, and should periodically restudy all employees with reference to suitable placement. Where such conditions have been met, the responsibility then becomes one for the worker to assume. If the worker dislikes his work, he should either, (1) seek work that will prove interesting; (2) seek and find reasons for disinterest in present work and correct the cause; (3) study personal attitude toward work in general; or (4) find supplementary or compensatory interests. As illustrated by one of the case studies reported on page 80, low vocational interest motivation is characteristic of some individuals. The things that challenge their interest lie completely outside the areas represented by standard vocational activities. Such persons must cultivate vocational interests if they are to make a satisfactory work adjustment in the type of occupation ordinarily available.[8]

### DEALING WITH EMPLOYEE DISSATISFACTION

It is human nature to find fault, therefore, there will always be some things related to a worker's job, place and conditions of

[8]See Blum, *Industrial Psychology, op. cit.* pp. 75-131 for a more detailed analysis.

work, the worker's associates, supervision, method of payment, and special privileges about which there will be intermittent complaints. This is a normal phenomenon; in fact, a certain amount of grousing is evidence of interest in work. Often the grumbler wants nothing more than an audience to which to express a mood. He really wants nothing done nor expects that it will be. However, when feelings with reference to specific things reach the point of seeming injustice, or when it appears to the worker that there is abuse of the control over his life, fostered by work organization, then it may be considered that the worker has a grievance. In essence, a grievance is evidence of an interest of a deep-seated nature which is emanating in negative form. It is evidence that the worker's attitude toward some factor or situation has reached a state where it causes him deep concern. If not resolved, the feeling aroused by the grievance may spread to other matters and cause a broader loss of interest or result in active dislike for his work.

The handling of grievances is a problem which should receive serious consideration by the employer, not only to attain the objectives of making work human, but also as a means of reducing industrial strife. It is common knowledge that an accumulation of unsettled minor grievances often is the real issue in many strikes, although the stated issue relates to wages. The five prime rules to be applied in handling grievances are, (1) provide means for the worker to make known his grievances without prejudice or penalty; (2) provide means for prompt handling of all complaints; (3) make an unbiased investigation of each complaint; (4) adjudicate equitably and expeditiously; and (5) advise all interested parties of the settlement, whether directly or indirectly involved.

An understanding of human nature is essential to effective handling of grievances. It is often difficult to get facts, and usually the importance of certain facts relating to grievances is greatly magnified in the mind of the complainant. The longer aggrieved

feelings have been nursed, the more abused the complainant feels. In addition to getting the facts and exercising insight, the person handling grievances must know a great deal about the personality of the individual offering the complaint. Some grievances originate with fair-minded and well-balanced persons and are usually found to have considerable foundation in fact. Other grievances emanate from selfish, temperamental personalities who are seemingly happiest when they have cause for complaint. In any case, prompt, open, and frank consideration is necessary to prevent the contagion of dissatisfaction from spreading and infecting other members of the work group. As a therapeutic measure, the chronic complainer should be separated from employment or isolated, quarantined, so to speak, from the rest of the group. Handling the troublemaker is one of the most serious problems in industry today. No amount of damning or condemning will eliminate or cure troublemaking; the troublemaker must be "managed" or eliminated. Often, giving the complaining person responsibility for some of the things about which he "raises hell" is an effective cure.

A grievance usually implies criticism of someone who is directly part of management, or who represents management. It is natural for anyone who is criticized to assume a defensive or countercritical attitude. But management cannot afford to be hypersensitive to criticism by employees. Management is neither all-wise nor omnipotent. Nor does the possession of authority compensate for display of poor judgment and boorish manners. It is unfortunate, but nonetheless true, that many management personalities appear stupid, overbearing, harsh, conceited, grasping, and self-indulgent, when judged by the worker. Whether such opinions are justified or not, keen interest in work by the worker and good work adjustment cannot occur where such reputations exist. The impressions that the personal characteristics of members of management make on workers may invite feelings of grievance or may reduce them. Management must concern

itself not only with what it does, but also with impressions made personally.

Grievances are symptoms. They may be symptoms of something wrong with the person making the complaint, something wrong with work conditions, something wrong with immediate supervision, something wrong with management policy and practices, or something wrong with management personalities. In any event, the situation should be diagnosed and remedial measures taken, where indicated, and where time and future events cannot be expected to provide alleviation. No worker can be interested in his work if beset by dissatisfaction over things attendant to his work.

What is actually done in work performance is not always the important thing in work experience. What goes on in the mind of the worker is often more important. Critical evaluation by the worker of what is being done or accomplished, looking forward and planning, looking for ways of improvement, recognizing the importance of what is being done, seeing the significance of what is being done in relation to broader accomplishment, doing something as a service to loved ones or for a boss that is admired, feeling a sense of social contribution—these things or thoughts in conflict with them are ideas that pass through the worker's mind. If positively and favorably directed, they help to make work challenging and interesting. Work activities which, taken by themselves, appear to be dull drudgery, assume an air of liveliness and sparkle when enriched by appropriate ideation. In this respect, almost any type of work can become interesting if the individual enriches his labors by engaging in constructive mental activity in relation to the routines of work. That state of mind by the worker should be encouraged by management.[9]

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[9]A constructive approach to the development of positive satisfactions and job interest through a contest for the best essay on "My Job and Why I Like It" is reported in a pamphlet issued by General Motors Corporation under the title, *The Worker Speaks* (1948).

See also Robert Hoppock, *Job Satisfaction.* Harper, 1935.

CHAPTER FIVE

# *Fitness for Work*

SINCE THE DAYS OF PLATO, PHILOSOPHERS HAVE WRITTEN ABOUT a world in which every man would be engaged in work exactly suited to his interests, aptitudes, and learning. Although such a world would be mechanistically ideal, it would not be human. The concept of such a world presumes a foreordination of work forms that is not consistent with evidence. Except for primitive occupations such as fishing, hunting, soil cultivation, and animal husbandry, there is little of naturalism in man's occupations. Whether by chance or choice, occupations other than those of a highly primitive nature are man-made and follow an arbitrary pattern established with production or service objectives in mind. Presumably, if man set about to develop an entirely different set of occupations, he could do so. In this he would be limited only by his self-chosen objectives and his ability to overcome the force of tradition in social organization. This is seen in the fact that new occupations or forms of work are constantly coming into being and old forms are disappearing.

## PRINCIPLES OF WORK ADJUSTMENT

The thesis of this book is not one of tailor-made jobs for every individual, but one which contends that work can be directed toward the objectives of production and service and still be made to conform to the basic desires and capacities of man. This principle having been accepted, the task of placement still is individual in nature, but restrictions of individual interest and capacity are much less precise than a mechanistic concept would indicate.

Guidance and placement are common-sense procedures involving insight and judgment rather than exact rules and standards.

A very important reason that the concept of the "one best job—every man to his own work" is not human is the self-evident fact of human adaptability and plasticity. The human world is one in which every man has capacities which fit him for a wide variety of work activities. This does not mean that a given individual will not make a more satisfactory adjustment doing one set of work activities rather than another; indeed, human experience has demonstrated that he will. However, man is not predestined to find his greatest happiness, be most productive, or render highest service in any one specific work activity, ardent vocational guidance enthusiasts and job efficiency experts to the contrary, notwithstanding.

Theoretically, the range of work activities in which an individual might make a satisfactory adjustment is extremely broad. However, from a practical point of view, the range is limited by a set of factors which are related to the individual and to environmental conditions which restrict opportunity. The environmental conditions which either restrict or make opportunity are related primarily to social traditions and practices, industrial and commercial organization, geography, dissemination of information, and financial considerations. Sometimes these conditioning factors include persons, particularly parents, teachers, relatives, personal friends, and friends of the family. The characteristics of the individual which limit vocational adjustment basically are (1) capacity or ability; (2) interests and attitudes; (3) personality qualities; and (4) motivation.

Many persons reach sound decisions in the choice of work activity through self-directed study of the characteristics essential to satisfactory work adjustment. Such study must, of course, be supplemented by information about occupations, which can be obtained through (1) reading and directed study; (2) discussions with parents or teachers, and with friends and relatives engaged

in various occupations; (3) observation of people at work; and (4) vacation and spare-time work or other forms of temporary employment. Where these procedures do not provide the basis for choice, recourse may be had to vocational guidance and advisement services provided by schools and other agencies.

The individual may arrive at a satisfactory state of work adjustment through progressive periods of work at a variety of jobs. This latter procedure is not objectionable if the movement from one job to another brings the individual nearer his ultimate goal of satisfaction in work, or if there is satisfaction to a degree in most of the experiences. However, if such temporary sampling of jobs becomes typical of the individual, then it results in little work satisfaction; it merely feeds a feeling of unrest which is symptomatic of inadequate capacity for work adjustment.

### TURNOVER AS AN INDEX OF ADJUSTMENT

That maladjustment in work is widespread is demonstrated by distressingly large ratios of labor turnover which are reported from time to time in practically all industrial fields. In one study of turnover, extending over a period of five years, the ratio of workers separated from their jobs ran as high as 48% per year. In this study it was found that voluntary separations accounted for 30% of the turnover, a fact which reveals a high degree of dissatisfaction in work. Turnover figures vary from company to company and with type of work; reported ratios vary from 5% to 120%. It may be contended that turnover figures are not a true indication of work satisfaction or dissatisfaction because, on the average, one-third of turnover is the result of shifting demand for workers. However, the extent of turnover due to shifting demand is ordinarily known. Therefore, turnover figures can be used by a company as a rough index of work satisfaction among employees. Where good occupational adjustment exists and where relatively stable operations are typical of the industry, normal turnover should not exceed 10% to 15% per year. A higher ratio

is indicative of work conditions which warrant special investigation.

The fact that the rate of turnover varies from company to company in which the same work activities are involved indicates that conditions in some companies favor work satisfaction to a greater degree than in others. Where turnover is high, a company should assume that work in its plant has not been made human unless investigation proves outside factors to be the cause. Special need for investigation may be assumed to be present if the rate of turnover rises suddenly over a short period of time, or if it gradually creeps upward over a longer period. Just as top management requires frequent reports on production, sales, and profits from the accounting department in order to keep abreast of the economic position of the company, so, likewise, should management require monthly statements of turnover from the personnel department in order to maintain awareness of the human relations element of operations.[1]

Turnover is, of course, but one index of the status of work satisfaction within a company. Grievances, which have been discussed in Chapter IV, are another, and absenteeism is still another. Even production records will often reveal elements of maladjustment. The causes of work dissatisfaction, over which a company has control, include hours of work, wages, physical conditions of work, job routines, attitudes and practices of the supervisory force, selection and placement practices, educational programs, relations with labor organizations, public relations and company reputation, and general philosophy of management. Because of the human factors in supervision, adjustment problems often arise unexpectedly, hence the necessity for constant alertness on the part of management to seek evidence from every possible source. Fitness for work involves not only the capacities of the worker, but also the attitude of the worker toward his work.

[1]See Ray E. Hibbs, *Labor Turnover: It Can Be Reduced by Sound Methods.* Pamphlet published by North Star Woolen Mill Company. Minneapolis, 1944.

Ultimately, the problem of work adjustment becomes highly individual; it is a question of adjustment of a large number of persons with somewhat different interests, abilities, personality characteristics, motivations, and economic needs. The best time to assay the individual's fitness for work and to weigh the probability that he will make a satisfactory work adjustment is at the time of initial employment or contemplated transfer to other work within the company. Making the proper assessment of an individual's personal assets and liabilities for the purpose of determining his fitness for a specific work assignment necessitates the operation of a carefully planned program of selection, placement, instruction, and follow-up or supervision.

## ADJUSTMENT THROUGH PLANNED SELECTION

The objective of selection and placement is that of choosing and assigning persons to jobs for which they possess appropriate qualifications. Before selection procedures and standards can be established, each job must be analyzed and appraised in terms of human qualities. The problem then becomes one of matching qualities of persons being considered for employment or transfer with job requirements. Although this procedure sounds simple, it is really complex and is difficult to carry out in an effective manner.

Many companies which boast of the use of carefully planned selection routines are actually operating selection programs which are little more than organized guessing. The points at which selection programs are likely to be weak are:

1. Failure to make complete, detailed analyses of each job in terms of the operations, knowledge, materials, tools, equipment, and work conditions involved.

2. Faulty or incomplete translation of job elements into human skills, understanding, attitudes, and personality characteristics.

3. Failure to set up procedures which provide for the use of special measuring devices and which establish sources of information that will reveal whether the applicant possesses the qualities sought.

4. Failure to use, or inappropriate use of, information revealed by selection devices.

5. Inability of persons using the established selection procedures to make sound decisions on the basis of information revealed by the selection devices.

6. Assuming that the applicant will make a satisfactory adjustment and remain content on the job, even though he possesses qualifications which exceed the requirements of the job.

To say that selection and placement procedures with reference to job fitness are inadequate in many companies is stating the case mildly. Even though jobs are analyzed, required qualities specified, and elaborate paraphernalia put into operation, haphazard selection may occur if qualities sought, and sources of information which reveal those qualities, are not closely correlated in placement practice. This highly essential correlation involves three steps:

1. Determine clearly the qualities to be sought in the candidate for a particular job.

2. Get information which reveals these qualities.

3. Interpret and evaluate the information in terms of job requirements.

Explicit matching in the first two steps is essential. The manner in which this may be done is well illustrated as applied in one industry by procedures described in a manual on *Selection and Employment of Transit Operating Personnel,* developed by a committee representing the managers of several urban bus and street car transportation systems.[2] Through careful study of the requirements of the job of operating a street car or bus in con-

[2]Published by the American Transit Association, New York, 1946.

gested traffic conditions, the committee established the essential qualities for meeting the requirements of the job, and then, through further research, developed selection devices for use in obtaining information with reference to these qualities in applicants for employment.

The qualities to be sought in an applicant for the job of street car or bus operator and sources of information through which the qualities may be judged are shown in the accompanying table. (See p. 108.) The summary was prepared for management officials of an urban bus transportation company to show the application of the procedures recommended by the American Transit Association. It should be noted that the plan requires that analytical judgment be used in evaluating employment information. Critical evaluation is essential to any plan of selection if it is to produce valid results. However, it is likewise true that the exercise of sound judgment requires comprehensive and objective information.

The selection plan outlined in the table is illustrative. For other jobs other qualities would be sought. The significance of the illustration lies in the fact that (1) the qualities to be evaluated and the sources of information to be used are specified in the plan, and (2) explicit matching of qualities with clearly designated sources of information is assumed. This procedure minimizes the influence of generalized impressions in making appraisals of the qualities sought.[3]

Planned selection to determine job fitness goes far beyond the random use of miscellaneous selection devices to assess vaguely defined qualities. Selection practices must rise above the level of clerical routines if they are to be effective, because selection assumes evaluation. In evaluative selection, job characteristics must be translated into human characteristics and information about

[3]The tests and other devices recommended in the plan are described in the manual on *Selection and Employment of Transit Operating Personnel.* The procedures presented in the manual have general application but the plan must be adapted to meet requirements of every job to which it is applied.

## Employee Selection Plan

| *Operator Qualifications* | *Sources of Information* |
|---|---|
| 1. Is the applicant old enough to be stable and responsible, yet young enough to be trainable and to have prospects of a long career with the company? | 1. Application<br>Birth Certificate<br>Credit Bureau Report |
| 2. Is he honest, reliable, of good reputation and high moral character? | 2. Credit Bureau Report<br>Personal Investigation<br>References<br>Police Report |
| 3. Is he physically sound and in good health? Does he meet standards on vision and hearing? | 3. Medical Examination<br>Visual Skills Tests |
| 4. Has he a strong desire to do this type of work? Is he likely to continue to be satisfied in this job? In other words, is he properly motivated? | 4. Application<br>Interview |
| 5. Is he likely to be an industrious, steady worker who can be depended upon to do his job day by day in an efficient and attentive manner? | 5. Application<br>Interview<br>References |
| 6. Is he clean-cut, neat, well-mannered, and of good appearance? Will he make a good impression on passengers? | 6. Interview<br>References |
| 7. Is he affable, friendly, and congenial? Is he likely to get along with fellow workers, supervisors, and passengers? | 7. Interview<br>References<br>Personality Test |
| 8. Is he mature, stable, realistic, and emotionally well-balanced? Will he remain calm, composed, level-headed, and even-tempered in the face of emergencies or annoying situations? | 8. Interview<br>References<br>Personality Test |
| 9. Is he teachable? Can he grasp instructions quickly? Can he learn to do, with speed, skill, and self-control, the movements required in operating a commercial passenger vehicle? | 9. Application<br>Interview<br>Mental Ability Test<br>Motor Ability Test |
| 10. Is he likely to be a careful and safe operator after he has learned the job? | 10. Application<br>Personality Test<br>Motor Ability Test<br>Police Report<br>References |

the candidate must then be translated into degrees of the required characteristics possessed by the candidate. In other words, specifications must be prepared and the applicant must be evaluated with reference to those specifications to determine his fitness for the job.

## EVALUATION IN SELECTION AND PLACEMENT

Evaluative selection requires that standards of evaluation be established. These standards should be stated in two forms: (1) desired ranges, and (2) acceptable outside limits. By using standards in this form—both restricted and within broad limits—one quality can be more readily balanced against others in making a total evaluation of the candidate. In applying standards the person doing the evaluating must (1) decide when a candidate is acceptable where objective standards are provided; (2) evaluate information for which no common standards can be provided; (3) obtain supplementary information if needed with reference to a particular candidate; (4) check information and correlate all the evidence through a placement interview; and finally, (5) make an evaluative rating of the candidate on each quality and also rate the candidate as a total personality.[4]

The point of coordination in evaluative selection is the placement or evaluative interview. This is a probing, patterned interview conducted subsequent to the accumulation of pertinent information about the qualities of the candidate which are to be judged. The interview is conducted by a trained interviewer upon whom is placed the responsibility of judging the degree of fitness of the candidate. Prior to the interview, all information previously assembled is codified, recorded, and tentatively evaluated. The interview provides opportunity for verification and extension of the evidence relating to the candidate's fitness. This permits final evaluation and recording of appraisals.

[4]The procedure for conducting an evaluative interview is set forth in another transit industry manual entitled, *The Placement Interview for Transit Employees.* American Transit Association, New York, 1946.

A record of the entire transaction with the candidate should be made on a special form showing the information used and the evaluations made. This record, along with comments supplied by all persons dealing with the case, should be filed as a case record. The record can be referred to at a later date to determine whether an appropriate evaluation was made. This can be determined by the degree to which the candidate displays fitness for the job through records of his work experience.

Maintenance of a case record on each person employed thus provides a means for checking the selection procedure, reviewing sources of information, and validating standards. It also provides a basis for making changes or improvements which experience with a large number of candidates may justify. Perhaps more important, the case record provides means for checking the quality of judgment of the person who made the evaluation. By checking the various elements in the procedure, information sources, and the evaluations made, the company is protected against guesswork and alibis in selection and placement.

The selection procedure now widely used in the transit industry has been cited in detail by way of illustration.[5] All of the elements in the plan may not fit the needs of other industries because selection procedures should be custom-made for every company and, to some extent, for every job. However, the general philosophy underlying the plan is unquestionably sound and every employment procedure should include most of the steps involved, even though the elements may differ.

Some employers have criticized the plan by stating that it (1) requires too much time for each candidate, and (2) does not eliminate the factor of judgment. The objection that any procedure for determining job fitness requires too much time generally means that management is considering the immediate cost of the procedure. Whether a procedure costs too much must be measured in terms of its effectiveness over a reasonable period of

[5]See footnotes 3 and 4.

time and by the extent to which it helps keep down other costs. Any procedure that fails to serve its intended purpose is expensive regardless of cost, be it great or small.

Ineffective selection procedures result in excessive costs for initial training and, because of inevitable turnover, also result in high replacement training costs. Many of the indirect gains from better work adjustment through accurate selection and placement are not always accountable in dollars and cents; however, it may be assumed that loosely-formulated, quick-action selection procedures are always expensive in the long run. In general, it may be concluded that the gain in making work human through sound selection usually justifies any added cost which may be incurred, provided there be any.

The objection that judgment is not eliminated by procedures herein suggested is also easily answered. Judgment is never eliminated in employee selection and placement, even though haphazard and deceptively simple procedures are used. That judgment not applied at the time of selection is often applied later, is shown by high rates of disqualification in training and excessively high rates of separation after brief tryout on the job in companies having inadequate selection procedures. Since there are no sound automatic techniques of selection which eliminate judgment, it is necessary to establish procedures for obtaining information about applicants which will permit the formation of judgments on the probability that an applicant will or will not prove to be a suitable employee after he has been hired and trained.

Although there is no substitute for the use of judgment by the person or persons responsible for making selections among applicants, accuracy of judgment can be improved by clear and concise statements of job requirements and by establishing means for obtaining necessary objective information about candidates. Furthermore, the element of judgment is a human factor and decisions reached will be valid only to the extent that the person

doing the selecting is capable of making reasonably accurate appraisals. The requirement that valid decisions be reached on the basis of information about the candidate, ranging in objectivity from verifiable personal data and exact test scores to highly subjective opinions about the candidate supplied by himself and others, would probably disqualify a large percentage of employment clerks and interviewers who are today casually deciding the fate of applicants for positions in many companies. The requirement might even present a challenge to a fair share of personnel and employment managers, as well as to many department heads found in commercial establishments. The current need for higher calibre minds with specialized training, in both the scientific and practical elements of evaluating human nature, is far greater than top executives in industry realize. This barrier to better work adjustment through sound selection and placement must be removed if work is to be made human.

### THE FUNCTION OF TESTS IN PLACEMENT

Unfortunately, many employers have been led to believe that selection and placement problems can be solved easily and quickly by the introduction of psychological tests. This is a tragic misunderstanding that has been fostered on the one hand by test enthusiasts seeking to sell tests or consulting services, and on the other by limited-vision management, seeking a simple solution to a complex and difficult problem. Tests have a place in the selection program, indeed, a very important place. But tests are tools to be used for the specific purpose for which they are designed and by technicians qualified by training and experience to use them. This fact does not preclude their use by personnel workers in industry, but it does make ridiculous the "buy and try" approach ordinarily used. Tests should be applied by persons trained in test administration and results should be interpreted by a person familiar with the purposes of tests, their relation to other sources of information, and statistical methods of adaptation and valida-

tion. Any person not having such technical skill and knowledge should acquire it before attempting to use tests, whether he be an employment clerk, a personnel manager, the president of the company, or, for that matter, a teacher of psychology.

Psychological tests are devices for obtaining information in a brief period which might otherwise be obtained through an extended tryout period. They have advantages over tryouts, other than economy of time, in that the exposure of candidates can be controlled for uniformity. They are subject also to precise scoring, and the results are usually more objective than rated observations of the candidate obtained during a tryout period. Properly used, tests can greatly improve the accuracy of prediction of satisfactory work adjustment. But absolute accuracy of prediction by means of tests of human adjustment is not possible; nor is absolute prediction of human behavior possible by any other means, for that matter. Proper placement of 5 out of 6 candidates is excellent prediction. Under the most favorable conditions, using every known refinement, accuracy of placement rarely exceeds 9 out of 10 candidates, except in chance situations which are not likely to again exist. Accuracy of placement of 3 to 1 is distinctly better than average.

Test scores do not provide a *substitute* for other information normally used in employment; however, they do provide needed *supplementary* information. Used as a substitute for other employment information, test scores are likely to be wholly inadequate as a basis for forming judgments about the suitability of prospective employees. This is true because tests usually reveal little more than information on one or more special capacities and a limited number of personal characteristics which the new employee is expected to bring to the job. Thus, if test scores alone are used, important qualities or limitations of the candidate are likely to be overlooked. Hiring by tests alone is equivalent to hiring only that part of the candidate revealed by the tests; whereas, the candidate brings a whole personality to the job. Hence, tests are not

a proper substitute for the personal history blank, references, confidential investigations, physical examination, interview, or other employment techniques.

In general, tests are devices for obtaining samples of behavior under controlled conditions. To the extent that such samples of behavior are related to subsequent behavior on the job, predictions of probable success or failure can be made. Such predictions cannot be expected to be accurate in all cases for two reasons: (1) no tests have ever been devised which are perfect instruments of prediction; (2) factors in personal make-up, not related to the characteristics measured by tests, may make success possible or may cause unsatisfactory performance on the job, despite the strength or weakness of the characteristics measured by the test.

### THE CHOICE OF TESTS

Satisfaction from the use of tests in selection requires that the tests used be chosen with adequate understanding of the major requirements of the job and equally competent understanding of the sampling qualities of the tests. The first step in introducing tests is the analysis of the job for which tests are to be used. The next step is interpreting the requirements of the job in terms of human characteristics, performance abilities, and personality traits, including the capacity for personality and skill development. The final step is the selection or construction of those tests which measure significant characteristics required by the job. Although this is the final step in the introduction of tests, it is but the beginning of the task of applying results judiciously and determining the merits of tests in employment routines.

The importance of analyzing the job should be understood. Many employment officials assume that a general job description will suffice for employment purposes. Such is not the case, because, if tests are to be introduced and used effectively, a detailed statement of duties and responsibilities is a prerequisite to the choice of appropriate tests. For the purpose of choosing tests, the job

analysis should always include a statement of the length and nature of training and induction procedures required to qualify for the job, because one of the fundamental purposes of tests is to determine the capacity of the candidate to profit by training. If there is a standard job sequence whereby the candidate is expected to move on to another job or series of jobs, information about subsequent work activities should also be included in the job description to the extent that they can be anticipated.

The choice of tests requires a knowledge of tests. Herein many companies have been misled because, unfortunately, most tests have not been developed for industrial use and are frequently named in terms of theoretical concepts of human characteristics. For example, intelligence tests may measure intelligence in terms of a restricted abstract concept which has more significance in scholastic circles than in industry. As a consequence, academic lingo, such as "intelligence quotient," "mental age," and "mental maturity" not only has little meaning when applied to industrial situations, but, through implication of false significance, are often confusing and harmful.

Even the statistical concepts of academicians relative to tests are confusing. Academically, the concept of "high, average, or low" with reference to test scores, and the layman's inference of "the higher, the better," are often misleading. Evidence obtained through the use of so-called intelligence tests and other types of tests in industry does not justify the inference "the higher, the better." Rather, it has been shown that there is often a range of scores on a test from which satisfactory employees can be selected. Persons who attain relatively low scores on a test are seldom suitable; although, conceivably, for some jobs this might be possible. Often those with extremely high scores are not suitable for certain types of jobs. This, of course, is not always true; therefore, no hard and fast rules can be applied to all tests and all jobs. Only through trial of a particular test for a particular job can standards be determined. Although prejudgment may aid in choosing a

promising test, only actual experimental use will demonstrate the merits of the test; and only experimental use will show the preferred hiring range of scores.

### DETERMINING THE MERIT OF A TEST

The determination of the merit of a test, when injected into an employment situation, is found in the answer to a series of questions, *"How much improvement in selection occurs as a consequence of the introduction of tests? Is a better qualified employee secured than has previously been hired? Is he easier to train? Does he stay on the job longer? Does he have fewer and less costly accidents? Can he be upgraded?"* Moreover, in making these comparisons there are distinct disadvantages in comparing new employees with those that have remained with the company. A more pertinent question is: *"How does he compare with those who were discharged or who left the job?"*

The purpose in applying tests is not to attain perfection in selection, but to obtain the highest possible proportion of satisfactory placements among available candidates. Tests aid not only in accomplishing this objective, but, comparatively speaking, also indicate the general quality of persons selected. The test scores of those selected provide an index whereby an estimate can be made, at the time of selection, of the proportion of those employed who will qualify for the job and be retained. Thus, even though test scores will not always indicate the identical persons who will prove satisfactory, the score level will indicate the proportion that will prove satisfactory. Such information, by which advance predictions can be made of separation during training or in the early weeks on the job, provides the employment office with an index to gauge the extent to which over-employment is justified to provide a specified number of qualified workers.

A word of caution about experimental determination of the relationship of a test and score ranges to job performance is in order. Trial with a few cases is never sufficient; experimental use

with a large number of cases, over a considerable period of time, is usually necessary to determine the merits of a test. Frequently, experiments conducted by persons unfamiliar with test validation prove nothing in the way of evidence of the suitability of the test except that it was not given a fair trial. For that reason, unless someone in the company is familiar with validation of tests in their industrial application, competent advice should be sought, both in the choice of tests and in subsequent experimentation with them.[6]

Although marked progress has seemingly been made in recent years in the application of psychological tests to the problem of determining fitness for work, actually little scientific or technical advancement has been made in the measurement of human capacities. There has been rapid expansion in the extent to which tests are used in industry, but this merely means that more companies are using tests. In one sense, it means that a large number of companies are now following practices which a few farsighted companies instituted at least twenty-five years ago. The most significant new idea in psychological testing which has been developed in recent years is found in the fact that psychologists and others are beginning to recognize that tests are clinical tools to be used only by persons who have evaluative skill.

Even the widespread use of tests in the armed forces, so far as one can learn from published reports, has resulted in no strikingly new developments in testing, nor have any unique or unusual tests been produced. This condition suggests the existence of a need for a new experimental approach to the measurement of fitness for work. It is the author's contention that a necessary first step toward this much-needed new approach is the analysis of work situations in terms of basic human characteristics such

[6]For a general statement of varieties of tests and their use in selection and placement see "How Efficient are Your Hiring Methods?" by Robert N. McMurry. *Personnel Journal.* Vol. 26, No. 2, June, 1947. For a discussion of the application of tests in a specific industry see "Use of Tests in the Transit Industry" by Glen U. Cleeton. *Passenger Transport.* Vol. 4, No. 19, September 16, 1946.

as those set forth in preceding chapters. Until jobs have been so analyzed, measurement of fitness for work is likely to continue to be exploratory and empirical.

These observations do not mean that the use of tests in selection and placement should be minimized because the contrary seems to be the desirable course. More extensive use of tests is recommended, but intelligent experimentation should supplement application of existing knowledge. The lack of genuine progress in the experimental development of measures of human capacity can generally be explained by the lack of funds for extensive research in psychological analysis by persons competent to make such studies. This situation encourages the conclusion that industry must subsidize such experimentation if future progress is to be made in the application of tests for the determination of fitness for work.

## TRADITIONAL SELECTION DEVICES

Although it has been stated that tests are useful to the extent that they provide supplementary information which can be used in the determination of fitness for work, it must not be assumed that other sources furnish more important or more reliable information. Many of the devices which are traditionally used in selection and placement could, in most instances, be greatly improved, both in terms of the significance of the information contributed and in the reliability of that information. Specifically, the devices used in selection and placement which are subject to considerable improvement are: (1) the application blank and personal history form; (2) the medical examination; (3) references and other reports on the candidate obtained from outside sources; and (4) the interview.

When an applicant asks for consideration as a prospect for employment, he is but a name and a physical assemblage which may, at first contact, impress another person favorably or unfavorably. But since it is clearly true that first impressions and such

information as might be obtained through brief questioning are an insufficient basis for evaluation, a search for additional information must be instituted. Thus, various selection devices are pressed into service. The object in their implementation is to obtain usable and reliable information in an optimum period of time. Therefore, the merit of any selection device should be determined in reference to the purpose it is supposed to serve. Any device should be discarded, revised, reorganized, or otherwise supplemented if the information obtained through its use is inapplicable or unreliable, or if the information is insufficient to provide a basis for forming judgments on the entire range of qualities sought. The ultimate plan should include devices which, taken together, furnish all of the employment information needed to make a sound evaluation.

## IMPROVING THE INTERVIEW

Among traditional devices on which considerable dependence has been placed in determining fitness for work, the interview technique, as used in most companies, is undoubtedly the weakest link in the chain of selection procedures. The interview is often an unreliable means of obtaining valid evidence on the applicant's interests, desires, and capacities for one or more of the following reasons:

1. Many interviewers merely engage in a friendly chat with the prospect, forming impressions on the basis of appearances or chance statements.
2. The interview is not directed and controlled.
3. Insufficient information is obtained.
4. The points covered in the interview are not related to information from other sources.
5. No record of the interview is made, or, if made, is more or less general in nature.
6. The interviewer does not know what he is looking for.
7. The interviewer lacks insight.

8. The information obtained is rarely evaluated at the time of the interview, if at all.

Numerous efforts have been made during recent years to improve interview techniques, particularly as used by personnel workers in industry for the purpose of determining fitness for work. Qualifications of interviewers have been stressed, special methods of questioning have been proposed, and evaluative procedures have been formulated. The most promising progress has been made in the development of techniques for controlled and directed evaluative interviewing.[7]

### THE EVALUATIVE INTERVIEW

The evaluative interview combines interview techniques with evaluative procedures. It supplements all other selection procedures and occurs after information which can be made available through other selection procedures, including brief preliminary interviews, has been obtained. All information obtained through other procedures is reviewed prior to the evaluative interview and such information is combined with that gathered during the interview. While the interview is in progress, or shortly thereafter, information obtained is evaluated in terms of specific characteristics required on the job. For example, in an evaluative interview, all the information obtained through the devices listed on the right-hand column of the selection plan presented on page 108 would be evaluated in terms of the desired characteristics shown on the left side of the page. After the particular qualities, which have been specified as necessary to demonstrate fitness for the

[7]Important information relative to interview procedures will be found in the following publications:

Walter V. Bingham and Bruce V. Moore, *How to Interview.* Harper, 1941.

*Manual of Employment Interviewing: Research Report No.* 9. American Management Association, New York, 1946.

Richard A. Fear and Byron Jordan, *Employee Evaluation Manual for Interviewers.* The Psychological Corporation, New York, 1943.

*The Placement Interview: Civilian Personnel Pamphlet No.* 15. War Department, Washington, D.C., 1945.

job, have been evaluated separately, then, and only then, would an evaluation be made in terms of the overall potentiality of the candidate for the job.

When used, the evaluative interview becomes the final and most important step in determining fitness for work. The requirements for proper functioning of the evaluative interview are as follows:

1. Specifications of fitness for work must be stated in terms of qualities which can be quantitatively evaluated.

2. Definitive sources must be used for procurement of essential information relative to these qualities.

3. A method of summarizing and recording information obtained prior to the evaluative interview must be established.

4. All information obtained prior to the interview must be reviewed and most of it evaluated in preparation for the interview.

5. An interview guide must be prepared and a controlled or directed method of interviewing must be followed.

6. Immediate evaluations of information obtained through the interview must be recorded.

7. A series of key questions which will elicit desired information must be prepared in advance for use in the interview.

8. Key questions should be phrased in a manner which will provide a basis of verification of information already available as well as elicit new information.

9. The interviewer must be thoroughly familiar with the key questions and have an ample reserve stock of questions by means of which he can pursue a line of interrogation to a point that will provide the supplementary information needed to make an evaluation.

10. The interview must be sympathetically and skillfully directed.[8]

[8]For a description of an evaluative interview procedure which meets all of the requirements herein set forth, see *The Placement Interview for Transit Employees.* American Transit Association, New York, 1946.

Use of the evaluative interview places the responsibility for decision relative to an applicant's fitness for work precisely where it belongs, i.e., at the final point of contact with an applicant after suitable information for formulating judgments has been accumulated. This does not minimize the importance of tests, application forms, personal history records, references, personal investigation, preliminary interviews, medical examination, and other selection and placement tools. On the contrary, the use of an evaluative interview makes it all the more necessary that other employment procedures be used to provide adequate and reliable information. Consequently, any organization which adopts the evaluative interview procedure will probably find it necessary to overhaul rigorously all other procedures designed to determine the suitability of an applicant for employment.

## IN-SERVICE APPRAISAL

It frequently becomes desirable to determine the suitability of a worker or his fitness for his job after he has been placed in service. With new employees, particularly, follow-up appraisal is essential. In many other instances, employees in service must be appraised with reference to promotion, job transfer, or pay change. Hence, determination of fitness for work is not limited to initial employment. In one form or another, employee evaluation is constantly in progress.

In-service appraisal of workers should, in general, follow the plan recommended for selection and placement. The basic elements of that plan are:

1. Determine the qualities to be evaluated.

2. Establish procedures for procurement of evidence or information.

3. Classify, interpret, and record information in usable form.

4. Supplement information and make appraisals by using evaluative interview procedures.

The fundamental differences between evaluation of the employee who is already in service and evaluation at the time of employment are:

1. The objective of the in-service evaluation may call for consideration of a higher degree of the same qualities, appraisal of certain qualifications which were not considered at the time of employment, or the judging of the employee with reference to an entirely new set of capacities and traits.

2. More direct evidence or information is normally available for making in-service evaluations.

The importance of clearly determining the qualities to be appraised cannot be overemphasized. If the worker is being appraised for job transfer or promotion, the evaluation should be made in terms of the job for which transfer or promotion of the worker is being considered rather than the job which he is leaving. It is equally important that up-to-date and complete records be maintained on every worker in order that appraisals may be facilitated when the need arises. The case file on each employee, which is initiated at the time of first contact when the applicant is seeking employment, should be kept actively alive throughout the selection, placement, induction, training, and probationary periods. Thereafter, records of production, compensation, spoilage, absenteeism, accidents, illness, supplementary training, complaints, citations, disciplinary actions, surveys, ratings, interviews, special incidents, supervisors' reports, and any other materials which may throw light on the qualities of the individual should be added to the individual file.

Some companies provide for periodic appraisal of each employee without reference to consideration of change in status. Such appraisals, on an annual or semi-annual basis, are good human relations practice, provided they are not made in a perfunctory manner. The widely-used practice of having employees rated on a uniform scale is a procedure that is likely to become perfunctory. If periodic rating is used, it should be done in con-

nection with a review of the employee's record and in connection with an evaluative interview especially designed for that purpose. This responsibility is one which should be jointly shared by the personnel department, the foreman, and his superintendent.[9]

### FITTING THE WORKER TO THE JOB

The purpose of all recruiting, selection, and promotion procedures is that of placing on each job persons who show the greatest degree of fitness for the particular job. After the most suitable workers, those who have the greatest potentialities and who are most likely to make a satisfactory adjustment, have been chosen, much still remains to be done in fitting the worker to the job. The new worker must be properly introduced to the activities in which he is to engage; he must be properly trained for work activities and, thereafter, must be supervised on the job. If these are inadequately planned and executed, then much of the preliminary work relative to placement is wasted effort. However, even the most carefully planned and humane procedures for selection, training, and supervision will not wholly eliminate occupational maladjustment or prevent maladjusted individuals from becoming members of the work group. It seems inevitable that there will be a certain percentage of misfits in any work situation. It is the responsibility of management to keep the percentage of misfits at the lowest possible ratio.

When other elements in the remainder of the social environment of the individual promote emotional stress or when the personality make-up of the individual tends toward maladjustment, a heavy burden for personal unification is placed on occupational activities. This burden is frequently greater than the

[9]For helpful suggestions on employee appraisal problems see:
Herbert Moore, *Psychology for Business and Industry*. McGraw-Hill, 1942. pp. 174-208 and 291-328.
Robert N. McMurry. *Handling Personality Adjustment in Industry*. Harper, 1944. pp. 153-290.
S. W. Carter and M. A. Kraft. *The Case Interview Plan of Supervisory Control*. American Transit Association, 1948.

work activities alone will bear. Consequently, although work is made human in terms of the average person, some individuals will not make a satisfactory work adjustment. Under such conditions the attention of the employer must be directed toward the individual rather than toward work activities. This ordinarily means that the individual must either be separated from employment, or be given special assistance in bringing about a more adjustive personal unification.

For non-adjustive employees, clinical psychological aid must often be provided. Such aid involves careful analysis of outside social forces to which the individual is subjected and therapy counseling with reference to personality coordinations. Some companies have made staff provisions for such clinical assistance. Where qualified staff counselors are not provided, outside consultants are frequently used. Regardless of the provision made for handling problem cases, the important point is that of recognizing that certain employees require special assistance in making adjustment. If assistance is not provided, such employees will do damage to the whole work situation and prove detrimental to themselves, their employers, and fellow workers.

The maladjusted workers in industry have not been sufficiently identified to make clear description possible. Indeed, it would require an extensive array of descriptions to identify them, because maladjusted persons do not fall into a specific type classification. They can best be recognized as those workers who are called "problem cases" or "troublemakers" by employers. Their number is something of a matter of guess, but reasonable estimates place the figure at approximately 20% of the employed group. Roughly, then, it may be said that one out of every five employees needs personal help beyond that given others in making a satisfactory work adjustment.

The employer may say that providing special aid for maladjusted workers is not his responsibility and that discharge is his only resort. This viewpoint, in addition to being socially un-

sound, is shortsighted because it usually costs as much or more to train a replacement as it does to salvage a so-called problem case. Companies which have used a plan for helping unadjusted workers to make a better adjustment have found that 70% to 80% of such persons can be redirected to become satisfactory employees. When rehabilitated, such workers usually become extremely loyal in their support of company policies and practices.

Certainly the social importance of helping the worker make a satisfactory adjustment should not be overlooked, especially should the employer accept this responsibility with reference to the person entering upon work for the first time. The fact that many new workers change jobs several times during the first year or two of employment cannot be charged entirely to failure to choose workers who display fitness for their jobs. Rapid shift of new workers is probably an indication that most companies do not give sufficient attention to work adjustment from the point of view of the individual. One study of young workers showed that over half the group had changed jobs during the first year of employment. The average number of jobs held was 2.6. One girl had worked at 26 jobs in 4½ years, or an average of 6 jobs per year. Obviously, there is something fundamentally wrong with a person who changes jobs 26 times in 4½ years; such a person probably needs help beyond that which any employer is able to give. But there is also something lacking in a system which results in half of the new workers changing jobs during the first year of employment.[10]

Fitness for work means more than mere capacity to perform the tasks involved in a job. It also means possession of interests and attitudes which permit the development of feelings of satisfaction in work. To this end the employer must not only choose workers with care, but must also provide conditions of work and

[10]For suggestions on methods of handling maladjusted workers, see:
Moore, *ibid.* pp. 423-449.
McMurry, *ibid.* pp. 67-115.

individual assistance to workers which promote self-realization through work. Appropriate work adjustment of all employees is probably unattainable. However, an objective of 90% should be sought instead of apparent present average attainment of approximately 50%.

CHAPTER SIX

# The Opportunity to Work

ONE OF THE MOST DIFFICULT PROBLEMS OF SOCIAL ORGANIZATION IS that of providing opportunity to work for those who want to work. In 1948, with more than 60,000,000 people gainfully employed, there were at least 2,000,000 persons allegedly wanting to work who seemingly could not find suitable work. To some extent such a degree of unemployment in a period of extreme demand for workers can be discounted. It is always true that some persons who are statistically unemployed do not really wish to work. For many of these persons, economic motivation has been destroyed under a program of unemployment benefits which provides relief payments equivalent to a marginal wage for those who choose to remain unemployed. Like many legalized social welfare programs, the intent of the unemployment benefit plan is often defeated in its application. When ineptly administered, unemployment insurance debases work and glorifies loafing; it destroys the opportunity for satisfaction in work.

## NORMAL UNEMPLOYMENT

Despite the paradox of theoretical unemployment at a time when jobs were plentiful, it must be recognized that there will always be a group of genuine unemployables. It is difficult to determine how large this group of unemployables really is. Available unemployment statistics suggest that an estimate of 3% to 5% of the total labor supply is an appropriate one. But this estimate does not take into consideration the marginal employee who, though given an opportunity to work, renders highly unsatis-

factory service. Estimates of the number of marginal workers vary from 10% to 25%. A true estimate cannot be formulated because such estimates are related to the point at which standards of performance are set. However, if the lower estimate on marginal workers is combined with data on unemployment in a peak production period, we may conclude that 15% of persons in the total labor supply are either unemployable or are likely to be forced into the unemployed group with the first evidence of slackening demand for production. This suggests that we could quickly shift from a situation in which 2,000,000 are unemployed to one in which 9,000,000 to 10,000,000 will be unemployed. Thus, it may be observed that the problem presented by 2,000,000 allegedly unemployed in a period of peak production is simple in comparison with the very real problem of unemployment, which has periodically plagued this nation.

### ABNORMAL UNEMPLOYMENT

It is easy to pretend that periods of mass unemployment are a thing of the past, and to assume, or hope, that such conditions will not again exist. But such hopes deny both the facts of history and the nature of the economic forces operating both within the nation and abroad. Some students of human affairs claim that recurring cycles of relatively full employment, followed by periods of mass unemployment, are inherent in the private enterprise system. Others consider unemployment an unsolved socio-economic problem, which can be brought under control within the framework of any system of economic organization. In any case, the fact remains that the solution to the problem remains to be found.

Attempts to solve the problem of mass unemployment through government policy and planning have been unsuccessful. Therefore, if government intervention is to aid in the provision of opportunity to work, we must learn from the mistakes made during the twenty-year period from 1928 to 1947, and must seek a new approach to the solution of the problem. Although frequently

questioned, substantial support can be found for the following propositions:

1. If policies and practices of our national government did not foster a long period of excessively high unemployment from 1930 to 1940, they certainly did not solve the problem.

2. The problem of unemployment was artificially solved by demands for war production from 1941 to 1945.

3. A backlog of delayed demand for civilian production is currently (1948) solving the problem of unemployment.

4. Since 1945, national governmental policies have fostered inflationary conditions, which appear destined to result in a sharp deflationary break. If such a break occurs, it will result in mass unemployment unless new means of dealing with this problem are devised.

When the next period of mass unemployment will come, denying the opportunity to work to millions of persons, has been variously estimated. That it will arrive sometime in the 1950's seems likely—it seems likely unless war, or other unforeseen circumstances, intervene to delay its occurrence. Before discussing the circumstances that might delay or ameliorate the effects of the next downtrend in the business cycle, let us look at some of the facts and conditions of the last period of mass unemployment.

During the period from 1928 to 1933, unemployment totals increased from approximately 2,000,000 to nearly 13,000,000 and then slowly diminished to about 6,000,000 in 1937. The figure rose abruptly again in 1938 and mass unemployment continued to be a serious problem until 1940. It was only through war production that a decade of high unemployment totals was brought to a close. That dreary period followed a boom period of almost equal duration. We are now nearing the close of another ten-year boom period. Must we look forward to the beginning, within a few years, of another period of mass unemployment?

The increase in unemployment in the five-year period from 1928 to 1933 developed from a 1928 base of total employment

of 46,000,000. Therefore, if a period of depressed business activity of equal degree occurs in the 1950's, we may look forward to a situation in which approximately 20,000,000 persons will be temporarily denied the opportunity to work. On the basis of experience with mass unemployment during the ten-year period from 1930 to 1939, it may be concluded that unemployment insurance, or other forms of relief, will most certainly not provide an adequate solution to the problem of occupational adjustment.

## EMPLOYMENT READJUSTMENT

Studies by the author made during the period 1930 to 1939 indicate that if another period of mass unemployment occurs, the unemployed group will present the following adjustment problems:

1. Approximately 60% of persons unemployed during a period of mass unemployment need only an opportunity for employment in the occupation for which they are prepared.

2. At least 15% of unemployed persons are marginal workers. The degree of efficiency possessed in these cases is sufficient to warrant employment in a period of heavy labor needs, but is insufficient to warrant retention in a period of slack labor needs. Many of these persons normally need training which will extend skills already partially developed.

3. About 25% of unemployed present special occupational adjustment problems, some of which may be described as follows:

   a. Persons whose abilities and skills are suitable for the field of employment in which they were previously engaged, but whose occupation is one in which opportunities for employment are on the decline.

   b. Persons who have been employed in fields which call for job performance below the level of their abilities.

   c. Persons whose failure to adjust is due to emotional problems, rather than to lack of ability or skill.

   d. Persons who are physically handicapped.

e. Persons whose background of training has not fitted them for any particular occupation, and who have little information concerning either their own abilities or occupational opportunities and requirements.

f. Persons whose background of experience or training has not fitted them for any particular vocation, but who have well-conceived vocational plans which will prepare them for employment if opportunity is provided.

g. Persons who constitute a group of unemployables for whom no particular opportunity would make satisfactory adjustment possible.[1]

### PROVIDING FULL EMPLOYMENT

Many of the problems of work adjustment suggested in the preceding series of conclusions exist regardless of the degree of unemployment. However, it can be observed that the most serious threat to occupational adjustment is the possibility of a business slump in the 1950's, which may bring in its wake mass unemployment equal in degree to that characteristic of the 1930's. Because of this threat, we, as a nation, should be taking steps to prevent mass unemployment, if there are any measures which will serve that purpose.

One circumstance which would delay the downswing of the business cycle and continue the present high employment rate is war. High production and employment rates are necessary to the prosecution of war. This we have seen in the two wars in which we have been involved since the turn of the century. However, the ultimate reaction against such artificial stimulation is usually deeply destructive. We may be heading toward a business reaction resulting from artificial war stimulation, if such reaction is not delayed by still another war. But a delay in the downswing of

[1]These conclusions are based on studies reported in *Occupational Adjustment in Allegheny County* by Glen U. Cleeton. Published by the Pittsburgh Personnel Association, February, 1935.

the cycle artificially caused by another war would only make the ultimate reaction deeper. Hence, we should hope to avoid another war, not only to escape its unpleasant direct consequences, but also to be spared the indirect consequences which always continue for several years beyond cessation of hostilities. Wars usually create conditions which result in postwar business booms, which, in turn, are followed by a collapse of sustaining economic forces. We are now in a postwar boom period, but are faced with the prospect of a sharp reduction of business activity within a few years, which may be expected to result in the destruction of opportunity to work for millions of persons who are currently employed.

Whether we should or should not be preparing feverishly in anticipation of another war in the immediate future, or working just as feverishly to prevent such a calamity, the reader may conclude for himself. But that we should be working feverishly, with a greater application of intelligence than has been displayed in the past by government officials, labor leaders, and industry leaders, to clean up the economic mess resulting from two wars within 30 years, can hardly be denied. That we should also be planning against the inevitable crumbling of the present high blood pressure economic structure is evident to anyone who has the courage to make a calm appraisal of the abnormal purchase demand on which much current business confidence is built.

In a period of full employment, thought should be given to periods of less favorable nature if the opportunity to work is to be maintained. If such thought is not given and if plans are not formulated, we may expect a repetition of the same kind of costly temporizing, and socially destructive methods of dealing with unemployment which were used in the period from 1928 to 1940. The man who wants a continuous opportunity to work deserves to be saved from the type of fumbling, brain trusting, and bureaucratic maladministration which characterized our last

efforts as a nation to deal with mass unemployment. Somewhere there should be economic statesmanship equal to the task. Whether that statesmanship should come from labor or management or government is an issue hotly debated at frequent intervals. To the confused layman, it would appear that the problem is one for all three groups, individually and collectively. An outraged public opinion, observing the current evasion of responsibility and abusive recrimination of each group by the other, should demand that sufficient time and thought be diverted from grabbing for today to make possible planning for tomorrow.

How each of these groups could help to smooth out major fluctuations in employment has been the subject of much discussion. That discussion requires little mention here, save to note that it has resulted in no evident constructive action. Our primary interest is that of insisting that the right to work is human, and that it should not be denied because of lack of foresight or failure of any groups to assume social responsibilities which are rightly theirs. It is probably too ambitious to hope that minor fluctuations in employment can be removed, but no social system can survive repeated and prolonged periods in which the right to work is denied those who want to work. Such is not a human way of life.

Made work and dole-supported idleness are not acceptable substitutes for genuine work activities. They are not acceptable substitutes because they are destructive of self-respect. The worker does not want security for security's sake, or, at least, if he does, he should not. Development of a sense of security through the feeling of making an important contribution in production, accompanied by the feeling that reasonable opportunity to do so will continue to exist, is the truly human feeling of security in work. Guarantee of minimum economic security through unemployment compensation, doles, or WPA time-serving is not a worthy substitute for the true feeling of job security.

## PROVIDING JOB SECURITY

While the worker does not seek security for security's sake, he is sincerely interested in job security. In fact, he has a greater interest in continuity of employment than either his employers or leaders of labor unions are willing to admit. This is shown in a study conducted by the National Industrial Conference Board, in which management, labor union representatives, and employees were asked to rate 71 factors in relation to their importance to employee morale. Whereas compensation was rated first by management and union officials, job security was placed highest on the list by the workers, with opportunity for advancement second. The five top factors chosen by each group were as follows:

| *Employees* | *Union Officials* | *Management* |
|---|---|---|
| 1. Job security | 1. Compensation | 1. Compensation |
| 2. Opportunities for advancement | 2. Job security | 2. Job security |
| 3. Compensation | 3. Total hours worked | 3. Vacation |
| 4. Benefits | 4. Working conditions | 4. Opportunities for advancement |
| 5. Informing employees of their job status | 5. Labor unions | 5. Working conditions |

Job security is difficult to provide in companies under catch-as-catch-can management policies and practices which are adjusted to the vicissitudes of the market by accelerating production during temporary market spurts and building up surplus profits in order to weather later periods of dull demand. This type of management forces upon the worker the stress of overtime hours during rush periods, and then forces him into deadening idleness through layoffs and furloughs during low demand periods. Conditions over which the worker has no control are thus permitted to govern his life and he is required to make abnormal work adjustments to meet those conditions.

## PLANNED PRODUCTION AND EMPLOYMENT

It would be unfair and inaccurate to say that a producer can avoid being responsive to fluctuations in the demand for his product, and equally foolish to expect him to refuse to profit from a seller's market. His economic survival permits three choices: (1) he may adjust to the market on a short-run basis; (2) he may seek to control the market through monopolistic practices; or (3) he may plan his marketing on a long-run basis with reference to consumer needs. Farsighted companies who have instituted the practice of making demand studies for their products have developed means of forecasting production needs which permit a healthy degree of stabilization. Many of these companies have found that they can thereby smooth out the peaks and valleys of production and thus make the worker's employment more steady and continuous, and, as a consequence, more human. To accomplish this industry-wide presents a challenge to the much-vaunted intelligence and foresight of management. If management cannot exercise intelligence and foresight in this manner, then one is justified in doubting the equity of the huge rewards frequently paid for alleged managerial wisdom and judgment.

Given a factory capable of producing a certain output, it is obviously more profitable to operate facilities continuously on an optimum capacity basis to achieve a certain production goal, than to have high and low production periods which, on the average, make possible the attainment of the same goal. Hence, provision of steadiness of employment, meeting a fixed production goal, and attaining maximum profits are as closely related as they are equally desirable; attempting to provide continuity of work opportunity is desirable, both from the point of view of management and the worker. To say that economic forces do not permit the evening-out of production is merely saying that management operates on a ride-the-tide basis rather than on the basis of analysis, foresight, and planning.

If all companies, or a large majority of them, attempted to even out production, many of the economic forces which seemingly make for irregularities of employment would disappear. Accomplishment of this goal requires that management budget production and regulate the intensity of marketing activities accordingly, instead of making production dance to the tune of sales and marketing activities. This plan of operation requires an intensification of sales effort when production threatens to exceed demand, and a reduction of marketing activities when demand catches up with production. Under such a plan, sales effort would fluctuate more violently than production.

Planned production also requires flexible inventory control, which permits the building up temporarily of inventories of finished products during periods in which goods move slowly. Such inventory reserves are then used to fill later demand, which might otherwise force feverish overtime production. Planned production eliminates speculative inventory control, which operates in precisely the opposite manner. Speculative inventory control seeks to squeeze extra profit out of a rising market by withholding goods in order that they may be unloaded at an opportune moment. Shelves thus cleared are kept relatively bare in a period of declining market and unemployment through layoffs results. But speculative inventory control, which is the cause of much temporary unemployment, is not a true function of productive industry. If speculative gains are to be the objective sought by the management executives of a company, then the production aspects of the company should be liquidated and funds thus obtained used in the commodity market in acknowledged speculation. Speculative control and planned production represent two diametrically opposed approaches to production problems.

That irregularities of production can be leveled off has been demonstrated in certain well-managed industries. That more industries could do so is believed to be true. Of course, certain fields

of employment present special problems—merchandising, for example, and some seasonal industries, notably food canning and preserving. However, the notion that certain major industries must be operated on a "feast or famine" basis is, to a marked degree, traditional rather than inevitable. To change these traditions would require courage and ingenuity in planning; but such planning is socially desirable, therefore, worth trying.

In some of our major industries, demands for elimination of uncertainties of employment have recently been voiced by labor organizations in proposals for guaranteed annual wages. Doubtless there are many good reasons why employers are not ready to institute guaranteed wage plans, and it is conceivable that such plans are not feasible in certain industries. But industries which protest loudly against guaranteed wage demands and then do little to provide continuous, steady employment do not display good faith. They are asking the worker to share a risk for which he receives no reward, whereas management normally either accepts rewards for risk-taking or underwrites the risk. If management leaders as a group would try to solve cyclical and intermediate-trend shifts in production levels, which periodically destroy the right to work, their protests against labor's demand for protection against unemployment would sound less biased. In fact, if the causes of unemployment were removed, or even partially counteracted, demands for wage guarantees would disappear, for what the worker really wants is security which brings to him the right to work, not payment for layoffs.[2]

Some business leaders contend that cyclical changes, with attendant peaks and valleys of production and fluctuations in

[2]See an article entitled, "The Annual Wage—Where Are We?" by Herman Feldman. *American Economic Review*, Volume XXXVII, No. 5, December 1947. This article contains a review of three books dealing with the annual wage: (1) *Guaranteed Wages: Report to the President* by the Advisory Board, Office of War Mobilization and Reconversion. Government Printing Office, 1947; (2) Joseph L. Snider, *The Guarantee of Work and Wages*. Harvard University, 1947; (3) A. D. H. Kaplan, *The Guarantee of Annual Wages*. Brookings Institution, 1947.

wages, prices, and employment, are inevitable in our private enterprise system. This view assumes that we are at the mercy of a mechanistic economic system which operates as a matter of course. To contend that the worker must accept the weaknesses of our economic system is untenable, because our economic organization is man-made and operates in certain ways as a consequence of human behavior. It may be assumed that anything that is man-made is controllable to some degree. If business leaders believe in the private enterprise system to the extent claimed, and are firmly convinced that it should be perpetuated, they should assume their share of the responsibility of making it behave instead of hiding behind claims of benefits which they allege have accrued from it. This is especially true if allowance is made for the fact that many of the values claimed should be credited to an expanding economy in a nation rich in resources, and to the capacity and willingness of the average American worker to work with sincere purpose and high hopes, rather than to the economic system.

It must be admitted that national fiscal policy affects demand for products and thereby influences the level of employment. Consequently, the planning of production by private enterprise is meaningless unless it is done within the framework of national fiscal policy. Therefore, the solution of the problem of economic stabilization on which job security depends is one in which leaders in private enterprise and government officials who are responsible for national fiscal policy must cooperate if opportunity to work is to be protected.[3]

[3]For a brief discussion of the relation of fiscal policy to employment see: M. J. Bowman and G. L. Bach, *Economic Analysis and Public Policy.* Prentice-Hall, Inc., 1945. pp. 790-808; K. E. Boulding, *Economic Analysis,* Harper, 1941. pp. 350-374, 764-789; and A. G. Hart, *Money, Debt, and Economic Activity.* Prentice-Hall, 1948. Ch. IV-XIII.

For a more general treatment of unemployment problems see Philip Taft, *Economics and Problems of Labor.* Stackpole and Heck, 1948. pp. 39-154.

For case studies of firms that have introduced employment stabilization programs see Herman Feldman, *Stabilizing Jobs and Wages.* Harper, 1940; and F. B. Brower, *Reducing Fluctuations in Employment.* National Industrial Conference Board, 1940.

## THE RIGHT TO WORK

Since the right to work is strongly desired, the worker should look upon his job as a prized possession. That possession should be protected. If the worker expects the employer to recognize his right to work, the worker, in turn, should do everything possible to deserve that right. This means that he should (1) seek work for which he has ability; (2) equip himself with the appropriate skills and knowledge; (3) strive to go forward by learning more and more about his work and about other work for which he may eventually qualify; (4) accept regulations which are in the interest of the entire working force; (5) try to understand his employer's problems; (6) lend a hand to his fellow worker who may need help; (7) practice sobriety and decency; and (8) look upon his work as an activity in which satisfaction in the work itself is its greatest reward. The worker can do these things without sacrificing his self-interest in the least, rabble-rousers to the contrary notwithstanding.

Just as the worker expects the employer to provide an opportunity for work, to stabilize that work opportunity as far as possible, and to refrain from locking out the worker, he should be protected from union interference with his right to that opportunity. The most extreme form of this interference, which appears in some union-management contracts in the guise of the closed shop, has recently been outlawed by national legislation. It remains to be seen, of course, whether that legislation can endure. The difficulty of adjusting to such legislation lies in the fact that some 5,000,000 workers have been working under closed shop agreements for many years. To change this custom, which has a long history in some union-management relations, will not be easy. In theory, however, the law supports the principle that the worker has a right to work without union interference if the employer is willing to hire him and the worker individually accepts the employer's offer.

Abuses of the closed shop in forcing workers to pay unusually high initiation and membership fees for the privilege of working on war contracts was doubtless the factor of greatest importance in bringing about labor legislation which restricts the closed shop. It is apparently one thing to tell a man that he cannot work on a certain job unless he joins a specific local of a specific union in peace times, and quite another to prevent a man from contributing his services in a national emergency such as war. At least our national legislative bodies held this principle in such high regard that they ignored a presidential veto to approve legislation which restrained the closed shop even in peace times. Apparently, if the closed shop is to survive in any form, practices under it must be modified so as not to abrogate the right to work.

The union shop and preferential hiring have also been brought under restrictive control by national legislation. Other interferences with the right to work, such as jurisdictional strikes, strikes by minority unions, secondary boycotts, secondary recognition strikes, and the more violent forms of picketing are likewise restrained. The law tacitly says a man may or may not join a union, whichever he may choose, but he may not be denied the right to work regardless of his decision. This legislation, the Labor-Management Relations Act of 1947, has been proclaimed by many union officials as anti-union. Its sponsors assert that the legislation was aimed at unfair union practices and that provisions of the law are not anti-union. Regardless of the general merits of the law as a whole, surveys of opinions of union members have shown that the majority favor those provisions which protect the right to work.[4]

[4]For a discussion of the virtues and limitations of the law, see: "Should We Repeal the Taft-Hartley Law?" by J. Mack Swigert. *Saturday Evening Post,* October 30, 1948.

Despite campaign promises made by the winning candidate in the 1948 presidential race, the 81st Congress refused three attempts to repeal the Taft-Hartley Act. Efforts to reinstate the Wagner Act of 1935 and later pressure to pass the Thomas-Lesinski Bill resulted in the adoption by the House of Representatives of the Wood Bill, a modified form of the Taft-Hartley Act. However, the House reversed itself and referred the Wood Bill back to Committee. Because of diverse political forces at work, the future of labor-management legislation is highly uncertain.

In seeking an opportunity to work, the worker should not be forced to surrender his right to work to either his employer or his labor union; nor should he be made the victim of the fiscal policy of his government. The right to work is individual, and the individual should be permitted to exercise that right within the limits of his capacity for work. Within such limits he should find opportunity for exercising choice as to the nature and place of work. The wide variety of commercial and industrial enterprise in the nation provides exceptional opportunity for the individual to choose work for which he is fitted. However, circumstances beyond the worker's control frequently deny the opportunity for continuous and uninterrupted employment.

Opportunity for work means more than merely being gainfully employed, more than merely having a job. It means having an opportunity to engage in work which is individually challenging and satisfying. Work is challenging and satisfying when it utilizes the capacities of the individual, appeals to his desires and needs, stimulates his basic interests, and creates a feeling of doing something that is productively important. Therefore, proper selection and placement become important coordinates of opportunity to work. An employer is not providing opportunity for work, in a true sense, unless he is making that opportunity available to the person best fitted to do the work.

Some jobs, unfortunately, are such that they are not particularly challenging or satisfying to any human being. These jobs are often filled by persons who seemingly work from sheer necessity. Perhaps all such jobs cannot be wholly eliminated. But an examination of jobs of this type often shows that elements can be added which will make the job more challenging, and usually many of the unattractive features of the job can be eliminated. Employers who have studied jobs and have made changes which have made work more human have found that turnover is greatly reduced. But even though that gain were not made, the employer who depends on economic necessity as the sole moti-

vating force in filling basically unattractive jobs is engaging in an unjustifiable form of social exploitation.

Admittedly, providing opportunity to work for those who want to work has at times been the nation's most difficult social problem. Procedures tried as possible solutions to the problem in the past have not been effective. However, the problem should not be ignored simply because past proposals for solution have not proved satisfactory. Planning to provide an opportunity for employment in slack times should be undertaken in periods of full employment, with the objective of leveling out employment opportunities. Such planning requires coordinated thought and statesmanlike action by leaders in private enterprise, public finance, and labor relations.

CHAPTER SEVEN

# *Education for Life and Work*

IT IS AN UNFORTUNATE COMMENTARY ON AMERICAN HOME LIFE and education that far too many young workers enter upon their first work experience with the wrong attitude toward work. Work that is sought primarily because of economic necessity or which is looked upon as a burden to be borne cannot be satisfying. The fact that many young workers approach their first employment with such attitudes makes the problem of education for work a doubly important one for the employer, as well as for the young employee. In this respect, the home and the school have a responsibility, if not to employers, then at least to youth, for developing a point of view that recognizes work as a distinctly natural human activity which holds unusual possibilities of providing personal satisfaction.

## FOSTERING CONSTRUCTIVE ATTITUDES TOWARD WORK

A sound and wholesome attitude toward work should be developed from early childhood. Parents who directly or indirectly lead a child to believe that work is something to be endured at best, and avoided if possible, mar the life possibilities of self-realization through work for their offspring. Wholesome work activity is a natural human thing. Therefore, the attitude toward work which should be developed is that of pleasure and satisfaction through achievement in work. This may be accomplished, even in early childhood, by encouraging participation in constructive behavior which, in itself, can be made both productive and challenging to the child.

Such commonly heard expressions as, "he is not afraid to work," or one expressing an opposite thought such as, "most young people want a job with big pay and little work," reflect attitudes which indicate that the concept of work ordinarily held is erroneous. Such concepts do not spring into being as a result of a single experience. They are the product of numerous experiences. Since the parent has within his power the direction of early-life experiences, it is his responsibility to develop in the child proper concepts of work during preschool years. It then becomes the responsibility of the school to encourage appropriate attitudes toward work.

In fostering a constructive attitude toward work, it is necessary to develop more than respect for work; it is essential that a capacity for zeal in the joy of accomplishment be developed. Direct indoctrination in the home and school may help in promoting this attitude, but more important is the general atmosphere under which home and school tasks are carried to completion. Most of the principles set forth in this book to be applied by employers in making work human have equal significance in the pre-employment home and school activities in which youth engages. With development of respect and enthusiasm for work through application of basic principles of human relations in the school and home the fundamental rewards for work should become more clearly recognized by the young worker through subsequent work experience.

### TRAINING FOR WORK IS ESSENTIAL

Appropriate training of new employees for work by their employers encourages satisfaction in work relationships. It is the foundation on which programs of human relations in industry should be built. The very fact that an employer takes the trouble to train a worker at the time he is introduced to a new job, creates a feeling of importance on the part of the new worker with respect to his job. However, where plans for organized training

are lacking, and when the worker is told to observe other workers and pick up the operations necessary to do the job himself, he gives no credit to his employer; he takes all the credit for himself, and often resents the fact that he is obliged to learn his duties "the hard way." Furthermore, it is quite likely that a worker learning a new job by haphazardly directed observation of other workers will develop inappropriate work practices. Therefore, adequate training not only provides the employer with a worker who performs according to predetermined methods and standards, but such training also aids in the development of good human relations on the job.

Few jobs are so simple that they can be effectively learned without some type of training. Even though there are many jobs of such nature as to require only a few hours of instruction to reach a suitable operating performance level, there are other jobs which require weeks, months, or years of experience and training to reach a satisfactory skill level. It has been estimated that the time required to master the minimum manipulative operations of industrial jobs varies as follows: one day or less, 43% of jobs; a week or less, 36%; a month or less, 6%; a year or less, 14%; and one to six years, 1%. However, mere training in job performance does not constitute genuine education for work. Sensing this fact, many companies have broadened the scope of their educational programs to include many things in addition to the development of simple operational skills.

Orientation or induction periods prior to formal training are generally used at the beginning of the association of the new employee with the company. Instruction given at that time provides the information and understanding necessary for the development of attitudes which are essential to satisfactory work adjustment. The relationship thus established should be continued as a part of the educational program of the new employee during a probationary period subsequent to his initial qualification through direct training for the job. If this is not done, the

educational achievements of the induction period may be counteracted by influences which interfere with work adjustment.

Some farsighted companies continue educational activities with the employee intermittently throughout the entire period of his association with the company. Appropriately conceived and wisely administered, such a plan is good human relations in industry, because in no other contact with workers is the relationship between employer and employee mutually more helpful than in a well-managed educational program. In educational activities there can be an implication of helping the employee attain personal objectives and purposes, even though the employer is also seeking to achieve certain ends through such activities. Educational situations can truly be two-sided, whereas in everyday production situations company objectives more often seem to be emphasized.

## THE SCOPE OF WORK TRAINING

The topics or fields of subject-matter, in addition to work performance, which may appropriately be covered in education for work will, of course, vary with the nature of the job. However, the following subjects should always be considered in establishing educational programs for employees:

1. Company policies as embodied in rules, regulations, and standards of performance.
2. Aims, purposes, and objectives of the company; management philosophy.
3. Importance of the job and its relation to other jobs and to the finished product.
4. New developments and points of possible change and improvement on which the company seeks cooperation or suggestions from employees.
5. Public and community relations of the company.
6. Production methods.
7. Wage and incentive plans.

8. Employee benefit plans, such as retirement, vacations, insurance, hospitalization, etc.

9. Health, safety, and control of spoilage and waste.

10. Getting along with people—fellow workers, foremen, and management.

11. The industry as a whole—general business and economic conditions.

12. Marketing the company product.

13. The materials used, their history and discovery.

14. Related terminology and literature.

15. Related mathematics and science.

This is not an exhaustive list. However, it includes topics on which employees usually indicate a desire for information. Whether all the information provided through training always improves performance on the job, as shown by greater output in production, is not the sole measure of effectiveness of training. Any activity which enriches understanding and promotes job satisfaction is justifiable. In fact, such activities are essential elements in the task of making work human.

### ENCOURAGING WORKER SELF-IMPROVEMENT

Every worker is interested in self-improvement, or, at least, he thinks he is. Not all are sufficiently interested to put forth the necessary effort and time to bring about such improvement. However, for those who are, companies can well afford to lend assistance in providing the means of accomplishing this hope. Certainly they can lend advice and encouragement, and make appropriate information about the means of self-improvement available.

Where self-improvement sought relates directly to the worker's job, the company should actually provide the educational facilities and should make possible the use of these facilities by the worker when sought by him or recommended by the employer. To a certain extent, such an arrangement should also hold for other jobs within the company to which the worker aspires.

Where facilities for instruction directly related to the worker's job cannot be provided within the company, it is good production investment, as well as good human relations for the company to defray the cost of such instruction when it can be obtained through educational institutions in the community. This is equally true of individual educational plans which include instruction which may be only indirectly related to the job. Some companies go so far as to pay part or all of the tuition cost of instruction sought by a worker on his own time, regardless of the bearing that it may have on his job, so long as the motivation is sufficient to carry the worker to satisfactory completion of courses undertaken. In order to aid the employee further in self-development, some companies provide educational advisement services which assist the ambitious worker in selecting appropriate courses, make known to him the institutions where suitable instruction may be obtained, and otherwise give counsel on educational ventures in which the worker may wish to engage. This is a form of humanization of work relations which is highly commendable.

## BASIC ELEMENTS IN TRAINING

In setting up an educational program for work, attention should be directed toward:

1. The material to be taught.
2. The order of presentation.
3. The method of presentation.
4. Training facilities.
5. Measurement of results.

In determining what is to be taught, a complete job analysis should be made to establish answers to three specific questions:

1. What must the worker be able to *do?*
2. What must he *know?*
3. What must he *feel?*

Determining what the worker must do is the simplest part of job analysis for training. Determining the best way of doing the job is not as easy, but is highly essential. As indicated elsewhere, the best way of doing a job from a time and motion study point of view is not always humanly the best way. Time and motion study must be tempered with considerations of the effect of monotony, the incidence and cumulative magnitude of fatigue, elements of interest, and effective utilization of human capacities, if maximum work satisfaction is to result. Consideration must also be given to the scope of the job to assure that training is provided not only on the continually recurring routines, but also on the occasional, sometimes highly crucial, procedures which may be involved.

There is perhaps no limit to the things which the worker could be taught, or otherwise learn, about his job, if all broadly related information were to be considered. However, there is certain basic information with reference to any job which the worker must know in order to perform properly the duties assigned to him. This minimum requirement should be determined and given priority in planning instruction for each job. Around this central core of required knowledge there may be conceived expanding concentric zones or areas of information, which may be learned progressively on the job, or by special instruction after the worker has assumed duties on the job. Some of the fields of knowledge representative of such areas have been listed elsewhere in this chapter. From the standpoint of initial job performance, areas beyond the central core of required knowledge have little significance. But as a means of promoting job satisfaction, they may have greater importance than job performance, skill, and knowledge.

What the worker should feel is perhaps the most difficult of all aspects of job instruction to determine. However, there are certain attitudes toward work itself, the company, fellow workers, supervisors, safety, etc., which are desirable to such an extent

that they should be indicated, encouraged, and continually cultivated. For purposes of presentation in this chapter, that which must be done, that which must be comprehended, and that which must be felt have been discussed separately. However, in every individual these elements tend to combine, to become coordinated. To do certain things, one must know certain things and must feel favorably inclined toward them. To know and feel thus favorably inclined helps the doing. This augmentation of forces is particularly important with reference to quality and quantity standards of performance. Stress should, therefore, be placed on the development of proper knowledge of and favorable attitudes toward standards in any educational program. If such is done, the likelihood that the desired standard will be attained and maintained in the worker's performance on the job is greatly augmented. From an educational standpoint, it is important to consider the fact that it is easier to develop proper understanding and respect for standards through initial training than through supervision on the job after duties have been assumed. Therefore, standards of performance should be stressed and motivated during initial training to the point that meeting those standards becomes second nature to the worker.

## SEQUENCE AND PRACTICE IN LEARNING

Order of presentation of material to be taught requires careful study and experimentation for the purpose of determining the most effective sequence. Of particular importance when the new employee is learning the procedures of a job for the first time is the selection of the material to be presented in first order. If a series of movements and ideas can be isolated which are basic to all or nearly all of the operations involved in the job, these should be taught first. This may necessitate the abstracting of fundamentals from the job so that they may be taught as the introductory skills in learning the elements of the job as a whole. It is important that such material be identical in style and

form with the procedures of the job, for the learner learns precisely what he practices. This means that initial learning exercises should be such that they can be incorporated into job performance later. Auxiliary learning exercises can then be introduced as job comprehension and feeling for the job are acquired. Practice exercises are suitable for job learning only when so ordered and arranged as to provide progressive mastery of skills.

The selection of basic elements for practice is well illustrated by scale practice in learning to play a musical instrument. Such practice as a simplified introductory step to actual tune playing is accepted educational procedure. However, if these exercises are used for extended practice, motivation lags, the value of the exercise or scale practice is lost, and learning is delayed. The same is true in job instruction; a switchover to doing part of the job or its whole sequence should not be too long delayed, even though it becomes necessary to revert to exercise practice, or to intermingle exercise practice with job sequence practice. If the exercise practice is a part of the job and recognizable as such, so much the better from the standpoint of motivation. If not, it is important that all practice be made meaningful to the learner by showing the relation of such practice to job performance. Demonstration of this relationship gives the learner a feeling that he is making progress that otherwise might not be evident.

That which must be mastered through repeated practice should, where possible, be placed in the early stages of the instruction regimen, but attention should constantly be given to distribution of practice. Studies have shown that repetition in the learning of a new skill, when sequence and distribution are ignored, usually results in an uneconomical overlearning of the steps initially practiced, especially when initial steps are repeated in the learning of later steps. This evidence suggests that first-practiced material need not always be first order material so far as job operation sequence is concerned. But the steps initially practiced should always be related to the job as a whole, and the

relationship should be made clear to the learner in the early stages of training.

Only through analysis and experiment can the best learning sequence be determined. What may seem logical may not prove to be sound from a psychological standpoint. What may be good sequence for the teaching of one job may prove to be poor sequence in teaching the elements of another. Furthermore, the appropriate interrelation of conceptual and performance material can only be determined by carefully observed trial of one approach, and then another, until the optimum arrangement is found. However, it is known that a mixing of procedural and conceptual material produces results which endure longer than does the presentation of procedural and conceptual material at distinctly different learning periods.

## INSTRUCTIONAL METHODS

It is difficult to divorce method of presentation from the personality of the instructor. However, the essence of good method may be summarily stated in three brief principles:

1. The learner should be taught exactly what he is supposed to learn.

2. The material should be presented in a manner which will command the learner's respect, hold his interest, and stimulate a keen desire to master the concepts and procedures presented.

3. A sympathetic, positive, and constantly encouraging manner should be assumed by the instructor.

It is easy for the instructor to take a patronizing and overhelpful attitude toward the learner and try to do his learning for him. It is equally easy for the instructor to be overcritical and impatient, and thereby create nervous tension which retards the learner's progress. These limitations are found in many instructors in job training, especially when such training is entrusted to a highly skilled worker doing the same job as that for which the learner is being trained. Likewise, the competent worker almost

invariably selects an awkward sequence; he seems not to know where to begin, nor where to end, in teaching the novice. Perhaps the highly skilled worker knows too much about the job, and understands little of the problems of the learner. Perhaps he remembers that he had a difficult experience in learning the job, and associates difficulty of learning with effectiveness of learning. At any rate, the experienced worker usually makes a poor instructor until he himself has been taught how to teach.

In addition to technical competence, persons selected as instructors should be capable of inordinate patience, should be resourceful, and should possess a deep and abiding interest in people. Persons who possess these qualities readily adapt themselves to the procedures and philosophy of teaching. The personal qualifications for teaching are emphasized here because too little attention has been given to the selection and training of instructors in industry. The result is what one might expect. An extensive survey of training programs in a leading industry revealed the following weaknesses, most of which relate to the personality of instructors and failure to comprehend the learner's problems:

1. Some instructors assume a cocky and patronizing attitude when they instruct, and spend much time that should be devoted to teaching in berating and badgering the learner.

2. Another type of instructor, one who is hesitant, apologetic, and lacking in language proficiency, is also frequently found.

3. Learners are frequently criticized, but seldom praised.

4. The learner is permitted to make mistakes over and over again. Apparently, some instructors operate on the theory that if the learner becomes sufficiently discouraged he will try harder. When it is pointed out that this method usually results in the learner becoming completely discouraged, such instructors usually state that the learner is "no good anyway." To combat this tendency, it is well to remind the instructor that each failure of the learner to make suitable progress is usually as much the fault of the teacher as it is the fault of the learner.

5. The instructor does not clearly understand what he is trying to teach.

6. Material is presented without logical reference to sequence of operations or to psychological organization for instructional purposes.

7. Instruction is frequently "pitched over the heads" of beginners.

## QUALIFICATIONS OF INSTRUCTORS

As may be concluded from the preceding statements, probably the weakest aspect of training in industry is the failure of most companies to provide fully competent instructors. Most teachers in industry are well-meaning and usually skilled in that which they are attempting to teach, but they have rarely been properly coached or taught how to teach. As has been previously stated, being a competent worker is no guarantee of ability to teach; too often, the opposite is true. Nor will teaching experience alone develop the knack or know-how of teaching. The safest procedure to follow in choosing an instructional staff is to select men who are proficient in the thing they are to teach and who have the qualities likely to make a good teacher. These men should then be taught the methods and procedures which constitute the elements of good teaching.

The qualities of a good teacher have not been fully defined, but they quite definitely include the following traits:

1. Patience, coupled with unswerving insistence on mastery by trainees of the skills and knowledge involved, and a knack of developing the attitudes desired of the learner.

2. An alert mind that penetrates beyond the obvious and perceives relationships in a situation.

3. A capacity for enthusiastic leadership which stimulates others to a state of responsiveness.

4. An understanding of human nature to the point of being able to appraise ability, estimate progress, and comprehend the motivating forces which can be applied in a positive manner.

5. A sincere interest in helping others achieve.

6. An objectively applied sense of fairness and justice.

7. An understanding of the principles of economy in learning and the ability to apply these principles.

8. Skill, knowledge, and attitudes required in the job for which instruction is being offered.

9. A contagious optimism which generates a hopeful outlook in others.

10. Ability to profit by experience displayed by an eagerness to continue to learn.

In a teaching situation it is easy to confuse purposes. The basic purpose of any educational activity is, of course, to bring about a change in the learner, to develop in him prescribed knowledge, skills, and attitudes. This cannot be accomplished if the learner remains passive and the instructor is dominatingly active. Initially, the instructor should assume the active role and then should gradually move into the background by encouraging the learner to become more and more the active member in the teacher-learner situation. Many instructors obscure fundamental points of knowledge by talking too much, by lecturing rather than drawing forth recitation by the learner, by continuing to be overactive in the training situation. Some teachers do too much of the practicing which the learner is supposed to do, instead of guiding, prompting, and correcting the learner's practice. A capable instructor insistently keeps the major purpose of instruction in mind and constantly applies the principle that the learner learns by doing. If that is done, then method of presentation will almost take care of itself.

### COORDINATING INSTRUCTION, PRODUCTION, AND SUPERVISION

The effectiveness of training for work is influenced by training facilities as well as the instructional staff. Initial training and production will not mix, therefore, it is desirable to set aside for training certain production equipment within the

plant, or to duplicate that equipment in a training center or school. A training center has an advantage in that training aids in the form of models, films, charts, and the like can be used there more readily than in the plant. The training center also has an advantage in that distracting elements can be controlled. The best plan of organization for training appears to be that of providing a center for initial training and then continuing training, after preliminary qualifications for the job have been developed, by giving final instruction for production in the plant subsequent to assignment of the worker to the job.

In industrial training, it is a common practice to use one group of instructors in the training school, and then use a different set of instructors to teach the worker after he leaves the training center and starts working on the job. Ordinarily, the on-the-job instructors are skilled workers who receive a bonus for breaking in and developing the new worker. When this practice is followed, it is important to remember that job competence on the part of a skilled worker is no assurance of ability as a teacher. The qualities which have been previously mentioned as characterizing a good teacher should be sought in instructors who teach on the job, as well as those who teach in the training center. Both need instruction on the methods of "how to teach," and both should be checked periodically to make certain that they are teaching as well as they know how. Periodic review of teaching procedures which a teacher repeatedly uses in training is necessary, because it is easy for the most capable teacher to fall into slipshod habits after a period of continuous training of persons for the same job. Paradoxical as it may seem, teaching effectiveness frequently deteriorates through practice. Unless an instructor has a genuine love for teaching, his presentation often becomes routinely mechanical and uninspiring through repetition.

Where one instructor teaches one part of a job and another instructor teaches another part of the job, or where one teacher

handles the initial stages of training and another takes charge of further development, it is often found that different instructors teach different ways of doing the job. Naturally, this results in one instructor neutralizing the work of another. Consequently, uniform methods of doing a job and uniform methods of presenting the job to the learner should be adopted, and these methods of job operation should be adhered to by all instructors. Initial training, follow-up instruction, and supervision must be closely coordinated for greater educational effectiveness.

### MEASURING LEARNER PROGRESS

It has been said that if the learner has not learned, then the teacher has not taught. Student progress is the criterion of the quality of training. Therefore, measurement of results of training through evidence of student progress is an important part of educational procedure. To some extent, instructors' observations and reports of progress are a measure, but such reports cannot be truly objective. They can be made more searching and analytical by recording estimates of learning progress on a standard check list of the operations involved in the job. However, use of progress check lists is likely to prove unsatisfactory unless they are prepared after a penetrating analysis of precisely what it is that the learner is supposed to be able to do at given stages in the instructional program. Furthermore, instructors must be taught to use progress check lists, in the same manner that they are taught to use other tools of instruction, if estimates are to be meaningful.

Check lists serve best when they are used in recording progress made by the learner in acquiring skill in job operations. For observing and reporting progress in the development of desired traits and attitudes, descriptive rating scales have been found to be more appropriate than check lists. However, the preparation of rating scales requires the same careful analysis as that which must be applied in developing any other tool

of measurement. Likewise, their use in an effective manner can only be assured through the training of instructors with reference to their purpose, their practical applications, their limitations, and the pitfalls which tend to invalidate evidence obtained through their use.[1]

Use of check lists and rating devices in a training program merely because they are widely used in industrial situations is likely to prove valueless. Evaluation of learning progress serves two purposes in an otherwise well-organized training program, namely: (1) to determine the stage in training the learner has reached, and (2) to diagnose faults and weaknesses which require special instruction to correct or strengthen. But devices do not make a training program; they must be planned to fit the program.

Oral quizzes, written examinations, and choice-of-answer tests can be used to measure progress in the acquisition of knowledge, and as an aid in developing understanding on the part of the worker. Preparation of these measuring devices likewise requires careful planning. They should be based on an analysis which shows exactly what the learner should be able to remember, what he should be able to describe, and what he should be able to explain at different stages in learning. If tests of these types can be so devised as to require the solution of a problem involving things remembered, comprehension of relationships, and reasoning about elements and their relationship, the ends of educational growth are better served than by tests which overemphasize memory.

Obviously, performance tests can be used to ascertain progress in mastering job operations and related knowledge. Such performance tests should resemble actual production situations as far as possible. Though it appears that they would be comparatively simple to devise, actually the construction of per-

[1]For discussion of rating methods, see: Edwin E. Ghiselli and Clarence W. Brown, *Personnel and Industrial Psychology*. McGraw-Hill, 1948. pp. 89-122.

formance tests which measure basic skills is difficult and expensive. Since this is true, it is much easier to make check-list observations and ratings of job tryouts at certain stages of learning than to devise performance tests. Yet performance tests are, by far, the most satisfactory means of measuring progress.

Measurement of progress would not assume great significance if all learners followed the same pattern of development, and if they all progressed at the same rate to the final objective of a qualified worker. But such is not the case, as anyone who has had the briefest of experience in teaching can testify. It is not unusual for the quick learners to progress twice as rapidly as do the slower learners. Sometimes the rate of progress for the fastest learner is as great as three times that of the slow learner. Some persons who enter training for industrial jobs fail to qualify because of apparent inability to reach a satisfactory degree of proficiency. Individual differences modify effectiveness of learning.

The existence of marked individual differences in ability to profit by training for certain types of work warrants the application of the following principles:

1. Select for training for a given job only those applicants most likely to make reasonable progress.

2. Do not limit selection to those who can learn most rapidly, because the quickest learners most likely have abilities above the level of the job.

3. As far as possible, permit each learner to progress at his own rate.

4. Make diagnostic checks of each learner to determine where he would profit by corrective supplementary training.[2]

[2]For a more complete treatment of the psychology of learning, see:
Gates, Jersild, McConnell, and Challman, *Educational Psychology*. Macmillan, 1942. pp. 295-625.
Robert G. Simpson, *Fundamentals of Educational Psychology*. Lippincott, 1949. pp. 190-203, 316-371.
H. Sorenson, *Psychology in Education* (Revised). McGraw-Hill, 1947. pp. 243-463.
J. B. Stroud, *Psychology in Education*. Longmans, Green & Company, 1946. pp. 352-644.

## EVALUATING THE TRAINING PROGRAM

Industry has learned to use methods of determining the relative efficiency of production procedures. But it has not given attention to a similar evaluation of its training activities. While it is true that individual progress of students is measured in one way or another, it is seldom that steps are taken to measure effectiveness of training programs as a whole. Yet, inadequacies of training are likely to exist in most industrial organizations. In fact, undetected training inadequacies are more likely to exist than production inadequacies, because production faults have a way of attracting attention and demanding correction, whereas training faults are easily overlooked because of their subtle nature.

It is not possible to set forth the details of a training evaluation plan in these pages. However, the following steps for obtaining suggestive data may be used profitably in surveying training activities:

1. Item analysis of answers to questions appearing in tests used for the purpose of measuring student progress.
2. Analysis of follow-up reports by production supervisors who use the services of workers while in training and at terminal points subsequent to training.
3. Analysis of operating data or production data of recently trained workers.
4. Analysis of comments by workers in training on the value of different phases of training. Such comments should be used to guide further investigation; they should not be accepted without substantiation.
5. Analysis of comments or recommendations by instructors.
6. Analysis of grading or rating by instructors.
7. Analysis of grading or rating by production supervisors of newly trained workers.
8. Analysis of records of retraining found necessary to bring trainees up to the standard of proficiency desired.

9. Analysis of accident and spoilage records of newly trained workers.

10. Analysis of turnover among new workers.

### ADMINISTERING THE TRAINING PROGRAM

No plan for development of suitable instructors in education for work can be successful unless management understands and accepts its responsibilities in reference to training. Management frequently underestimates the importance of training and is usually unwilling to establish appropriate supervisory authority. Where there is a willingness to establish such authority, management frequently does not recognize the importance of placing in the job of supervising training a person especially qualified for that job.

The qualities of a supervisor of training would include the traits of instructors listed on pages 155-156. In addition, the supervisor should have knowledge and skill in the following fields:

1. Preparation of job specifications and translation of such specifications into training procedures.

2. Principles of teaching, particularly those which apply in adult learning.

3. Techniques of teaching and their application, both in classroom and individual instruction.

4. General economics and labor relations.

5. Techniques of statistical analysis and graphic presentation.

6. Qualities of instructors and methods for selecting and developing instructors.

7. Measures of student progress.

8. Measures of effective training.

9. Conference techniques, including effective speaking and leading a meeting.

10. Relation of training to selection, production, and supervision.

It should be clear to management, instructors, and supervisors of training that there is a close relation between education for work and supervision of work. Those who supervise workers are, in reality, the users of education for work. They are responsible for effective utilization of skills and knowledge developed through education for work, and for the extension and further development of such skills and knowledge. To a marked degree, the supervisor must be a teacher and should look upon his work as one of education. For that reason, the plan for supervision of training and supervision of work should be closely coordinated.

The educational program of a company provides an unusual opportunity for creative human relations. Management should recognize this fact and plan accordingly. In failing to promote through training the human satisfaction that comes from doing a job well, that comes from doing a job in a craftsmanlike manner, and in failing to develop in the worker a sense of importance and dignity in work, management has frequently failed to utilize to their full possibilities the important functions of training and supervision in making work human. Only constructive and creative minds can make training serve the dual objectives of preparation for production and the development of favorable industrial relations. Therefore, responsibility for industrial training programs should be placed in able hands.[3]

## CONSTRUCTIVE APPRENTICESHIP

Apprenticeship education for work, which is still adhered to in form, but not in substance, in certain skilled trades has deteriorated to the point that it is no longer education for work. As regulated by some trade unions, apprenticeship is restraint and restriction of education for work. As practiced by many companies, apprenticeship is neglect of education for work. As

[3]For a description of problems relating to the organization and administration of training programs for industrial workers, see Earl G. Planty, William S. McCord, and Carlos A. Efferson, *Training Employees and Managers.* Ronald Press, 1948.

a cooperative venture by many vocational schools, pre-apprenticeship and apprenticeship training are dabbling at education for work. Probably the best thing that could happen to the most commonly found plans of apprenticeship would be the complete divorcement of educational objectives from them, because being an apprentice in most instances today merely means being on a waiting list. As apprenticeship is now organized, the apprentice does a lot of time-serving and is given a chance to watch others at the trade. If he can pick up bits of skill and knowledge almost by the process of stealing them, he may emerge as a semicompetent and poorly informed journeyman, handicapped by the traditions of the trade. This process of restraint, frustration, and neglect is not education for work.

An internship program of education might well be substituted for what now passes for apprenticeship. Under such a program, the trade learner would be given direct instruction initially to the point of part-skill trade competence. He would then be given a chance to use such skills in work assignments, returning to a training center at frequent periods for direct training on other units of the trade. He would thus increase proficiency through alternate periods of education and work. As his final pre-journeyman assignment, for a period of a year or more, he would be required to apply complete trade skills under the supervision of a master craftsman, in order to qualify as a journeyman. Properly organized, such a program would provide highly satisfactory educational experience for the craft aspirant. However, the plan has a dangerous aspect for some of the craft unions in that it would probably produce craftsmen superior in competence to more than half of the persons now working as members of the craft.

### PRE-EMPLOYMENT EDUCATION

Most of the ideas expressed in this chapter relate to the problems of education for work which arise after the worker has

been employed. To parents, and to the young worker himself, preparation for work subsequent to employment often seems late in life for the beginning of direct preparation for work. For that reason, pressure has been exerted in every civilization in the history of mankind to hasten specific preparation for work. In the past, some form of pre-employment job training was usually provided for youth, either within family life activities or by a system of indenture. These types of pre-employment job training have gradually disappeared and a tendency to force the burden of direct preparation for work upon our public schools has developed. As a consequence, public education has become over-vocationalized, despite the efforts of farsighted educational leaders to preserve as the true objective of education broad preparation for life and work.

Preparation for work in the form of education for life and work is the most enduring investment that an individual can make. Therefore, education for life and work should be as broad and extensive as individual circumstances and capacity for education will permit. For some, this will mean two to four years of basic college education, supplemented by professional education. For others, it will mean technical education, intermingled with the study of humanities and social organization. For the majority, it will mean a standard high school program, with such specialized training as can be obtained. Only for a few persons in this complex world should it mean much less. Fortunately, popularization of education has made high school graduation the goal of practically every boy and girl. Unfortunately, this pressure for education for all has tended to weaken the quality of high school education and has fostered an ill-conceived and pernicious elective system, which results in the omission of important studies from the educational programs of many young people.

We need a return to an honest conception of education for life and work. This would mean the abandonment of "follow-

your-whim" progressive education methods now in vogue in many elementary schools. At least, it would mean their abandonment to an extent which would permit time and opportunity for such practice as is needed for mastery of the basic skills of word relations and number relations, and for the acquisition of fundamental knowledge in history, geography, and the biology of health. It would also mean a revision of the elective system in secondary education to the extent of requiring three stems of thorough study and learning, each covering four to six years, depending on whether the 6-6 or the 8-4 plan of elementary and secondary school organization is followed.

The first of these stems in secondary education should be language study, reading with understanding, and writing for a purpose with grammatical accuracy and lucidity. For the average pupil, language study would all be in English. For the more able or more proficient in English, another language would be introduced, which would be studied and spoken in the same manner as English. The second stem should include mathematics and science, algebra, geometry, biology, physics, and chemistry. For the more able students, the study of mathematics would be extended to include trigonometry, and the rate of progress for such students would be accelerated. The third stem should include study of government structures, problem analysis using historical evidence, and introduction to the systematic study of social relations, covering fundamental principles of economics, psychology, and political science. Much descriptive work now taught as social studies would be eliminated from secondary curricula and analytical study of principles substituted therefor. Scholarly pursuit of these three stems would still permit time for a limited number of electives. These might include art and music appreciation, home management, courses involving certain manual skills relating to the home workshop or hobby crafts, and management of personal finances.

At least 75% to 80% of young people would be better prepared for life and work by such a program of secondary education, and the remainder would in no way be harmed by exposure to it. Furthermore, no doors of educational or work opportunity would be closed by such a program. This cannot be said for the present secondary school elective system, nor can it be said for the so-called vocational schools at the secondary level. Just as the elective system should be abandoned in favor of a more substantial program such as the one herein described, so should secondary-level vocational schools be abandoned, as such, and converted into technical institutes at the post-secondary level. These technical institutes should be for both boys and girls, with programs differing for each. Some of the work offered should be that now taught in vocational schools, but it would be presented on a more thorough and substantial level. Furthermore, the work of technical institutes should be extended to include programs now covered by some (but not all) business and commercial trade schools. The length of programs should be one, two, or three years, depending on the field covered. Students might be admitted after the third year of high school, but preferably after the fourth year.

## EDUCATION FOR SELF-REALIZATION

The outstanding weakness of today's elementary and secondary education, and frequently, of college education, is the almost complete failure to develop in the student the capacity for self-realization through self-directed study. True education is the development of ability to increase mental stature through the mastery of the techniques of self-directed study and through the development of full appreciation of their value. Education for life and work should give the student repeated experiences through which he can learn to appreciate the power of ideas, and through which an understanding of the usefulness of the ability to

do critical, analytical, and evaluative thinking can be developed. Vocationalism and education for use are excellent in their place, but their place is not in preparatory education. Instead, preparatory education should be preparation for life and work through the development of capacity for the skillful practice of the art and science of study, which can be applied throughout life in the solution of problems of personal adjustment, social organization, and work performance.

Much alleged incompetence in work and dissatisfaction in work may be traced to three sources: (1) failure of home and community life to provide opportunity for constructive work experience in childhood; (2) failure of public schools to provide the types of educational experiences which constitute broad general basic preparation for life and work; (3) failure of employers to provide effective training for specific work assignments. The school and business enterprise cannot discharge the responsibility of the home in fostering a wholesome respect for work. Nor should the school be expected to assume the educational functions of the factory in training for work. Adequate education for life and work requires that each agency assume its rightful obligation. Since much confusion now exists as to the nature of these separate obligations, many young workers are denied both the opportunity of utilizing inherent capacities for work and, as a consequence, they often fail to attain the degree of satisfaction in work that might otherwise be possible.[4]

[4]For a challenging statement of the responsibilities of industry for education for life and work made by a leading industrialist, see: R. W. Johnson, *People Must Live and Work Together—Or Forfeit Freedom*. Doubleday, 1947. pp. 147-177. General Johnson, who is Chairman of the Board of Johnson and Johnson, served as Vice-Chairman of the War Production Board in World War II.

CHAPTER EIGHT

# The Place of Work

IN DESIGNING WORK PLACES IN THE PAST, TOO LITTLE CONSIDERATION has been given to construction features which provide for the comfort and convenience of the worker. More attention has been given to the machinery and materials of production than to the needs, desires, and capacities of the workers. Because of the existing conditions under which work must be performed, some observers contend that two-thirds of our factories ought to be torn down and newly designed ones built. This estimate may be an exaggerated one; however, it seems reasonably safe to say that (1) probably less than half of the places where people work are as pleasant and attractive as they should be, and (2) probably one-fourth require the worker to perform his daily tasks under conditions which are below the level of human physiological limits of healthful adaptation.

## WORKER NEEDS AND THE PLACE OF WORK

In order that the statements in the preceding paragraph may not be classified by the reader as being too severe, let us hasten to add that many industrial managers will agree that most factories and many other places of work should be redesigned. But they agree for another reason, namely, because redesigning the average factory would give opportunity for installation of new equipment, would provide for a better flow of work, and would otherwise make possible more efficient mechanical organization of production. These industrialists would then probably agree that if a factory is being redesigned, one might as well do as

much for the comfort and convenience of workers as possible. This view is shortsighted, because it overlooks the fact that the production efficiency of the worker is usually increased by providing a more suitable place of work. But whether comfort, convenience, and a desire for attractive surroundings makes possible a greater productive capacity on the part of the worker or not, the place of work as now constituted in many industrial plants must be improved if work is to be made human.

That workers will often sacrifice wages in order to have a pleasant place to work is demonstrated by the acceptance of a low standard of wages by many persons working in offices, banks, hotels, and schoolrooms. But nice surroundings should not be used by the employer as a substitute for wages, any more than wages can be expected to compensate for working conditions which are obviously injurious to health. The worker deserves both a satisfactory place to work and a just financial reward for work. Both are necessary in making work human.

Many places of work remain unsuitable, not so much because of the cost which would be involved in improvement, but because of indifference and neglect. Sometimes, lack of information on what constitutes a suitable place of work prevents efforts looking toward improvement. But even with such information, and with ample funds for making changes, management is often restrained by the dead weight of tradition, obstinacy, or a ridiculously absurd philosophy of human relations.

Recently, a group of top executives of a bus operating company decided, after lengthy discussion, not to provide air conditioning in the waiting rooms of the men whose job it is to operate the busses, even though offices in the same building were being air-conditioned, and even though funds had been appropriated for similar remodeling of the waiting rooms. This decision was reached on the basis of an argument that the operators might resent having to drive a bus on a hot day after having spent waiting time in air-conditioned waiting rooms! Imagine

the attitude of the workers when they learned that the bosses' offices were to be air-conditioned, while the operators' waiting rooms were not to be so equipped. Or consider what the workers' estimate of the sagacity of management might have been if they had been told the alleged reason for the decision. Because of the unusual nature of the line of reasoning followed, it is not surprising that workers often consider management decisions on human relations to be stupid. They seem stupid more often than representatives of management realize, and, in reference to the provision of facilities for the convenience of employees, they often seem penurious to the public.

The retarding influence of tradition in all matters of human relations is too well understood to require emphasis here. Yet tradition has an especially strong restraining influence with reference to improvement of conditions of work. It is easy to think that because a generation of workers accepted certain conditions, others will also accept them. This would not be a matter of serious concern, if so many work places had not in the past been so inadequately ventilated, lighted, and heated, and if a great number were not even today still cramped, shabby, dirty, dusty, and otherwise unattractive. In considering possibilities for improvement in places of work, it is safe to assume that traditional work conditions ordinarily do not meet human needs. Therefore, for a majority of plants, the starting point in rehabilitation should be that of providing conditions which meet minimum standards of sanitation and health.

Provision of suitable conditions of work need not be wholly motivated by the objective of providing the highest possible work satisfaction on the part of employees. It has been shown that optimum conditions of physical comfort encourage increases in productive output, tend to reduce mistakes, waste, and accidents, and restrain both the fatigue and monotony effects of repetitive work. From a long run point of view, provision of a suitable place of work adds to profit.

## PHYSICAL FACTORS WHICH AFFECT WORK

In efforts to improve the place of work, all facilities provided for work should receive attention. This includes tools and equipment, as well as housing. Redesigning of machines to reduce the physical effort required of the worker, making controls of equipment conveniently accessible, taking into account posture, introducing rhythm, and distributing the work load make possible maximum utilization of human capacity, and at the same time encourage higher work satisfaction.

In addition to the study of the effects on productivity and health of the employee of illumination, ventilation, humidity, noise, dust, and fumes, some companies have experimented with color as an environmental element in the place of work. In these experiments, psycho-physical factors of visibility, effect of contrast, associative identification, glare, and organic fatigue are likely to prove most profitable fields of study. The much publicized studies of conditioned-associations, which presumably make some colors appear either warm or cold, soothing or irritating, barely scratch the surface of the possible significance of color as an environmental element. As applied to the place of work, the most satisfactory method of studying the effect of color is to determine the purpose to be served by color and then choose by experiment the hue and intensity, or combinations of these, which serve that purpose best. In such experiments, it is important to control the type and intensity of illumination, because color as the human eye sees it is reflection of light. Note that the recommendation here is to choose by experiment, not by prescription of a so-called color expert.

Anyone who has tried to regulate temperature, ventilation, or illumination in a living room or an office to suit all persons present soon becomes acutely aware of distinct differences in individual tastes and tolerances. Hence, any attempt to make the place of work ideal for all workers is doomed to failure. The most that can be accomplished is the provision of optimum con-

ditions which fall within the range of normal human preferences. However, at least those conditions should be sought. But such an achievement is not easy, because optimum conditions vary with different kinds of work. For example, the degree of illumination required for precision calibration work is not the same as that which would be found suitable for bench fitting of large objects. Likewise, ranges of temperature and humidity which are acceptable for different types of work vary considerably.[1]

Work conditions, as found in many places of work, are often the result of putting other things ahead of human well-being. For example, in a certain industry, it has been found that the material used in production can be processed most satisfactorily at 85° F. and 65 per cent relative humidity. Hence, practically all workrooms in that industry are kept at the temperature and humidity which is most suitable for processing the basic material. This practice provides good working conditions for the material, but the work environment is somewhat harsh for the workers. The situation described persists in the majority of plants in the industry concerned, despite the fact that preconditioning of materials by storage in special rooms would serve production purposes equally well and would not add to production cost. Preconditioning of materials would make possible the conditioning of the workroom to suit the workers instead of the materials, but few companies take the trouble to do it. Examples of similar failures to place the human factor first are numerous. Consequently, many work places are needlessly unpleasant, even though an inexpensive change could easily be made which would noticeably improve the comfort and convenience of the place of work.

## MAINTAINING SATISFACTORY WORK CONDITIONS

The burden of maintaining satisfactory work conditions is not wholly one for the employer. The worker must do his part. Many employers complain of poor housekeeping, improper use

[1]A comprehensive review of experimental studies of the effects on production of conditions of work is presented by Thomas A. Ryan in *Work and Effort*. Ronald Press, 1947.

of equipment, and destruction of sanitary facilities, which are provided for the worker at considerable expense. In this respect, there is no distinction between men and women workers, because women workers are reputedly as careless in such matters as men.

As a consequence of the carelessness of a few employees many employers become annoyed with apparent lack of cooperation in keeping cafeterias, powder rooms, recreation halls, and even the work area orderly and tidy. Hence, the provision of suitable facilities often becomes a matter of contention between employers and workers. Little is gained in such situations by ranting and railing against human nature and claiming lack of appreciation. Care of facilities is part of the job, and employees should be so instructed. Absurd as it may seem, many employees do not recognize the difference between good and poor housekeeping practices unless the distinction is brought to their attention. When appealed to properly, most workers will not only respond to housekeeping instruction, but will also usually help in the policing of offenders in their ranks. They will even help in controlling rest room loafers, if they respect the supervisor who requests it. Encouraging the development of group standards is a more effective means of control than issuing executive orders.

Any type of facility requires upkeep; no man-built product is self-sustaining. Maintenance of convenience facilities should be provided for in the same manner that maintenance is provided for production facilities. Cost of such maintenance is a legitimate production cost. A bright and shiny car gets dusted and polished, but an old and shabby one invites neglect. So it is with facilities provided for employees. If they are permitted to become rundown they invite carelessness, yes, even vandalism. But few employees will purposely damage well-kept facilities either thoughtlessly or deliberately, especially if cooperation is invited in keeping such facilities in suitable condition. The fact that an occasional employee is by nature careless or destructive should not make necessary the penalization of the entire group. Such an employee is a

case requiring special handling, and usually fellow employees can help discipline him.

### HUMAN RELATIONS AND THE PLACE OF WORK

Some employers state that they do not wish to "spoil workers by pampering them." In fact, a few employers resist pressures for the improvement of work conditions by saying that the more they do to make work pleasant, the more employees ask in further improvements. This tendency of the worker to aspire to better conditions of work should not cause surprise, because human nature is like that; the ideal situation is never wholly attained. The most reasonable plan for employers to follow is that of making the most urgently needed improvements in the place of work, and then doing more when possible. Gradual improvement over a period of years is often more effective than a sudden pretentious change. Workers respond favorably to evidence of continuing interest in their welfare. Desire for further improvement is not an indication of lack of appreciation on the part of employees for that which has been done. Therefore, in making further changes, the employer should do so with enthusiasm, because things done grudgingly to improve working conditions provide no gain in the improvement of employer-employee relationships.

Most work places could be improved greatly before becoming anything near ideal. In some factories and offices, there often is so much to be done that perhaps the only suitable solution would be to junk the whole setup and build anew, with a design for making living human. But if this cannot be done, it is sound human relations to tackle the problems of improvement one by one and make the changes over a period of time. Merely knowing that their welfare is under consideration by the employer has a stimulating and salutary effect on workers, even though each improvement leaves much to be desired. The arrangements of a place of work should never be considered final, because making

minor changes in almost perfect arrangements is also good human relations practice. Whether conditions are good or bad, the important thing to the worker is the fact that someone is giving attention to possible improvement. The universal principle applies here as elsewhere in human relations in industry: the worker finds more satisfaction in his work if he feels that his employer is really concerned about him and his work.

Although the provision of a suitable place of work will help in the handling of other problems of human relations in industry, the best of working quarters will not prevent problems of interest in work, fitness for work, training, wages, union organization, supervision, or individual grievance from arising. Management cannot solve other human relations problems by directing attention of employees to the attractive rest rooms and spacious swimming pools provided for their use. Nor can employee loyalty be purchased with these things.

The recently reported spectacle of an elderly industrialist spending his declining years as a soured and disillusioned man because employees had unionized after fifty years of non-union operation, reveals an inadequate understanding of human relations in industry. He had, he said, paid good wages, and had also provided steady employment; he had built a beautiful community and had made the factories in which his employees worked the most pleasant and most sanitary in the nation; he had taken a personal interest in his employees and their families; he had provided insurance, sick leave, and vacations; he had provided recreation facilities and entertainment; he had even built a hospital for the community, in which workers from his plant had special preference in admission and rates. Therefore, since he had done all of these things for the benefit of his employees, he could not understand the apparent disloyalty and lack of appreciation of his employees in becoming members of a union.

He was right about the ideal conditions he had provided, right about his philanthropy and community service, right about

his personal interest in the welfare of employees. But he did not understand that these things could not set aside the independent individuality of men. Nor did he understand that patronizing supervision and paternalistic management cannot usurp the right of individuals to choose their own leaders. Instead of being so thoroughly disconcerted by the vagaries of human nature, he should have complimented himself on the fact that a union might have made life really miserable for him if his past record had not contained so many exemplary actions. Neither he nor any other employer should expect any one phase of employee relations, such as providing a pleasant place of work, to serve as full insurance against other employee relations problems.

By the same token that provision of a suitable place of work will not solve other employee relations problems, complaints by employees with reference to the place of work cannot always be taken at face value. Such complaints may be symptomatic of unsatisfactory work adjustment in other respects. Therefore, correcting conditions complained about may provide only temporary reduction of employee tension. In attempting to deal with complaints about the place of work, as well as with other complaints, the wise employer will attempt to discover more serious sources of employer-employee friction. In many cases, it may be found that absence of satisfaction in work for its own sake is the true source of difficulty.

Throughout this volume, emphasis has been placed on the possibility of making work more human through provision of conditions which encourage satisfaction in work for its own sake. It has been pointed out that the artist and craftsman gain satisfaction in work through the enjoyment of work activities themselves. The organization of work methods in mass production industries tends to destroy the opportunity for such satisfaction. This is especially true if the worker is isolated from other workers and is required to engage in simplified repetitive activities which seemingly have remote or minor relationship to the fin-

ished product which is being made. The arrangement of the place of work may magnify this limitation, through denial of an opportunity for workers to share work experiences with each other. This tendency may be counteracted by arranging the place of work to provide group operations wherein the activities of one worker supplement those of another. Certainly, anything that can be done in organizing the place of work to reduce the possibility of the worker becoming a single-purpose tool or machine will counteract some of the worst features of mass production procedures.

### A SAFE PLACE TO WORK

In addition to making the place of work one that meets standards of human living, accident hazards in the place of work should be controlled and safe operating practices on the part of the worker should be promoted. On the basis of time lost as a result of accidents the following manufacturing industries have a good safety record: tobacco, airplane, automobile, heavy machinery, printing, glass, textile, rubber, leather, sheet metal, and wood-working. On the same basis, the most hazardous industries are construction, quarrying, lumbering, and mining. In relatively safe industries, time lost per thousand man hours of work ranges from two hours to one day; in more hazardous occupations, time lost averages three days per thousand hours. In one field of work, time lost because of accidents reaches the appalling average of one in twenty hours worked, with a disabling injury occurring on the average of once each month per thousand employees.

The first responsibility of the employer for safety is to provide and maintain safe tools, equipment, and facilities of work. This includes special safety devices as well as the machines and tools used directly in performing the job. The second responsibility of the employer is that of developing on the part of the worker, through education and disciplinary control, attitudes and operating practices which promote safety in work. Meeting these responsibilities requires continuing attention because the task of

making work safe is never finished. However, promotion of safety in work usually pays its own cost if the safety program is properly organized and executed.

Harangue, propaganda, and preaching do not effectively promote safety. The "poster-publicity-propaganda" approach may help prevent accidents but an "education-enforcement-engineering" approach is the one which has been found to be the most effective by those industries which have attacked the safety problem in a thoroughgoing manner. The elements in the "Three-E" plan of safety have been clearly stated by Aspley and Whitmore as follows:

"There are three parts to a well-balanced safety program: (1) educating the employees to be careful and to take 'trouble' to be safe; (2) enforcing the safety regulations which have been laid down, keeping in mind that employees tend to become callous in safety matters as well as in other things; (3) engineering to develop and perfect safety appliances, devices, and methods which will automatically eliminate safety hazards, especially in the operation of fast moving machines.[2]

## COMMUNITY OBLIGATIONS

Through the place of work, a business enterprise makes contact with the community. If the buildings are ugly, weather-beaten, or grimy, they stand as a symbol, impressing people in the community day by day that here is an ugly, dirty, and unpleasant place to work. Conversely, a sturdy, well-planned, and attractively designed place of work not only makes people want to work there, but the impression generally conveyed lends dignity and community standing to everyone who works for the company. The pride thus engendered is reflected in quality of

[2]Quoted from J. C. Aspley and Eugene Whitmore, *The Handbook of Industrial Relations,* Dartnell, 1943. p. 784. A well-organized presentation of industrial experience and data relative to safety planning appears on pages 782-802 of the *Handbook*. This book is also a helpful reference source on numerous other problems of industrial relations.

For information on safety equipment, see *Best's Safety Directory* published by A. M. Best Company, Inc., New York.

work and serves to encourage mutual respect between employer and employee. There is a deadly parallel in the fact that industries having the longest history of unpleasant labor-management relationships have, in general, provided the most unsatisfactory places of work.

There are community obligations besides that of providing a decent place of work for employees. There was a time when communities would accept a factory to get the benefits of its payroll, even though such acceptance meant smoke, dust, fumes, stream pollution, ugly buildings, noise, traffic disruptions, and other destroyers of peaceful, healthful, and beautiful surroundings. Today the community will take the payroll without the unpleasant features, if you please. That this is true is evidenced by ordinances and statutes being passed by cities and states which prohibit the things once welcomed, then endured, now become public nuisances. Such restrictive legislation should not be necessary, because cleanliness and beauty in places of work add little more to the cost of conducting business than filth and ugliness.

Community-wide cooperation for the purpose of improving places of work appears to be an inevitable social development. This is shown on the positive side by the success and general public acceptance of the smoke-abatement and clean-up programs of cities like St. Louis and Pittsburgh. On the negative side, the need for control is shown by the heedless manner in which certain industries continue to pollute our streams and poison the atmosphere we breathe by waste and chemical by-products of manufacturing operations.

Death and illness resulting from stream pollution is difficult to calculate, but recurring instances of illness resulting from contaminated water, each involving from 2,000 to 35,000 persons, were reported last year. More than a million persons were affected. All of the pollution of streams from which water for human consumption is drawn cannot be charged to industrial by-products. However, the amount of contaminating substances discharged

from one manufacturing plant sometimes equals the sewage wastes of half a million people. A few industrial plants can create a greater degree of pollution than all of the domestic wastes of a large city.

Death and illness from atmospheric contamination by industrial smoke and chemical fumes is likewise difficult to calculate. However, there is a close parallel between the incidence of pneumonia and other respiratory diseases and the smoke content of the atmosphere in the highly industrialized communities of the nation. That deadly gases are released into the air by certain manufacturing and converting processes is shown by the destruction of vegetation near such plants. That such gases become death-dealing poisons under certain weather conditions is attested by the tragedy which occurred in the industrial community of Donora, Pennsylvania in the fall of 1948. During a heavy fog which blanketed that community for several days, four hundred persons were stricken by the smoke-laden atmosphere they breathed and twenty deaths were charged to this pollution.[3]

No need of the consumer for products or desire for profit by a producer can justify destructive practices which result in illness and death of the inhabitants of industrial communities. Pollution of streams and the atmosphere can be controlled. This can usually be accomplished with no cost to the producer. Filtering of smoke and processing of solid by-product wastes can produce salable commodities. In fact, some companies have found that conversion of industrial wastes has provided an added source of profit. But whether accomplished by profitable or expensive methods, the protection of the health and well-being of the worker is an obligation which the employer should accept in return for the privilege of operating his plant in a community.[4]

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[3]"Smog Deaths Rise to 20," *Pittsburgh Post-Gazette,* November 1, 1948.

[4]For a summary of the problems of atmospheric and stream pollution, see two articles by Bill Davidson, "Our Poisoned Waters" and "Our Poisoned Air," *Collier's,* October 16 and October 23, 1948.

Regardless of cost, managers of business enterprise have an obligation to make the place of work one in which satisfaction from work can be attained and to provide safeguards to the worker's health and physical well-being. They also have an obligation to help make the community in which they operate a pleasant place for the worker to live, make a home, and rear a family. Instead of contributing to the dirt, squalor, and the shabby homes of many factory towns, the operators of enterprise should demand a clean-up of such conditions and should lead the way in promoting community development. The builders of new factories should refuse to locate in communities where movements toward cleansing and beautification are not under way. And if they locate away from congested areas, they should protect against the inevitable development of industrial slums and commercial rubbish heaps as their neighbors. The place of work can be made an attractive center around which an attractive community can be developed.[5]

To make the place of work human, whole communities may have to be redesigned or abandoned and new ones built. This movement has already started, and doubtless will continue. If large industrial centers do not fall into step with the movement, they may become ghost towns in another generation. The worker who has many years invested in his job and has become negatively adapted to the unpleasant elements in his work environment may continue to accept conditions which he basically does not like. But the younger worker, knowing that some places of work are more pleasant than others, will seek the more pleasant, as, indeed, he should.

[5]For an illustration of cooperation in community planning and redevelopment, see "Pittsburgh—Challenge and Response" and other publications of the Allegheny Conference on Community Development, Pittsburgh.

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CHAPTER NINE

# The Reward for Work

WORK, TO BE HUMAN, SHOULD PROVIDE AN ECONOMIC REWARD FOR the worker which will permit a standard of living within the realm of human dignity and personal decency. That other rewards for work are psychologically more important in producing satisfaction in work than the wages received for work has been emphasized repeatedly in this book. However, our economic system appears to be operated on the basis of widely varying rates of payment for work. Therefore, if wage rates are not adequately controlled by public opinion and legislation, or by refusal of the worker to accept substandard wages, a fair share of workers are likely to be paid wages which are below subsistence level as measured by reasonable standards of living.

## DISTRIBUTION OF INCOME

Charges that many workers are paid substandard wages are vehemently denied by those who fear that minimum wage legislation might make it impossible for certain types of work to be bought by employers at rates which are often inadequate, when judged by living standards. Such denials are usually accompanied by citations of average earnings of workers, and by claims that these earnings are higher today than ever before in the history of this country—far higher, in fact, than they are anywhere else in the world. It is claimed that the average American wage earner usually works fewer hours and can purchase more with his earnings than workers in any other nation. Usually these comparisons

are highly favorable to the American enterprise system. For example, it is estimated that seven hours of work will purchase a pair of shoes in America, whereas more than one hundred hours of work would be required in Russia and about twenty-five hours in England.[1] However, the problem of substandard wages for a large number of workers in America cannot be solved by comparison with the unfavorable economic status of workers in other countries.

Average earnings of American workers are undeniably high; for manufacturing industries, an average wage considerably in excess of $50 per week has been reported during recent years. However, attainment of high average earnings by workers as a group does not answer the charge that substandard wages are received by large numbers of workers. The true problem relates to the distribution of wages over a wide range which includes earnings by some workers that fall below $20 per week.

The serious nature of the problem of reward for work is revealed by varying wage levels and by the large number of persons in the lower wage brackets in the wage distribution curve. While, in a period of shifting wage rates, it is difficult to obtain reliable data on the distribution of wages on a nation-wide basis, it is safe to assume that the following estimates are close enough for general discussion. Among approximately 60,000,000 gainfully employed persons:

10,000,000 to 12,000,000 receive less than 65 cents per hour
5,000,000 to 6,000,000 receive less than 50 cents per hour
2,000,000 ot 2,500,000 receive less than 40 cents per hour

Certainly $26 per week is not a subsistence wage; yet, the estimates in the preceding paragraph indicate that approximately 25% of workers receive less than that amount. What might be considered a family income which would provide a decent

[1]In either of these countries, the worker might encounter difficulty in getting the shoes, even though he had funds with which to purchase them.

standard of living is difficult to determine, especially in times of erratic, inflated, and gouge-gauged prices. Presumably, few persons would currently (1948) place a reasonable standard of living wage at less than eighty cents to one dollar per hour, or $40 to $50 per week, for a family of three. If this estimate is a fair one, then at least one-third of American families are trying to live on substandard incomes. The number would be greater save for the fact that more than one member of the family is gainfully employed in at least every third family.

According to estimates released by the U. S. Federal Reserve Board in a survey of consumer income, approximately 21 million families received income of less than $3,000 in the year 1947. The median family income was $2,920. The distribution of income for approximately 42 million families was as follows:

| *Per Cent of Families* | *Income Received* | *Per Cent of Total National Consumer Income* |
|---|---|---|
| 13% | Under $1,000 | 2% |
| 18% | $1,000 - $2,000 | 7% |
| 20% | $2,000 - $3,000 | 13% |
| 17% | $3,000 - $4,000 | 15% |
| 11% | $4,000 - $5,000 | 13% |
| 13% | $5,000 - $7,500 | 20% |
| 8% | Above $7,500 | 30%[2] |

## LOW INCOME GROUPS

There are low-income workers in every type of work, but in this respect a few business fields have an unenviable record. At least half of the workers employed in lumber manufacturing, textile and fibre mills, tobacco product manufacturing, retail trade, hotel and restaurant service, laundries, cleaning and dyeing establishments, and domestic service are paid wages which are un-

[2]"Consumer Income in 1947." U.S. Federal Reserve Board, Washington, D.C.

doubtedly below subsistence level. The underpaid are not limited to these less-favored industries and service occupations; they are found in large numbers among certain other groups, notably clerical workers, public school teachers, and municipal employees.

It is a distressing fact that not more than one-fourth of the members of the so-called white-collar business and professional groups can be said to receive adequate reward for their work, and no amount of false sympathy for their predicament will offset that fact. By continuing to offer sympathy instead of alleviation, society is undermining its cultural foundations and no strength of economic superstructure can survive such destruction. On the whole, ministers, teachers, librarians, writers, nurses, secretaries, and office people represent as high a level of intelligence as is found among members of the professions of law and medicine, and certainly as high as that found among bankers and merchants. But their abilities and social responsibilities are not being appropriately recognized if the inadequate economic reward which they receive for their work is used as a criterion. A majority of these persons, who serve society in an important capacity, choose their field of work with high ideals and purposes in mind, and they continue such service through deep devotion to professional and social ideals, regardless of the economic reward for their work. But society cannot afford to accept their services on that basis if we hope to maintain our present economic system or improve existing social standards.[3]

Many persons in low-paid professional service fields influence the ideals and shape the thinking of American youth. Professional service workers may not be indispensable from the standpoint of production and distribution of goods, but they are vitally important to the continuance of our free society. Everyone seems to agree that all persons in this group should be rewarded above a

[3]For a discussion of this problem by a leading industrialist see a chapter entitled, "The Plight of the Underpaid" in *People Must Live and Work Together—or Forfeit Freedom*, by R. W. Johnson. Doubleday, 1947. pp. 53-68.

semi-destitution level of economic existence for their work, but no one seems to do much about it. These important members of society could, of course, become an organized, noisy minority, or destroy the dignity of their place in society by forming professional unions. They might even adopt some of the mercantile methods of the lawyer, physician, and dentist, but society would assuredly not benefit by such practices. If society continues, through inadequate reward, to contribute to the destruction of the economic stability of those who symbolize humanitarianism in their work, it deserves the consequences; it will cease to be a human society, save in a primitive sense.[4]

## RESPONSIBILITY FOR WAGE STANDARDS

It is, perhaps, beside the point of this book to attempt to place responsibility for substandard wages in any of the fields of endeavor where such conditions exist. However, it is fitting to point out that although legislation may help in providing a remedy for the situation, it will not solve the problem. The primary difficulty encountered in any attempt to provide a reasonable standard of living reward for work for all classes of workers seems to relate to the fact that the low-paid workers are usually unable to help themselves and have no suitable champions. Both business leaders and labor leaders appear to be more concerned with improving the status of the better-paid worker, and the better-paid workers seem to take little interest in the plight of their underpaid fellow workers. Unfortunately, some of the underpaid seem not to be seriously interested in their own unsatisfactory status. This just about places the problem of the underpaid on the doorstep of those who are interested in general social well-being and those who should be concerned with our

[4]See an article by Alonzo G. Grace, State Commissioner of Education for Connecticut, entitled "Shall Teachers Strike?" in *Your Human Relations*, Vol. 1, No. 1, January, 1948. pp. 19-22.

total economic welfare, which should mean all of us. Assuredly, the problem should be important to those who believe in the private enterprise system, because economic maladjustment of any large portion of workers, if uncorrected, could wreck the enterprise system.

Paradoxical as it may seem, the private enterprise system stands to suffer more from substandard wages for large masses of our population than from the allegedly high wages against which some businessmen frequently offer protest. In the collapse of the private enterprise system, topside groups would stand to lose as well as the entrepreneurs, managers, investors, merchandisers, and the economically favored professions. Lush wages for one group of workers cannot hold alongside substandard wages for another group, especially a group of such sizable proportions as that group now appears to be. This does not mean that wage levels should not differ with different localities or with fields of enterprise. Nor does it mean that varying rewards for different kinds of work should not be provided, but the day is past when one portion of the population can prosper at the expense of another distinctly less favored group. Any group which tolerates such a condition, much less encourages it, is promoting social revolution, unwittingly or not. In a broad sense, marked disparity in reward for work encourages totalitarianism, with its deceptive equality of reward which, if we may judge by European experience, can be achieved only through perennial depression.[5]

One might suggest that public opinion should, at least, police those enterprises and public agencies which are the most conspicuous offenders in denying the worker a just reward for his efforts. So far as certain office workers and members of the underpaid professions are concerned, this may be the only way out of a potentially explosive situation. If a revision upward in the reward for work of these groups results in greater cost of seemingly

[5]The historical facts relating to Italy, Germany, Russia, and Great Britain appear to justify this statement, especially the events of the past fifty years.

non-productive services, it may be justified on the premise that it is good social insurance. In those private enterprises which pay substandard wages, it seems safe to assume that much could be done to provide a higher reward for the worker through the elimination of waste, and by more intelligent and resourceful management of production and marketing. To assert, as some representatives of management do in these laggard industries, that wage increases above substandard levels would put them out of business is, of course, a debatable contention. Events of the past half century prove conclusively that lifting wages did not destroy wholesale trade, coal mining, the steel industry, or other industries concerned with production of electrical goods, automobiles, heavy machinery, printing, petroleum, rubber, and power and light. True or not, many workers believe that managers of some of the laggard industries are banded together in the common cause of keeping wages in whole industries at socially unfavorable levels. This widely held belief promotes a highly unsatisfactory industrial relations situation in those industries.

Public opinion should not overlook the fact that there are concentration spots of low-wage employment, because focusing the spotlight of public opinion on certain industries and geographical areas distinguished primarily for the violation of decency in reward for work is doubtless a better corrective than legislation. But public scorn should not be limited exclusively to specific industries or geographical areas. Low wages are a social menace, even though paid to a limited number of workers in a typically high-wage industry. They are equally detrimental socially when paid by a local school board, a township or municipal board of control, the finance committee of a community church, hospital, social work agency, charitable organization, or by a university. No social progress can be achieved by denying a decent standard of living to one-third of our work groups in boom times, and to more than half of the persons in these groups in periods of business depression.

### EQUITABLE BALANCE IN REWARD FOR WORK

Wages can be too high as well as too low, when considered from an economic point of view. In general, this observation does not apply as definitely to the general average of wage levels as it does to wages for specific types of work, because wages and prices tend to counterbalance each other. Except in the production of luxury items, wages are too high when, through contribution to the cost of a product, they place the product out of the purchase range of a large majority of workers employed in basic industries. This condition may occur as a consequence of excessively high wages paid for standard production in selected industries, or it may occur in any industry if production is substandard, regardless of the wage paid. Some of the wages paid in the building industry, coupled with certain non-productive practices, come close to being excessively high, in a relative sense, when considered in the light of ability of other wage earners to pay for the finished product.

The wage level of low-paid workers is unsound if it does not permit the maintenance of a decent standard of living. The wage level of high-paid workers becomes unsound when it places the services or products provided by such workers out of the reach of the consumer group, which includes other workers who are less well paid. This dislocation becomes acutely evident in a period of scarcity when goods and services are in great demand, but it is present in any situation which operates in a way to prevent consumers in the low-wage and average-wage groups from enjoying those benefits they have a right to expect in a sensibly organized economy. Every worker should recognize that the payment of disproportionately high wages to certain workers and the limitation of production by some groups of workers, are equally as detrimental to his welfare as the exacting by industry owners of disproportionately high profits or the selling at relatively low prices those things which the worker produces.

Wage levels for different groups can get out of balance in an imperfectly adjusted enterprise system to the same degree that prices and production can get out of balance. They often get out of balance for the same reasons that prices get out of balance, namely, through artificial restriction by self-interest groups. Monopolistic unions can do as much social damage as monopolistic enterprise and, in some instances, the two work hand in hand to the detriment of the rest of the population, particularly the low-wage group. It is not surprising, therefore, that control legislation for both types of monopoly is frequently sought in the public interest. That such controls can be successful has not been satisfactorily demonstrated. Certainly, no legislation that has been formulated to date has provided anything more than temporary benefit.[6] Presumably, the situation will not be corrected until wider acceptance is accorded the social principle of a fair and equitable wage for all workers as measured by living standards. Until that principle is accepted, work cannot be made human for a large percentage of persons in certain fields of endeavor.

## TOKEN WAGES VERSUS REAL WAGES

The economic reward for work is stated in monetary terms by the employer, and the employee likewise thinks of his wages in terms of dollars and cents per hour, per week, or per month; but using dollars as the measure of wages is misleading and confusing, because the ultimate material reward for work is the goods and services that the wages will buy. Money reward for work is a token wage; the purchasing power of the money reward, measured in terms of consumable things and usable services, is the real wage. Token wages may be increased, but no increase in real wages occurs if the prices of things bought increase commensurately. Therefore no gain is made by the worker until more things can be bought with the money reward paid to

[6]The problem of providing controls compatible with the private enterprise system is discussed in a chapter entitled, "Economic Systems" by H. G. Moulton in *Controlling Factors in Economic Development*. Brookings Institution, 1948.

him. Such a gain may occur under one of several conditions: (1) when token wages increase and prices remain constant or drop; (2) when token wages remain constant and prices drop; (3) when token wages increase at a rate proportionately greater than prices; or (4) when token wages drop at a slower rate than prices. When the converse of any of these conditions occurs, the worker loses.

Theoretically, these gains and losses offset each other over an extended period of time. However, the worker, understanding little of the vicissitudes of price changes, and failing to recognize the distinction between real and token wages, persists in thinking that he gains only when wages rise. The employer, constantly on the alert to keep production costs at the lowest possible level, resists any tendency for wage increases. The ensuing struggles tend to stifle production periodically, with the result that everyone has fewer goods to share. Reasonable plans for wage readjustments, both upward and downward, in terms of a purchase-power index, might prove advantageous for all concerned.[7]

Any intelligent approach to the problem of adequate reward for work requires that consideration be directed toward real wages rather than token wages because no gain is made until purchasing power is increased. The primary means of achieving increases in real wages lies in production. The sooner this fact is learned by workers, employers, and the general public, the sooner the reward for work can be improved for the population as a whole. The more goods produced per unit of token wage, and the more goods made available to the purchaser per unit of profit, the more consumable things for everyone. In the possibility of higher levels of production per unit of effort or unit of time lies the possibility of a higher standard of living for everyone. Making this possibility a reality requires the sincere cooperation of worker, producer, and distributor.

[7]Some union-management contracts have recently included clauses providing for periodic adjustments based on cost of living changes.

## WAGES AND PRODUCTION

Ultimately, social well-being lies not in high wages or high profits expressed in dollars, but in high production which will make more goods available for dollars to buy. Increasing production is a responsibility which should be shared equally by management and the worker. The worker can meet his responsibility through application of effort in his work and by becoming more efficient in doing his work. Management can meet its responsibility by maintaining or improving quality of product, and, at the same time, reducing costs through research on materials, methods, product design, and routing. Much can also be accomplished by developing channels of distribution which cut costs of moving the product from producer to consumer. Many major industries have made remarkable progress in these respects over the past quarter of a century and, at the same time, have found it possible to increase token wages.

The slogan of the next decade should be, "To have more, produce more." But this goal will not be achieved unless both management and workers accept that credo. Nor will it be achieved unless some of our backward industries, in which waste and inept management are traditional, join the parade of industries which are moving forward. How to produce more at less cost and, at the same time, hold the present wage level or increase that level, particularly for the low-income group, is the challenge of the future.

The bogey in regulating real wages appears to be the price system which characterizes our economic system. Wages and prices are tied together because wages are a part of cost of production. An increase in wages without an increase in production must be passed along to the extent that the cost of product is increased by added unit wage costs. If this happens in several industries, the worker finds that his higher wages buy no more than before the increase was granted; frequently, the wages buy

less! However, an hourly wage increase, accompanied by a proportionate increase in hourly production, does not add to the unit wage cost of production. Actually, increase in hourly rate of production may be such that the unit wage cost is reduced, despite an increase in the hourly wage rate. This has happened in numerous instances where skillful management has encouraged greater worker efficiency and the worker has been willing to respond. It has also occurred in industries where management and workers have cooperated to improve methods, machines, and scheduling; frequently, it has occurred where means have been found to reduce loss through waste and spoilage, prevent work stoppages, make better utilization of power, simplify design, cut down overhead, or reduce material costs.

Humane management always seeks to reduce cost of production without reducing the wage of the worker. The record of many enterprise managers in bringing down the cost of products to the consumer, without disfavor to the human element in production, is excellent. However, there are still too many producers and distributors who seem to try to do business by grabbing all that the traffic will bear by boosting prices to the limit of buyer response in a rising market, and slashing wages in a falling market. This attitude on the part of management reduces the volume of things which the worker can buy with his wages, because it tends to hold the price of given items at a relatively high level in terms of real wages, regardless of the general price trend. A similar attitude on the part of the worker, which causes him to produce only the amount necessary to hold his job, or which permits the banding together of workers for the purpose of limiting production, likewise tends to withhold the benefits which would accrue to consumers from reduced cost through increased production. When limitation of production occurs, the worker, without recognizing that he is doing so, is indirectly reducing his own wages through destruction of the purchasing power of wages.

### WAGES AND PRICE FLUCTUATIONS

As pointed out in Chapter VI, wide fluctuations in business conditions, which occur periodically in our economy, are detrimental to workers. The worker cannot make a satisfactory work adjustment if he must adapt himself to periods of fluctuating demands for his services which jeopardize his opportunity to work. Slack work periods not only cut his income through layoffs, but also carry a threat of unemployment, which destroys morale and thus influences output unfavorably. Nor can he make a satisfactory work adjustment in a period of full employment if it is accompanied by an upsurge in prices, which makes his income insufficient to purchase the things he needs. Appropriate means must be found to level off the peaks and valleys of business cycles and to even out employment opportunities, if work is to be made human. It is equally true that prices must be reasonably stabilized if the worker is to receive a just reward for his efforts in real wages; unless, of course, token wages are varied to conform with price changes. Cost of living wage variations have been proposed to meet the problem of price changes. But since labor costs are a part of product cost, such a plan is difficult to apply equitably.

Precisely how full employment and an equitable balance between the price level and wages can be achieved is not wholly clear. However, acceptance of the principle of full employment and stabilization of real wages as a desirable objective, and more intelligent cooperative planning on the part of enterprise managers to attain that objective, would help bring a more satisfactory situation with reference to reward for work than now exists. Intelligent government planning might help, but such planning must be accomplished in cooperation with enterprise managers and labor leaders to be successful. Enterprise pulling one way and labor another, with government supporting first one force and then the other, will not help. The goals for all should be full

employment, full production, and reasonable stabilization of real wages. With such goals accepted in principle, the means could probably be found.[8]

The method of pricing used by producers could, in many instances, be changed with distinct advantage to workers and other consumers. The method frequently followed is that of computing cost and then adding profit, a sort of cost-plus system. Another and better method for the consumer would be to start with a preconceived price which would place the product within the reach of the majority of consumers, and then develop a plan of production which would keep costs at a level low enough to permit a fair profit. That this procedure can be followed profitably, and still bring to the consumer a product of suitable quality at a reasonable price, has been demonstrated by certain prominent manufacturers of men's clothing, shoes, and hats. The feasibility of such a plan was also demonstrated by producers of low-priced automobiles during the prewar period, even though a different point of view seems to apply to current pricing policies.

### WAGES AND TAXES

The reward for work is vitiated when an excessive portion of that reward is taken from the worker, without choice on his part as to the manner in which it will be spent. This comes close to being true under our present system of taxes. No worker can obtain full satisfaction from work when every third day's pay must be surrendered to pay for government services and the liquidation of public debts incurred by governing bodies. Yet this is approximately the situation in America today because

[8]The views of employers on this important problem are reflected in reports of the Committee for Economic Development prepared in cooperation with the U.S. Bureau of Foreign and Domestic Commerce, Washington, D.C. The views of labor are reflected in *Planning and Paying for Full Employment,* edited by A. P. Lerner and F. D. Graham. Princeton University Press, 1947. The viewpoint of an individual producer (U.S. Spring and Bumper Company of Los Angeles) is reflected in an article entitled, "Equitable Standards for Production and Incentives" by Fred M. Burt in *Mill and Factory,* July, 1948. pp. 130-134.

through taxes, approximately 6,000,000 civilian federal, state, and local employees take a share of every worker's paycheck. This number of hidden dependents is 125% higher than it was in 1940. Eventually, the worker must learn that he is supporting a horde of unknown dependents and creditors who receive a sizable share of the wages earned through his efforts. Often that share of his wages is higher than the profit received by the owners of the factory in which he is employed. The true significance of this situation is not understood by the average worker; however, just as wages become less rewarding when the price of goods is high, so too, are they less rewarding when the price of government is high.

Workers cannot afford to support approximately two and a quarter million employees of the national government in peace time. Nor can they afford subsidies which keep much-needed food products off the market and thereby increase the cost of things which the worker must buy. Although he does not realize it, the worker pays taxes to support a subsidy program which operates to reduce his real wages. Paradoxically, he pays taxes for the privilege of paying higher prices for goods he must buy with that portion of his wages which is left after he pays his taxes. But the cost of taxes to the worker does not end in the payment of direct taxes. The price of everything he purchases includes a portion for taxes, because every seller passes his tax cost on to the consumer. And the average wage earner is the prime consumer, because he must spend practically all of his earnings in order to live.

The worker should not be asked to pay out of his earnings for charity and unemployment relief to European and Asiatic workers, nor unemployment relief for people at home who choose to loaf when jobs are available, nor for bungling management of war surplus disposal, nor for subsidized housing that does not materialize, nor for airplanes that aren't delivered, nor for South American highways that aren't completed, nor for Canadian oil

fields that aren't developed, nor for kickbacks or expensive parties charged to government contracts, nor for junkets and investigations which too often are public spectacles, rather than a means of recovering misused tax money which the worker has supplied. The worker cannot long afford to contribute, directly or indirectly, twenty to thirty cents of each dollar he earns in order that these and other government expenditures may be made. If we, as a nation, decide we must continue to support such activities, a method of financing them should be found which will leave the worker's earnings intact.[9]

If the worker is to pay the interest and amortization of a huge national debt of 253 billion dollars, most of which was accumulated through spending to meet the cost of twenty years of social experimentation and war, the burden of other tax costs must be reduced. No amount of argument that the worker, as a citizen, owes this debt to himself can change the fact that deductions are made from his weekly paycheck at the source to meet the cost of owing the debt to himself. However, the debt is there and, unless we, as a nation, adopt the European method of repudiating public debt, it will have to be paid. This fact should be recognized in formulating national fiscal policy. If the worker is to be asked to try to earn a respectable wage, and if the employer is to be asked to strive to pay it, then, in all fairness to the desire to make it possible for the worker to maintain a decent standard of living, taxing agencies should let him keep for his own use at least 90% of what he is able to earn. At the same time, national fiscal policy should provide means of demonetizing fifty billion dollars' worth of cashable bonds, which exercise an inflationary force that reduces the real value of the token wages paid to the worker.[10]

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[9]The worker receives more tangible services in return for local taxes than he does from the Federal taxes he pays. See an article by Carl J. Faist, "I Get My Money's Worth from Local Taxes." *Saturday Evening Post,* November 20, 1948. p. 196.

[10]For a discussion of the economic consequences of national fiscal policy see *The National Debt and the New Economics* by S. E. Harris. McGraw Hill, 1948.

References to taxation and general fiscal policy have been made in this chapter to indicate that plans of employers for placing adequate reward for work in the hands of the worker can be disrupted through government practices. Through excessive taxation, a government can actually discourage workers from working. This has been demonstrated recently in England. Government financial practices can result in price inflation, thereby reducing the purchasing power of wages. This has been demonstrated in the United States during the past two years, (1946-48) and was cruelly demonstrated in Germany following World War I. In such circumstances, the worker is placed at a disadvantage through no choice of course of action on his part, and despite wage increases granted by his employer. Under such conditions, the worker is, in a sense, victimized by the persons he has chosen as his leaders.

## DETERMINING THE MEDIAN JOB RATE

Ultimately, every employer must decide the manner in which wages as a reward for work are to be determined. This determination must include a method for establishing variations in wages which will be paid for different kinds of work. Frequently, wages are established by studying the market to determine the probable price at which goods can be sold, and then, after computing other costs of production and allowing for profit, finding the margin left for wages. But this places the determination of the reward for work last, whereas it ought to be placed first. The human way is to determine the wage that should be paid to provide for a decent standard of living and set that cost as inevitable. All other planning with reference to material costs, the price at which the product is to be sold, and the margin of profit should be balanced around the highly important central factor of wages. Failure of management to plan

in this manner has the effect of forcing workers to use organized effort to attain wages desired.

Where a variety of rates must be paid because operations involve different kinds of work, a median rate should be set and other rates adjusted to that median. The median rate should be established with due consideration being given to three primary factors. The factor which should be considered first is cost of living requirements of the community. This factor should be broken down in terms of the economic obligations and needs of different classes of workers, such as male or female, married or single, etc. The cost of living factor having been estimated, then consideration may be given to elements which make a particular job deserving of a rate above or below the median.

It might be assumed that the median rate should be set at the cost of living point. But this does not suffice, because rates falling below the median would then be substandard to cost of living. Setting the median rate at the level of cost of living tends to place about half of the workers on a substandard rate. In general, the median rate should be high enough to guarantee that no worker need be below a cost of living standard applicable to the type of person most likely to fill the job. The type of person most likely to fill the job must be considered because dependency obligations differ. For example, the rate on a job most likely to be filled by a person with no dependents could be below the standard for a married worker with two or three dependents and still not violate principles of human decency. The economics of production and skill requirements of different jobs should be considered as factors in establishing wage scales only after the social elements have been clearly determined.

To put a wage plan into operation, using cost of living as the focal point, requires definition of cost of living. Such a definition in cold print is hazardous, because conditions vary from community to community and prices fluctuate widely in a cycli-

cal interval such as that which currently exists.[11] However, as of the moment, and for illustrative purposes only, let us assume that eighty cents to one dollar per hour would be a reasonable minimum cost of living wage for a family of three. Such a rate would provide income sufficient only to meet the cost of bare neccesities for a family of that size; it certainly would not provide income to support a way of life that many would choose. An examination of this rate, and a few imaginary applications of it to personal needs, will quickly demonstrate to the reader that the median job rate should not be set at the minimum cost of living level.

Where, then, should the median rate be set, and how should it be calculated? This question cannot be answered for a specific business organization without information relative to the extent of variation of jobs in the organization. In an organization with small variation in skill and responsibility requirements for different jobs, the median job rate might conceivably be set at 20% to 25% above the minimum standard of living rate. For organizations having a broad spread of job activities, and thus requiring a broader range of job rates to attract properly qualified employees, the median rate might be 30% to 40% above the living standard rate. Under present conditions, a median rate of $1.20 to $1.25 would probably be appropriate for most industries.[12] This rate should not be confused with the average earnings rate, because the median rate referred to here is the median job rate. That rate will frequently be higher than the average earnings rate because of the variation in number of persons employed on different jobs.

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[11]A monetary statement of standard of living has little significance without reference to locality. The difference in rent alone, as between city and rural communities, may amount to as much as $500 per year. A series of items in cost of living recently compiled by the Bureau of Labor Statistics shows a difference among cities amounting to as much as $454 per year.

[12]January, 1949.

### DETERMINING VARIATIONS FROM THE MEDIAN RATE

Having determined the median job rate, the immediate problem of wage administration then becomes one of setting equitable rates for different jobs with different requirements and different responsibilities. In setting rate differentials, jobs must be evaluated in somewhat the same manner as was recommended in Chapter V for evaluation of applicants for employment. A wide variety of job evaluation plans are in use in industry today. These differ as to details, but the following steps are ordinarily involved:

1. *Collect job facts.* This basic information should be detailed and exhaustive. Thorough recording of these facts may require ten to fifty typewritten pages for each job. The purpose of such lengthy and exhaustive tabulation of job facts is to assemble information which ordinarily exists only in the minds of workers, supervisors, and job planners, and then to record that information so that it may be preserved for reference in classified form. In collecting such information, it has been found that details which the persons closest to the job take for granted and, consequently, fail to mention, are often of considerable importance in later evaluation. For that reason, the search for job facts should be painstaking and exhaustive. Inadequacy of such information has been found to be a prime weakness in most evaluation plans.

2. *Prepare job descriptions.* The job description is essentially a classification or logical ordering of the facts about a job. It is prepared after facts have been collected. A general outline for preparing job descriptions should be kept in mind in collecting job facts, but the outline should not be so rigidly followed as to preclude the gathering of important facts about a job which may be peculiarly applicable to that job.

3. *Prepare job specifications.* A job specification is essentially a systematized condensation of the job description. However, the job specification differs from the job description in that the facts of the job are interpreted in terms of the degree and kinds of

duties, risks, responsibilities, and operations involved. For most effective use, such specifications should be drawn up in terms which permit comparison of jobs on essential elements. Terms used to designate these elements should be carefully defined in order to permit them to be used in comparative symbolic thinking with reference to two or more jobs.

4. *Prepare worker specifications for each job.* This step is frequently omitted in plans for job evaluation. However, it is an essential step because the elements included in most job rating plans are related to the qualities, effort, skill, risk, responsibility, and conditions under which the worker must perform his work. Implicitly, the evaluation of a job is an evaluation of a well-qualified hypothetical person at work on the job. Therefore, the job specification and the worker specification are both important points of reference in making a job evaluation.

5. *Prepare a job evaluation plan.* This should include a form for recording separate evaluations of job factors or elements common to a family or related group of jobs.[13]

### JOB EVALUATION

Job family is a general classification for dividing jobs into groups with reference to their fundamental characteristics. After an extensive study of job characteristics, one company has found it desirable to classify jobs in that organization into seven groups or families: (1) unskilled, (2) skilled, (3) interpretive, (4) creative, (5) administrative, (6) executive, (7) policy making. Each major group may be subdivided into subgroups before attempting to evaluate separate jobs. No pattern will suffice for every company. Only careful analysis of descriptions of all jobs within a given company will provide a workable grouping. This grouping is the preliminary stage of evaluation. Subse-

[13]It will frequently be found desirable to compare jobs and wages on a community-wide basis. This should be done analytically because job names are frequently misleading. See Benjamin McClancy, "How to Do a Community Wage Survey." *Mill and Factory*, July, 1948. pp. 134-137.

quently, each job is rated on a scale especially applicable to the group to which a particular job belongs.

Job factors or elements used in the form for making job evaluations or ratings should be determined by analysis of job specifications and workers' qualifications. Again, no particular set of elements will suffice for every company, nor for every job family within an organization. This is a matter which must be determined with reference to the conditions within each company. Normally, the number of factors evaluated or rated will range from four to ten. One company evaluates the following elements in arriving at a rating of requirements for office positions: (1) general education; (2) special training and experience; (3) special knowledge; (4) accuracy and system; (5) ability to plan, execute, and accept responsibility; (6) supervisory ability; (7) judgment; (8) mental ability; (9) ability to make good contacts; (10) integrity and professional ethics. Maximum values assigned to each of these elements range from three to eight. Another company rates production jobs on the basis of six factors: (1) mentality; (2) skill; (3) responsibility; (4) mental application and concentration; (5) physical application and exertion; (6) working conditions. In using this evaluation form, maximum point values ranging from 50 to 400 are assigned to elements in different jobs.

The procedures of job evaluation are based on a comparison of relative values which have been arbitrarily determined. Jobs are scaled on the basis of an arbitrary-evaluation yardstick and wages are then scaled accordingly. In essence, a job evaluation is a series of recorded judgments for which there is, at present, no satisfactory substitute. Although the validity of the procedure has been questioned, this criticism has no special significance, because job evaluation in one form or another is inescapable. However, the validity of such judgments can be extended by adherence to sound analytical procedures. To insure optimum validity, evaluations should be rechecked periodically and a new

evaluation should be made if a job is changed in any manner, even though the change may seem minor.[14]

## REWARD FOR EFFORT

Job evaluation is a technique for determining differences in basic rates for different jobs. Having established these differentials for the purpose of setting rates on a variety of jobs as deviations from the median rate, some companies believe it desirable to provide methods for varying the amounts paid to different workers on the same job. These departures are based on a philosophy of equal pay for equal effort, and provide for incentive or bonus payments to workers whose rate of production is faster than "standard time" for a given series of operations.

Elaborate procedures for establishing time standards, based on "average" performance, have been developed and are applied in many industries. In the early stages of the development of the techniques involved in these procedures, the approach to the problem was highly mechanical. Therefore, even though not basically inherent in the philosophy of time study, the worker was often treated as an adjunct of the machine, with little allowance for the human element. As a consequence, applications of time study methods have encouraged widespread mistrust and opposition among workers. Doubts as to the validity of time studies are frequently justified, because necessary research for checking some of the assumptions made by time study proponents has not been forthcoming. Psychologically, the important human relations element in any time study incentive system is worker acceptance. Therefore, time study specialists have a dual responsibility in

[14]For a statement of principles and procedures in job evaluation see *Job Evaluation* by Jay L. Otis and Richard H. Leukart. Prentice-Hall, 1947. For a report of company practices see *Studies in Personnel Policy*, No. 25—*Job Evaluation*. National Industrial Conference Board, New York, 1940. See also "The Job-Rating Method" in *Psychology for Business and Industry* by Herbert Moore. McGraw-Hill, 1942. pp. 298-304. For discussion of current wage problems see "Planning Wage and Extra Compensation Policies." American Management Association, 1948, and "The Annual Wage—Where Are We?" *American Economic Review*. December, 1947.

making their techniques more human; they must not only validate many of their basic assumptions through research, but must also develop means of convincing workers that application of these assumptions is fair and equitable.[15]

## EVALUATING THE WORKER

After jobs have been evaluated and the wage plan has been established, there arises the necessity for determining the degree to which the worker satisfactorily performs his job, not only with reference to rate of production, but with reference to other requirements of the job. Wages are a measure of the value of the worker's time. That value is judged by the worker in terms of satisfaction in work, effort and attention required, inconvenience incurred, association with others, and other elements of a personal nature, in addition to the satisfaction in the things which wages will buy. The employer also measures the worker in terms of many elements in addition to direct productivity. Hence, it is important to have some means of measuring the worth of the worker in a broad, general sense. This measure of the merit of the worker is used in determining whether he is to be retained or dismissed, whether he needs retraining, and whether he should be transferred or promoted.

Frequently it is also necessary to determine the relative merit of a worker, in order to decide whether to reward him by giving him a preferential wage rate on the job he is performing. Many companies have instituted carefully organized plans, whereby increases in wages are granted on the basis of ratings by foremen and other supervisors. These ratings are used to supplement more objective measures of improvement in performance or employee worth to the company. Because of the

[15]For an appraisal of time-study procedures see *Work and Effort* by Thomas A. Ryan. Ronald Press, 1947. pp. 289-236. For examples of wage incentive practices in industry see *Studies in Personnel Policy,* No. 68—*Wage Incentive Practices.* National Industrial Conference Board, 1946.

association of the plan of rating with the idea of service rendered and increases in wages thus merited, this procedure is often referred to as "service rating" or "merit rating." The rating procedures used in these plans are substantially no different than rating methods in more general use. Consequently, the same elements of weakness are involved as in other rating procedures.[16]

A wide variety of methods may be used in making wage adjustments on the basis of merit ratings. For example, a company might establish a series of three or more rates for the same job, each of which is progressively higher by a few cents than the basic job rate. An appropriate rate would then be assigned each worker on the basis of periodic ratings, occurring six months to one year apart. In this method, the worker is required to maintain a satisfactory standing on the basis of merit rating to attain or hold a rate higher than the base rate up to the maximum for the job. Another method of accomplishing a similar kind of wage adjustment for merit is that of rating the worker periodically on a rating scale, subdivided into traits or qualities to which different values are assigned for different degrees of the traits or qualities. The numerical total for the worker is then used to adjust his wages on the basis of scaled variations within a minimum and maximum wage range for the job.

### GETTING ACCEPTANCE OF THE WAGE PLAN

It is difficult to determine the extent to which methods for paying wage differentials to persons on the same job should be recommended for use. However, it should be noted that many companies are using such plans with apparent success. The success of any plan depends upon the development of a feeling on the part of the employee that he is being paid fairly in comparison with other employees, therefore, the following basic

[16]The discussion of rating procedures presented in Chapter X is applicable to merit ratings. For examples of rating practices in industry, see *Studies in Personnel Policy*, No. 39—*Employee Rating*. National Industrial Conference Board. New York, 1942.

principles should be applied in developing a differential wage scale:

1. The plan should be formulated after careful analysis of job specifications and worker specifications.

2. Employees should be invited to offer suggestions and criticisms in formulating the plan.

3. The plan adopted should be simple enough to be understood readily by employees.

4. The plan should be carefully explained to all employees.

Application of merit rating, time studies, and other bonus or preferential incentive systems has clearly demonstrated the existence of marked differences in individual productivity. These differences are due, in part, to differences in basic human capacities and, in part, to differences in interest and responsiveness. It is the contention of this book that better work adjustment is attained through the development of direct satisfaction in work than through striving for economic rewards. However, properly used, incentive and bonus systems provide an essential form of supplementary motivation. It is when such rewards become the primary element in motivation in work that their use ceases to be human.

Providing an adequate reward for work is a twofold problem. In the first place, it is one of general social responsibility for lifting the lower third of wage earners to a real income level which will permit living on a socially acceptable standard of human dignity and decency. In the second place, it is one of individual company responsibility for rewarding merit. These objectives cannot be achieved (1) if productivity is restricted by incompetence of workers, union policies, inadequate production engineering, or limitations of management; (2) if an excessively large share of the worker's income is absorbed by taxes; or (3) if national fiscal policy fosters price fluctuations which destroy the purchasing power of wages.

CHAPTER TEN

# *Supervision of Work*

AT ONE TIME, OWNERS AND MANAGERS OF BUSINESS ORGANIZATIONS and their employees worked side by side and understood each other's personal problems. Today workers and managers usually are total strangers and, to a certain extent, they live in two different worlds so far as daily work experiences are concerned. They meet only through an intermediary, the supervisor. The supervisor must serve the interests of both, and in so doing he must see to it that the worker obtains the satisfaction from work to which he is entitled, and that management gets the production for which the business is operated. To do this the supervisor must understand both the workers and managers, visualize opposing perspectives of a problem, and be able to integrate varying interests, purposes, and points of view, even though they may conflict. Truly, the responsibility of the supervisor is such that he must be an able man, more capable in certain respects than either the worker or the manager.

## THE TRUE CONCEPT OF SUPERVISION

Many managers say that if they could only get department heads, foremen, and production supervisors to understand the economics of enterprise, the company would prosper. To this end they lay stress on the importance of production costs, speed-up in production, and profit margins, through conferences, individual discussions, and special courses for supervisors. The usual result is to concentrate attention on abstract economic principles that emphasize the general assumption, already too firmly en-

trenched, that business exists primarily for the earning of profits. The trouble with this emphasis is that it fails to recognize the interest of the public in work situations and places the supervisor in a difficult position with relation to both management and workers as human beings. It intensifies a prime source of conflict because, in terms of economic abstractions, owners and managers are pictured as persons trying to win a game in which high scores in profits are amassed by using services of workers obtained at the best bargaining price in wages at which those services can be bought. The worker, in turn, is pictured as a sort of faceless, formless, selfless automaton, whose services are being sold on an equally hard-bargaining basis, either by himself or enmasse by a labor union, for the highest wage rate obtainable. In terms of economic abstractions, these assumptions may be true, but conception of management-labor relationships in this manner completely undermines the possibility of making work human through personalized supervision.[1]

What supervisors need is not more thorough indoctrination in the harsh principles of the commodity theory of labor, but greater understanding of the motives, interests, needs, capacities, and the personal problems of workers as individuals. The supervisor needs to know that the worker is striving to carve out a place for himself in a chaotic and confused world; that he is searching for a way to plan a future for himself and his family; that he has not the degree of freedom to establish himself as a proprietor or owner, or an exploiter of easily accessible natural resources, which was afforded his father or grandfather; that, in the majority of instances, he must spend much of his life working at his present job or a similar one; that he is unable to

[1]Some companies recognize the importance of human relations factors in work situations. See, for example, "Humanizing Labor Relations," an address by Frederick C. Crawford, President, Thompson Products, Inc., Cleveland, Ohio. Published in pamphlet form by the company, 1947. Mr. Crawford, who is a former president of the National Association of Manufacturers, bases his plea for closer relations between management, supervisors, and workers on a survey of employee opinion summarized in another pamphlet entitled, "We Led With Our Chin." Also published by the company.

make any show of strength as an individual unless he joins forces with his fellow worker and seeks his own leaders; that he is desperately hungry for human understanding; that he will respond to any relationship which brings to him the warmth of feeling accruing from recognition of individual importance and dignity; that he misunderstands the significance of profits made by the company employing him; and that he often resents what to him seem to be inequities in the distribution of economic rewards.

The setting in which supervision must function is truly a human one; economic issues should be settled elsewhere. Production and smooth operation through adroit handling of human relations are the objectives of supervision. Even where an incentive wage system is applied, it is not economic pressures by supervision which get best results, it is the managing of the system as a game, in which points are won or bogeys overcome, that gets high production. To be sure, when workers bargain or strike, they place emphasis on hours and wages, but that stress is often a rationalization of failure otherwise to experience satisfaction in work. From the point of view of making work human, the primary purpose of supervision should be to see to it that every worker gets the maximum possible satisfaction from his work.

The human concept of supervision removes the functions of the foreman from the realm of hard-driving policing and disciplining of workers. It makes the supervisor a leader rather than a harsh taskmaster. It calls for a different type of personality than is frequently found among foremen in industrial organizations at present, and it assumes that management will recognize the importance of the foreman's position to a degree that will generate willingness to pay appropriately for the qualities required. The ridiculous situation in many companies, which makes the margin of earnings of the foreman such that a competent worker with a little overtime can top the foreman's rate,

is evidence that management does not always clearly recognize the significance of supervisory activities in work.[2]

Industry needs a new philosophy of supervision of work, based on a new concept of human relations in work. In a past period of industrial development that extended into the early years of the present century, the owner or manager of business enterprise was king. He was free to exploit workers, just as he exploited natural resources, in an expanding economy. The supervisor's job was one of holding the worker to his task and sweating out as much effort as possible to satisfy the avaricious greed of owners and managers. This was frequently accomplished through constant threat of discharge held over the head of the laggard worker. In more recent years, the supervisor's job seemingly has been to go as far in that direction as possible and still stay within the limits of legal regulation. The struggle between the philosophy of strict discipline and the legal restraints of the National Labor Relations (Wagner) Act often made the supervisor's job during the prolonged depression years one of avoiding legal citation and still wangling production out of workers who were reluctant to work because of protected loafing, output restriction, slowdowns, and sitdowns.

## THE IMPORTANCE OF SUPERVISION

In most industries, the supervisor was not doing a satisfactory job of getting out production in the face of legally protected limitations until war came along and provided a motive for production. The tendency on the part of large groups of workers to use these legal restrictions on management prerogatives as protection in shrinking production in the prewar period was evidence that the supervisor had not learned to handle the human relations elements of his job, when denied the authority of ruthless dis-

[2]See "Foremen to the Fore" by John F. Sembower, *Trained Men*, No. 1, 1948, pp. 11-16 for a discussion of the importance of strengthening the foreman's place in the administrative organization of industrial firms.

cipline.[3] The blowoff following the war, with its strikes and reduced production, indicates that during the war a sort of truce in human relations was being maintained despite ineffective supervision. Now that two extremes have been experienced in industrial relations, one in which the entrepreneur had the upper hand with the tacit approval of law, and the other in which organized labor—protected by the one-sided Wagner Act and its biased and often primitive administration—called the tune, management-labor relations are moving into a new era. This new era should provide an opportunity for supervision of work to contribute not only to higher production, through which everyone may benefit, but also to help in maintaining industrial peace, which is possible only when the human relations of work are soundly handled.

Because foremen, department heads, and other supervisors are in a mid-position between management and the worker, their task is a difficult one, and one which can be readily misunderstood. Management has the power to make work human or inhuman by the policies which it establishes; however, it remains for supervisors to carry out these policies, hence, the supervisor may be considered more or less directly responsible for human relations in industry. The supervisor may be helpless in seeking to make work relations human because he is restricted by policies established by management. On the other hand, management may establish the most humane policies possible and fail in achieving good work relations because supervisors do not carry out these policies in their daily association with workers.[4]

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[3]It must be admitted that the Wagner Act was a "bad" law in its effect on production and in its restriction of motivation of respect for work. The administration of this law destroyed many of the natural satisfactions in work. However, it must also be admitted that the law was enacted as a means of correcting exploitative practices by a certain type of entrepreneur. Unfortunately, it did not protect the worker against other objectionable forms of exploitation, particularly the practices of certain types of labor leaders.

[4]For an analysis of the relationship between management and supervision, see "The Executive as a Supervisor" in *Executive Ability: Its Discovery and Development.* op. cit, pp. 371-402.

The fact that the foreman is essentially a member of management personnel has been overlooked by many companies, with the result that a disturbing phenomenon has recently developed in attempts to establish foremen's unions. The formation of a foremen's union means that, having failed to gain recognition as a part of management, foremen are, in essence, joining forces with the work groups which they are called on to supervise. Fundamentally, there is nothing wrong with foremen's unions, but the motivation which causes the formation of such organizations is contrary to the basic purpose of the foreman's job. The existence of supervisors' unions in a company suggests that top management either does not have a clear conception of the management aspects of foremanship, or fails to respect the dignity of the position.

To make it possible for the foreman to function properly in his position, application of the following procedures is recommended:

1. Define the functions of foremanship.

2. Select persons who have qualifications specifically needed to render service in keeping with these functions.

3. Provide training which will clearly indicate to the foreman the functions which he must discharge, and which will assist him in utilizing his capacity to meet the requirements of the job.

4. Provide adequate compensation in just proportion to the rewards of management and establish a sound means of readjusting the reward to the foreman proportionately to the highest paid workers under his supervision.

5. Provide effective means of evaluating supervisory performance.

6. Provide a means for the supervisor to maintain essential contacts with top management.

7. Provide a means for information to move through the foreman as a channel to workers, and for information to channel

through the foreman to management, especially with reference to problems of human relations.

8. Provide means for bringing about a clear recognition of the responsibility of supervision on the part of top management.

9. Establish close coordination between supervisory groups and members of the staff of the personnel department.

10. Establish close coordination between supervisors and all personnel responsible for employee training.

### SUPERVISION SHOULD EMPHASIZE THE HUMAN ELEMENT

While production is the lifeblood of any business organization, and while the survival of the organization depends upon production, production gained at the cost of employee dissatisfaction and ill will results in industrial strife and conflict. Ill will engendered by inept supervision leads to strikes, slowdowns, work stoppages, unrealistic wage demands, and other actions which usually cancel the momentary gains made from forced production, which disregards the human element. Strikes and other actions which limit production are more likely to occur when the nature of work engaged in fails to arouse pride of workmanship and a feeling of dignity in work. The breakdown of jobs into minor skills, which characterizes much of today's industrial operation, destroys some of the natural appeal of the job and makes for working conditions which frequently run counter to, rather than encourage, feelings of pride and dignity in work. Therefore, elements not present in work must often be compensated for through leadership in supervision. Consequently, the task of supervision is made doubly difficult and infinitely more important where high-speed production is sought.

Unfortunately, application of technical processes, by which industry has made great strides, encourages a philosophy of work which runs counter to the facts of human nature. The counter-stress emanating therefrom is not insurmountable, but it must be recognized in dealing with workers. The persons who are

responsible for technical developments—scientists, engineers, designers, financiers, and lawyers—frequently make progress in the formulation of production plans and procedures because they ignore the human element in their research and planning. This ignoring of the human element is sometimes highly essential, otherwise, the resistance of human nature to change would obstruct progress. However, planning is one thing and production operation is another, because the human element cannot be ignored in carrying out production operations.

It is possible to establish a flow of materials and a rhythmic timing of machinery which are subject to the direct control of a technical specialist. These mechanical elements in production can be made to respond directly to the desires and purposes of the production specialist. Hence, it is easy for the technician to reach a frame of mind which leads him to expect workers to adjust willingly and expeditiously to any mechanical requirements or conditions of work involved in a plan of production. For what seems to be sufficient economic reward, responsiveness on the part of the worker may be obtained temporarily. However, the worker eventually begins to think and feel certain ways with reference to the things which he is forced to do in order to comply with mechanized work requirements. If he does not think and feel favorably toward work requirements, he expresses his state of frustration by engaging in eruptive behavior.[5]

[5]In an article entitled "Emotions as Instruments of Management," Arthur C. Horrocks, Director of Public Relations, Goodyear Tire and Rubber Company, states:

"To use Glenn Gardiner's famous four M's, industry requires four things: Money, Materials, Machinery and Men.

"America has plenty of MONEY. . . .

"While our MATERIALS are not inexhaustible . . . twice in a quarter of a century we had materials enough to stop the dictators.

"As for MACHINES, as for electronics, as for applied science generally, the boss has only to whisper a wish and the thing is born in this country-wide 'House of Magic' of ours.

"But we in management have not yet learned how to handle these MEN, to make 'em sing in harmony with our machines!

"These men live in a different atmosphere from ours—we in a world of facts and figures, of material things—they in a world of emotions, with their first thoughts for their families, their security."—*Trained Men*, No. 1, 1948. pp. 17-18.

The organization of industry by specialists, which reduces each job to a few simple skills, provides a continuous flow of materials, and introduces assembly line procedures, is excellent from the standpoint of fabrication of materials. In that respect, nothing better appears to be in prospect, yet those procedures, unrelieved by some means of bringing personalized satisfaction in work to the worker, tend to produce fatigue, occasionally give rise to nervous disorders, and generally build up a background of destructive emotional repressions. This suggests a need for careful study of the human element in establishing production procedures. Here the supervisor should be able to serve in a more satisfactory manner than technical specialists. Failure of management to recognize this fact has been a primary source of dissatisfaction in work.

Regardless of production procedures, satisfactory worker adjustment cannot be achieved unless suitable persons are chosen to fill supervisory positions. A foreman who displays annoying personality traits tends to induce emotional illness in many of the workers under his supervision, and unintentionally encourages others to become troublemakers. When general employment conditions permit workers to secure other jobs, displeasing qualities in supervisors also result in a high labor turnover. The ideal supervisor is a balanced individual who can keep production moving at a satisfactory pace and, at the same time, avoid antagonizing workers. In many instances, he must not only avoid the stimulation of antagonism directed toward himself, but must also overcome annoyances created by thoughtless actions by top-ranking officials.

### INDIVIDUAL AND GROUP RELATIONS IN SUPERVISION

To a great extent, supervisory activities in industry are carried out in a manner which is the reverse of good human relations practice. This occurs most often in the failure of the supervisor to distinguish between the individual and group relations of his

job. Performance of job operations has its individual aspects, but no worker is entirely happy in his work unless he can share some phases of it with his fellow workers. Where work presents little direct challenge, working as a member of a group toward goals in which the group has common interest is usually more satisfying than individualized, solitary work. One of the important tasks of supervision is that of discovering a means whereby the worker can be made to feel that he is working as a member of a group, or of a production "team" rather than as an individual doing a highly specialized, repetitive operation.

Whereas it is natural for the worker to find satisfaction in working as a member of a group after he has learned to do his job, learning the job is a highly individual matter. For the sake of economy, a limited amount of group instruction may be given which is wholly acceptable to the worker. This applies primarily to the introductory phases of job training. But for the intricate elements of skill development, individualized instruction enlists speedier and more satisfactory learner response. Such instruction should be individualized in an explicit sense, rather than be such that it places on the learner the burden of following a formula such as, "Now, watch me and do as I do." Likewise, in providing training for the correction and improvement of the worker on the job, individualized and personalized instruction will produce more satisfactory results than group demonstrations.

The individual, rather than the group, should be the focal point in the administration of discipline. A series of rules and penalties applied in a routine manner usually fails to accomplish the purpose intended. Not only does routine administration of discipline fail to provide adequately for correction of undesirable behavior, neglect, or irresponsibility, but it tends to create feelings of resentment and frustration. Individualized administration of discipline calls for clinical analysis. All elements in the situation should be considered, and the individual as a personality should be studied. This requires that discipline be administered with due

consideration to the employee's past record, as well as the immediate circumstances bearing on the incident under investigation.[6]

### APPRAISAL OF WORKERS BY SUPERVISORS

One of the most difficult tasks of supervision is that of providing management with individual appraisals of each worker. While production, which is easily measured or estimated, is the chief contribution for which the worker is paid, other characteristics, not so easily appraised, which the worker displays may be equally as important to his employer as his capacity to produce. Some of the personal qualities of the worker may operate beneficially to him and to the company, whereas some of his other traits may be annoying and destructive in their effect on others. Good or bad, as far as work relations are concerned, most personal traits are such that they cannot be evaluated by offhand judgments. Consequently, a method for making analytical appraisals must be sought.

It is easily demonstrable that, in judging the characteristics of the worker, information about his behavior is the most objective basis of appraisal. Considerable information about a worker is ordinarily accumulated by the supervisor in day-to-day work relationships. However, since memory is not wholly trustworthy as a repository for information on the behavior of an employee, some means of preserving and recording observations should be established. A convenient method for accumulating information is the maintenance of individual file folders for each employee. Into these folders, information of significance from a large variety of sources may be filed as it comes to the attention of the supervisor. The information may range all the way from personal items about the employee's family or his participation

[6]For a discussion of procedures recommended for use in administering discipline, see "The New Approach to Employee Discipline" by Glen U. Cleeton. *Personnel*, Vol. 16, No. 4, 1940. For a suggested outline for use in the investigation of discipline cases, see *Executive Ability: Its Discovery and Development. op. cit.* pp. 525-528. Principles set forth in these sources are applied in *The Case Interview Plan for Administration of Discipline*. American Transit Association, 1948.

in employee activities within the plant to performance records, special incidents in which the worker is involved, accident reports, citations, or disciplinary actions. (See p. 123.)

Material about each employee should be reviewed and summarized periodically by the supervisor. In evaluating the accumulated information, appraisals should be made without reference to any personal feelings which the supervisor may have toward the employee. Instead of depending on occasional general appraisals of their employees, some companies require that each worker be rated systematically on several traits at specified periods. These periodic ratings are usually used for one or more of the following purposes, in relation to which the supervisor's judgment is considered highly significant.

1. Discovering and developing talent.

2. Selecting for special assignments men who possess the best qualifications.

3. Maintaining and improving the quality of personnel in all work activities.

4. Discovering and eliminating unsuitable workers, or transferring men to jobs for which they are better qualified.

5. Upgrading workers by correcting weaknesses discovered through rating.

6. Discovering men who deserve promotion or change of position.

7. Adjusting compensation.

8. Stimulating better morale.

9. Encouraging the study of personnel problems by supervisors.

10. Providing continuous and permanent records of potential-growth employees.[7]

[7] A large variety of rating procedures have been developed. These procedures are discussed at length in various publications, therefore, the reader is referred to technical literature in the field. See particularly *Psychology for Business and Industry* by Herbert Moore. McGraw-Hill, 1942. pp. 174-208; and *Personnel and Industrial Psychology* by E. E. Ghiselli and C. W. Brown. McGraw-Hill, 1948. pp. 62-139.

### MAKING APPRAISALS OBJECTIVE

While rating procedures can be extremely helpful for the purposes indicated in the foregoing list, precautions should be taken to assure the highest possible degree of objectivity:

1. *Raters should guard against the concomitant factor known as the "halo effect."* This terminology is used to describe the tendency of weak or strong traits to color the opinion of the rater on other traits. With some raters the tendency may go so far as to result in a general impression of the person being reflected in the rating of each and every trait.

2. *Raters should guard against "stereotypes."* This is a tendency found in some persons which leads them to rate consistently more liberally or severely than other raters. With some persons this habit may be so firmly established as to disqualify them as raters; in others it may be mildly evident, but sufficiently characteristic as to require the adjustment of ratings to correct for rater bias.

3. *Raters should be trained.* Such training should include the discussion and demonstration of "halo effects" and "stereotypes." Other topics which should be covered in rater instructions include: (a) purpose of the particular rating plan; (b) range and scope of human abilities, including such concepts as "normal distribution"; (c) relation of the rating plan to other personnel practices—e.g., selection, training, promotion, wage standards, etc.; (d) the mechanics of filling in forms, meaning of items, and standards implied; (e) use of results; and (f) answers to problems or questions growing out of previous experience or trial ratings. Conferences, group discussions, or individual coaching should supplement the issuance of printed instructions.

4. *Raters should be given an opportunity for supervised practice.* No rating procedure should be used before raters have been given an opportunity to try out the form for recording ratings and have discussed the results of trial ratings.

5. *Each person under observation should be rated by at least three raters.* Averages of ratings may be taken, but frequently agreement by two of three raters on a trait for a particular person is a better appraisal than an average of the three ratings.

6. *The rating plan should be explained to those for whom it is used as well as to those who do the rating.* Persons being rated must understand the rating plan and be convinced of its fairness if resentment is to be avoided.

7. *Ratings should be made periodically, not sporadically.* They should be made at least once a year, but not oftener than every six months.

8. *Ratings should be reviewed, either by a superior, by a personnel department representative, or by a reviewing committee.* However, once a rating is made, it should not be changed without the consent and concurrence of the person who did the rating.

9. *Ratings should be discussed with the ratee, preferably by a third party.* Often a personnel department representative is best qualified to undertake this important task. In such discussions the person who has been rated should be put at ease. This may be accomplished by offering commendations for qualities favorably rated before making suggestions for improvement of qualities unfavorably rated.

10. *Wherever possible, ratings should be checked against other available objective evidence.* This provides a means for determining the validity of ratings in general, and for checking the capacity of individual raters to make sound judgments. Ways of improving the rating form may also be discovered.

11. *Persons applying the results of ratings should clearly recognize that ratings are only approximate.* It should be understood that ratings do not tell the whole story and that they are most useful when applied in connection with other information about the person rated.

12. *Raters should be well acquainted with the persons they are rating and the work which they do.* However, too close a relationship between rater and ratee is sometimes a handicap.[8]

## RESPONSIBILITY OF THE SUPERVISOR FOR SELECTION AND TRAINING

The supervisor should cooperate closely with the staff responsible for employee selection by assisting in job analysis and evaluation. He can make a special contribution in the development of job specifications by furnishing information about qualities required in workers that might otherwise be obscured through abstract analysis. Because he is "in touch" with the human element in work, he is in an excellent position to judge the kind of people who are most suited to the various jobs under his supervision. However, the supervisor should not attempt to operate the job analysis, evaluation, or employee selection program. In these activities, he should assist the personnel department in an advisory and consultative capacity.

The supervisor must maintain an active interest in training, because he receives the product of the training program. He is also in a position to observe at first hand that maintenance of good human relations requires that the worker be trained beyond the point of merely knowing his job. An alert supervisor quickly recognizes that knowing why is often as important as knowing how, and that the worker is not fully trained until he has made an adjustment on the job which makes him feel at home and happy in his work. Organized training can provide the "know-how" of jobs, but usually the initial training of the employee is somewhat hurried, therefore, the why of certain things with reference to the job is often quickly glossed over in initial training. This gap can be bridged by effective supervision.

Regardless of the care taken in selection, and the thoroughness of the training of new employees, the functional organiza-

[8]Adapted from an article by the author entitled, "Rating Executive Qualities," originally published in *Personnel*, Vol. 23, No. 5, 1947.

tion of modern industry is such that dissatisfaction with work routines will develop unless supervision provides the human touch. To place the new worker into a fast-moving production line and neglect him as a human being may give rise to confusion, resentment, and friction if supervision does not smooth the way. After an initial stage of nervous confusion, the worker may settle down into a routine of reporting for the job, punching the time clock, and starting the machine, and then wait and hope for the day to end. Under such conditions work activities are not stimulating. Instead, they become dull and deadening, and the worker may begin to feel as though he were serving time, in somewhat the same manner that a person would feel if sentenced to involuntary labor. The situation is likely to produce bickering, grousing, complaints, and slowdowns, and, if unrelieved by adroit supervision, will result in the multiplication of grievances.

### SELECTION AND TRAINING OF SUPERVISORS

Supervisors who can meet the human problems in work situations do not come into existence by accident; they must be carefully selected and trained for this responsibility. In general, selection of supervisors should follow the same pattern as that outlined in Chapter V for new employees. Fundamentally, this means that the job of supervision should be analyzed, the qualifications of supervisory personnel determined, and procedures established for finding these characteristics in candidates for supervisory positions. In the past, persons selected for supervisory positions were often workers who possessed the skill required to do production jobs in a highly satisfactory manner, but who lacked the interests, capacities, and leadership qualities for directing and guiding the work of others. This procedure results in persons being selected who discharge responsibilities within the limitations of their capacities. As a result, important supervisory functions disappear from the job and the so-called

supervisor becomes a production clerk or head operator. Only through the selection of individuals who possess the qualifications necessary to discharge supervisory functions, or through selection of persons capable of developing these qualities, can this situation be avoided.

The quality of supervision can be greatly improved through training. This training should be dynamic because effective supervision is dynamic. The principle that supervisors require training has been widely accepted, but much of the training given supervisors has failed to achieve a useful purpose because it started with too little and failed to develop momentum. When dull topics are presented in such training by lectures, which give no chance for participation by members of the supervisory group, few ideas are exchanged and fewer concepts are changed. Consequently, supervision goes on as before.[9]

### CONFERENCE METHODS IN SUPERVISORY TRAINING

Training, to be effective, must provide for active participation by trainees. This applies to supervisory training to the same degree that it does to other forms of training. To provide opportunity for individual participation in training for supervisors, some companies have tried conference methods of training. Supervisors meet as a group under a conference leader for the purpose of discussing techniques of supervision. In theory the conference method is excellent, but in practice the method is likely to degenerate into fruitless group discussions. Without forceful leadership, the weight of random discussion by participants tends to bring the level of group thinking below that sought. In conferences which are not carefully planned, the

[9]For a review of supervisory training practices of the past, see "Training in Human Relations" by S. D. Hoslett. American Management Association, 1946. For typical samples of subject-matter treated in formalized supervisory training courses, see *The Management Leader's Manual for Operating Executives, Supervisors, and Foremen.* American Management Association, 1947. Material of the type suggested in this handbook cannot be effectively presented in supervisory training unless correlated with illustrative case material.

discussion which occurs is limited by the present knowledge and capacity of participants to such an extent that the higher competency of the leader is obscured by the limited competency of the participants.

To make the conference method effective, meetings should be planned with reference to a specific problem. Preparation of a prospectus pertinent to the problem by the conference leader and by the development group should provide the material for discussion. As far as possible, the topics of discussion should center around procedures already in operation in the company or those which are being made ready for installation. To hold discussions about things which ought to be done or which might be done is entertainment rather than education.

The following steps are recommended for making the conference method produce results:

1. Conduct a series of meetings in which the conference leader: (a) outlines the problem for study; (b) briefly presents information about the problem; and (c) invites discussion of ways and means of solution.

2. Following the initial discussions of the problem, organize members of the conference group into small groups or subcommittees of five to ten persons. These groups, working independently, should be assigned the responsibility of searching sources, holding meetings, and formulating proposals for presentation to the conference group.

3. Depending on the nature of the problem, each subcommittee may work on the problem as a whole, or concentrate on some phase of it.

4. The conference leader should meet once with each subcommittee by prearrangement, and thereafter by invitation. Otherwise, each subcommittee may operate independently and hold meetings under the guidance of a temporary chairman chosen from its members.

5. If questions relating to policy arise, the subcommittees

may call in appropriate management officials for decision of issues. Subcommittees may also call in technical experts for advice and instruction. Although it is not essential that the conference leader be present at meetings when these persons are called in, he should be kept fully informed on developments.

6. If a plan of action is put into operation, a committee of the conference group is assigned the responsibility of preparing a report following a period of experience with it.

7. A deadline should be set for presentation of reports on proposals by the subcommittees. These reports are prepared in written form and are made available for circulation among the entire membership.

8. After proposals have been presented and discussed, a plan of action should be formulated by the conference group.

9. The plan of action should be presented to appropriate management officials for review. If no action is required, a report of findings may be prepared for distribution to all persons concerned.

10. If plans developed affect workers, representatives of workers ordinarily should be invited to participate in subcommittee meetings. This provides a means for developing potential supervisory talent, as well as helps in maintaining good industrial relations.

### SCOPE OF SUPERVISORY TRAINING

Supervisory training problems may be drawn from a wide range of topics. The following general fields are suggested as being worthy of consideration:

1. Selection and placement.
2. Training the worker for the job and training on the job.
3. Group conference methods.
4. Individual conference methods.
5. The evaluative interview.
6. Helping the worker make a satisfactory adjustment.

7. The problem employee.
8. Motivation of employees.
9. Employee attitudes and morale.
10. Accident prevention.
11. Quality control.
12. Production time standards.
13. Control of waste and spoilage.
14. Employee records.
15. Handling discipline cases.
16. Housekeeping and work environment.
17. Leadership qualities and how to develop them.
18. Individual differences of workers.
19. Fatigue and boredom.
20. How to reduce turnover.
21. Merit rating.
22. Rewards and incentives.
23. Frustration in work.
24. Upgrading and promotion.
25. Operation analysis.
26. Job evaluation.
27. Keeping the worker informed.
28. Handling grievances.
29. Dealing with labor unions.
30. Dealing with top management.[10]

It will be observed that supervisory training must be a continuous process, if the major points of importance in supervision are to be covered. However, training of supervisors will be impeded if the full cooperation of top management is not obtained. Since the importance of supervision is usually not fully recognized by top management, this may not be easy to accomplish. This is, perhaps, another way of saying that top management needs train-

[10]For reports of experience of several leading industrial producers with supervisory training see "Developing Better Supervisors" in *Handbook of Industrial Relations* by J. C. Aspley and E. Whitmore. Dartnell, 1943. pp. 410-443.

ing in supervision to understand and appreciate fully its functions. With certain modifications, the conference procedure outlined for supervisory training can be applied profitably in management training.[11]

## MANAGEMENT RESPONSIBILITY FOR SUPERVISION

Among other things, top management must learn that one of the important functions of supervision is that of guiding and encouraging the growth of workers. Unfortunately, this responsibility has been neglected. Hence, there are vast undeveloped capacities among workers waiting to be tapped. Through some means, these capacities should be discovered and opportunity for their development should be provided. Supervisors generally recognize this fact; however, unless top management also recognizes it, persons holding supervisory positions are helpless in making the most of human talents. Unfortunately, there is a tendency for some representatives of management to contend that present-day workers, especially young workers, are already educated beyond the requirements of most jobs, that they "know too much for their own good." Indirectly, it is implied that high school and college education unfits young workers for many kinds of work. This indicates a misconception of the significance of education, and reflects the fact that management has not helped supervisors to learn how to adjust the work situation to better educated workers.

As a consequence of the advancement of the general educational level during the past quarter of a century, it is probably true that millions of young workers deserve better jobs than are available. Therefore, we as a nation have a social responsibility to make better jobs for them, regardless of the views of some representatives of management with limited vision. Every social-

[11]Procedures for making the administrative phase of supervisory training function effectively are set forth in a series of pamphlets on *Supervisory Development* published by the American Transit Association, 1949.

minded employer will recognize that he has both a responsibility and an opportunity in this respect. Making jobs attractive to able, well-educated young people will pay dividends, because capable, well-adjusted man power today is the greatest asset that any employer can have.[12]

The advancing level of general education is likely to present a special problem with reference to selection and training of supervisors. A supervisor with limited intelligence or whose educational accomplishments are limited cannot satisfactorily direct the activities of the more able and better educated workers. The supervisor found in such a situation is likely to resort to arrogance and bombast in an effort to reduce the worker's estimate of his own ability and intelligence. This represses the development of capacities upon which the employer should capitalize in the work situation. Furthermore, the supervisor of limited ability and foresight is likely to discourage workers who are ambitious to improve themselves in ways which are not directly part of the job, whereas he should encourage such self-improvement. Not only should he personally encourage the workers under his supervision to strive for self-improvement, but he should urge that management provide ways and means for the realization of educational ambitions through sponsored educational programs going far beyond job training.

### SUPERVISORS MUST REPRESENT MANAGEMENT

When a young worker is ambitious and wants to get ahead, he should be aided rather than obstructed. To further the desire of the worker for self-improvement, the supervisor should be in a position to give advice and counsel that will make possible the intelligent planning of self-development programs. If such advice and counsel cannot be given adequately by the supervisory force in charge of production, then special educational advisory services

[12]For a suggested solution to this problem see *People Must Live and Work Together—Or Forfeit Freedom. op. cit.* pp. 115-159.

should be established to carry forward this important function of supervision. Some companies have met the problem by adding a staff officer at the supervisory or administrative level, who has general responsibility for all educational activities within the organization. Titles such as "Supervisor of Education" or "Educational Director" are frequently used; however, no purpose is served by appointing an officer in charge of educational practices and policies unless that officer is given sympathetic support by top management. Giving administrative support grudgingly, or destroying the effectiveness of educational activities through cynicism, vitiates the efforts of the educational officer.

At no point is the human relations function of supervision more important than as a line of transmission between management and the worker on matters of reciprocal interest. Here, as with the educational and other responsibilities of supervision, management does not always understand the importance of the supervisor's job. For example, top management frequently does not know what is on the worker's mind, because supervisors have not been required or permitted to transmit such information. The tremendous size of many industries has removed management to a point so completely distant from the line of production that management may even forget to care what the worker thinks or feels, unless supervisors are required to keep them informed. This has been the source of much industrial strife and has been costly in terms of production losses.

Because representatives of management do not use the services of supervisors to keep themselves informed on the worker's thoughts and feelings, the relationship between management and the worker often resembles a narrow one-way street, with the only traffic moving on it being orders transmitted to the worker through the supervisor. When given an opportunity to report the viewpoints of workers, the supervisor is frequently discouraged by the attitude of management from being forthright, because representatives of management often feel that they are placed on

the defensive if the worker's attitude is critical. While the supervisor should be encouraged to be direct and frank in presenting the viewpoints of workers to management, he should be extremely tactful in helping the worker understand what is on management minds. However, if the supervisor is to interpret accurately, management must be more explicit in routine matters and less secretive about semiconfidential matters in its relationship with the supervisory force than is generally true.

Although management might prefer that circumstances be otherwise, workers are definitely interested in finding out the things which management must worry about. The "what" and the "why" of the financial status of the company, and the plans and objectives with which management is concerned, are examples of the kind of semiconfidential information which workers like to receive. If it is decided that such information can be released, it should be presented in a form which the worker can understand and which he will not misinterpret. This calls for departures from customary methods of reporting material such as that relating to the financial status of the company. For example, the worker is less likely to misunderstand reports on profits, dividends, and reserves, when they are presented to show the relation of the individual worker to these financial elements, than he is if they are reported in gross figures, which would be meaningful only to a banker or investor. The reasons for the fiscal policies of a company are frequently more convincing to the worker than the facts, especially if these policies are fair and equitable. In any case, the supervisor should be carefully briefed on the interpretation of such information if it is made available to the worker.

### MANAGEMENT MUST RECOGNIZE THE WORKERS' INTERESTS

In suggesting that supervisors and workers be kept informed, it is not intended to imply that management should surrender management functions to the worker or to the supervisor. There are areas of responsibilities which management should reserve as

its own, and a clear understanding with workers and supervisors on this point should be maintained. However, there are areas of suitable cooperation in which the worker may be treated as a partner. In those areas the worker may be presumed to be an individual with interests in the operation of the business equally as great as those of stockholders. This prescription for management makes management a more difficult field and supports the growing tendency to place management practices in the hands of persons professionally trained in management techniques. It also emphasizes the need for dependence by management on supervisors to assist in bridging the gap between workers and management.[13]

Instead of receiving assistance from management in performing the task of serving to close the gap between workers and management, supervisors are often treated as though they were expected to "pull management's chestnuts out of the fire." By assuming this attitude, management isolates itself from workers and literally places the supervisor in a position of protecting the interests of management. This practice only serves to widen the breach between management and the worker. To assist supervisors in promoting better worker-management relationships, conferences between representatives of the worker and management groups are helpful. The purpose of such conferences is to answer questions and discuss problems of mutual interest. They are usually most successful when conducted with representatives from the supervisory staff present.[14]

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[13]The negative side of the much-debated question of labor-management cooperation is presented in a pamphlet entitled, "Can Labor Sit in the Office?" by Goetz A. Briefs. National Industrial Conference Board, 1948. For an illustration of the way in which management thinking and worker thinking differ, see an address entitled, "The Uncommon Man" by Enders M. Voorhees, Chairman, Finance Committee, United States Steel Corporation. Published in pamphlet form by the corporation, 1948.

[14]For a sympathetic understanding of the problems involved in worker-management relations as expressed by a leading industrialist, see *People Must Learn to Live and Work Together. op. cit.* pp. 179-196.

It takes men of sympathy, understanding, and sound judgment to conduct worker-management conferences, because they must be conducted with due consideration for the worker's point of view. If, by asking embarrassing questions, the worker places management on thin ice, resentment should not be shown by management representatives. Instead, questions should be answered with dignity and sincerity as far as conditions will permit. Hedging and attempts to deceive are fatal. Effort should be made to remove all difficulties which might impede factual discussion, because the purpose of discussion is to promote understanding and mutual goodwill based on a consideration of pertinent evidence.

In the initial stages of developing and inaugurating a plan of worker-management conferences, only clearheaded and dependable workers should be invited to participate. After a period of amicable relations with a selected group of workers has been experienced, then other workers can be invited to participate, without reference to the motives or philosophy of the worker. The type of conference suggested here does not take the place of the work of grievance committees, nor should it be looked upon as being, in any respect, a special medium for worker-management negotiation. Therefore, a clear agreement should be reached at the outset that the conferences will have as their main purpose the exchange of information which will be considered objectively.

### SUPERVISION IS THE KEY TO GOOD WORK RELATIONS

A somewhat extended discussion of neglected responsibilities of supervisors has been presented to indicate that a broader understanding of the functions of supervision in the work situation is needed by management and workers, as well as by those who fill supervisory positions. The long-held conception that the primary function of supervision is that of getting out production through the use of tactics involving threat and force is no longer tenable. It is admittedly true that supervision must get out production, because production is the reason for the existence of a business

organization. But efficient production can only be accomplished with full understanding and appreciation on the part of supervisors of the human elements involved. To this end, the supervisor should be encouraged by management to help the worker make his job an important and satisfying part of his life, not merely a source for providing the means of physical existence.

CHAPTER ELEVEN

# *That All May Gain Through Work*

IN A STRIKE EVERYONE LOSES; THROUGH FULL EMPLOYMENT AND continuous production everyone gains. That all may gain through uninterrupted production, strikes and other arbitrarily imposed forms of work stoppage should be eliminated from the work situation.

While the strike was originated in order that workers might have a device to use against employers who choose to be stubborn, unfair, and unreasonable, it has become a much-abused practice. As a device for presenting a united force to support fair demands, the strike has greatly aided the worker. However, in recent years it has often been used to serve questionable purposes. It has, in some instances, been used as a means of obtaining special advantage for a few workers at the expense of others in the distribution of reward for work; it has been used as a means of strengthening the political power of certain labor groups; it has been used as a means to create individual advantage for certain labor leaders; and it has been used to foster social revolution. None of these uses serves the purposes originally intended.

Today a strike frequently results in damage to the strikers, their families, other workers, investors, suppliers, and consumers. Consequently, a strike can no longer be considered a matter concerning only management and workers; it is a matter of public concern. In modern industrial relations, the strike should be avoided by both management and labor. Its continued use will prove a boomerang to the workers for whose protection it was conceived, and will ultimately destroy the productive capacity of the nation.

### CAUSES OF STRIKES

Strikes are usually called because of alleged differences between workers and employers with reference to wages, hours, and other specified working conditions. Actually, strikes are more often a protest against the manner in which workers are treated in numerous incidental circumstances. These minor conflicts are hidden sources of irritation, which assume major proportions when occasion arises. A few of the sources of dissatisfaction, easily overlooked by employers, which ruffle tempers and pave the way for strikes are:

1. Failure of the employer to expedite the handling of minor grievances.
2. Lack of opportunity for the worker to talk man-to-man to a high-ranking representative of management.
3. Careless handling of employee suggestions.
4. Inadequately explained pay deductions.
5. Brusque or surly treatment by supervisors.
6. Apparent or real favoritism.
7. Emergency overtime, followed by layoffs.
8. Inadequate instruction on new operations.
9. Failure to keep workers informed on company plans and policies.
10. Failure to explain reasons for changes.

Being generally ignored as an individual is usually sufficient cause for the development of inferiority feelings on the part of the worker. When such feelings of inferiority are aroused by an accumulation of minor irritations, the unconscious tendency on the part of the worker is to do something to assert his feelings of self-importance and to register his dissatisfaction with the recognition given him. This tendency is overtly expressed by diminishing effort to produce, soldiering on the job, changing jobs, absenteeism, and strikes. Consequently, strike-prevention is not only related to the process of collective bargaining, mediation,

and arbitration, but likewise to the company's personnel relations program as a whole. Those personnel practices which make work human by encouraging satisfaction in work and by reducing minor irritations are likewise the practices which reduce the likelihood of strikes when major issues of conflict arise.

In an article entitled, "Psychological Aspects of Industrial Conflict," Professor Ross Stagner of Dartmouth College states:

> A thorough understanding of the phenomena of industrial conflict requires an exploration of the psychological aspects of this problem. Strikes, lockouts, slowdowns, and sitdowns occur as a result of processes in the minds of men. We must know how workers and executives think about industrial situations if we are to develop any clear comprehension of how certain conflicts come into focus.
>
> It is clear that if everyone behaved in a logical manner, strikes would never occur. Everyone loses in a strike—particularly one of long duration. The employees lose tremendous sums in wages. The employer loses in gross sales, in overhead, in business losses to competitors, and ultimately in net profits. The public loses through declining purchasing power, reduced production of goods, and the disruption of orderly living. The Hinde & Dauch Paper Company recently published figures showing that a strike in one of their mills had cost the workers an amount in wages that will require five years, eleven months to recoup at the rate of increase won. The company does not estimate its own losses in profits, but the figure is undoubtedly large. Thus both sides might have gained from a sensible prestrike settlement.[1]

Through a series of attitude studies with reference to industrial conflict, Professor Stagner reaches the following conclusions:

> It is urgent that we recognize the importance of perception in industrial conflict. No doubt there would be many industrial difficulties even if all executives and all union leaders were calm, fact-minded, and objective in their judgments. The evidence indicates that present leaders on both sides come to an industrial controversy ready to see the good on one side and the bad on the other. This tendency exaggerates, if it does not actually create, many serious conflicts.
>
> We are not inclined to suggest that a change in the perceptual patterns, particularly of one side, will solve all labor strife. The per-

[1] *Personnel Psychology*, Vol 1, No. 2, 1948. p. 131.

sonnel man who reads this article may come into his office the next morning full of sweetness and light, prepared to see good in all union stewards. But what if the stewards have not also read this report? They may not trust his apparent change, and act in such a way as to convince him that his former prejudice was correct. Furthermore, many controversies are simply conflicts of desires, with no disagreement about facts involved.[2]

## STRIKES ARE ECONOMICALLY WASTEFUL

The possible economic gains which the worker may achieve through strikes are overemphasized by labor leaders when the strike is presented as the primary means of getting higher wages for the worker. Even though higher wages are sometimes achieved through strikes, it is doubtful whether there is ever any true economic gain in strikes, because the economic welfare of the worker cannot be measured by the level of wages. High wages in themselves do not create prosperity for the worker. It is not money, or symbols of money, which measure the economic well-being of the worker; it is the purchasing power of wages, and the availability of desired commodities, that determine the worker's well-being. If strikes result in price increases or if they reduce the supply of purchasable goods, an increase in wage rates may represent no gain whatever.

A striker seeking a twenty per cent increase in wages has usually been led, directly or indirectly, to believe that upon receiving the increase he will be able to buy more food, more clothing, more housing, more transportation, and more commercialized entertainment. He likes the prospect, because contemplation of these things which he hopes to buy is frequently more satisfying than his work activities. This type of daydreaming is quite human, but not exceedingly enlightened. It is much more convincing to contemplate the possibility of getting a fair deal from one's employer, and, at the same time, a greater share of the world's goods, than it is to consider that getting more wages

[2] *Ibid.* p. 142.

is but the first step in gaining any benefit therefrom. It is easy for one contestant to win a footrace if the other racers stand still. It is likewise easy for a small group of workers to benefit from wage increases if prices of the things which members of the favored group wish to buy do not advance or do not leave the market. But no gain occurs if other wages and the commodities sought also advance in price.

There is clearly a missing link in the chain of logic of greater gain through high level wages, which is usually overlooked by workers and labor leaders in calling strikes to secure higher wages. That link is productivity. High wages must inevitably be coupled with high level productivity, if we are to continue to distribute the goods produced by the worker through the medium of a price system economy. This applies not only to the things produced by the worker who receives more purchasing power through a wage increase, but also to goods produced by other workers. If an automobile worker gets a twenty per cent increase in wages and expects to buy more shoes at the price he previously paid, then the shoemaker must make more shoes, whether his wage rate has changed or not.

Getting more for one's self without giving something in return was tried by management in the earlier periods of industrial expansion. That policy eventually proved shortsighted. Imbued with the philosophy of abundance and leisure, workers have frequently seemed to be equally shortsighted. Armed with the strike weapon, labor groups have sought to improve their relative position by demands which defy the laws of economics. When fictitious gains of higher wages and shorter hours evaporate as a consequence of higher prices brought about through reduced productivity, no further gain is made by striking for shorter hours, standbys, crew limits, narrower paint brushes, or fewer apprentices. Reduced output means more cost of production per unit, higher prices, and lower real wages. Workers would benefit by fewer strikes and sounder economic reasoning.

Despite the shortsighted economic policies of many labor leaders, for management to claim that workers and their leaders are selfish and greedy solves no problems. It is human to act in one's own interest; therefore, such action is to be expected on the part of workers and their leaders. Management should recognize that fact, because management representatives likewise act with self-interest in mind. It is in seeking a common ground on which to negotiate conflicting issues that management and labor display enlightened self-interest. The strike, the lockout, the boycott, and the jurisdictional riot are not human tools of negotiation.

### STRIKES ARE A STRUGGLE FOR POWER

Regardless of the stated issues in conflict in a strike, the act of striking is a demonstration by which those participating seek to assert a desire for power. By resisting a strike, an employer is likewise seeking to assert his power. As long as a strike continues, it is a struggle to determine which of the opposing forces will acknowledge the power of the other as being superior. Fundamentally, the human dynamics of strikes are the same as those of war. In both, the emotional forces at work are throwbacks to the days of primitive man.

Because of his primitive heritage, it is a natural human tendency for an individual to seek to exercise power. The exhilaration of winning in childhood games, the compelling attraction of competitive sports in adult life, the pioneering spirit in man's struggle with environment, rivalry in business, the bid for leadership in politics and fraternal organizations—all of these are testimony to the existence of a strong desire for power. If man as an individual cannot gain acknowledgment, it is human for him to join others of like purposes and interests in order that strength of power may be increased through group action. Therefore, it is natural for the worker to like the exhilaration of strength afforded him through unionization, and natural for the labor leader to capitalize on that satisfaction in the assertion of power through

strikes. It is also natural that worker groups should welcome any use of power which will further their individual interests and help them to achieve personal benefits. Furthermore, the labor leader must repeatedly use the power afforded through group action to achieve gains for individuals within the group. If he does not he may find that he is forced by the group to surrender his leadership. Because of the impelling human desire to use power, society must make rules which restrict its abuse by individuals or groups, regardless of their social, political, or economic strength.

For more than a decade, worker groups have been afforded legal protection in the exercise of power in trying to raise standards of living for the worker. This legal support was given because organized groups of employers appeared to be resisting the efforts of workers to act together collectively to improve their economic status.[3] With legal protection, and aided by favorable economic conditions, distinct progress toward a higher standard of living has been made by worker groups. In the exercise of power to gain benefits, workers have had public support to an unprecedented degree since the passage of the National Labor Relations (Wagner) Act in 1935. But the public is human, too. It countenances the exercise of power, if not used to the detriment of the total social group or where the unfavorable effects of such exercise of power are not apparent. When abuse of power occurs, public support is usually withdrawn.

## STRIKES VIOLATE PUBLIC INTEREST

Although the social group as a whole is usually adversely affected by strikes, the consequences are often indirect and, therefore, ignored. However, within recent years a series of strikes have drawn attention sharply to social and economic losses arising

[3]See B. M. Selekman, *Labor Relations and Human Relations*. McGraw-Hill, 1947. pp. 1-41 for a discussion of the rise of union-management conflict. For a comprehensive treatment of the union in present-day society, see C. E. Dankert, *Contemporary Unionism*, Prentice-Hall, 1948.

from work stoppages that were contrary to public interest. For example, a twenty-seven-day power strike by 3,200 workers of a privately owned utility in Allegheny County, Pennsylvania, which occurred in the fall of 1946, demonstrated that a small group of workers can, if not restrained, cause economic loss and inconvenience to the entire population of a community. This strike by 3,200 workers disrupted the lives of 1,500,000 persons, resulted in $300,000,000 loss to the community, and brought temporary unemployment, which caused the filing of 56,000 compensation claims.

Regardless of the issues involved, it is not human to permit 3,200 persons to destroy economic values at the rate of approximately $100,000 per man for the sake of indulging in a work stoppage extending over a period of almost four weeks. It is particularly against the public interest to permit such a group to paralyze the power facilities of a community by refusing offers to settle differences by arbitration. This occurrence clearly demonstrated the human tendency of persons, protected in the use of power, to ignore the possible consequences of reckless use of that power. The company was defied, public officials were ridiculed, the courts were dared to exercise authority, efforts of agencies of the national government were rendered futile, and the public welfare was ignored in order that a small group of workers and their leaders might have the satisfaction of feeling that they had demonstrated who was "boss."

The evidence in this case cannot be interpreted in a manner which indicates clearly who was at fault. The union leaders probably followed motives which were not publicly revealed, and the worker group acted in a manner which defied logic and reason because they condemned both management and union leaders. However, the fact that the strike was called, that it continued to be supported stubbornly by workers despite urgent pleas of civic officials, and that deep-seated antagonism toward company officials was revealed, suggests the possibility that personnel relations

within the company were inappropriately managed. Nevertheless, the evidence does indicate that both workers and management should be subject to legal restraint, in a case of this type, because it is detrimental to everyone when employers and workers engage in warfare on the public doorstep.

The strike is not a technique which is limited exclusively to use by labor groups; it could be and has been used by other groups. To a limited extent, consumers have sometimes gone on strike. While the term used for such action is boycott, it is still a form of strike. Management has at times gone on strike. The term used is lockout, but it is still a strike. Producers have repeatedly exercised strike tactics by withholding goods from the market. In any form, a strike is socially destructive, therefore, its use should be discouraged. In this respect no group should be exempted. If labor groups are asked to refrain from using strike tactics, other groups should likewise be restrained. On the other hand, if labor groups persist in using the strike, then we may expect strikes by management, strikes by consumers, and strikes by producers of raw materials.

### WORKER-MANAGEMENT COOPERATION IN STRIKE PREVENTION

Some unions have a record notably free of strikes, for example, the International Printing Pressmen and Assistants' Union (AFL) and the International Ladies Garment Workers' Union (AFL). These records are attributed by some observers to the attitude of union leaders in these organizations. By others the amicable relations between employers and employees in the industries concerned is attributed to the fact that although the principal labor organizations involved operate on an industry-wide basis, they engage in collective bargaining on a local community basis.

Some companies also have an excellent record with reference to labor-management relations. The case of Studebaker Corporation, which has not had a major strike in nearly a century of

operation, is frequently cited. The ability of the representatives of Studebaker management and officers of Local 5, UAW-CIO, to work together as individuals to bring about amicable settlement of issues appears to be the basis of industrial peace in that firm.[4] In this respect, union-management relations at Studebaker provide a distinct contrast with those at General Motors, which also bargains with a local of UAW-CIO.[5] A reasonable conclusion which might be drawn from the experience at Studebaker as compared with General Motors is that (a) union and management representatives at Studebaker have followed the policy of dealing with each situation pragmatically as a problem to be solved by establishing the points at issue, getting at the facts relating to issues, and arriving at a workable solution through negotiation, whereas, (b) at General Motors representatives of management and union leaders have taken positions dictated by their respective economic and social philosophies and then have tried to resolve conflicts which by their very nature are often in direct opposition.

Ostensibly, increased use of the strike is an outgrowth of efforts by labor to strengthen its position in collective bargaining negotiations. In the minds of labor leaders, the strike is a means of forcing management to yield more favorable terms in bargaining. Labor contends that a strike, or threat of strike, is the only way open when stubborn management will not yield. But management contends that labor uses the strike to force unreasonable concessions, that labor insists on all demands being met, and that strikes are called if such demands are not fully met. This, management contends, is a resort to force rather than collective bar-

[4]"Studebaker." *Life*, September 16, 1946. p. 66.

[5]Professors Frederick H. Harbison and Robert Durbin of the University of Chicago Industrial Relations Center have isolated and compared factors involved in collective bargaining at Studebaker and General Motors in a study entitled, *Patterns of Union-Management Relations*. Science Research Associates, 1947. This interesting case history of the same union operating through different locals in two companies in the same field of production merits careful study of all persons concerned with labor-management relations. Conclusions of the authors are presented on pp. 202-221 of the report.

gaining. When such states of mind exist, collective bargaining cannot occur, because collective bargaining requires a meeting of minds in mutual trust.[6]

In support of its position, management cites cases where demands made by labor are, allegedly, far in excess of reasonable expectancy. It is claimed that labor usually asks for more than it expects to receive and stubbornly adheres to its demands, but often settles for less than the original demands after prolonged and crippling strikes. An example in support of this claim is reported, in which labor asked for a 30% increase in wages. Management countered by offering a 15% increase. A committee of workers refused the offer without submitting it to the rank and file of workers and called a strike, alleging that they had authority to do so. After a prolonged strike which lasted several months, a settlement of 18% was reached. The disruption of production growing out of this incident resulted in loss of profit to the producer, caused a considerable loss of wages for the workers, and kept much-needed goods from being produced for public consumption, because collective bargaining was abandoned in favor of the strike.

Labor, in making claim for the use of the strike, cites examples wherein it is alleged that management refuses to negotiate in good faith. In one instance, it is contended that workers tried for twenty-one months to get a satisfactory contract and finally went on strike because management would make no offer whatever. It is also stated that the company refused a proposal made by the union to arbitrate the dispute. It is further alleged that the president of the company not only refused to discuss matters with government conciliators, but told the workers to

[6]For an analysis of four cases where labor-management negotiations have been mutually accepted as following satisfactory patterns see *Constructive Labor Relations,* Industrial Relations Section, Princeton University, 1947. The companies included in the study are Alexander Smith and Sons Carpet Company, Brown Instrument Company (subsidiary of the Minneapolis-Honeywell Regulator Company), R. Hoe and Company (printing presses and tools), and H. Daroff and Sons (men's clothing).

go ahead and strike if they wished to do so. When the strike was called, the president of the company is reputed to have stated, "When you are hungry enough to come crawling back to the plant on company terms, we will open the plant." In this instance, company policy apparently made collective bargaining impossible and workers were given little choice but to strike.[7]

## LEGALIZED COLLECTIVE BARGAINING

Collective bargaining has been held by most students of labor relations to include the right to strike, and legislation has frequently supported this contention. The right of labor groups to bargain collectively with employers was given legal recognition through the Railway Labor Act of 1926 as amended in 1934, the Norris-LaGuardia Anti-Injunction Act of 1932, and the National Labor Relations (Wagner) Act of 1935. None of these important pieces of legislation directly provided legal status for the strike, but they did so by implication. Furthermore, in the administration of these acts (except for the Railway Labor Act) the strike has frequently been recognized as an accepted step in labor-management negotiations. In fact, it is often contended that the Norris-LaGuardia Act and the Wagner Act have encouraged strikes. Whether they have or have not, the fact that strikes increased during the years following the passage of these laws suggests a need for a more human approach to the problem of collective bargaining.[8]

[7]Other situations might be cited in which labor leaders have needlessly prolonged strikes. In at least one instance in recent years it is believed that the leaders of the union were using the strike as a means of promulgating communistic ideologies. The philosophy of communism (and fascism) is in direct conflict with the theory of collective bargaining. For an exposé of the methods used by communists and their affiliates in gaining control of labor unions, see "The Red Web in U. S. Labor" by L. F. Budenz. *Collier's,* October 23, 1948; also Donald Robinson, "How Our Seamen Bounced the Commies." *Saturday Evening Post,* December 25, 1948.

[8]During the first six months of 1946 strikes caused the loss of more than 115,000,000 man days of production. This represents wage loss of more than $1,000,000,000 and production loss of such magnitude as to seriously hamper smooth operation of the national economy.

In the truest sense, collective bargaining means the right of employees to bargain collectively with an employer or employers, through representatives selected by a group of employees. Collective bargaining as we know it is more characteristic of the modern industrial period than it was of earlier social epochs. Group action resembling collective bargaining began with the formation of craft guilds during the period preceding the introduction of the factory system. Later, labor union groups, roughly corresponding to craft guilds, were formed to represent workers in bargaining with employers. However, employers who failed to understand the essential human elements in collective bargaining frequently discouraged its use. This failure by employers to accept collective bargaining caused public opinion to be raised in support of the practice. In turn, public opinion encouraged legislation which gave collective bargaining legal sanction.

The administration of labor legislation by governmental agencies during the past decade brought to light glaring weaknesses in laws covering labor relations practices. Whether these weaknesses arose out of the legislation, or were a result of the administration of the legislation, is debatable. However, through experience following World War II it became clear that while existing legislation provided the means and technique of collective bargaining, the operation of the Wagner Act tended to defeat the purpose of collective bargaining by giving special privileges to organized labor. Furthermore, to many it appeared that the Wagner Act encouraged jurisdictional disputes and failed to raise the standards of ethics and social responsibility of labor leaders. Consequently, new legislation in the form of the Taft-Hartley Act was passed in 1947 to replace the National Labor Relations Act of 1935.

Whether the Taft-Hartley Act will serve the purpose of promoting more harmonious relations between employers and workers remains to be seen. However, it is clear that workers did not

understand some of the major provisions of the Act when it became law. A survey reported in *Look Magazine,* shortly after the law was enacted, showed that 54% of workers who were questioned in the survey said that Congress should not have passed the bill. Yet on eight major provisions of the Act an average of 73% registered approval. On the provisions prohibiting unions from spending money or making contributions in connection with political campaigns for federal offices and the provision outlawing the closed shop, only about half of those polled agreed that the provisions were desirable. However, on six other major provisions, approval by was reported ranging from 70% to 86%. The provisions approved were:

1. Require unions to give 60 days' notice before they can go out on strike.

2. Give the company the right to sue the union if the union breaks its contract.

3. Require unions to make reports on money taken in and what they spend it for.

4. Prevent communists from holding union offices.[9]

5. Forbid a company to have a union shop until a majority of the workers vote for it. (A "union shop" is defined as one in which the worker does not have to belong to the union to get a job, but must join after he is hired.)

6. Allow the government, in industries considered vital to the country's welfare, to get a court order preventing a strike while settlements are attempted.[10]

[9]See "The Red Web in U. S. Labor." *op. cit.*

[10]The Taft-Hartley Act was openly criticised in the 1948 campaign for President. The extent to which its provisions will be changed is a matter of speculation. This is equivalent to saying that we do not know what our future national labor policy will be. For a statement of experience in the application of the Act see J. M. Swigert, "Should We Repeal the Taft-Hartley Law?" *Saturday Evening Post,* October 30, 1948. See also footnote 4, Chapter VI.

For a suggested public policy on labor relations, see H. W. Metz and M. Jacobstein, *A National Labor Policy.* Brookings Institution, 1947.

## MISINFORMATION LEADS TO STRIKES

Investigations much more extensive and definitive than opinion polls have demonstrated that workers are often poorly informed, or misinformed, on social and economic issues. This situation is often the basis of the uncompromising stand taken by workers on wage issues in bargaining with employers. Because he understands the symbolic meaning of a wage increase, the worker tends to exert group pressure to get the increase without reference to the broader significance of such action. The worker usually does not fully understand the very simple proposition that if he is to receive a greater reward for his efforts, the increase in reward must have a source.

The failure of the worker to benefit from forced wage increases in recent years is, in part, the result of failure of workers to exert group pressures at other points than against employers. To gain in reward for work, it is more important that wages *buy* more than that they *be* more. Some of the ways that are frequently suggested for increasing the worker's rewards are:

1. *Make consumers pay more for goods produced.* This is possible under certain conditions of supply and demand, but it does not aid the worker, because the greater portion of the worker's income is dispensed in the consumer market. To pay ourselves more by charging ourselves more represents no gain.

2. *Let managers and investors take less as their share of earnings and divert a greater portion to the worker in wages and bonuses.* In most situations this would add only slightly to the worker's income because the greater portion of the production dollar is already being paid for labor, plant operation, materials, and taxes. Furthermore, managers and investors are entitled to just rewards. Labor is dead right in calling for a study of this question, but labor is dead wrong in constantly harping on this issue to the exclusion of others which would yield greater returns.

3. *Reduce cost of plant operation.* Here management and labor could cooperate to the mutual interest of both.

4. *Reduce materials cost.* Management can and has aided in this respect through technological developments. Workers have sometimes shortsightedly resisted such changes. The worker can cut material cost by reducing spoilage and waste.

5. *Bring pressure to assure an equitable tax cost and a fair return in services for each tax dollar paid.* The worker pays taxes in many ways which he does not comprehend; for instance, if he buys a house costing $5,000, the tax cumulation in that price is approximately $1,250. Furthermore, by purchasing the house, the worker assumes a real estate tax liability which must be met year after year as long as he is a property owner. The taxes paid by the company by whom the worker is employed reduce the availability of funds for other purposes, including wages. By his indifference to the reduction of real wages through taxes, it is evident that the worker does not understand some of the dramatic facts about taxes such as: (1) the budget of the national government for the fiscal year 1947-1948 was four times that of the highest prewar peacetime year; (2) the retail price of every loaf of bread bought by the worker contains at least five hidden tax payments, which represent at least 30% of the price; (3) it now costs more to be governed than it does to feed the worker's family —federal taxes of $40,000,000,000 per year exceed by approximately $1,000,000,000 the nation's food bill for a like period; (4) to the fantastic cost of federal government, taxes levied by state and local governments add $10,000,000,000 which workers and other consumers must pay.[11]

[11]The problem of tax costs is a difficult one to analyze. Taxes collected and spent on current governmental operations as collected have one effect; taxes collected and used to reduce public debt have another. The latter policy is the most beneficial to the worker in the long run, just as clearing away personal indebtedness is good practice. Those in charge of national fiscal policy appear to confuse long run and short run policies, if, indeed, they recognize the difference. Perhaps it would be more accurate to say they confuse policy with expediency.

6. *Reduce the price paid to prime producers for goods directly consumed by the worker.* Currently, goods which are most prominently in this category are food and clothing items. For many years the prices of these commodities have not been permitted to seek their natural level, therefore, they are often exorbitantly priced in comparison with wages. The reason is found in tariff and parity legislation. Group pressure by workers through public opinion could bring a more equitable and realistic application of parity and tariff theories.[12]

7. *Cut distribution costs.* Much has been accomplished here through competition. More could be accomplished through cooperation. Consumer cooperatives have made fair progress in this respect, but usually they have been operated among rural consumers. Unions have experimented with group buying with fair success. Undoubtedly distribution costs could be greatly reduced through elimination of unnecessary services. Distributors favor their elimination, but consumers continue to demand their continuance.

8. *Strive for higher wages for key workers and thus lift the level of wages for all.* Unfortunately, this tactic does not serve the purpose intended. Instead, it usually increases further the spread in range of wages between less-favored and more-favored groups.

9. *Adapt government fiscal policies to suit the purposes of the median income group.* Much could be done in this respect, but there appears little disposition on the part of government officials or agencies to do so. American fiscal policy was deliberately made inflationary in the early 30's and, of necessity, continued so during the war period. Inaccurate predictions by government economists discouraged a change in policy at the close of the war. A debate later ensued among government officials and their ad-

[12]Politics causes those in important governmental positions to expound opposing theories of economics. In the 1948 campaign, for example, farmers were promised higher prices for their commodities through continuance of parity legislation and in the same breath workers were promised lower food prices through price control legislation.

visers on the appropriate method of making a shift in policy away from inflation which would not become drastically deflationary. The average worker cannot comprehend the intricacies of government finance, but he should become aware of the relation of national fiscal policy to the purchasing power of his wage dollar.

10. *Produce more goods.* This is the soundest solution to the problem of making the worker's earnings bring greater consumer satisfaction, provided, of course, those who manage production and distribution agencies will cooperate. Restriction of output is uneconomic, whether practiced by producers, distributors, government, or labor. Unfortunately, all groups are guilty of such practices, even in times of acute shortage.[13]

## ENLIGHTENED LEADERSHIP CAN PREVENT STRIKES

While it is evident that workers are not well-informed on broad economic issues affecting wages, labor leaders often display an understanding of the direct elements underlying wage negotiations which surpasses the thinking of representatives of management. This may be illustrated by the following excerpt from a book prepared by the Chairman of the Steel Workers Organizing Committee and a consulting engineer.

> Because a man's pay determines his share of the good things of life, it is easy to understand why he is constantly striving for better wages. On the other hand, to the manager wages cannot be separated from output because the amount done for a given wage determines

[13]The following ratios indicate the extent to which the wage problem is complicated by overall economic factors. They indicate that the need of the worker is often not a general increase in wages to the extent that it is one for leadership of high economic level in his labor organization, his company, and his government.

| | |
|---|---|
| Consumer income in 1947 was | 2½ times 1935-39 |
| Currency available in 1947 was | 3½ times 1935-39 |
| Total of factory payrolls in 1947 was | 3½ times 1935-39 |
| Farm income in 1947 was | 3 times 1935-39 |
| Industrial production in 1947 was | only 2 times 1935-39 |
| Business profits in 1947 were | only 2 times 1935-39 |
| Prices at close of 1947 were | less than 2 times 1935-39 |

the labor cost per unit of production. It is not difficult then to see why in a competitive market he opposes wage increases and constantly seeks ways and means of increasing the productiveness of each employee.

These opposing points of view, which involve not only rates of pay but rates of production as well, often lead to controversy between employer and employee. Fortunately, it is possible through an analytical treatment of the problem of wage payments to separate much that is factual from the obviously controversial elements and thus to eliminate many of the initial causes of irritation.

Primary elements that can be settled on a factual basis include, for example, such points as the time required to do a job; the fatigue involved in operations; quality requirements; means of reducing exertion; defensible rewards for accomplishment; the importance of one job as compared with another; and working conditions which affect the well-being and therefore the production and earning power of employees. Inequalities in wage rates also may be thus eliminated.

Settlement of these problems largely on a factual basis, determined by joint union-management consideration and research, reduces collective bargaining about wages to such basic elements as general increases or decreases in rate, and the system to be used in remunerating workers. There is no one wage system or method of computing wages generally conceded to be the best. The goal is an adequate and assured annual income. Even among the unions there is a wide difference of view as to the form the wages should take under existing conditions. The fact that it is necessary to analyze work carefully as an aid to optimum production does not mean that one method of compensation is to be preferred to another. The kind of product to be turned out must necessarily influence the wage scheme. Perhaps a majority of workers today given free choice would prefer a daily wage with measured production. Variety and experimentation are highly desirable for the ultimate wage system is probably not yet born.

The amount of money in a worker's pay envelope is inevitably gauged, first or last, by the value of the work he has done. It is a fundamental American principle that the reward for services must depend upon value received. Yet so obvious a principle is often overlooked. On occasion a manager will gloat over the fact that there is no loss to him when a worker loses his "own time" because of delays or early quitting. On the other hand, workers have been known to boast of "soldiering" or purposely slowing down on a job. Actually

> the time lost by workers and not paid for directly is paid for indirectly by the company because the day or piece rates must be higher to provide the expected weekly wage. "Soldiering" may react on both the management and the worker through increasing labor costs that cannot be passed along to the buyer in higher prices, thus creating avoidable losses which may curtail plant activity.[14]

An all-time record of 1,586 strikes in three midyear months of 1946 is evidence that a highly pathological state of labor relations can greatly curtail production of consumable goods. Had differences been settled through collective bargaining, mediation, and arbitration, the entire consumer group would have benefitted. To prevent such meaningless and unnecessary interruptions of production, public opinion and law should encourage collective negotiation, supplemented by mediation and arbitration, as a substitute for strikes.[15]

In true collective bargaining, representatives of workers meet with representatives of the employer and negotiate for the purpose of arriving at an understanding conceived in mutual respect. The direct purpose is that of entering into an agreement on wage rates, working conditions, and other points at issue. Workers state what they want and what they are willing to do to gain their wishes. The employer states what he wants and what he is willing to grant. If there are differences, negotiation continues and bargaining in the commonly accepted sense is engaged in with the hope of reaching a settlement acceptable to all parties. The process should be a two-way exchange of claims supported by evidence, in which justice and fairness should prevail. At no point should either party to the proceedings assume an uncompromising atti-

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[14]Morris L. Cooke and Philip Murray, *Organized Labor and Production.* Harper, 1940. pp. 109-111.

[15]A community experiment in reducing labor-management conflict, as embodied in the Labor-Management-Citizens Committee Plan of Toledo (Ohio) City Council, is reported by Jerome Gross in *Your Human Relations.* January, 1948. pp. 30-33. The general counsel for NLRB has stated that there was a 42% average monthly reduction in work stoppages in the first 14 months of operation under the Taft-Hartley Labor Act.

tude unless the position taken can be supported before a body of unbiased observers.[16]

### STRIKE PREVENTION THROUGH MEDIATION

If collective bargaining fails to bring mutual acceptance of terms, then mediation is the next appropriate step. Mediation means bringing in a disinterested third party for the purpose of getting the benefit of objective evaluation of proposals and counterproposals. Mediation should occur before a strike is called, because mediation is more useful as a means of preventing strikes than as a means of settling them. Both parties should agree to operations as usual while mediation is in progress. Both mediation and collective bargaining are more effective in preventing strikes when conducted on a local or company basis than when conducted on an industry-wide basis.[17]

The mediator is an advisor, a counselor. He discusses issues on both sides with the parties jointly and separately. He tries to find points of strength and points of weakness in the positions taken respectively by management and by workers. He tries to find the faults and weaknesses in the contentions of both parties, regardless of the economic strength or public support of either party. He tries to clear muddy waters and cool tempers. He seeks ground for compromise. He brings knowledge, understanding, and persuasion to bear in seeking a settlement.

The mediator may be a public official, a respected citizen outside the field represented in the case, or a consultant-specialist. Intelligence, integrity, patience, ability to deal with people, and personal qualities of leadership are important characteristics in

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[16]The psychological and sociological elements involved in management-labor negotiations are ably presented by B. M. Selekman, *Labor Relations and Human Relations*. McGraw-Hill, 1947.

[17]Professor Leo Wolman of Columbia University contends that collective bargaining on an industry-wide basis is economically unsound. See *Industry-Wide Bargaining*. The Foundation for Economic Education, 1948; and "The Executive and Collective Bargaining." *Commercial and Financial Chronicle*, November 11, 1948. Metz and Jacobstein, *op. cit.* seem to support this contention.

a mediator. Dishonesty, bullying dominance, cocksureness, and legalistic thinking are deterring qualities in a mediator, which usually serve only to postpone the possibility of agreement rather than hasten it. During the period of his service the mediator may, if it seems desirable, bring in other advisors, but he should avoid appeals to public opinion to strengthen his position, because by so doing he antagonizes at least one litigant and usually loses the respect of both.

The mediator should be a purveyor of industrial peace and, if qualified for his task, he requires no power to make decisions. His task is one of encouraging the parties to the dispute to reach decisions which coincide. A capable mediator creates the impression of playing no favorites. His task is not an easy one, however it is an extremely important one. If he is especially able, he brings about an understanding which closes negotiations with all parties in a state of good feeling, and thereby sets standards of practice which will make future negotiations more free and human.

Mediation does not always resolve differences sufficiently to bring the contending parties into agreement. When mediation fails, then arbitration procedures should be instituted, and, during the period of arbitration, continuance of operations should be agreed to by both parties. However, arbitration should not be used until negotiation and mediation have failed, because arbitration is a legalistic and often highly expensive proceeding. From a legal standpoint, arbitration is voluntary, however, numerous arguments have been presented for making arbitration compulsory by law in all companies engaged in interstate commerce.[18]

### STRIKE PREVENTION THROUGH ARBITRATION

Voluntary arbitration appears preferable to compulsory arbitration, because mutually satisfactory decisions seem more likely

[18]Compulsory arbitration has been legally supported in Australia for more than forty years, but enforcement has been lax. Consequently, strikes have not been prevented in that country to any greater extent than in other nations. See Metz and Jacobstein *ibid.* p. 155.

to be reached by voluntary acceptance of this method of settling disputes. The inclusion of arbitration clauses in an increasing number of labor-management agreements is a forward step in the direction of sound industrial relations. However, the subterfuge of "no contract—no work," whether practiced by labor or management, defeats the purpose of the arbitration clause in contracts when the date of renegotiation arrives. To prevent strikes, arbitration should apply to renegotiation of contracts, as well as operations under contract.

Although mutually acceptable methods of selecting arbitrators can be found, both management and labor are occasionally reluctant to agree in advance that decisions reached through arbitration shall be binding. Some instances have occurred in which one or the other of the parties to arbitration have refused to abide by the decision reached. If this aspect of arbitration is a barrier to more general use of the procedure, then it would seem in order to establish courts of review which might pass on the equity of decisions reached through arbitration. Establishment of labor courts appears to be the most-needed next step in labor-management legislation.

Arbitration can be made to serve the interests of both employers and workers and can also be used to protect the interest of the general public; however, fair practice in arbitration is difficult. Hence, both employers and workers sometimes view such proceedings with suspicion. Admittedly, it is difficult to find suitable men to serve as arbitrators and difficult, at times, to understand the logic of the decisions made by some arbitrators. It is likewise difficult for both parties to "keep face" through settlement of issues by arbitration, because decisions frequently seem to favor one side more than the other. To be otherwise, every arbitration decision would have to be an astute compromise. But it must be recognized that much of the dissatisfaction with the accomplishments of arbitrators is related to the extreme difficulty of the problems involved, rather than arbitration as a technique.

The limitations of arbitrators are human limitations; they are natural and to be expected. Therefore, they should be accepted.

Negotiations through collective bargaining, mediation, and arbitration provide human methods of settling work relations problems in industry. They are human methods because they are based on a meeting of minds; they are human because of dependence on thoughtful analysis, rather than the pitting of power and force against power and force. Because they serve both the employer and the worker, and protect the public against inconvenience, economic loss, and inhuman social behavior, they are worthy substitutes for the boycott, the lockout, and the strike.

CHAPTER TWELVE

# Research & Judgment in Work Relations

EVENTS OF RECENT YEARS HAVE DEMONSTRATED THAT THE SOLUTION of human relations problems is equally as important to the successful operation of business organizations as the solution of problems relating to materials, production methods, finance, and marketing. Haphazard or rule-of-thumb solutions of work relations problems in industry no longer suffice; nor can these problems be solved by makeshift compromises, because compromises which temporize in fundamental issues often create more problems than are solved by their acceptance. Solution of work relations problems requires broad understanding of human nature, supplemented by controlled analytical thinking. Both judgment and research should be applied in their solution.

## THE CHARACTERISTICS OF WORK RELATIONS PROBLEMS

By their policy decisions and public statements, many industrial executives imply that human relations problems can only be solved through an intuitive approach. Likewise, at least one well-known school of business administration emphasizes the intuitive method by teaching its students almost wholly through the study of "cases." The author prefers to believe that the clinical approach is more effective, i.e., that problems in human relations can best be solved by forming judgments through the application of analytical reasoning to the facts and principles pertinent to the problem. It is true, of course, that every person who deals repeatedly with problems in any field develops skills of a special nature which are difficult to communicate or demonstrate in isolation. Although the application of these skills may appear

to be intuitive, this practice might better be described as the conscious formulation of unconsciously conceived judgments, i.e., unanalyzed judgments.[1]

The background of every human relations problem will be found by examining the problem in reference to basic principles of human capacities, motivation, and behavior. The setting of a particular problem is found in the facts, both obvious and subtle, which describe the circumstances, situations, or issues that make the problem different from others. Armed with applicable general principles and carefully assembled distinguishing facts, the person seeking the solution to a human relations problem engages in a series of controlled steps of thought for the purpose of resolving the elements into a decision for action.

The majority of problems of work relations are problems of adjustment. That there are far better solutions to many of these problems than have been made in a wide range of work situations is the fundamental thesis of this book. In support of that thesis, principles have been stated and suggestions have been offered for achieving better adjustment of the worker to his job. However, regardless of the degree of adjustment attained, differences of opinion will continue to arise between employers and employees because of differences in objectives. The employer should take the lead in trying to overcome conflicts when they arise. To that end he should try to understand clearly what the worker wants and what he, as an employer, wants.[2] The source of conflict is not

[1]The nature of unanalyzed judgment is set forth in *Executive Ability: Its Discovery and Development* by Glen U. Cleeton and Charles W. Mason. Antioch Press, 1946. pp. 325-330. Presumably, a person can develop skill in formulating unanalyzed judgments through the study of cases. Readers wishing to familiarize themselves with the "case method" in work relations may consult Herman Feldman, *Problems in Labor Relations.* Macmillan, 1937; Calvin C. Thomason, *Human Relations in Action.* Prentice-Hall, 1948; and Frances S. Drake and Charles A. Drake, *A Human Relations Case Book for Executives and Supervisors.* McGraw-Hill, 1948.

[2]For an analysis of the elements involved in seeking to create better understanding between employer and employee, see L. F. Jordan, "General Electric's Employee Relations Program." *Trained Men,* Vol. 28, No. 5, 1948.

always easy to determine, but generally it arises out of one or more of the following briefly stated purposes and objectives:

| *What the Worker Seeks* | *What the Employer Seeks* |
| --- | --- |
| 1. An opportunity to engage in satisfying work activities that provide the means of self-realization through the application of capacities and interests, revealed and developed through education and experience. | 1. A cooperative, well-adjusted, and reasonably satisfied worker; one who appreciates the opportunity and protection given him to exercise his talents through appropriate work assignments. |
| 2. Reasonable security and continuity in opportunity to work for an appreciative employer. | 2. A worker who has a sincere regard for the economic interests of his employer, as well as his own. |
| 3. Individual recognition and a feeling of importance generated through work activities. | 3. A worker who is loyal to his employer; one who attempts to present favorably to the public the services or goods which his employer provides. |
| 4. Wages which will permit the maintenance of a decent standard of living, as measured in terms of individual wants. | 4. A worker who attempts to produce in proportion to the economic rewards for work, as measured both by quality and quantity standards. |
| 5. A pleasant and comfortable place to work, some aspects of which may be sacrificed for other considerations, such as wages, security, personal recognition, and interest in work. | 5. A worker who keeps spoilage, waste, lost time, and accidents at a minimum; one who protects the property of the employer as though it were his own. |

## FIVE STEPS IN PROBLEM SOLVING

In searching for ways in which the worker and employer can cooperate in a manner that will permit approximate attainment of the wants of each, conflicts which arise should be treated as problems rather than contests of strength. As far as possible, these problems should be attacked in somewhat the same systematic manner that a research worker uses in the solution of a problem. Briefly stated, the steps involved in the systematic approach to problem solving are as follows:

1. *Define the problem.* A choice of words should be made which will clearly state the problem. The direct statement of the

problem must frequently be supplemented by description and illustration. Usually the problem must be stated tentatively, and elaborated or refined as new items of information or supplementary data are accumulated. Many statements of human relations problems are confusing because of failure to distinguish between the apparent and the real or true problem. Therefore, any statement of the elements in a problem should be evaluated in terms of the real or fundamental issues involved. Sometimes a subsidiary problem is more important from a practical point of view than the real problem, but this significance cannot be determined unless the fundamental or major problem to which it is subsidiary is clearly stated.

2. *Devise a plan of treatment of the problem.* It is first necessary to determine whether known and accepted practices or principles are applicable to the problem. The treatment of the problem may then be determined in the light of these applicable elements, taking into consideration any generally accepted attitudes or values, arbitrary or real, which limit the applicability of the principles. This is another way of saying that general principles must be applied with reference to data pertaining to local customs and practices. Where no practices or principles are accepted as being applicable to the problem, it is usually necessary to collect special data through sampling or experimental procedures to establish working hypotheses which can be used in devising a plan of treatment of the elements in the problem. Frequently, it is necessary to construct or invent special procedures for testing the working hypothesis to determine probable validity.

3. *Organize thinking toward a tentative solution.* It may be necessary to solve the problem piecemeal, to simplify it by making restricting assumptions, or to elaborate the plan of treatment by injecting new assumptions. Segmental treatment and condensation through arbitrary definition of concepts, which may be accomplished by use of key words or symbols, often makes a problem solvable which otherwise would yield only to approximation.

Throughout this stage a great deal of exploratory and manipulative thinking must be done, which requires alternation between controlled analysis and intuitive insight.[3]

4. *Formulate an answer.* The answer to a problem may be a product, a result, a decision, or a judgment. Contrary to common practice and belief, arriving at a decision or reaching a judgment with reference to a problem frequently does not satisfy all the requirements of a solution to the problem. A decision or judgment may be arbitrarily accepted and applied, pending further study, or the solution may be accepted as a temporary closing of study, pending the recurrence of need for reconsideration. Operation under arbitrarily accepted decisions may clarify the problem for later review and may change the issues involved, thus calling for a new approach in the solution of the problem when it is reopened. Because of the dynamic nature of the elements involved, many human relations problems are never completely or finally solved. Research in human relations is usually a refinement and extension of procedures arrived at through exploratory judgment. Need may require the establishment of practices before all of the results of research are available. Indeed, it may be necessary to introduce practices to provide a basis for research.[4]

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[3]The elements involved in "pure" research in the psychological aspects of human relations problems are presented by Professor Egon Brunswik, University of California, in a monograph entitled, *Systematic and Representative Design of Psychological Experiments.* University of California, 1947. The following references contain useful suggestions relating to methodology in psychological research: T. G. Andrews (ed.), *Methods of Psychology.* Wiley, 1948; C. A. Curran, *Personality Factors in Counseling.* Grune and Stratton, 1945; P. M. Fitts (ed.), "Psychological Research on Equipment Design." *AAF Aviation Psychology Research Report* 19. Government Printing Office, 1947; H. A. Larrabee, *Reliable Knowledge.* Houghton Mifflin, 1945; R. L. Thorndike (ed.), "Research Problems and Techniques." *AAF Aviation Psychology Research Report* 3. Government Printing Office, 1948; R. I. Watson (ed.), *Readings in the Clinical Method in Psychology.* Harper, 1948; R. S. Woodworth, *Experimental Psychology.* Holt, 1938. Other sources are cited in Appendix I.

[4]For an example of the solution of a human relations problem progressively by exploratory judgment leading to the introduction of research, see W. H. C. Seeley and M. A. Kraft, "Selecting Transit Operators." *The Management Record.* National Industrial Conference Board, March, 1948. pp. 191-193.

5. *Check validity of solution.* Any soluton, unless arbitrarily accepted as the final solution, is always tentative. Attempts to use a solution in practical situations, or to apply it to theoretical situations, may prove the solution lacking in validity. This may not be obvious for a considerable period of time unless validation studies are made immediately following the application of the solution. Validation studies require the same critical approach as is required in the formulation and treatment of the problem in its solution stages.

*(Much of the subsequent discussion in this chapter relates to the preceding five steps, therefore the reader is urged to become thoroughly familiar with them before continuing.)*

## DETERMINING THE TRUE PROBLEM

Fundamentally, definition means the setting of limits and, in a subsidiary sense, it means to describe. Definiteness and clarity are the distinguishing elements of good definition. Clear definition of a problem differentiates one problem from another and leaves no doubt as to what the true problem really is. No problem exists apart from subsidiary problems directly included or indirectly implied; therefore, clear statement of the main problem usually requires clarification of subsidiary problems.

In defining a problem, its essential attributes should be stated first and foremost. Subsidiary elements should be included subsequent to the main definition to the extent that they clarify, illustrate, or explain the main problem. To explain, as indicated here, means to convey understanding, and not to explain in terms of cause and effect relationship, because the problem itself is normally concerned with causal elements. Sometimes a problem can be more readily communicated to others by illustration or comparison than by delineation. But neither illustration nor comparison provide definitive meaning; their use should be restricted to clarification, otherwise, the illustration may be mistaken for the problem.

It is not pertinent to the purposes of this discussion to lead the reader into the circulatory mazes and bypaths of semantics. But it is pertinent to emphasize the need for clarity in stating a problem before attempting its solution. It is further pertinent to warn against a widespread tendency of mistaking two similar problems as being identical, and mistaking the solution to one problem as also being the solution to other problems. For example a simple preliminary statement of a problem might indicate that it relates to the effect of rest pauses on the output of workers doing simple repetitive tasks. A limited statement of that type would require elaboration before a suitable experimental procedure could be selected. However, changing any part of the statement of the problem in elaboration would make it a different problem. The question to be answered would then be whether the initial statement or the modified elaboration defines the true problem. Until such questions are settled, plans for solution cannot be made.

It is easy to mistake one problem for another problem involving similar elements. For example, a problem of determining the effect of rest pauses on the output of workers doing highly complex tasks, such as instrument assembly work, could easily be confused with a similar problem relating to workers doing simple repetitive tasks, such as feeding a punch press. Because of the similarity of the two problems, the solution to one might easily be assumed to be the solution to the other. However, they are two distinctly different problems and their solution would doubtless provide different conclusions. In any case, the point here is that problem A is not problem B, and the solution to problem A is not necessarily the solution to problem B. Careful attention to definition and statement of problems prevents the mistaking of one problem for another, and discourages the acceptance of one solution as a substitute for another.

### CLASSIFYING AND ORGANIZING FACTS

In planning the treatment of a problem, and in organizing thinking toward a tentative solution, it is necessary to secure and classify facts. It is essential that the facts selected be pertinent to the problem, and that a satisfactory means of organizing and interrelating the facts be chosen. It may be necessary to set up an experimental procedure for obtaining the facts, or it may be possible to get relevant facts through observation and report. In any case, it is obvious that the more information obtained and the greater its pertinency, the more likely it is that a clear-cut and valid solution will be reached. A means of summarizing and correlating facts must be found, and a means of stating these facts in a simplified form must be devised. Summarizations must then be related to known principles, theories, or hypotheses for the purpose of formulating a tentative solution, modifying the theory, establishing a working hypothesis, or extending a working hypothesis into a theory.

Most problems can be solved only through progressive integration, which requres either the interrelation or the unification of multiple elements of increasing diversity. This means that redefinition and clarification of the problem become necessary as efforts toward solution progress, and that supplementary data must frequently be obtained. All of the elements in the form of summarized facts and applicable theory must be correlated either mathematically or rationally in formulating judgments. Testing and checking, both of the elements being considered and the judgments formed, is essential if the solution is to be a valid one. Such checking is necessary because it is easy for the human mind to digress tangentially, especially when dealing with problems in human relations. For the purpose of maintaining directness of approach in solution of the problem, questions such as the following should be repeatedly applied: What is the true problem?

Do the facts apply in the solution of the problem? What are the limitations of the data with reference to the problem?

### BIAS OF EXPERIENCE

It is frequently difficult to rule out the bias of experience in treating the various elements involved in problem solution. Judgments formed on the basis of past experience are as likely to be erroneous as they are to be valid. Experience with a problem and the formulation of a judgment thereon does not necessarily provide a true solution to a problem, because experience is normally limited in extent and uncontrolled with reference to many of the elements involved. Yet, previously formed judgments based on experience have a powerful influence on thinking.

Not only must a healthy skepticism be maintained with reference to one's own experience, but equal skepticism must hold when considering the experiences of others. It is a fundamental fallacy to assume that someone else's experience with a problem may provide a suitable solution. Learning what others are doing with reference to a problem merely gives status data. It is necessary to learn whether the things which others are doing provide a satisfactory solution to the problem. Only that experience which has been carefully observed, analyzed, tested, and checked can be trusted. Even then, what may seem to be a satisfactory solution may not be the best solution. Of course, skepticism can be carried too far and result in unnecessary expenditure of effort. The way to protect against overskepticism as one extreme, and the other extreme of uncritical acceptance of solutions which have been adopted by others, is to raise such questions as: How was the solution reached? Why is the solution accepted as a satisfactory one? Is there a better solution?

As an illustration of the fact that experience or practices of others may not necessarily be the best solution of a problem, one might examine the practices of a representative group of 100 companies in the handling of employee discipline. Such a survey

would indicate a variety of practices, ranging all the way from administration of discipline on the basis of the offhand judgment by the worker's immediate supervisor to a carefully formulated scheme for administering discipline, describing the nature of infractions for which discipline is administered, and specifying the nature of the discipline to be administered in typical situations. Using this information, a company might seek a solution to the problem of administering discipline by tabulating and classifying to determine the procedures used by the largest number of companies. This might be a solution to the problem: What are the most common practices in administering discipline? But it would not necessarily provide the solution to the question: What is the most effective method of administering discipline? If the latter were assumed to be the problem, then it would become necessary to raise such questions as: What is the purpose of administering discipline? Is the purpose to provide punishment, or is the purpose to reduce infractions which justify discipline?

If the purpose in the foregoing illustration is held to be that of administering punishment, then the most common practices found in a survey of several companies might be a satisfactory solution. On the other hand, if the purpose of administering discipline were conceived as that of reducing undesirable behavior on the part of employees, then the scope of the problem would be extended, the method of analyzing the data would be changed, and data of a different nature, probably involving controlled experimental studies, would of necessity be sought. These points are emphasized to indicate the importance of defining a problem in such a manner that the true problem is set forth, to point out the equal importance of collecting data which are pertinent to the true problem, and to highlight the necessity of organizing thinking so it will progress critically in the direction of a true solution rather than toward an intermediate or secondary solution.

In solving problems of materials and their conversion, industry has long since abandoned pure empiricism, which at-

tributes all knowledge to experience. Science and theory are held in high regard in many new industrial developments because experience alone would have provided little of the progress that has been made. But in human relations many employers are ignoring the findings of psychology and following the lead of experience unquestioningly. This has the tendency of institutionalizing practices which are not in keeping with human desires and capacities. Procedures and practices are often followed because they have been followed, not because they can be justified in the light of existing evidence or by evidence which might result from a change in procedures. Experience should be used to test theory, not to impede its application.[5]

### BIAS OF OPINION

Not only should it be borne in mind that reports of experience are not in themselves valid data for solving problems in human relations, it should also be definitely recognized that opinions are rarely suitable data for the study of such problems. Valid data are admitted evidence which can be used for the purpose of relational thinking in drawing inferences. An opinion is a belief, somewhat stronger than an impression; it is essentially an attitude based on sentiment and feeling as well as experience. Opinions may be acceptable data for the study of attitudes, but attitude studies are useful only when they lead to investigatons of a more profound nature. Opinions of employers on work relations procedures, and opinions of workers with reference to employer-employee relationships in the work situation, should be used primarily as a preliminary step in more fundamental and basic investigations. This observation is more significant than it may appear on first consideration, because there appears to be a

[5]The criticisms of empiricism herein offered in relation to limited individual experiences or surveys of company practices are equally valid for conclusions based on the experiences and practices of governmental agencies. See, for example, Carroll L. Shartle, *Vocational Counseling and Placement in the Community in Relation to Labor Mobility.* Social Science Research Council, 1948.

growing tendency for opinion studies or attitude surveys to be used as conclusive studies. Such surveys prove nothing except that the opinions and attitudes are what they are. Reliance on them as fact, or treating conclusions drawn therefrom as fundamental knowledge, may result in fallacious reasoning with reference to cause and effect, because preponderance of a viewpoint does not necessarily make true that viewpoint.[6]

### DETERMINING CAUSE AND EFFECT RELATIONSHIPS

In dealing with problems of human relations, it is necessary to exercise unusual discrimination in determining cause and effect relationships. For example, if one investigated critically the statements of a thousand employees giving reasons for leaving employment of a given company, it would probably be found that at least half the statements do not reveal the true reason. In fact, unless careful investigations are made of each case, it is almost impossible to learn the true reasons for employees' self-separation from employment. The person leaving a company is likely to give what seems to be a good reason, which often is not the true reason. In like manner, it will be found in many situations that the factors which seemingly influence behavior are frequently not the true motivating forces. Even though the major influencing force is identified, more than likely other forces also play a part in motivating action. In studying problems in human relations, it is frequently difficult to determine the degree to which data are applicable; therefore, a safe rule to follow in analyzing data on human relations is to look for subtle supplementary elements which may not appear in the factual material that has been collected for study.

### FORMULATING JUDGMENTS

Controlled and directed thinking must often be used to formulate judgments, which may be used as a substitute for solutions

[6]As lasting testimony, consider the fate of election polls in 1932 and again in 1948.

that might be reached through extensive research. The essence of judgment is a conclusion reached as the result of the application of intelligence and experience to a set of facts and circumstances, even though evidence is limited. Frequently, also, judgment must be used to reach conclusions or decisions on the basis of indications and probabilities not clearly revealed by available evidence. In any case, the judgment formed is the product of a viewing of available facts and circumstances, analyzing, classifying, weighing or evaluating, correlating, and synthesizing to reach a conclusion or form a judgment. Judgment may be weak as a consequence of shallow intelligence; it may be poor because inadequate facts or nontypical circumstances are considered; and often judgment is inferior because a random associative method of thought is used, rather than a controlled and directed method of thought.

Formulation of judgments, as considered here, is an exacting process. It is an operation of mind involving comparison and discrimination by which knowledge is formulated. It implies exacting discernment resulting from clear definition, careful consideration of evidence, and rigid control of the reasoning processes by which conclusions are reached. The first step in the exercise of judgment is that of analysis, that is, separation of a situation into constituent parts or elements. Such an analysis clarifies a problem and indicates possible points of attack. It does not increase ultimate knowledge, but places momentary data in their true perspective. Analysis requires isolation of data elements but must not result in separation of any element from related elements. Data must be considered in relation to the source and with reference to the solution sought as a whole. Analysis normally results in making clearly evident the need for additional data which must frequently be sought before valid generalizations can be made.

The second step in judgment is classification. In the process of classification, points of agreement are sought, points of differ-

ence are noted, points of nonconformity are either reconciled or isolated and controlled, and concomitant variations are classified in a subsidiary manner. If classification justifies, relationships are noted and inferences drawn and, by the process of induction, the process of reasoning is advanced toward a conclusion or solution to the problem. However, in most human relations problems, conclusions cannot be drawn without taking a still further step, that is, the step either of weighing or evaluating evidence in terms of a known criterion, or by using mathematical procedures such as correlation formulas for determining reciprocal and exclusive elements in the data themselves, as well as their relation to the criterion reflecting the objective sought.

### USING STATISTICAL TECHNIQUES

In many instances, first order correlations will not provide the full answer to the question of relationships and multiple correlation techniques must be applied. Statistical procedures involving correlation techniques should be used only to the extent that they provide grounds for a conclusion not obtainable through graphical charting of extensity or range of data, distribution, or modality. Graphical procedures relating to trend, frequently used in study of economic phenomena, are normally of little value in dealing with the psychological aspects of human relations, but may have significance if the problem involves biological elements. The choice of appropriate statistical procedures requires expert knowledge.[7]

### INFERENTIAL THINKING

Having analyzed, classified, weighed, compared, and evaluated the data or elements chosen for the purpose of reaching a solution to a problem, it is necessary to make an inference or draw a conclusion which may serve as a tentative solution. The

[7]See H. E. Garrett, *Statistics in Psychology and Education*. Longmans, Green, 1947; Quinn McNemar, *Psychological Statistics*. Wiley, 1949.

process of reaching a conclusion on the basis of comparison and discrimination of values and relationships is the process of judgment. It is the logical end of a series of steps and must be held in abeyance until the basic preliminary steps have been properly executed, if judgments are to be sound. Without such careful step-by-step preparation for judgment, inferences made will result in little more than the formulation of offhand opinions, which might have been reached without the delineative steps essential to formalization of judgment.

Inferences and assumptions are frequently confused in thinking. An inference is a logical conclusion drawn from given data or premises, whereas an assumption is something taken for granted without necessity of proof. Unless a premise is founded on demonstrable evidence, then it is little more than an assumption. An inference drawn from such a premise might be wholly unwarranted, particularly if the premise is false. Therefore, in making an inference to reach a conclusion, one must guard against untested assumptions.

The process of inferential thinking makes no allowance for the validity of data because the process can be applied in passing from one judgment to another, or from a belief to a judgment. Hence, the reliability and validity of data must be determined from an accepted point of reference, deemed to originate in natural or normal causation. Widely practiced customs, generally accepted ethical principles, and legal regulations are in a somewhat different category in this respect than individual percepts (including those set forth in this book) or company policies (even those of one's own company). Precepts and policies should be subjected to constant re-examination and should be open to immediate change because they are within the control of company officials. Customs, ethical principles, and legal regulations are a more fixed form of social judgment. Therefore, they constitute part of the framework of reference of work relations data and are valid to the degree of acceptance or enforcement.

Occasionally, unknown to the person attempting the solution to a problem, unconscious inferences are made. The only check against fallacious conclusions, which may result from unconscious inference or from inference based on data of questionable validity, is that of submitting both the data and conclusions to others for analysis. Here, of course, professional competence must be taken into consideration in choosing those who are to pass judgment on the data and the conclusion. However, even though checked and tested in every conceivable manner, the final proof of validity may not be possible until the conclusion is tested by experience in application.

One of the dangers in inferential thinking is overgeneralization, that is, generalization which goes beyond the evidence on which the generalization is based. This is the chief fault of deductive thinking and is one of the reasons that inductive processes have generally supplanted deduction in rational solutions to problems. Perhaps the fault of deduction is not in the process itself, but in the tendency to assume that a thing is the whole of reality merely because it is known to exist. The inductive process seeks to make inferences from particular to particular by observing points of agreement or difference, residuals, and concomitant variations, and ordinarily proceeds with full acceptance of fallibility of both assumptions and data. In other words, induction emphasizes quantity and quality points of reference and places less emphasis on the frame of reference. The inductive process also insists upon inference from particular to particular before admitting of inference from particular to general. Deduction encourages overgeneralization, whereas induction approaches generalization with extreme caution. Deduction seeks to make a case, while induction searches for solutions.

### OPINION AND JUDGMENT

The dividing line between opinion and judgment cannot always be distinctly drawn. Except by chance, an opinion based

on limited experience, associative thinking, and quick appraisal may be expected to have less validity than a carefully reasoned and considered opinion based on extensive observation. However, in distinguishing between opinion and judgment, allowance should be made for professional competence. The professional opinion of a physician relative to a physical disorder, its prevalence, and its treatment, has more significance than the opinion of a lawyer on such matters. On the other hand, the opinion of a physician on a question of politics and government would certainly have less professional significance than the opinion of a lawyer. A nonprofessional opinion is one which lies outside the realms of the professional training and experience of the person giving the opinion. Regardless of the extent of the specialized professional discipline the person has been subjected to in one field, and regardless of the social status of the person concerned, his opinions are the opinions of a layman when he ventures outside the realm of his specalization. Opinions approach the status of judgment only when they are based on selective professional experience, and then only when they are reached after extensive observation of data. That professional opinions are not conclusive in themselves is borne out by the fact that experts frequently find themselves at variance with each other. Where professional opinions with reference to human relations are at variance, there is no known method of resolving differences except through experimental study.

It is by implication, rather than direct indication, that judgment presupposes professional competence in observing and analyzing the particular data which characterize a problem under consideration. A degree of insight is produced by professional discipline or experience which enhances the capacity for discernment, penetration, and "seeing into a situation." The scope of understanding is broadened by professional discipline and experience to the extent that the individual has greater capacity for apprehending the true nature of data under consideration. Of

course, such insight has little virtue if biased and, in general, has only chance value if it rests on the nebulous quality of intuition popularly attributed to some persons. Loosely defined, insight is imagination leavened by experience. Tenuous though insight may be, it is important because the processes of judgment formation may be unimaginative and the conclusion unrealistic if insight is lacking. However, dependence on insight alone is a form of guessing.

Inferential thinking involving induction minimizes the value of the authoritarian approach to knowledge. In inferential thinking, the opinions or judgments of experts, and the voluminous pronouncements of persons who have expressed themselves in writing on a problem, are reduced to the level of data, related or direct, to be taken into consideration. Evidence of authority in a pronouncement should not be accepted without proof merely because the assertion is made by a person who, by nature of experience or training, is recognized as being qualified to render an opinion. Such conclusions should be submitted to experiment and required to pass the same tests of validity that other data collected in the solution of a problem are required to pass.[8]

## RATIONALIZATION AND JUDGMENT

The emphasis herein placed on rigorous procedures used in inductive thinking in problem solving does not mean that reasoning is cast aside, because inferential inductive thinking is a process of reasoning. However, inductive reasoning does reduce rationalization to a position of less importance than it occupies in deductive thinking. Rationalization often misleads because it seeks to make knowledge conformable to principles satisfactory to reason, but what passes as reason in many instances is little more than

[8]This observation applies to much of the material contained in handbooks such as L. P. Alford (ed.), *Management's Handbook*. Ronald Press, 1942. W. J. A. Donald (ed.), *Handbook of Business Administration*. McGraw-Hill, 1931. J. C. Aspley and Eugene Whitmore, *The Handbook of Industrial Relations*. Dartnell, 1943. Rev. ed., 1948,

an opinion, belief, or an assumption. Rationalization usually seeks to explain or justify rather than to prove or demonstrate. The explanations of rationalization are frequently couched in terms of socially accepted motives, whereas the true motives may be more directly related to matters of self-interest. One of the possible explanations that greater progress has not been made in developing more satisfactory human relations in work is the tendency of many employers to rationalize work relations practices in terms of socially acceptable motives instead of recognizing that they frequently favor the employer. Of course, the worker also engages in self-interest thinking, but he does this more violently when he observes bias in the reasoning of his employer.

### CAUSE AND EFFECT IN PROBLEM SOLVING

No problem involving conflicting interests is fully solved until action is taken to control the cause which produces the effect that has given rise to the problem. In this respect, many errors are made in seeking the solution to human relations problems, because the effect is attacked and the cause neglected. For example, the problem of absenteeism cannot be solved by determining its extent and issuing orders, lecturing employees generally on the subject, or disciplining the worst offenders. Appreciable reduction will occur only when causes are determined and those causes are brought under control. This principle has been illustrated by extensive experience among street transportation companies in relation to accident prevention. These companies have found that preachments, posters, slogans, and other direct attacks upon accidents, which are an effect, bring no appreciable reduction; however, they have found that accidents are reduced when the causes are determined and the causes regulated, restrained, or removed.

Frequently, human relations problems are not solved, even though action is ordered with the intent of correcting causation. This is due to the fact that the action taken by those responsible

for execution of orders or directions is not the action proposed. Again, using the example of accident reduction, many studies have been made and appropriate action has been recommended or ordered by management without a resulting reduction in accidents being achieved. The orders in such an instance, as in many instances in human relations in work, must usually be carried out by a supervisory force. Once given, the orders are often forgotten by management and, frequently, the proposed changes are either not made or are ineptly handled by the supervisory force. Management deludes itself into believing that the problem has been solved as a consequence of the discovery of the cause and issuance of orders for bringing the causes under control. A true solution to a problem cannot occur unless continuing studies are made to determine whether recommended action has been taken, and records of the effect that such action has produced are placed in evidence.

### PROBLEM SOLUTION AND PROBABILITY

There are no fixed and final solutions to human relations problems, nor are such solutions likely to be inclusively or exclusively definitive. This is true because the worker performs his duties in a highly complex situation in which he is stimulated by a wide variety of environmental factors of a physical nature, and more subtle environmental factors of a social nature. These situations differ from one place of work to another, and from time to time in the same work environment. A solution which would function satisfactorily in one place or at a given time might function with less effectiveness in relation to another time or place. Furthermore, since individuals differ, solutions which would be appropriate for the majority of individuals concerned often do not serve for certain persons in the group.

Confronted with these complexities of situations, situational differences, and individual differences which characterize problems of human relations in work, it may seem to some that solu-

tions of these problems are impossible of attainment. However, this is not true; but it is true that solutions will be effective only in terms of predictable probabilities, which means that solutions can be reached which have greater probability of being satisfactory than unsatisfactory. Efforts to attain solutions to human relations problems which are statistically better than chance show that better-than-average solutions may be presumed to have been attained when the probabilities are approximately 2.5 to 1 in favor of the solution being the appropriate one. This can be achieved by application of judgment based on evidence obtained through use of reliable and valid tools of psychological measurement. Solutions having a higher probability ratio can usually be achieved through carefully planned and executed research studies. Even then, solutions may be considered exceptional if they function in an approximate ratio of 5 to 1. Achieving solutions to human relations problems which are satisfactory in 70% to 85% of instances is cause for gratification. However, it is not justification for complacency. Rather, our current inability to reach satisfactory solutions in a higher proportion of instances demonstrates the need for continuing effort through the application of research and the use of sound judgment to reach solutions which will make work more human.

*(Suggested techniques for applying work relations principles discussed in this and preceding chapters are included in the Appendix. See pages 281-306.)*

# Appendix

## Application of Work Relations Techniques

It is presumed that many readers will wish to investigate further the principles set forth in this book and that they will wish to develop techniques for applying them to typical work relations situations. Therefore, procedures which could not be fully outlined in the main body of the book are presented in this appendix. The procedures outlined are illustrative and will ordinarily require further development when applied to specific situations. No attempt has been made to provide an exhaustive list of procedures. Numerous others could be developed from basic ideas presented in the book.

Suggestions are arranged by chapters for convenient cross reference. The topics for which procedures are suggested are listed in the accompanying special index. Bold face numbers in the special index refer to the chapter under which the topic is treated both in the appendix and the main body of the book. The page on which each topic appears in the appendix is shown in parentheses following the chapter number. The page on which the topic is treated in the main body of the book may be ascertained by consulting the general index. References cited in the appendix are identified by the name of the author or short title and by a number assigned to the book or article in the bibliography which appears on pages 307-312. Where undesignated page numbers are given, the reference is to *Making Work Human.*

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Wage Rates, 9(298)
Work Adjustment, 3(287)
Work Environment, 3(288)
Work Simplification, 3(288)
Worker Analysis, 3(287)
Working Conditions, 8(294)

## CHAPTER ONE—*Work is What We Make It*

From the employer's point of view, effectiveness of work is frequently measured by productivity or output. To a considerable extent, the worker also is impressed by accomplishment in work. However, his long-run desire is to engage in work activities that are in themselves satisfying. Analyze a typical work situation to determine the extent to which both the objective of the employer and the psychological needs of the worker can be achieved. To what extent are the factors which make such achievement possible inherent in the work itself? To what extent are they related to the characteristics of the individual worker? To what extent must special work relations techniques be applied to insure satisfaction in work?

## CHAPTER TWO—*Human Desires and Needs*

### —A—

Apply the accompanying check list to work situations to determine the extent to which the elements involved cater directly or indirectly to basic human desires and needs. Work situations are not fully analyzed until the manner in which basic desires and needs are supplied has been determined. Therefore, in using the check list it will frequently be necessary to answer the question, "In what way does the situation cater to a particular desire or need?"

| | *Not Supplied by the Work Situation* | *Indirectly Supplied by the Work Situation* | *Directly Supplied by the Work Situation* |
|---|---|---|---|
| 1. The need for food and correlative needs for air and moisture. | ..... | ..... | ..... |
| 2. The need for bodily well-being and comfort. | ..... | ..... | ..... |
| 3. The need for activity. | ..... | ..... | ..... |
| 4. The need for mating. | ..... | ..... | ..... |
| 5. The need to share thoughts and feelings with others. | ..... | ..... | ..... |
| 6. The need for dominance—power in exercising control over persons and other elements in one's environment. | ..... | ..... | ..... |

7. The need for self-determination—individuality and independence. ..... ..... .....

8. The need for achievement, acquisition, and possession. ..... ..... .....

9. The need for approbation—recognition and admiration by others. ..... ..... .....

10. The need for ideation—realistic, artistic, projective. ..... ..... .....

## —B—

Determine the extent to which work situations meet the requirements of basic desires and needs by applying the following principles of work relations.

| | Degree to which the work situation meets requirements set forth in each principle. | | |
|---|---|---|---|
| | *Poor* | *Fair* | *Good* |
| 1. The maintenance of self-respect in work is as necessary to mental health and balanced personal adjustment as the satisfaction of bodily needs is to physical health. | ..... | ..... | ..... |
| 2. One of the primary factors in the debasement of labor throughout all periods of history has been the philosophy of work which holds that the primary function of work is the satisfaction of physical needs. Does the job provide opportunity to rise above this philosophy? | ..... | ..... | ..... |
| 3. The provision of physical conditions and the maintenance of work relations which encourage satisfaction in work for work's sake should not be used as a substitute for equitable wages; however, the provision of attractive physical and psychological conditions of work can and should be used as a supplement to the wages paid for services rendered by the worker. | ..... | ..... | ..... |
| 4. The basic problem in making work human is that of making the work activities of a given person coordinate with the integrating forces of his individual personality. | ..... | ..... | ..... |
| 5. No production problem is fully solved until the human factors involved have been analyzed and solutions have been found. | ..... | ..... | ..... |
| 6. The love of family, which is a sublimated form of sex drive, is the most powerful force in human motivation. Does company policy encourage? | ..... | ..... | ..... |

7. Projective identification can be made to include the work we do, the tools and machines we work with, the place of work, the company we work for, as well as close personal friends and the ones we love. However, it should be remembered that negative projective relationship can also develop; a man can hate as well as love his work. Are favorable identifications encouraged? ..... ..... .....

8. The executive, administrative, or supervisory officer who can transpose the need to dominate into capacity for sympathetic and tactful leadership does much to make work human for those persons whose work activities he directs or supervises. Rate the job with reference to supervision. ..... ..... .....

9. It must be expected that needless regulations in the office or workshop, or those recognized as such, will be responded to by employees with resentment and rebellion. Rate the job on the degree of freedom and opportunity for self-direction provided. ..... ..... .....

10. If the man's work can be fitted into his long-range goals (in the sense that there is hope for greater achievement in work) or if hope that present work, even though satisfying, leads to a more challenging type of work, then a better adjustment is made by the worker. ..... ..... .....

11. Every person is pleased when he, as an individual, his actions, his work, or the things he has produced are admired by others. Rate with reference to supervision. ..... ..... .....

12. Ideation is highly self-centered and personally biased. For the employer to expect the worker to be otherwise is contrary to the facts of human nature. Rate with reference to management viewpoint and practices. ..... ..... .....

## —C—

The findings showing the effect of praise and criticism set forth on pages 36-37 can be applied to instruction, discipline, citations for work performance, and general supervision. The stipulations included can be converted into a rating scale for instructors and supervisors.

## —D—

The statements indicating the factors affecting employee attitudes set forth on pages 39-42 can be used in checking work situations, particularly with reference to supervisory and management practices. President Igleheart of General Foods Corporation (77), suggests a plan for helping workers understand the nature of production and management problems

in the companies for which they work. His suggestions should be heeded by every person who is interested in making work human. Unfortunately, the article in which he sets forth his conclusions is too long to present here. However, certain statements from it are useful in checking company practices. After directing attention to evidence that "only one worker in five is aware of having received any information whatever from his employer about profits and wages," President Igleheart presents the following conclusions in the article:

*"Misinformation and untruths flourish where adequate information and truth are lacking.*

*"If our own employees lack information, how can we expect the public to be informed?*

*"Our good intentions must be sincere and real. They must be provable in terms of an active effort to earn the confidence of employees, consumers, and stockholders.*

*"To every possible extent, I believe, all managements must give greater emphasis than ever before to personnel administration and public relations —of which communications is a vital part.*

*"Face-to-face contact, as a matter of fact, will always be the best and most effective medium.* All the rest are tools to reinforce it or take its place. Why wait for a crisis to utilize this principle? We hear of companies whose top management regularly meets with all employees with good results. But these are exceptions. How many top management men can honestly say that a majority of their employees even know what they look like? I wish I could! And how many managements are using any large number of the other tools of communication?"

Summing up the problem of management communication with employees, President Igleheart states that "self-analysis may reveal some things we should know" and suggests the following as the type of questions which should be considered:

*"Question One. Are we doing enough?* Not while 35 million people remain unconvinced of the merit of our system. Not while only one worker in five gets any facts at all about profits and wages. Not in the face of the fact, as H. W. Prentis, Jr., of Armstrong Cork has reminded us, that over 60 million Americans are having their first adult experience with a free market in a peacetime economy. 'The world fills up and empties very rapidly,' he warns, 'and those of us who are convinced that there are real virtues in the American system have no time to lose.'

*"Question Two. Whose responsibility is it?* Yours, I think, and definitely mine. Management needs the technicians of human relations to help get the job done. It must give them full functional recognition at top levels and a voice in policy. But the problem is not solved by putting a box in an

organization chart. Top management must actively support improved communications until every member of the team, up and down the line, is asking questions and getting and giving answers.

"In industry, as in sports, the best players know the score. They *are* the team—not just with it. And the best 'fans' are the best informed.

*"Question Three. Are we being frank?* A half-truth or a distortion of fact has a way of coming back and slapping its authors in the face.

*"Question Four. Are we being lucid?* Need statements about 'private enterprise' sound as though they were prepared by certified public accountants and edited by engineering specifications writers? We need not talk down to people. But business terms are jargon and require translation. 'Fixed assets' really means 'the tools with which we work.' 'Capital expenditures' really means more jobs and better products for people. 'Earned surplus' means, in reality, the previous earnings of a business retained for its expansion and development—in other words for the security of people. Let us say so plainly. And let us not lose sight of the old proverb, 'One picture is worth a thousand words.'

*"Question Five. Are we bold enough?* Keeping its dignity, hedged around by legal fears, management rarely hits back when hurt in print. The critics of industry cavort in the front page headlines while businessmen address each other in well-weighed words on page 34. One need not advocate harum-scarum tactics to suggest that we look some of our cherished taboos squarely in the eye.

*"Question Six. How great is the faith we ourselves profess in the American system of individual liberty, economic enterprise, and political democracy?* Are we willing to put time, effort, and money into the task of vindicating ourselves before a questioning public? We know what we have got to lose. Let us see what we have got to gain.

"For one thing, I believe that if we could reestablish in millions of minds the connection between cause and effect—effort and reward—we would gain vastly in industrial production and economic stability. My confidence in management is great. My confidence in the fairness, good sense and goodwill of the people is equally great. I am sure if we act with decision and speed, we will find the path to understanding, freedom, cooperation, and peace."

## CHAPTER THREE—*Self-Realization Through Work*

### —A—

Using the standards indicated, rate the capacities involved in typical work situations (see pages 47-76 for definitions of basic capacities):

| | | *Highly Important* | *Fairly Important* | *Not Important* |
|---|---|---|---|---|
| 1. | Movement | | | |
| 2. | Strength and energy | | | |
| 3. | Receptivity | | | |
| 4. | Assimilation | | | |
| 5. | Adaptation | | | |
| 6. | Coordination | | | |
| 7. | Analysis | | | |
| 8. | Synthesis | | | |
| 9. | Social responsiveness | | | |
| 10. | Unification | | | |

—B—

Using the suggested points set forth on pages 51-52, check the psychological aspects of time and motion study, and compare with the procedures which have been established by methods engineering on typical jobs. Work simplification and equipment design have received insufficient attention in industry. Techniques to be applied are suggested in "Making Work Simple" (92) and Fitts (54). For further suggestions on job and worker analysis, see Ghiselli and Brown (59), pages 23-60. For guidance in fatigue studies, see footnotes 5 and 6, page 55.

—C—

Sensory receptivity adjustment is important in work satisfaction. Using the factors listed below rate a typical job and recommend specific changes which would improve the adjustment aspects of the job.

| | | *Unsatisfactory* | *Satisfactory* | *Excellent* |
|---|---|---|---|---|
| 1. | Illumination | | | |
| 2. | Temperature and humidity | | | |
| 3. | Ventilation, including control of dust, fumes, and other atmospheric elements | | | |
| 4. | Arrangement of work space and equipment | | | |
| 5. | Flow and handling of materials and finished products | | | |
| 6. | Color of walls, floors, and equipment | | | |
| 7. | Type of floor surface | | | |
| 8. | Sound control | | | |
| 9. | Vibration control | | | |
| 10. | Posture | | | |
| 11. | Length and spacing of work periods | | | |
| 12. | Proximity of other workers | | | |
| 13. | Exposure to hazards | | | |

—D—

Monotony is an aspect of certain types of work. However, there is no standard method for reducing monotony, because effects are related to both the work situation and the worker. Furthermore, a solution to the monotony factor frequently proves temporary. With these limitations in mind, determine the practicability of introducing the following counteragents to monotony in a typical work situation:

1. Rest pauses.
2. Shifting workers on jobs.
3. Varying methods of work.
4. Allowing conversation where it does not interfere with work.
5. Use of music.
6. Intermittent broadcast of news or other information.
7. Encouraging study by the worker of his work activities.
8. Feeding work in small units, thus breaking the continuous flow.
9. Providing a visual record of accomplishment.

—E—

Tests should be used in determining aptitudes only when the specific work situation in which they are to be applied has been analyzed and job requirements have been related to an aptitude for which there is a valid and reliable measuring procedure. See Hull (76) and Bingham (11) for suggestions. If, for example, capacity for analysis is required on the job, an employee should be selected who possesses high capacity in that respect. Standards for judging capacity for analysis are set forth on page 68.

—F—

Using the ten characteristics of leadership set forth on pages 72-73, construct a rating scale for evaluating supervisors. A standardized rating scale for executives appears on pages 107-112 in Cleeton and Mason (32).

—G—

Rate work situations on the fourteen points presented on page 73, describing the social relationship desires of workers.

—H—

Consult references cited in footnote 9, page 74, for suggested techniques for making morale surveys.

—I—

Personality maladjustments among workers should be dealt with qualitatively. The quantitative approach is generally ineffective. See Anderson (3), Fisher and Hanna (53), and McMurry (97).

## CHAPTER FOUR—*Interest in Work*

—A—

To establish interest patterns for various groups of workers, apply some of the simpler vocational interest tests described in Kaplan (83), pages 590-627.

—B—

To determine the extent to which workers are interested in information about the company for which they work, interview fifty representative employees on the subject. To determine what progressive-minded management thinks workers are interested in knowing, consult Igleheart (77) and Merrill (100).

—C—

In planning a suggestion system, consult references "Suggestion Systems" (135), Cleeton and Mason (32), and Bellows (7).

—D—

Boredom is highly individual. Therefore, no fundamental techniques have been developed for direct control. However, partial alleviation can be provided by:

1. Encouraging the worker to appreciate the importance of his work.
2. Providing an incentive plan that has features which are personally favorable to the individual.
3. Providing for change of pace.
4. Permitting work interruptions which allow workers to engage in interesting diversions for brief periods.
5. Introducing mild accompanying diversions, such as music, which can be included in the span of attention without interfering with work.

Compare the foregoing statements with procedures suggested on page 289 for overcoming monotony; see also May Smith (126) and Blum (14).

—E—

Compare the handling of grievances in a typical work situation with the following rules:

1. Provide means for the worker to make known his grievances without prejudice or penalty.
2. Provide means for prompt handling of all complaints.
3. Make an unbiased investigation of each complaint.
4. Adjudicate equitably and expeditiously.
5. Advise all interested parties of the settlement, whether directly or indirectly involved.

—F—

Techniques for determining the extent of job satisfaction and dissatisfaction are outlined by Hoppock (72), Blum (14), and Ghiselli and Brown (59).

## Chapter Five—*Fitness for Work*

—A—

The factors which limit or encourage vocational adjustment are: (1) capacity or ability, (2) interests and attitudes, (3) personality characteristics, and (4) motivation. Investigate ten "marginal" workers and determine the extent to which these factors appear to be affecting work performance in each case. Can adjustment be improved in any of the cases? Consult McMurry (97), May Smith (126), and Hoppock (72).

—B—

For methods of computing labor turnover, see Aspley and Whitmore (5). It has been estimated that general industrial unrest accounts for 5% to 15% of labor turnover, depending upon economic conditions, and that working conditions account for 20% to 25%. The primary cause of turnover is highly personal, accounting for 60% to 75% of cases. This suggests a need for study of the individual case. Suggestions for making individual case studies are presented by Hibbs (71). See also Bellows (7).

—C—

Using the Employee Selection Plan outlined on page 108 as a guide, develop a similar plan for other jobs. Useful suggestions may be drawn from *Selection and Employment of Transit Operating Personnel* (85). See also Seeley and Kraft (119).

—D—

The key to the formulation of successful selection and employment plans is the placement or evaluative interview. Using the evaluative interview described in *The Placement Interview for Transit Employees* (115), develop an interview guide for general use. See also Fear (48), and Uhrbrock (145).

—E—

General suggestions for use of tests will be found in Bingham (11) and Moore (102). Descriptions of tests will be found in Kaplan (82). Tests may be purchased through The Psychological Corporation, 522 Fifth Avenue, New York 18, New York. However, tests should not be introduced without professional advice. For many industrial situations suitable tests must be developed, because they are not available in standardized form. De-

veloping tests requires professional skill. See also Bellows (7) and Thorndike (141).

—F—

Traditional selection devices, such as the application and personal history form, the medical examination, and reports on applicants obtained from outside sources, could be greatly improved. The objective in planning improvement of these devices is to obtain evidence relative to the candidate which reveals the extent of his fitness for the job. By applying this objective, it will be found that most traditional devices provide a considerable amount of useless information, yet fail to reveal needed evidence on certain important characteristics. The plan of selection suggested on page 108 indicates the type of information which is needed in evaluating the qualifications of a candidate. Information not otherwise obtained may be obtained through the evaluative interview. However, the true test of any selection plan is the ultimate success of the worker on the job. See McMurry (98).

—G—

In-service evaluation of employees is equally as essential as evaluation at the time of selection and employment. In general, the same logic of evaluation applies in both instances. However, in-service evaluation is greatly facilitated by the maintenance of individual case files on each employee. See page 123; also, Moore (102), McMurry (97), Carter and Kraft (27), and Probst (112).

## Chapter Six—*The Opportunity to Work*

—A—

Most studies of employee attitudes with reference to work relations show that the employee values security above other factors. It seems reasonable, therefore, to suggest that the employer has a community responsibility for maintaining opportunity to work. This would mean overcoming seasonal employment variables in certain industries, and cyclical unemployment nationally.

Many employers have indicated their willingness to share in the responsibility for providing continuity of employment for workers. A plan is suggested in the April, 1949 issue of *American Affairs* in an article entitled, "A Problem Industry Must Meet—Mass Unemployment" by L. C. Walker, President, Shaw-Walker Company (150), pages 116-118. Mr. Walker points out that through national planning, "nearly every accidental contingency of economic life is grooved toward security and safety—all except the danger of mass unemployment. . . . Industry itself should find an answer to this problem—difficult as it is; and if industry will endeavor

to assume the responsibility we shall have directed toward its solution the brains of all those best qualified to handle it successfully. To leave it to politicians and bureaucracy is to invite the controls that ultimately destroy democracy and freedom of the individual." It is further suggested by Mr. Walker that groups of employers in each community should assume the financial burdens of maintaining at least a 60% level of employment for all workers in the community even in periods of low business activity.

—B—

Seasonal and cyclical changes bring about conditions which force certain workers into types of work in which they previously have not been engaged. Just as labor turnover has been found to relate to problems of individual adjustment, readjustment to new types of work as a consequence of unemployment is even more personal. The nature of the personal adjustment problems involved are indicated on pages 131-132.

—C—

Workers have suggested that the way to provide against recurring unemployment is the institution of plans for a guaranteed annual wage. It is claimed that the annual wage would force planned production. Employers in general have opposed the annual wage, although some companies have successfully applied the general principle. For a discussion of the issues involved, see references included in footnote 2, page 138. See also page 296.

—D—

Although not ordinarily recognized, the governmental factor which affects employment more than any other is national fiscal policy. The principles involved are indicated in the references cited in footnote 3, page 139. For documentation of the problems involved in national debt, see Hart (70) and Harris (69).

## CHAPTER SEVEN—*Education for Life and Work*

—A—

Fifteen topics or fields of subject matter for employee training are listed on pages 147-148. Arrange these topics in four groups, as follows:

1. Topics to be covered in order to provide competence in job performance.
2. Topics essential to the promotion of satisfactory employee relations.
3. Topics primarily related to the promotion of morale.
4. Topics primarily related to a better understanding of the work situation.

Rearrange these topics as follows:

1. Those which should be taught at the beginning of employment with the company.
2. Those which cannot be omitted if the worker is to learn his job.
3. Those which should be a source of continuing instruction after satisfactory job proficiency has been attained.
4. Those which can be indirectly imparted to the employee through printed material.

—B—

Using a job analysis, write training specifications for a job using the following headings:

1. Statement of what the worker must be able to do.
2. Statement of what the worker should know about the job, materials used, machines, and company policies and practices.
3. What the worker must feel—attitudes which should be developed through training.

—C—

Through studies of operating procedures, isolate the "least-necessary" motions involved in carrying out a simple job. Consult Maynard, Stegemerten, and Schwab (95) and Lowry, Maynard, and Stegemerten (88). Compare sequence in operating practice and, through trial, determine whether the operating sequence is the most suitable one to use as a practice sequence in instructing the learner. See also Gomberg (61).

—D—

Develop a scale for rating instructor qualifications, using the characteristics listed on pages 155-156. Using the general principles set forth on pages 160-161, devise an objective means for measuring learner progress. Most reference materials on this topic are unsatisfactory.

—E—

Although the solutions suggested are not necessarily adequate in all instances, problems relating to the organization and administration of training programs for industrial workers are covered in detail in Planty, McCord, and Efferson (109). See also Aspley and Whitmore (5) and Halsey (67). Points to be used in evaluating training programs are listed on pages 161-162.

## Chapter Eight—*The Place of Work*

—A—

For a review of conditions affecting work productivity, see Ryan (117).

## —B—

For a statement of community responsibility for the place of work, see Johnson (79). For constructive suggestions on community relations, see Mapes (94). In addition to providing a satisfactory place of work, it is frequently necessary to make an effort to convince citizens of a community of the value of a company to that community. An effort has been made by General Mills, Inc., to sell the company through national advertising. In one of these series the original mill of the company was shown and the following text was used:

"Here it is, right from the General Mills family album—an engraving of our Minneapolis flour mill in the 1880's. No masterpiece, perhaps, but to old-timers in the company it's a reminder of some good things they've seen happen since 'the good old days.'

"*Shorter hours.* They've seen the work day shortened four hours.

"*Higher wages.* They've seen their paychecks steadily grow. Today, on the average, our flour mill employees earn 2½ times what they did in 1928. And they enjoy the extra security of the company's comprehensive Retirement System and Health Association.

"*More jobs.* Also since 1928, they've seen thousands of new jobs created, and watched the number of employees on the payroll jump from 3,750 to over 12,000.

"*Collective bargaining.* They've seen the development of their international union of milling industry employees—the American Federation of Grain Millers (AFL)—and the establishment of true collective bargaining between their union and General Mills.

"How has all this come about? Through a typically American brand of teamwork on the part of a great many people: the research experts who develop useful, reasonably-priced new products for your convenience . . . the stockholders who invest their savings in better production tools . . . the farmers who grow the raw materials . . . the men and women in our plants who produce so efficiently . . . and their labor organization which balances its zeal on behalf of its membership with understanding and awareness of the American economic system.

"This same kind of teamwork, so characteristic of our free American economic system, is being practiced by millions of men and women in thousands of enterprises throughout our nation. It has given us Americans the world's highest standard of living.

"And the best is yet to come, if we all keep on working together."

## —C—

For statements of industrial experience relative to safety planning, see Aspley and Whitmore (5). Assistance on special problems can be obtained

through the National Safety Council, Inc., 20 N. Wacker Drive, Chicago 6, Illinois. For information on safety equipment, see *Best's Safety Directory* (9). For an example of research studies relating to safety, see Kraft and Forbes (84).

—D—

An example of a planned program of community relations is outlined in a series of pamphlets entitled, "Elements of a Steel Company's Community Relations Program." American Iron and Steel Institute, 1948. Topics covered by separate pamphlets are:

1. Employee Communication
2. Booklet Distribution
3. Civic Activity
4. Publicity Planning
5. Open House Programs
6. Radio, Films, Television
7. Annual Reports
8. School Programs
9. Institutional Advertising

—E—

For an illustration of community planning in which employers have participated see footnote 5, page 182.

## Chapter Nine—*The Reward for Work*

—A—

Although much discussion relative to wages revolves around the question of wage levels, the worker must consider total yearly earnings and the purchasing power of earnings. A few relatively stable industries have experimented with guaranteed annual wages, but management representatives of industries in which production fluctuates widely due to seasonal or cyclical changes have violently opposed the principle of a guaranteed annual wage. See Feldman (50 and 51). The problem of seasonal employment can sometimes be solved on a community basis but the problem of cyclical unemployment is a more difficult one. State and national provisions for unemployment compensation will usually solve individual unemployment problems in a superficial way. However, these offer no relief for mass unemployment. The problem of mass unemployment is one which industrialists as a group should attempt to solve. Providing a guaranteed annual wage up to 60% of normal yearly income of employees is a possible solution to the problem and is one which would not place an excessive burden on most corporations, especially if reserves for this purpose are established. See Walker (150).

—B—

There is growing evidence that the tax burden borne by the worker is excessive. Considering both direct and indirect tax payments, it is estimated that 25 cents to 30 cents of the wage dollar is dissipated in taxes. The record of history shows that when the tax burden reaches 30% of the total economic income, national economic power begins to decline. Therefore, many careful students of national economy have argued that a reduction in the tax burden is overdue. The Hoover Commission, which has studied operations of the national government, has shown numerous points at which economy in operation of government agencies could be effected. The same is doubtless true for many state operated governmental facilities. However, it is not similarly true that the municipal tax burden could be reduced. In fact, there is every likelihood that it must be increased. While the worker cannot be expected to understand the intricacies of taxation, he should be encouraged to understand that taxes not only prevent him from keeping all the wages which he earns, but also that high taxes tend to inflate prices, thereby reducing the purchasing power of his wages.

The principle that taxes should be reduced was accepted as national fiscal policy following World War I. The national debt, including expenditures for war, stood at approximately $25,500,000,000 in 1919. It was reduced approximately one billion dollars a year between 1919 and 1930, leaving a debt balance of approximately sixteen billion dollars, or $131 per capita. By 1941 the national debt had increased to approximately 49 billion dollars, which amounted to approximately $368 per capita. On April of 1949 the national debt was approximately 252 billion dollars, or $1,700 per capita. In a sense, then, it may be said that a worker's family of four is liable for and is paying interest on a national mortgage of $6,800, whereas in 1941 this family's share of the national debt was $1,472.

Most workers do not understand the significance of the national debt, because they have been told that "we owe the money to ourselves." The error in this argument can be made clear to workers by explaining that the debt is a mortgage on national wealth. This could be made more dramatic by showing that a worker's equity in his home, his bank account, and his savings bonds is subject to a mortgage of $1,700 multiplied by the number of persons in his immediate family. Thus, if a family of four owns a house valued at $11,000 on which there is a real estate mortgage of $7,000, then the $4,000 equity, which is a share in the national wealth, is actually worth less than the family's share in the national debt. Literally, the family owes holders of government bonds $2,800 more than the equity in the family home. For recommendations on national fiscal practices with reference to public debt, see *Our National Debt* (106) pages 164-166.

—C—

Not only is the worker's reward taxed unreasonably, but there is a growing belief that the distribution cost of the goods which the worker must buy is excessive. On this point, Mr. Benson Ford, Vice President of the Ford Motor Company, has stated, "Only the other day I saw a statement that 60 cents of every consumer dollar in this country represents cost of distribution. In our eternal battle to get costs and prices down, so that more and more people can have more and better things, the field of distribution seems to deserve particular attention. Most of us are amazed when we discover how much it costs to distribute goods." Ford (55).

—D—

The tax burden, distribution costs, and other production costs on goods produced by the worker for himself and other consumers causes him to buy back goods which he has produced at two to five times the amount he received for his work. This is illustrated hypothetically in the following table showing the relation of labor costs to other costs:

| *Labor Cost* | *Other Production Costs* | *Total Production Cost* | *Distribution Cost per Production Dollar* | *Tax Burden* | *Final Cost to Consumer* | *Ratio of Final Cost to Labor Cost* |
|---|---|---|---|---|---|---|
| 80 | 20 | 100 | 25 | 30 | 155 | 2 |
| 80 | 20 | 100 | 40 | 35 | 175 | 2-1/5 |
| 65 | 35 | 100 | 25 | 30 | 155 | 2-1/3 |
| 65 | 35 | 100 | 40 | 35 | 175 | 2-2/3 |
| 35 | 65 | 100 | 25 | 30 | 155 | 4-1/2 |
| 35 | 65 | 100 | 40 | 35 | 175 | 5 |

—E—

Variation in the rate of pay for different kinds of work is a natural phenomenon. Normally, the complexity of the work is the most significant factor to be considered. This necessitates preparation of job specifications for use in determining the rate of pay for different jobs. Community standards, national norms, and union restrictions must also be taken into consideration. However, the employer should not feel that the task of determining adequacy of reward for work has been completed merely through establishment of different wage rates for different jobs. There is a social obligation of establishing a median job rate and determining variations therefrom in terms of standards of living. The elements to be considered in determining the median rate and the variations from the median rate are set forth on pages 199-201.

—F—

Subsequent to preparation of job specifications, evaluations of each job must be made. The elements involved in making job evaluations are set

forth on pages 203-205. References cited in footnote 14, page 205 provide the technical information necessary for making such evaluations. See also *Job Evaluation* (78), Lytle (89), Otis (105), and Stanway (131).

—G—

Variations in the rate of pay for persons doing work on the same job are frequently encountered in industry. Appropriately applied, wage incentives are useful not only in the encouragement of high rates of production, but also equitable in providing an appropriate reward for effort and ability. See references cited in footnote 15, page 206. See also Burt (23), Lytle (90), Hopwood (73), and Jones (80).

—H—

The full merit of an employee is not measured by his productivity. Therefore, many companies have established plans for rating employees. These plans are frequently referred to as merit rating plans. However, that designation frequently arouses annoyance on the part of employees and resistance on the part of union officials. Therefore, a term such as service rating is sometimes used. The procedure for making such ratings may be the same regardless of the name used. See references cited in footnote 16, page 207, and 7, page 220. See also Probst (112) and Smyth and Murphy (127).

## Chapter Ten—*Supervision of Work*

—A—

To provide effective supervision of work, a committee composed of top management personnel should be established and given the responsibility of formulating policy and developing procedures. The following tasks should be assigned to the committee:

1. Define the functions and responsibilities of each supervisory job.
2. Determine the qualifications for each job and establish a plan for selecting persons capable of meeting the responsibilities involved.
3. Establish a plan for training supervisors individually and as a group.
4. Establish a compensation policy which recognizes the importance of the contribution made by supervisors and formulate a plan for salary review.
5. Establish a plan for periodic evaluation of each member of the supervisory staff.
6. Establish a plan for occasional conferences between members of the supervisory staff and the top-ranking executives of each division.

7. Establish a plan for keeping the supervisor informed of changes in policies, practices, and operating achievements.
8. The plan for keeping the supervisor informed of important developments should include procedures for transmitting information through the supervisor to workers under his direction.
9. Establish a means whereby top management is kept informed of the activities of the supervisory staff.
10. Establish the supervisor's responsibility for employee selection, upgrading, and promotion, and provide means for liaison between supervisory groups and the staff of the personnel department.
11. Define the responsibilities of supervisors for the training of workers and provide a means for maintaining liaison between the supervisory group and members of the employee training staff.

—B—

Every supervisor should be required to make periodic appraisals of workers under his direction. To this end he should be encouraged to maintain case files on each worker as a means of accumulating information to which he can refer in rating his men. For the type of information which should be accumulated, see page 123. Supervisors should be trained in rating procedures. The points which should be emphasized in this type of training are indicated on pages 221-223. Training on rating methods provides an excellent opportunity for introducing instruction on a wide variety of work relations topics. See Probst (112), Smyth and Murphy (127), and footnote 16, page 207.

Establish procedures for administering discipline which will utilize the principles set forth in Cleeton (31) and which will apply the techniques set forth in Carter and Kraft (26).

—D—

The procedure in training supervisors most widely used is the conference method. This method is frequently misunderstood to mean round-table discussion. However, for effective results, each conference should be carefully organized. The procedures recommended for organizing conference instruction are listed on pages 226-227. The range of topics suitable for consideration in supervisory conferences is extremely broad. Suggested key topics are listed on pages 227-228. The conference method can be used as a means for bringing about closer relationship between top management and members of the supervisory staff. Topics dealing both with the responsibilities of management and the responsibilities of supervisors can be discussed profitably. The ultimate purpose of such conferences is to bring about a closer recognition of the responsibilities of both groups in providing for the workers' interests, thus making work more human. See also Cleeton and Mason (32), pages 395-402.

## CHAPTER ELEVEN—*That All May Gain Through Work*

### —A—

Although strikes are usually called in connection with contract negotiations and are normally alleged to relate to wages or other benefits which are the subject of negotiation, fewer strikes occur in companies where minor sources of irritation are kept at a minimum. To assure work conditions which prevent conflicts, company procedures with relation to the following factors should be examined at frequent intervals:

1. Are grievances handled expeditiously and to the satisfaction of workers?
2. Are workers given an opportunity to confer with members of the staff of the personnel department on special problems?
3. If the worker does not find a satisfactory solution to his problems in conference with his immediate supervisor or members of the personnel department, does he have an opportunity to talk with a high-ranking representative of management?
4. Are decisions which affect workers fully explained to them?
5. Are suggestions made by employees acknowledged promptly and discussed with the employee concerned?
6. Are pay deductions adequately explained?
7. Are the methods of pay rate computation clearly explained, particularly incentive rates?
8. Are time and motion findings fully explained to workers affected?
9. Is the treatment of workers by supervisors periodically reviewed to assure that personality conflicts are kept at a minimum?
10. Is favoritism being shown in any of the work assignments or in work relations?
11. Is praise accorded the worker who performs his work in a satisfactory manner?
12. Is discipline administered fairly and in a manner that takes into account the individual factors in the case?
13. Is overtime handled in a manner which permits easy adjustment by the worker?
14. Are the reasons for layoffs fully presented?
15. When an employee is discharged, is he given a full explanation of the reason in an exit interview?

16. Is an adequate induction program applied during the probationary period?
17. Is a well-organized training program maintained for advancing the worker?
18. Are instructions adequate, particularly those relating to new operations?
19. Are employees kept informed on company plans and policies?
20. Are changes in operations made with consideration of ease of adjustment of employees, and are the reasons for the changes presented?
21. Are means provided for giving special recognition to the worker as an individual?
22. Is the economic wastefulness of strikes presented to workers in a manner which they can understand?
23. Are the fundamental desires of human nature recognized in training and supervision?
24. Are workers carefully selected with reference to capabilities and personality characteristics?
25. Is an opportunity provided for workers to participate in group activities of a social nature?
26. Do company and worker representatives discuss problems of mutual interest and concern at frequent intervals?
27. Do management representatives enter into collective bargaining negotiations in a spirit of friendly relations?
28. Are issues presented for collective bargaining considered as problems to be solved, rather than differences to be adjudicated?
29. Is the company position clearly stated on all issues in collective bargaining negotiations?
30. Are representatives of the union encouraged to seek solutions to problems without resort to strikes?
31. Are workers kept informed of their rights under union contracts?
32. Are workers kept informed of their rights under legislation relating to union-management relations?
33. Is an honest effort made to show the worker that in the long run his reward is determined by his productivity?
34. Are distribution costs, which the worker believes reduce his reward, fully explained to the worker?
35. Are management costs, which the worker believes reduce his reward, fully explained to the worker?

36. Are financial problems of the company explained to the worker?
37. Is an equitable wage system used?
38. Are jobs evaluated to assure that the worker will receive compensation for the contribution he makes?
39. Are the rates on specific jobs periodically reviewed?
40. Are merit increases clearly explained to those who do not receive them, as well as to those who receive them?
41. Is an effort made to assure job security to deserving workers?
42. Are promotions based on clearly demonstrated abilities?
43. Are health and medical services provided?
44. Are convenience facilities provided at least to the extent of optimum comfort needs?
45. Is a clean and well-ordered place of work provided within the limits of production demands?
46. Is adequate safety protection provided for workers?
47. Is an effort made to secure an agreement to include "no strike" clauses in union contracts?
48. When a deadlock is reached in collective negotiations, is the advice of a disinterested third party sought?
49. Are the services of mediators connected with state and national government offices used in case of a deadlock?
50. Is an effort made to secure agreement to a voluntary arbitration clause in the union contract?

—B—

Some employers contend that strikes are fomented by outside agencies which have no connection with the company or with the workers concerned. This may be true in a few instances where strikes are called but the majority of industrial conflicts have a local company basis. That there is an active group of American communists whose objective is that of using strikes for political purposes is believed by some persons who have had firsthand experience with the American communist group. See Budenz (21 and 22) and Robinson (114). For experience of American labor leaders with international communists in the World Federation of Trade Unions, see Carey (25). The non-communist affidavit section of the Taft-Hartley Act was intended as a protection against these forces. Such legislation may help, but laws are ineffective in situations where a genuine basis for employee-management conflict is permitted to develop. See also Wolman (153, 154).

## CHAPTER TWELVE—*Research and Judgment in Work Relations*

—A—

Statements of purposes and objectives of workers as contrasted with those of the employer are tabulated on page 262. Examine company practices on work relations to determine whether they meet the five criteria, "What the Worker Seeks." Develop a rating scale which can be applied to individual employees, based on the criteria included under the heading, "What the Employer Seeks."

—B—

Five steps in problem solving which have been found useful in exact fields of study, such as mathematics and science, are set forth on pages 262-265. These steps can be applied in solving problems relating to job analysis, job specification, job evaluation, worker qualifications, selection, placement, training, supervision, wages, production standards, employee rating, and a wide variety of problems relating to the place of work. In fact, this method of problem solution can be applied to practically any problem of work relations. If the method is applied, it is believed that more satisfactory employer-employee relations will be attained than if situations are solved by intuitive snap judgments or compromises. However, implementation of decisions based on orderly thinking in problem solving must be handled tactfully. Application of cold logic is essential in arriving at solutions to problems, but the warmth of clinical handling of situations is necessary if amicable human relations in work are to be maintained.

—C—

It should be remembered that no satisfactory solution to a problem in work relations can be reached unless all of the human elements are taken into consideration. The method of analysis set forth in Chapter XII is suggested as a means for getting facts and establishing procedures which will work within the limits of probability. The probability that the solutions reached will be effective is increased when the cooperation of workers is solicited through persuasion. In essence, this is the same thing as saying that even though a good solution to a problem is reached through the method recommended, it will frequently be necessary to convince the worker that the solution will operate to his advantage.

—D—

No plan or procedure for solving work relations problems has significance apart from the desire of management to reach equitable solutions to these problems. Representatives of management who decry government planning and who claim to be alarmed over the drift toward the "welfare

state" should recognize that the developments to which they object are the natural consequence of the failure of business leaders to attack the problems involved with imagination, zeal, and sympathetic understanding. Comments on this subject by Merryle S. Rukeyser, International News Service Economic Commentator, who is an ardent supporter of the private enterprise system, deserve careful consideration:

"Better management thinking in connection with technological change and resultant disruption to continuity of employment can contribute much to halting the destructive trend to state-ism.

"It should be recorded that modern social trends and consideration for the other fellow are resulting in channeling the inventiveness and creative know-how of management into these problems. This offsets the destructive tendency to dump all problems on the lap of the central government.

"For example, the railroad owned by the steel corporation, running to Duluth from the iron range country, was in the past notoriously a provider of seasonal employment. During the winter months, when the lake ports were closed down, there was greatly diminished activity, and the volume of employment was correspondingly reduced.

"Management has in recent years made an important contribution to the solution of the human need for continuity of employment by postponing all deferrable maintenance to the winter months.

"Likewise, the revolutionary shift of American railroads from the conventional reciprocating steam locomotive to the modern Diesel engine has reduced the amount of maintenance work required, and has widened the distances at which repair shops could safely be spaced.

"This change threatens to uproot families of workers engaged in conventional shops. However, instead of brutally letting nature run its course, the Santa Fe Railway, by way of illustration, is trying to find a new way to use manpower heretofore engaged at its major locomotive shop at Topeka.

"As soon as the trend was clearly determined, management set out to develop a freight car building shop at Topeka. Heretofore Santa Fe had been buying freight cars from outside car manufacturers. The effect of this change of policy, while retaining jobs for Santa Fe employees, it must be recognized, will tend to disemploy employees of distant car manufacturing companies. But evidently the management feels that charity (or humane consideration) begins at home.

"In various industries, management thinking has developed ways and means of levelling out seasonal curves, which had heretofore disturbed regularity of employment.

"The classic case was that of Procter & Gamble, which discovered that the historic merchandising methods and special deals of the soap industry, gave wide seasonal fluctuations to a product which was evenly consumed

throughout the year. By making internal changes in management and merchandising techniques, the company was able to achieve a high level of stability, and to introduce its plan of 'guaranteed' employment."

(Quoted from the *Pittsburgh Sun-Telegraph,* June 23, 1949.)

—E—

Trends in personnel research are described in Chapter XX of *Psychology of Personnel in Business and Industry* by Roger M. Bellows, Prentice-Hall, 1949. Dr. Bellows calls attention to the fact that research in work relations does not always connote a pure or academic approach. Perhaps it would be better to describe personnel research in industry as a point of view which emphasizes the need for careful investigation of problems relating to work relations. Reliance on organized investigation is better management procedure than depending on opinions based on unanalyzed experience.

—F—

For descriptions of research procedures involving human factors consult Andrews (4), Brunswick (20), Crafts (36), Curran (39), Fisher (52), Fitts (54), Garloch (56), Guilford (65), Guilford (66), Larrabee (86), McNemar (99), Ritchie (113), Stevens (132), Thorndike (142), Watson (151), Wendt (152), and Woodworth (155).

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