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MOTIVATION AND MORALE IN INDUSTRY

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INDUSTRIAL PSYCHOLOGY

THE SCIENCE OF WORK

MOTIVATION AND MORALE IN INDUSTRY

MOTIVATION AND MORALE IN INDUSTRY

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TO

MY WIFE

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Preface

THERE ARE three great continuing needs in industry, namely, (1) to increase production, (2) to promote employee satisfaction and adjustment at work, (3) to curtail industrial strife.

The achievement of these objectives is necessary for the sound and profitable operation of the business enterprise. Their achievement is also necessary from a broad social point of view, since neither the material goals of our civilization nor the equally important goals of preserving and extending the less tangible benefits of our system can be fully attained unless industrial productivity is high, workers are satisfied, and industrial harmony prevails.

These objectives cannot be fully achieved in any single plant, or in industry and business as a whole, unless accurate information is available as to the effectiveness of the various appeals or incentives which can be used to arouse the co-operation of individual workers. This involves an exact determination of basic motives in work, in the sense of evaluating the nature and strength of various wants and needs which require gratification through the work situation. Only with such knowledge can management arrive at a balanced and effective program of personnel policies and practices which will produce maximum results in the attainment of goals which simultaneously have significance for industry, the worker, and society at large.

This volume is devoted to a comprehensive description and critical evaluation of American and British experimental studies and attitude surveys bearing upon the sources of motivation and the determinants of morale in industry. Throughout the book emphasis is placed upon the *application* of research findings in increasing employee productivity, job satisfaction, and morale in an atmosphere of harmonious relations between management and workers both as individuals and as members of informally and formally organized groups. In this respect, as is particularly apparent in the final section, the book is primarily directed to management and to others concerned with the organization and op-

eration of the industrial enterprise and, more specifically, with the formulation and administration of personnel policies.

Although directed to management, the book will, it is felt, fill the need of students and teachers in psychology and related fields for a comprehensive and systematic treatment of motivation and morale projected against a background of motivational theory. There are assembled in this book not only studies drawn from the widespread literature of psychology, but also materials which are frequently not available to university personnel. These are considered in a broad context of related disciplines—most particularly, industrial and labor relations. Because of this approach and of the nature of the problems covered, it is hoped that the book will be of use in courses in industrial management, personnel administration, industrial engineering, and the like, as well as in courses in the field of psychology.

Many sources have been consulted in the preparation of this book. Acknowledgments to those responsible for materials cited in the text are to be found on pages xi–xvi. The author is also indebted to several of his colleagues at the University of Pennsylvania for reading portions of the manuscript. Dr. Malcolm G. Preston provided a number of constructive ideas on the content and organization of portions of the book. Dr. Francis W. Irwin and Dr. James C. Diggory contributed extremely helpful suggestions with respect to the treatment, in Part 2, of the theoretical backgrounds of motivation and morale. Chapter 6, devoted to a discussion of field theory and action research in group dynamics, has benefited from review by Dr. Albert Pepitone. Considerable help was given by Dr. William W. Wilkinson both in the collation of source materials for parts of this book and in reading proof. The author appreciates the assistance of many others, including graduate assistants and his secretarial staff, in sharing the burden of proofreading. To his wife, to whom this book is dedicated, the author owes much for her understanding support in meeting the stresses and strains associated with the process of bringing forth a book.

MORRIS S. VITELES

Philadelphia, Pa.
May 28, 1953

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The *National Industrial Conference Board* has given permission to cite data and to use quotations from special studies prepared for distribution to its members, and from its journals, including *Management Record* and *Business Record*. A similar courtesy has been extended to the author by the *American Management Association* with reference both to reports and to journals, including *Personnel* and *The Management Review*, published by AMA.

Considerable use has been made of publications issued by the *Survey Research Center, Institute for Social Research, University of Michigan.* In addition, the author has drawn on mimeographed reports made available to him by the staff of the Survey Research Center.

The Controller of *Her Britannic Majesty's Stationery Office* has granted permission to reproduce a number of figures and quotations from reports on investigations conducted by the *Industrial Health Research Board*. Frequent reference has been made to publications of the *Industrial Relations Research Association*; the *Social Research Service, Michigan State College*; the *Society for the Psychological Study of Social Issues*; the *National Institute of Industrial Psychology* of Great Britain, and the *Industrial Welfare Division, Department of Labour and National Service,* Commonwealth of Australia. Materials have also

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Part 1

MOBILIZING THE WILL-TO-WORK

1

Industry's Core Problem in the Utilization of Manpower

THE EFFECTIVENESS of every business organization depends, in part, upon the perfection of the technical processes and equipment employed by it. Of at least equal importance in a company's success is the full utilization of its human resources. Of particular significance in this connection is the co-ordination of effort on the part of all employed in the organization—from the office boy to the chief executive—to accomplish the purposes of the business enterprise. As Hayward and Johnson, the authors of *The Story of Man's Work*, point out

> "There is one principle that has held good among workers ever since the day, far back when savage men still dwelt in caves, when for the first time two of them joined efforts to move a stone that was too heavy for one to lift. That is the principle that the work of the world goes forward most easily and swiftly when, and only when, all hands cooperate earnestly and willingly. That held good when the two hairy apemen moved the stone. It held good when all the people, noblemen, yeomen and serfs, joined to raise the medieval cathedrals. It holds good today, when in some giant corporation, with scores of factories and hundreds of thousands of workmen, all those workmen, all the managers, all the directors, and all the bankers who finance them, combine to turn out some product of every-day use so cheaply that the poorest man in America can have it in his home" (23, p. 22).

"CAPACITY-TO-WORK" VS. THE "WILL-TO-WORK"

A common complaint in modern industry is that the drive towards such co-ordination of effort is lacking, particularly at the level of the rank-and-file employee. This shortcoming, according to many, reveals itself most prominently in the failure of workers to make full use of their

capacities in maintaining and raising production standards. Strong, for example, has reached the conclusion that "few, if any, employees are working up to their capacity" (44). Stated in 1934, this conclusion might easily be regarded as descriptive of employee attitudes which arise only during a depression period. However, studies made during World War II and postwar years show that the problem of enlisting worker co-operation in a program of full production exists also during "prosperity" years (3, 48). Approximately 55 per cent of executives of all types and sizes of manufacturing companies surveyed by Mill and Factory, in 1946, reported a decrease in *labor* productivity in their plants following World War II (28). As shown in Figure 1, a "general indifference on the part of labor" is referred to most frequently as the factor which accounts for the decrease in employee efficiency.

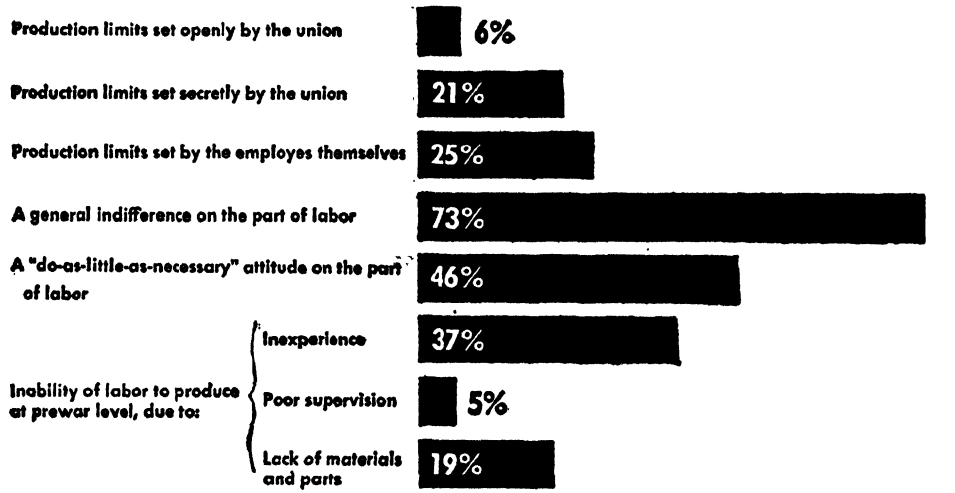


Figure 1. Reasons Given by Executives for a Post-War Decline in Labor Productivity * (*Note:* These percentage figures do not add to 100% because many respondents checked two or more factors.)

Difficulties experienced by individual firms in tapping the "will-to-work" are illustrated in a report published in 1946 by the National Industrial Conference Board (34), in which Henry Ford II is quoted as saying that the Ford Motor Company was getting about 34 per cent less output than it did in 1941, per direct labor man-hour, on comparable products and processes. The experience of the General Motors Corporation shows that, on operations which provided unquestionable bases for direct comparisons, a thousand man-hours of direct labor produced only 63 per cent as much finished material in 1945 as in 1941, a 37-per-cent decline in

* By permission, from "Labor productivity—questions on the productivity of labor," *Mill and Factory,* (August) 1946.

production which is close to the figure cited by the Ford Motor Company. An investigation made by the General Motors Corporation to determine the causes of losses in production led to the conclusion that approximately 43 per cent of the *total decline* in production represented losses that could be laid at the door of management (resulting from poor organization and tooling, less experienced supervision and setup men, interruptions in the flow of materials, etc.). The remaining approximately 57 per cent of the total decline was due, in management's opinion, to reduced productive worker effort (9).

As suggested above, many factors operate in raising or lowering productivity[1] (18, 63). An analysis of work standards by Wrape, in 1952, leads to the conclusions that in industries where man-hour output is rising, factors other than worker performance account largely for the productivity increase, and that "individual workers may actually be producing at a lower rate" than in earlier years (62, p. 64). Growing demands by unions for increased wages keyed to a "productivity" or "annual improvement factor" reflecting increases in the nation's industrial output (37, 45a) bring into relief the question of the extent to which such increases reflect increased worker co-operation or effort. This question has been considered in a survey of opinions bearing upon employee contribution to productivity. This involved 156 companies, representing a cross section of industry and employing 1,500,000 workers. Replies from these companies rank "increased labor efficiency" *last* in a list of seven factors believed to "contribute most" to total company productivity (32). In fact, the position taken by most of the companies is that in asking for productivity pay raises, labor "is asking for recompense for something that it had little or no part in achieving."

The influence of employee motivation in accounting for low productivity, and resulting increased unit labor costs, is illustrated in the findings of the 1945 nation-wide survey conducted for *Factory* by the Opinion Research Corporation. This showed that only 49 per cent of all manual workers, and an even smaller percentage of union manual workers think

[1] The terms *production* and *productivity* are used frequently throughout this book. Diebold defines *productivity* as "the quotient obtained by dividing production by one of the factors of production," thus making it "possible to speak of the productivity of capital, of raw materials, and of any other factor desired." The same authority notes that "*productivity* is most commonly expressed in terms of human labor" (18, p. 53). It is in this sense that productivity is viewed as a ratio of output to labor hours, and expressed in terms of *output per man-hour*. There is, however, considerable lack of both uniformity and clarity in the use of the term and, as Diebold has pointed out, "the word '*productivity*' has come to be something of a five-syllable synonym for output" (18, p. 53). In general, the present author has avoided the discussion of this semantic problem, and has followed the usage of investigators cited in this text in referring to their research or views on *production* and *productivity*.

that *"when a man takes a job in a factory he should turn out as much work as he can"* (61). Another example is found in a survey conducted in 1951 by the Opinion Research Corporation, involving a national sample of 1,245 manual and white-collar employees of manufacturing companies (15). When asked *"Do you feel the workers in your department (office) are already turning out as much work in a day as they can, or could they do more?,"* 34 per cent replied "Could do more" and another 11 per cent "Some could; some couldn't." Only about one half of those interviewed (51 per cent) were of the opinion that they and their fellow workers were *"turning out all we can."*

The Economic and Social Significance of High Productivity

Such facts suggest that among the continuing needs of modern industry is a better understanding of the factors which underlie the *will-to-work* and of the conditions or devices which can most effectively arouse or release these inner forces which lead the employee to participate willingly, fully, and satisfyingly in furthering the production aims of industry.

A COMPARISON OF TWO PLANTS

The advantages to the industrial enterprise of any program which will lead to increased production need no lengthy discussion. Differences in production among workers which have significance from the viewpoints of both employee earnings and company profits (18) are illustrated in a comparison of the productivity of workers on identical tasks in two British factories, reported by Marriott (33). Although widely separated and under different local managers, the two factories, designated as *Factory* X and *Factory* Y, were similarly organized and had the same higher management. In Figure 2 are shown productivity curves for two years (1947–48), based on four-week averages, of the number of man-hours taken to complete similar units of work. Analysis of data for the entire two-year period showed that workers in *Factory* X had, on the average, taken 178 man-hours and in *Factory* Y 255 man-hours, or 43 per cent longer, to complete a similar unit of work. On the other hand, as is apparent from Figure 2, there were times—at the beginning and end of the two-year period—when productivity was almost equal in the two plants.

In an interim report it was stated by Wyatt (who conducted the study described by Marriott) that "the differences in output were due primarily to human factors and not to material differences in type or conditions of work." A further analysis of some of the factors which appeared to

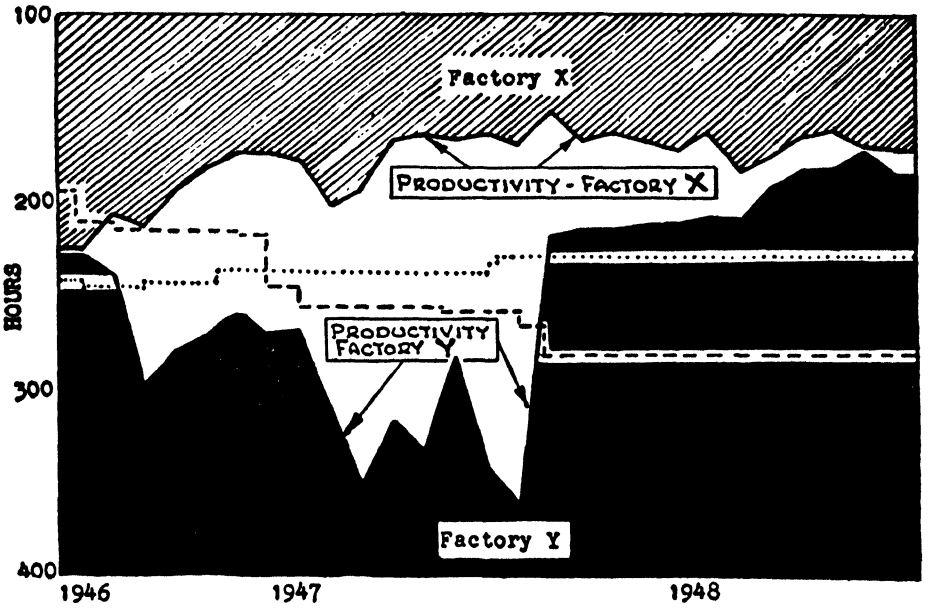


Figure 2. Differences in Productivity on Similar Work.* Productivity is plotted in terms of number of man-hours taken to complete similar units of work.

. . . . "Standard Times" (*Factory* X)
---- "Standard Times" (*Factory* Y)

account for the observed difference in output has been presented by Marriott, as follows

1. Mistakes made by the time-study engineers contributed to the difference. Workers in both factories were paid a bonus on the time saved on the "standard time." Time studies were made too hurriedly, and standards were set so that workers in *Factory* Y had to do 20 per cent more work to reach the bonus level than those in *Factory* X. In fact, because of discontent and low output, increases of 44 per cent in "standard times" had to be made as well as several temporary allowances granted in *Factory* Y before agreement was reached. By contrast, in *Factory* X, because of increasing efficiency, "standard times" were reduced by 6 per cent over the two-year period.

2. Employees in *Factory* Y were, on the average, 6½ years older than in *Factory* X; much less fit for strenuous work; not so carefully trained, and two thirds as compared with one third in *Factory* X had over a one-hour journey to and from work, which required much earlier rising.

3. As reported by managers and supervisors, workers in *Factory* Y were either ex-miners or came from mining families. Their attitude to work apparently reflected "their past experience of hard times in a de-

* By permission, from R. Marriott, "Socio-psychological factors in productivity," *Occup. Psychol.*, 1951, 25, 15–24.

> pressed area." They were suspicious and mistrustful, and efforts to win their confidence and co-operation apparently merely served to increase their mistrust (33, p. 23).

The above example makes clear that employee productivity is the end effect of many influences. Although not noted by Marriott, the marked rise in production coincident with the increase in "standard time" in *Factory* Y may well illustrate the influence of the wage incentive itself, when based on standards which are carefully developed and viewed as "fair" by the worker. Suitability for the job; the nature of the training program; the pattern of the task, and many "physical conditions" such as hours of work, temperature, lighting, construction and speed of machines, etc., are among factors underlying employee performance (50). However, there is also considerable evidence that the potential benefits of good selection, a well developed training program, good work methods, appropriate work standards and wage incentives, etc., can be considerably reduced or even nullified where, for one reason or another—including a suspicion or distrust of management—employees are unwilling or disinclined to use their capacities or other media at their disposal for achieving maximum output and maintaining high production standards.

THE SOCIAL SIGNIFICANCE OF PRODUCTIVITY

Maintenance of high production is of interest not alone from the viewpoint of the single plant, but also in terms of achieving broader economic and social objectives (45, 46). One basic test of any civilization is the extent to which it improves the material conditions of those who live under it (47). From this viewpoint, the effectiveness of the individual business enterprise and of an economic system as a whole can be measured by the availability, in the market place, of goods which minister to the satisfaction of human wants. Raising the level of consumption and standard of living involves lowering prices and increasing wages as a basis for the wider distribution of goods and of services. Such advances cannot be accomplished if output is restricted by employees or if other influences operate to raise unit output cost. Deficiencies in the motivation of employees can be an important factor in such variations in production. *Dealing with the problems and sources of employee motivation represents a potent tool for achieving necessary industrial and social objectives in the way of increased productivity.*

The Need for Job Satisfaction

The excellence of a civilization is to be gauged not alone by a material yardstick, but also by the opportunities which it provides for the intellec-

tual and emotional expression and development of the individual. There is little merit in a civilization which dulls the mind, warps the emotions, destroys the will, and reduces the individual to an automaton, even though it succeeds in providing an ever increasing supply of material goods for general distribution (49). For this reason, *it is not possible to think of the human element in industry in terms of productive efficiency alone.* The psychologist must take full account of the possible consequences of our industrial order in mechanizing the mind, creating mental conflicts, diminishing creative power, and setting the stage for individual dissatisfaction and maladjustment at work. In other words, the psychologist (and also other social scientists) must be concerned with the *satisfactions derived by the individual from the job.*

A common charge against modern industry is that it has made work dull and spiritless. Through the coming of the Machine Age, it is said, the workman has lost his joy in production (4, 59). "Now," says Morgan, ". . . work is so specialized, so devoid of intrinsic interest that the workman finds no incentive to work . . . The nature of the daily work of most of the working people precludes the possibility of their loving the work. Most of them hate it, and how can they help hating a job which means, for instance, that they go through a set of motions (which they learned in a very short time) hundreds of times a day with the prospect of day after day, week after week, year in and year out doing the same thing?" (35, p. 207).

EXTENT OF JOB DISSATISFACTION

As this author has shown elsewhere (50, 52, 53), both a review of the history of man's work through the ages and modern studies of repetitive work raise questions concerning the validity of such an extreme indictment of the Machine Age. Nevertheless, there is considerable evidence that many workers are dissatisfied with their jobs. For example, according to a survey conducted for *Fortune* by Roper (40), in 1947, 20 per cent of a nation-wide sampling of factory workers found their jobs to be dull and monotonous most or all of the time (Table 1). In a study conducted by Centers (11), involving a sampling of the entire occupational stratification of the United States, discussed in some detail in later chapters, 13 per cent of all manual workers were found to be dissatisfied with their jobs. A survey involving a sampling ($N = 976$) of men in two mass-production factories and six metal-rolling mills in Great Britain showed that from 59 to 75 per cent of the men interviewed expressed themselves as "satisfied" or "very satisfied" with the operations they performed (56). Studies by Hoppock (24), Bell (6), Flowers (16), Habbe (21), Form (17), and others, summarized through the years by Hoppock and his

associates in *Occupations*, suggest that 20 to 25 per cent represents a fair estimate of the proportion of dissatisfied workers, and that the percentage of workers dissatisfied with their jobs is particularly high at the lower levels of the occupational hierarchy. Similar findings are reported from surveys of workers in Holland (42).

TABLE 1. *Summary of Replies on Attitudes toward Present Job—Fortune Survey of Public Opinion, (May) 1947* (after Roper)

"Which one of these statements comes closest to describing how you feel about your present job?"

	Per cent of each group replying				
	Total factory workers	*Non-union member*	*Independent union member*	*A.F.L. member*	*C.I.O. member*
1. My job is interesting nearly all the time.	43	48	50	47	35
2. While my job is interesting most of the time, there are some dull stretches now and then.	34	36	28	35	35
3. There are a few times when my job is interesting but most of it is pretty dull and monotonous.	14	11	14	12	18
4. My job is completely dull and monotonous; there is nothing interesting about it.	6	4	3	5	10
5. Expresses no opinion.	3	1	5	1	2

MANAGEMENT'S RESPONSIBILITY FOR JOB SATISFACTION

According to Watson, "an economist, gifted with both competence and imagination, once defined his Utopia as a world in which everyone would be eager to do the kind of work he was doing, whether he was paid for it or not" (58, p. 114). There is, of course, a serious question as to whether this ideal can ever be realized. However, there also seems no question that much can be accomplished in increasing the extent of *intrinsic job satisfaction*, i.e., the satisfaction that derives from the content of the job itself (27), through the application of vocational guidance and selection techniques; by reorganizing the job itself, e.g., through job enlargement and job rotation in repetitive jobs (38a, 54); by eliminating "depersonalization" through the re-creation of a "bona fide work community" (55), and through other media discussed in texts on industrial psychology and industrial sociology. Although Utopia is a far-distant creation of man's

imagination, it seems entirely possible to accept the suggestions, by Balchin, that work "should [and can] be something infinitely more pleasurable and more satisfying—a pleasant reality rather than a mere escape from reality" and that "an effort should be made to give the average man what many of us already enjoy—a job which is not merely a means of 'earning a living' but which has in it all the ingredients of life itself" (4).

There is no question that the accomplishment of such an objective is extraordinarily difficult. However, there is also no question that increasing intrinsic job satisfaction through the modification of work processes and the use of other devices represents a worthwhile goal in industrial management. There is a need for executives to recognize that "those who would be horrified at the suggestion that they spend their working lives doing something completely dull and pointless have little right to complain if other men now demand that they should enjoy their working lives too," and that, furthermore, "the demand for an enjoyable working life will be made . . . is being made now, though in a muddled and incoherent way" (4). Other considerations point to the desirability of taking steps to reduce the incidence of dissatisfaction with the job. One of these is the practical *possibility* that workers with higher intrinsic job satisfaction are the more productive workers, at least in some job situations. A few studies have, it is true, shown that high productivity is not necessarily a function of job satisfaction (27, 60). Other studies, such as that by Katz and Hyman (26), have revealed a positive relationship between job satisfaction and production. Whether or not satisfaction is related to production, the need for steps to promote the feeling "*I am satisfied with my job*" (24) is supported by findings, discussed in later chapters, which indicate that job satisfaction can be and is an important ingredient of employee morale.

Employee Morale

Both everyday observation and studies described in this volume indicate that independent organizations and departments within the same organization differ widely with respect to levels of *employee morale*. The term morale has been used loosely, both by industrial people and by psychologists. In many instances, as is evident from studies described in *Part III* of this volume, the term morale has been used as equivalent to intrinsic job satisfaction. However, it has become increasingly evident, as Katz points out, that "morale is not a strictly unitary concept, but that it consists of a number of dimensions" (27). There is no complete agreement as to what these are. In general, particularly in earlier studies, the trend has been to define significant dimensions in terms of what is revealed in individual experimental studies and attitude surveys. More recently, there

has been a growing inclination to define morale *primarily* in terms of attitudes and behavior traits associated with or derived from the activity of the individual as a member of a group. In addition, emphasis has been placed upon the implications of morale for individual adjustment, particularly in terms of the orientation of the individual toward future goals —toward "effective and confident striving for conditions that will work for good adjustment in the future" (12, p. 394).

THE NATURE OF MORALE

In spite of differences of opinion,[2] discussed further in Chapter 14, there is considerable support for the position that

> *"Morale is an attitude of satisfaction with, desire to continue in, and willingness to strive for the goals of a particular group or organization"* (41, p. 1).

An important element in high morale is the feeling on the part of the individual that "he shares the basic purposes of the groups of which he is a member"—a state of mind which "makes it possible for him to perform his tasks with energy, enthusiasm, and self-discipline, sustained by a conviction that, in spite of obstacles and conflict, his personal and social ideals are worth pursuing" (12, p. 394). From the viewpoint of management, the problem of employee morale is that of stimulating a feeling of "togetherness," of "a sense of identification with an interest in the elements of one's job, working conditions, fellow workers, superiors, employers, and the company" (7, p. 299) conducive to the achievement of the organization's aims. High employee morale is important because plant productivity and efficiency of operation depend upon employee cooperation in attaining necessary output standards. High employee morale is equally important because of the implications of low morale for *industrial conflict.*

MORALE AND INDUSTRIAL CONFLICT

There are many indications of continuing hostility and strife in the industrial scene. A significant index of the extent of such conflict is found in the number of strikes. During the five-year period 1948–1952 there have been 21,468 work stoppages (caused almost entirely by strikes) involving approximately 13 million workers and resulting in the loss of about 201 million workdays.

Cost of Strikes: The cost of strikes, to industry and to society at large, is illustrated in figures applying to the 1949–50 coal strike in the United

[2] See particularly Allport (2), Child (12), Lippitt (29), Maier (31), Watson (57), and Stouffer (43).

States. According to a report of the National Association of Manufacturers (14), based on figures collected by the U.S. Bureau of Labor Statistics, 23,790,000 man-days were lost in the bituminous coal industry during the actual strike period, September 19, 1949, to March 5, 1950.

Assuming an average daily pay of $15.46, the time lost because of strikes alone cost the miners approximately 370 million dollars. On the assumption that on the average 325,000 men were made idle during the strike period, these workers sustained a pay loss of about $1,200 each. In the final strike settlement, miners were awarded a pay increase of 70 cents a day. The average worker, therefore, would have to work 1,714 days to make up the loss sustained because of the direct strike alone. Since the average workyear in the industry, as calculated for the period 1940–47, included 237 working days, the average miner would have to work a little over seven years to make up the pay lost because of the direct strike alone. Although this loss of wages is counterbalanced by other major monetary gains—particularly the 10-cents-a-ton royalty for the miners' welfare fund —the direct net wage loss to the individual miner still remains substantial.

As is pointed out in the report under consideration, loss of purchasing power of the miners, amounting to at least 370 million dollars, not only imposed hardships on the workers involved, but had far-reaching effects on the entire economy. Furthermore, both the coal industry and the national economy suffered from the great loss of coal production during the strike. It is pointed out that it is difficult to estimate with accuracy the size of this loss. However, consideration of figures given by the U.S. Bureau of Labor Statistics and the U.S. Department of Commerce leads to the estimate that, for both 1949 and the first two months of 1950, about 221 million tons of bituminous coal production was lost.

Strikes bring not only economic losses to all involved—to workers, companies, and society alike—but they represent an overwhelming accumulation of individual and group tensions which can have disastrous effects on the stability of the economic system. Throughout the world, except in the U.S.S.R. and other Communistic countries, where labor unions are dominated by government (19, 51) and strikes are not permitted (20), strikes have seriously prejudiced both the economy and the social order.

MORALE AND RESISTANCE TO CHANGE

Although strikes, with their terrific impact upon public opinion (1), represent the most evident sign of industrial strife, the latter expresses itself in many different situations and with many degrees of severity. In a large sense, every grievance in a plant is an expression of conflict between management and the workers. Conflict on a broader scale and of greater severity is found in repeated instances of both organized and unorganized

resistance to technological and other changes. As McGregor and Knickerbocker (30) have pointed out, even minor changes in work processes and equipment or in procedures may have major consequences for employee morale and industrial relations. But there can be no "right approach" in solving the problem of *resistance to change* and eliminating the source of conflict at its base without reference to "group thinking" (5)—without reference to the sentiments and feelings of the employees involved and of their fellow workers (39, p. 580).

FOCUSING ATTENTION ON THE INDIVIDUAL

The need for reducing industrial strife, as well as requirements in the way of enlarged productivity and job satisfaction, make it necessary to gather accurate information on "the biological and derived needs, the interests, the dissatisfactions, and the aspirations" of individuals working together in industry (10). There is an urgent need for the delineation of the dimensions of morale and of the sources and determinants of employee motivation. One purpose of this volume is to describe what has so far been accomplished in these directions. Another and major purpose is to indicate the implications of such facts (and of the methods by which they are derived) to management—particularly in terms of management's function in the development and administration of employee-relations and labor-relations policies and practices.

Basic throughout this volume is the conviction, so well stated by Drucker, that "*the human being is the central, the rarest, the most precious capital resource of an industrial society*" [8] (13, p. 56). Basic also is the conviction that management has a fundamental responsibility as a "co-ordinator of human efforts" in industry. Management must meet this responsibility, not alone in the interest of the individual enterprise, but as a necessary step in preserving the right and opportunity for industry to operate as a private enterprise within a free and democratic society.

Man has progressed from savagery to civilization largely by learning how to release, direct, and control the energies of inorganic matter. Progress toward a better civilization now depends largely upon his achievements in releasing, directing and controlling the energies of man himself. In no place is this more apparent than in man's daily task of producing and distributing those material goods upon which his civilization depends. The disregard of a worker's capacity to feel, think, and grow is a subtle but menacing danger in breaking down his social and spiritual morale (25). To increase productivity, heighten job satisfaction, and raise the level of employee morale, it is necessary to arouse the intelligent interest of the employee. It is urgent to enlist his feelings as well as his abilities in his

[8] Not italicized in the original.

work. The failure to do so will, at best, produce an ineffective worker. At worst, it will transform the worker into an industrial rebel. The individual worker's philosophy is built upon the concrete experiences which personally affect him. From these experiences, multiplied millions of times the country over, may easily emerge a cynical or intensely resentful group philosophy extremely dangerous to the democratic government and industrial organization of contemporary America.

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2

Wage-Incentive Systems

WHY MAN works is a fundamental question in considering man's efficiency and adjustment in industry. Until recently, the answers to this question have been categorical and dogmatic in character. He works, according to the moralist, because of an inner urge which compels him to contribute his share as a member of the working society of men. Man works, according to the realist, because only by doing so can he feed himself and his family and provide for other wants. According to this view, he works because he is paid for it, and the amount of work he will do and the satisfaction he derives from it will depend upon the amount of pay he receives: in other words, upon the attractiveness of the monetary reward.

The application of the principles of scientific management in modern industry has, in fact, been accompanied by widespread dependence upon *wage incentives* to stir the worker to greater production (104). In formulating the principles of scientific management, Taylor pointed to the need for "another type of scientific investigation . . . which should receive special attention, namely the accurate study of the motives which influence man . . . Laws which apply to a large majority of men," he wrote, "unquestionably exist, and when clearly defined are of great value in dealing with men" (97). Nevertheless, in the day-to-day application of this system, increased pay for a higher rate or quality of work has constituted the major, if not the sole, incentive employed in elevating the worker to the higher standards of efficiency demanded by the system. Furthermore, both management and union leaders have generally accepted the viewpoint that the desire for more money constitutes the prime, if not the sole, motive for increasing production, and that increased pay represents the basic source of satisfaction in work.[1] Evidence of the prevalence

[1] See Chapter 15.

of this opinion is found, for example, in a survey reported in the Public Opinion Index for Industry in 1947 (73). Questioned as to what is of importance in gaining worker productivity, 50 manufacturing executives replied as follows

	No.	Per Cent
"Money alone is the answer."	22	44
"Money is by far the chief thing but some importance is to be attached to less tangible things."	14	28
"Money is important but beyond a certain point it will not produce results."	14	28

A question, in the same survey, requesting opinions on the best wage system, showed almost unanimous agreement that some wage-incentive plan, such as straight piece work, bonus pay, etc., stimulates more production than straight hourly pay.

Variety of Wage-Incentive Systems

PIECE-WORK SYSTEMS

Emphasis upon earnings as a source of motivation has led to the development and use of a large variety of wage incentive plans.[2] Common among these are various kinds of *piece-work* systems under which payment is in relation to the number of units produced by the worker (80). In *straight piece work*, payment is at a single flat rate per unit of output. Under a *differential piece-rate* plan, as first formulated in the 1880's by Taylor, each operation is assigned two piece prices, one from 30 per cent to 50 per cent higher than the other (41). The worker who completes in a day a number of pieces less than the *standard task*, as established by time studies, is paid at the lower rate. The worker who completes more than the number of pieces included in the standard task is paid at the higher rate. Modifications of this plan are to be found in wage-incentive systems developed by Gantt (25) and in the *Multiple Piece Rate* (41) plan, the latter being characterized by three distinct piece prices; a lower one for production up to 83 per cent of the standard task; a middle one applying to production between 83 per cent and 100 per cent, and a higher piece price paid for production above 100 per cent of the standard task.

[2] For detailed description of wage incentive plans and their operation the reader is referred to Lytle (49), Balderston (2), Dickinson (17), Gomberg (31), Reitinger (77), Lincoln (44), Lynton (48), Russon (86), and to publication by the American Management Association (40, 71), the National Industrial Conference Board (91, 109, 110), the Dartnell Corporation (23), the Industrial Relations Counselors, Inc. (18), National Association of Manufacturers (107), British Ministry of Labour and National Service (57) and the Australian Department of Labour and National Service (80).

TASK- AND PREMIUM-BONUS SYSTEMS

Under the *task-bonus* wage-incentive plan, also widely used in industry, standard job times, known as *task times,* are calculated, generally on the basis of time studies. The worker is paid at an established hourly rate and, in addition, receives a bonus if he performs the job in the standard time or does not exceed it by more than a stated percentage. Such a plan, as represented in the *Gantt Task-Bonus Plan* (25) and the *Emerson Efficiency Plan* (22, 77), the *Bigelow Plan,* and the *Parkhurst Differential Bonus System* (107) has the advantage of providing a guaranteed minimum wage for all employees, including inexperienced workers who cannot be expected to meet the production standards while learning the job.

A further modification of such plans is to be found in *premium-bonus* systems, under which the worker does not receive extra payments unless he actually completes the job in *less* than the standard time, earnings consisting of time wages for the actual time taken to do the job plus payment for the *time saved* in comparison with the standard task time as established either on the basis of past experience or by time-and-motion-study techniques (80). Such plans vary with respect to the fraction of the time which is taken as the bonus for wage-incentive payment. Under the *Halsey Plan* (35), for example, the worker is paid on the basis of one-third of the time saved.[3] Thus, if the standard time is eight hours, and a worker completes the job in six hours, he is paid at the established time rate for six hours, plus one-third of the two hours saved. In other words, he receives pay for 6⅔ hours for the six hours actually taken to complete the job.

Criticisms raised by workers against a plan which gives them only a portion of the savings effected by their efficiency has been overcome in the *Standard Hour Plan,* sometimes called a "100 per cent premium" plan, under which a standard work task, arrived at by time study, is expressed in standard hours, and the worker is paid the full savings resulting from production above standard. According to a report of the National Industrial Conference Board, an increasing number of American firms have adopted the *Standard Hour Plan* in recent years (110).

POINT INCENTIVE-WAGE SYSTEMS

A somewhat different approach in the development of wage-incentive plans is found in the *point system,* which evaluates a task in time units which supposedly take account of the amount of skill and energy required for its efficient performance and also of the amount of rest an average

[3] An interesting feature of the Halsey Plan is that it includes the payment of a wage incentive to supervisors, the payment made being fixed and paid from the employer's share of the savings.

worker needs during the performance of the task. The time unit used in the system is referred to as a "point" and each task is appraised as being worth a given number of points. Apart from the evaluation of the job in points, the wage-incentive principle is similar to that of the premium-bonus system in that the worker increases his earnings in proportion to the amount of time below the standard time or "bogey" in which he completes his task.

The best known of the point plans is the *Bedaux Point Premium Plan* (80). The point in this system is called the "*Bedaux*" or "*B*," and is "a fraction of a minute of work, plus a fraction of a minute of rest, the aggregate of which is always one minute, but the proportions of which vary according to the nature of the operation" (9). The allowance for rest, usually known as the *coefficient of rest*, generally increases with the severity of physical strain involved.

Under the Bedaux system, a specific number of points is allotted to each of the tasks comprising a job. The amount of the bonus paid to the worker is determined, under this plan, by the number of *B's* in excess of 60, representing a standard hour's work, which he accumulates by completing more than the required or "standard" amount of work. As this plan was originally administered, the employee's bonus was 75 per cent of the value of the time represented by the points saved, the remaining 25 per cent being distributed among supervisory and managerial personnel in recognition of their share in making the saving which earned the bonus.

In spite of certain advantages, especially its applicability to a large variety of jobs in the plant, the Bedaux system has been severely criticized because of the expense of installation and administration; because of difficulties in explaining it to workers, and especially, according to labor leaders, because the returns to the workers in the way of increased earnings are purportedly not commensurate with the increase in production under the plan as ordinarily administered (20). According to the 1949 survey made by the Division of Labour and National Service of the Commonwealth of Australia (80), few companies are now using the original plan, the general practice now being to pay employees the full value of the time saved, and the types of point systems in general use represent considerably modified adaptations of the original Bedaux Point Premium Plan.

GROUP INCENTIVE PLANS

In addition to plans of the type described above, designed to provide wage incentives on the basis of individual increases in production, there are a number of *group incentive* plans (2). These are intended primarily for use in situations where production represents the collective effort of employees whose work is related and interdependent. While group in-

centive plans are primarily designed for use where the production of the individual cannot be directly evaluated, such plans have also been used, especially in Great Britain (56), in situations where individual incentive plans *could* be applied, largely because of their flexibility and their effect in promoting group or team spirit. According to a report of the National Industrial Conference Board, many firms in the United States adopted group plans in preference to individual plans during World War II, largely because they can be installed with less difficulty (110).

THE SCANLON PLAN

Wage-incentive plans take many forms. Apparent in recent years is an increased effort to simplify the plans. One objective in such simplification is to overcome resistance by employees which arises from lack of understanding of the plan and inability to perceive the direct relation between the effort and the reward. Illustrations of such an approach are to be found in the work of Scanlon (15, 88) in the United States and in that of Russon (86) in England. Plans developed under their auspices are generally alike in that they set production "targets" for a "target" date and use the difference between the norms (as established in the target) and actual performance as a base for bonus payments (50).

The first requirement in the application of the Scanlon Plan is to find a "normal" labor cost for the plant under consideration. Steps are then taken to develop means for giving labor the benefit of anything it can save under that "norm." The target is defined in terms of some tangible feature of the manufacturing situation. In a plant manufacturing silverware it is ounces of silver processed; in a wholesale warehouse it is tons warehoused; in a steel foundry and machine shop it is pounds of castings produced. In still another instance, in the case of a versatile steel fabricating shop, it is a calculated percentage of operating profits per month.

The system at the Lapointe Machine Tool Co. provides an illustration of how "norms" are set in the operation of a Scanlon plan, and how the amount available for distribution as a bonus to workers is determined. Here, where measurement was relatively easy, an "understandable accounting handle"—the ratio of labor costs to total production value (monthly sales plus or minus the change in inventory)—was used in setting the "norms." According to Davenport, Department of Commerce figures for 1947 showed that the ratio of wages and salaries to the value of shipments for the machine-tool industry throughout the country was roughly 41 per cent. Because of the feeling, on the part of the company, that the "norm" derived from its war record was too high, the "norm" at the Lapointe Machine Tool Co. was set at 38 per cent. Assuming the value of total shipments for a given month as $70,000, and an inventory

change of plus $30,000, total production for that month would be $100,000. The anticipated or "normal" payroll for the month would be calculated at $38,000 (38 per cent of total production value). If the actual payroll were only $35,000, a total of $3,000 would be distributed to the workers as a bonus (15).

As stated earlier, a significant feature of the Scanlon Plan is that labor gets the entire amount in the way of savings in labor cost. "Management's profit from the plan," according to Davenport, "is derived from increased sales with no corresponding increase in total 'burden,' (i.e. overhead and labor costs) . . . Thus the basic theory is that labor should profit from extra earnings, while the company profits from a better use of its assets" (15). Another basic feature of the Scanlon Plan is that everybody in the plant participates in the bonus.

The roots of what is generally known as the Scanlon Plan are found in union-management co-operation to save a marginal steel company from "going on the rocks" in the late 1930's. According to Daigneault, who has reviewed the operation of the Scanlon Plan in the plant of the Lapointe Machine Co., one advantage of the Scanlon Plan is that it actually serves to strengthen the union in a plant, as evidenced in the experience of that company over a period of five years (14a). The concept of *union-management co-operation* in the formulation of productivity plans (30, 117) has remained basic in the installation of the Scanlon Plan, except in a few instances. As a result, independent evaluation of the effect of *union participation*—both within and outside of collective bargaining agreements—would be required in the appraisal of the Scanlon Plan in comparison with other wage-incentive plans. This basic question, which arises with increasing frequency in the operation of all kinds of wage-incentive systems, is discussed in later chapters, particularly Chapter 23.

PROFIT SHARING AS A WAGE INCENTIVE

Profit-sharing plans, which provide for the distribution of a share of company profits, either in the form of cash or of company stock, have been viewed as an incentive to production.[4] In addition, such plans are generally perceived as bringing significant by-products in the way of higher morale, increased "loyalty" and greater interest in the welfare of the company.

The unfortunate repercussion from such plans during the 1930's depression years, and the decline in the number of such plans in 1929 have been cited as evidence of the limitations of profit sharing (24, 118). Fur-

[4] For descriptions of profit-sharing plans and their operation the reader is referred to publications by Balderston (3), Thompson (98), Rowe (84), Corby (14), and others (42, 114, 74, 76, 84, 69).

thermore, it has been suggested that profit-sharing (including stock-sharing) plans appear to be weak as *incentives to immediate production* because of the "time lag in payment, the lack of worker responsibility for results, and the large size of the groups involved . . . It is fairly certain," according to Marriott, "that more distant goals (as represented in such plans) have comparatively little influence as compared with immediate needs" (53, p. 16).

Prevalence of Wage-Incentive Plans

Not only are there many different wage-incentive systems, but these have been widely used both in the United States and in other countries. Wage incentives have been applied not alone to raise production in factories and offices, but also to increase sales and number of deliveries; to encourage more economical use of gasoline in the operation of motor vehicles; to improve the performance of supervisory and management personnel (76); to stimulate heightened achievement of personnel in almost every phase and at every level of manufacturing and commerce.

UNITED STATES

In a survey conducted by the National Industrial Conference Board (91) in 1939, it was found that of 2,700 concerns in all types of business, employing about five million persons, 51.7 per cent, representing 53.3 per cent of the total employees covered, were using wage-incentive plans of some kind in the United States.

The demands for production during World War II, as well as the opportunity to use incentive plans as a means of increasing wages despite wage stabilization (66), resulted in a renewed drive for the installation of wage-incentive plans supported, to some extent, by government officials and labor organizations (103). According to a report appearing in *Fortune* in 1943, such union support reflected the willingness of labor organizations to accept wage-incentive plans as a way of circumventing the Little Steel formula, representative of the operation of "wage freeze" restrictions, as well as "an upsurge of interest in the incentive idea as a means of pushing out more material in the face of a declining labor supply" (108). Government support of financial incentives as a means of increasing productivity during the war is evidenced in the establishment, in 1945, of an Incentive Division in the Office of Commerce, U.S. Department of Commerce (66).

In spite of the developments discussed above, neither government nor other surveys reveal an upsurge in the use of wage-incentive plans in the United States during or subsequent to World War II. Data which are most nearly comparable to those cited for earlier years are found in a

study made late in 1946 by the National Industrial Conference Board (67), involving 3,498 companies employing approximately 6½ million persons.[5] According to this report, incentive payments for "productive" work decreased from 51.7 per cent in 1939 to 49.7 per cent in 1946.[6] As in 1939, a separate study was made of selected companies (300 in number) which offered "an even choice between day work and incentive systems." Approximately 77 per cent of such companies were found to be using some kind of financial incentive as compared with 75 per cent in 1939.

In contrast to the figures cited above are data from government surveys (102), made in 1945 and 1946, which show that only about 30 per cent of manual workers in manufacturing industries (omitting basic iron and steel, printing, rubber and lumber) were receiving incentive payments. While the data from these independent surveys differ, in part because of differences in coverage, the facts appear to support the conclusion, stated above, concerning the absence of an upsurge in the use of incentive systems in the United States during the decade 1940–50, and suggest that there may actually have been some reductions in use, in spite of the forces operating in favor of the installation of wage-incentive plans during the war years. Nevertheless, according to a report by Ramond, in 1947 a total of 7 out of 12 million industrial workers in the United States were being paid according to some form of wage incentive system (113).

THE BRITISH COMMONWEALTH

As of 1947, 26 per cent of manual workers in Great Britain were being paid piece rates or receiving some kind of bonus, while 74 per cent were paid on a time-rate basis (55). A survey, in 1949, of 25 per cent of employees in private firms subject to payroll tax in Australia showed that approximately 28 per cent were being paid on the basis of some kind of wage-incentive plan, the figure for manual workers being approximately 32 per cent (39). In both of these countries, even under labor governments interested in the establishment of socialistic states, there has been wide and continuing interest in the possibility of stimulating production through the wider use of wage-incentive plans. As in the United States, there has been considerable controversy concerning the merit of various plans, e.g. individual *versus* group plans. In Great Britain where, according to Marriott, "incentives are now (1951) almost as topical as the weather" (53), reports by teams organized under the Anglo-American Council on Productivity to survey methods and particular industries, e.g.

[5] The incentive-wage plans considered did not include profit-sharing and employee-suggestion systems.

[6] Data on "nonproductive" workers were collected in the 1946 but not in the 1939 survey.

petroleum (79) and building (78), have brought enlarged consideration of the role of wage incentives in increasing productivity and in strengthening the national economy. Furthermore, in a report by an Anglo-American Productivity Team sponsored by the Trades Union Council, note is made of the paradoxical situation that, while incentive systems are less common in Great Britain than in the United States, American trade unions are less concerned about the need for increased productivity than are trade unions in Great Britain (99).

U.S.S.R.

Observations made by the author in the U.S.S.R. in 1935 as well as recent reports indicate that wage-incentive payments are more prevalent in communistic than in other countries (105). In the early years of the Soviet Union, emphasis in the drive for increased labor productivity was placed upon propaganda appealing to the workers' enthusiasm—to their "desire to build Socialism"—leading to the creation of a corps of *Stakhanovites* or "shockworkers" who form an integral part of the production system (52). Since approximately 1930, the tendency has been to lay increasing stress on differential-wage-scale and piece-work methods of wage payment (12). Piece-work-wage plans and efficiency bonuses, *without any guaranteed minimum wage*, now constitute the basis for the compensation of workers in industry, agriculture, and government (34). Wage-incentive plans have been extended to the point, where, for example, according to Kuznetsov, head of the trade unions, the piece work system, promoted by Stalin, accounted in 1949 for 92 per cent of wages in one industry and for similarly high percentages in other industries. As indicated by Newman, "this system of pay, once denounced by the Russians as the sweat shop and the worst form of capitalistic exploitation, has become the basic wage system of the Soviet Union" (65).

In passing, it is interesting to note that the introduction of differential wage rates was severely criticized by members of the Communist Party who felt that this represented a return to the pernicious practice of capitalistic societies—a serious deviation from the fundamental principle of Communism voiced by Marx in his famous statement "from each according to his abilities, to each according to his needs." To such objections the leaders of the Soviet Union have replied with striking facts concerning the adverse effect of equalitarianism in wages upon production and "labor fluctuation," i.e., turnover (33); with labored reinterpretations of Marxism (93), and with restrictive and punitive measures against critics of Party policies.

Along with such measures there has been much propaganda, directed

at workers of the U.S.S.R. and other countries, emphasizing the supposed contrast between the harmful exploitation of labor through piece work in capitalistic countries and its beneficial effect upon the welfare of workers in the Soviet Union (90). Characteristically, the dialectical shift from the basic tenet of Marxism finds expression in the pronouncement, by Stalin, that "equalization in the sphere of demands and personal life is reactionary, petty bourgeois nonsense, worthy of a primitive ascetic sect and not of a socialistic society organized in a Marxian way" (94). Thus, Stalin rephrases Marx's statement to read "from each according to his capacity; to each according to his work."

Effectiveness of Wage Incentives

Employers throughout the world continue to press for the more extended use of wage-incentive plans. The drive for such plans is based primarily upon the belief that wage incentives lead to (1) greater output; (2) lower cost per unit of production; (3) higher earnings for employees and supplementary advantages in the way of reduced absenteeism, easier supervision, etc. (80, p. 10). According to Roy (84a), because of administrative costs and the loss of production resulting from the withholding of effort by employees, wage incentive plans may actually lead to increased costs. However, reports from industry and surveys by government bureaus generally attest to the effectiveness of wage-incentive plans in increasing productivity and achieving other objectives. A government survey of 514 wage-incentive plans in the United States, reported in 1945, showed that, under such plans, production increases averaged 38.99 per cent; unit labor costs were decreased on the average by 11.58 per cent, and average take-home pay was upped 17.56 per cent (66).

According to a survey of 48 companies manufacturing a wide variety of products and employing 14,000 workers in the New York area, the installation of wage-incentive plans resulted in production increases ranging from 3 to 103 per cent, averaging 27.9 per cent above "standard" and 41.5 per cent above "past performance" (16). Similar results are reported from a survey covering 62 companies in the Chicago area. Achievements relating to specific manufactured products are illustrated in Table 2.

An example of the long-term effect of a wage-incentive system is found in the experience of the Shartle Brothers Machine Co., Division of the Black-Clawson Co. Here plant-wide wage incentives, both *direct* and *indirect* in character, have been applied for 11 years to all 350 shop employees handling a great variety of parts and small quantity runs. The returns, in the form of greater production and of higher earnings for the workers, are shown in Figure 3. Records kept by the company show a

TABLE 2. *Results from Wage Incentives* (from *Nation's Business*, 1945)

Type of production	*Gain in pay, per cent*	*Gain in output, per cent*	*Drop in unit labor cost, per cent*
Switch gears	3	3	0
Gears and motor parts	12	7	44.5
Fans and blowers	10	10	0
Condensers, radio	3.2	3.2	0
Laundry	14.5	22	10
Wood products	18.5	27.5	14.1
Corn products	9	13	4
Radio and radar	20.6	78.7	36.9
Pistol belts	25	25	0
Canned foods	2	10	8
Aluminum castings	56	71	7

saving of 1,055,000 man-hours of labor in an 11-year period in this firm, where "workers *asked* to be time studied so that they, too, could earn bonuses" (37).

The operation and effects of a *newly established* wage-incentive system

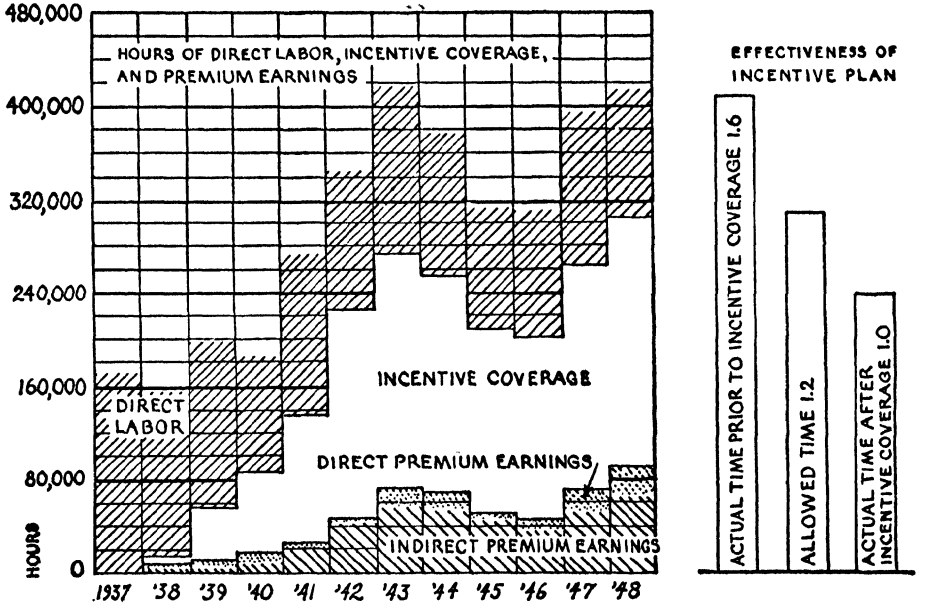


Figure 3. Shartle Brothers Machine Co., Division of the Black-Clawson Co.; Eleven Years of Experience with Wage Incentives *

* By permission, from R. K. Hovel, "Our eleven years with incentives," *Factory Mgmt. Mainten.*, (November) 1948, 106, 87–88.

in a plant is found in the experience of the Ecorse Division of the Murray Corporation of America, employing 1,000 workers in producing steel frames for motor vehicles (58). Here, a plan installed with the co-operation of the plant union (Local 2, UAW, CIO), led in a short time to production gains which averaged 16 per cent throughout the plants. According to the report on the experience of the Ecorse plant, "the average would be even higher if certain old equipment could be replaced, and if the union had not imposed a ceiling of 25 per cent maximum above standard—a restriction that reflects union qualms lest extraordinary individual earnings foment dissension" (58). Furthermore, contrary to expectations, accident rates fell subsequent to the installation of wage incentives, although, in contrast to the experience of other plants, there was no appreciable effect in the way of decreased absenteeism. Increased co-operativeness with supervisors was observed in the plant. From week to week, 94 per cent of *direct* workers showed an average increase in earnings of 19 per cent, while *indirect* labor showed an average gain of 12 per cent in earnings.

ISOLATING THE SPECIFIC EFFECT OF WAGE-INCENTIVE PLANS

Reports such as those cited above suggest that wage incentives contribute to increased productivity. However, in most instances wage-incentive plans are introduced under conditions which make it difficult to evaluate the exact contribution of the wage incentive itself. Taylor is quoted as emphasizing the need of dealing with one variable at a time—for "holding surrounding or accompanying conditions constant and uniform while one variable is experimented with" (13, p. 247). In practice, the installation of a wage-incentive plan is generally accompanied by other changes in working conditions, personnel policies, and practices which are frequently major in character. For example, the introduction of wage incentives in the Ecorse plant was accompanied by the formulation of new "elemental standards," probably necessitating changes in work methods and routines; by changes in shifts and in the length of the work week and, apparently, by a change in the over-all labor situation involving close co-operation between management and the labor union in the application of time-and-motion-study techniques. There are many instances in which the installation of a wage incentive has been accompanied by changes in training programs and training methods; by improved procedures for evaluating employee performance, and even by higher selection standards and improved selection methods [7] (21,

[7] An interesting treatment of one phase of this problem is found in studies by Rothe (82, 83, 83a), who presents hypotheses bearing upon methods for isolating the specific effects of a wage plan in the "incentivation of workers."

51). As a result, management and industrial engineers have frequently been unable to present clear-cut and unequivocal evidence as to the specific effects of wage incentives.

The Psychologist Looks at Wage-Incentive Methods

The evaluation of the motivating potential of wage-incentive plans is further complicated by the fact that there has been widespread failure to develop and adhere to scientific methods in the construction of wage-incentive systems (31, 34a, 46, 120). As suggested by Uhrbrock (101) in 1935, the findings and techniques of psychology, physiology and other sciences pertinent to the consideration and evaluation of variables which enter into the construction of a wage-incentive plan have generally been neglected by exponents of scientific management, who formulate and use "laws" and "principles" without supplying data adequate for their support or for their verification by means of independent investigation (101). Particularly striking are flaws in the design and application of time-study techniques used in setting production standards. A review of this situation by Presgrave, in 1945, leads to the conclusion that "Practitioners have done virtually nothing to justify time study from scientific, sociological, physiological or psychological grounds, having been content to rest their case on the one proved fact that through their techniques they have been 'preeminently successful in increasing output and decreasing costs' " (72, p. 1). Looking at wage-incentive methods from the viewpoint of the union leader, and on the basis of an exhaustive analysis of methods, Gomberg also concludes that "thus far time study techniques can make no claim to scientific accuracy. *They are at best empirical guides to setting up a range within which collective bargaining over production rates can take place*" (31, p. 170).

THE RELIABILITY AND VALIDITY OF TIME MEASUREMENTS

The objective of time study is to arrive at a *standard time* which is used as a base in formulating production standards and in constructing the wage incentive plan (95a). It is apparent that this calls for the completely dependable measurement of time intervals. Considerable dependence is still placed upon stop-watch readings in arriving at standard times. Frequently such standards are developed on the basis of a small number of observations made by a single time-study man. Questions can readily be raised concerning the reliability of the data obtained under such conditions (42a, 85). Furthermore, methods used in selecting or computing the standard time for each element of a job are far from uniform. According to one procedure, the "time that recurs at least one third of the total number of readings, or if no such number is found, the number which

with itself and any number less than itself occurs at least one-third of the total number of readings" (36) is taken as the standard time. In the work of other wage-incentive engineers, so-called "abnormal" times are eliminated largely on the basis of the opinion of the single observer (43). Time-study data taken from different sets of observations by different observers are sometimes combined into synthetic studies. There is a serious question as to whether such data can be combined satisfactorily unless the "personal equations" of different observers are known and compensated for.

Added to such sources of variability are the estimates to thousandths of a minute made from stop watches with dials showing hundredths of a minute (28), and the distinct possibility that the stop watches used by different observers are far from uniform and accurate. The question has also been raised as to whether minute, elemental times—no matter how accurate—can justifiably be added to provide a true representation of the job as a "whole" (1, 29a). Furthermore, procedures used by some methods engineers involve no direct timing of the different elements of the job, but depend in setting standards upon a so-called "law of motion," such as Segur's, which states, without adequate substantiation (87, p. 229 ff.), that "within practical limits the times required by all expert workers to perform true fundamental motions are constant" (1a, p. 178).

Such references to "what is wrong" with time-study practices are not intended to suggest that industrial engineers are unaware of these problems (42a). Thus, considerable attention has been directed to such questions as whether "continuous" or "snap back" operation of the stop watch yields more reliable and more accurate measures (31, 72). In the effort to overcome errors and improve reliability in timing, consideration has been given to the use of multiple observations. In considering this approach, Mundel recommends a statistical criterion for decisions as to the number of readings. According to the latter, "A reasonable limit to place on the number of readings would be to require a sufficient number such that the chances are 95 out of 100 that we are within ± 5 per cent of the true average for the element for the pace at which it was performed. Some may prefer a looser criterion of 95 chances out of 100 [that the readings are within] ± 10 per cent. In this latter case, the odds may be restated at 68 out of 100 of being within ± 5 per cent" (61, p. 295). However, research by Leng, cited by Morrow (60), suggests that practical difficulties may exist in the satisfaction of such a criterion since it was shown that from 14 to 75 observations, with an average of 28, were required to obtain a reliable reading to the nearest .01 minute.

An analysis of time-study methods and findings leads Presgrave (72) to the assumption that the average element observed in time study is

of .10 minute duration. An error of .01 minute thus represents an error of 10 per cent in the measurement of the average elemental time. According to Gomberg, an error of this magnitude consumes practically the complete tolerance permitted by the collective-bargaining wage decrement or increment. "Obviously," he adds, "if after months of negotiations . . . a settlement has been reached involving a 10 per cent change in the basic rates, neither management nor labor is prepared to sacrifice its respective rights to the blind operations of a technique of questionable accuracy" (31, p. 14). Such considerations have led to the view that time recorders should be substituted for stop-watch readings in making time studies. Studies of *kymograph* recordings have indicated that high levels of reliability can be achieved through the use of this device (7). A study by Leng, cited by Gomberg, provides evidence of the superior accuracy of *Marstochron* as compared with stop-watch readings (31, p. 53 ff.). *Micromotion study*, originally sponsored by the Gilbreths (26, 27, 29), involving the use of specially fitted cameras to produce *chronocyclegraphs* and *stereochronocyclegraphs*, results in increased precision of time measures, although other timing devices, such as the *decimal camera* and the *Marstochron* are preferred by other specialists in time study (96). On the other hand, Abruzzi reports that "there is not much difference between the stop-watch and the marstochron when the stop-watch is used by an experienced observer" (1, p. 244). The latter also refers to practical considerations which favor the continued use of the stop-watch. Such considerations have also been noted by Presgrave who, while questioning stop-watch measures smaller than 1/100th of a minute, also contends that instruments of the type referred to above find their true use not in industry but in the laboratory (72, p. 50).

THE USE OF RATINGS IN SETTING STANDARDS

Ratings and Leveling. A common requirement in time study is that the *standard time* represent the performance of a man of *average* skill applying *average* effort under *normal* conditions (47, 95a). In arriving at such standards, it would seem necessary to establish *objectively* the fact that operators observed in time studies are actually men of average skill working with average effort. In practice, however, time studies do not involve operators selected with reference to distributions of workers with respect to such variables. Instead, operators are chosen on the basis of intelligence, cooperation, good will—or even because they are superior operators—and adjustments are made of observed elemental times in arriving at a standard time supposedly representative of the performance of an average man (68). This involves a process, commonly known as *rating*, defined by the National Committee on Effort Rating of the So-

ciety for the Advancement of Management as "the process during which a time study engineer compares the performance of the operator under observation, with the observer's own concept of normal" (31, p. 131).

There are wide differences among the methods used for adjusting the observed time to arrive at a standard appropriate to the average or "normal" employee (45). Frequently employed is a *leveling* procedure, advocated by Lowry, Maynard and Stegmerten, under which average time taken to complete task elements subject to control by the operator is multiplied by a leveling factor derived from ratings on skill, effort, consistency, and conditions (47). In still another application of ratings, recommended by Presgrave, only ratings on effort are used in the adjustment or "leveling" of time-study data (72), while Mundel takes the position that ratings on two factors, namely pace and job difficulty, be used in the adjustment of elapsed time (61a, 61b).

Range of Individual Differences. It is evident, as has been made particularly clear in critiques of time-study methods by Uhrbrock (101) and by Gomberg (31), that serious questions can be raised concerning rating procedures. Neglect of a scientific approach is illustrated in the varieties of assumptions made with respect to the range of individual differences in variables rated by time-study engineers. For example, a correspondence course for training methods engineers, cited by Uhrbrock, takes the position that the spread between "super skill" and "average skill" is 15 per cent (100). On the other hand, as a result of a study of 250 men who bored holes in small pieces of iron, Younger concludes that the "average man is 70 per cent slower than the skilled or fast man," and proceeds to subdivide the distribution of over-all times, on the basis of judgment, into zones of *very fast, fast, average, slow,* and *very slow* men (119). Weights for individual rating factors under still another plan range from -0.22 to $+0.15$ in the case of skill, and from -0.04 to $+0.04$ in the case of consistency, and such weights (added to 1.00) combine to give a range of -0.50 to $+1.38$ for the leveling factor derived from the algebraic summation of ratings on four such variables (47).

Basic psychological data on the range of individual differences by Hull (38), Wechsler (111, 112) and others (82, 83), appear to have been largely overlooked in the application of rating factors. There is, it is true, growing recognition on the part of time-study engineers of the importance of such facts, and of the need for determining the limits of adjustment by means of appropriate research (47, 72). Barnes (4, p. 253), for example, illustrates the possibility of applying research techniques to such problems in an experiment involving 121 girls operating semiautomatic lathes. Here, under conditions which obviated the possibility that they were "pegging" production because of fear of a cut in the job rate or for

other reasons, maximum output proved to be 104 pieces per hour and minimum output 51 pieces, a ratio of 1 to 2.04 which is in line with these reported in studies of aptitudes and skill by psychologists. Nevertheless, much still remains to be done both by psychologists and engineers in accumulating data on output under varying conditions of skill, effort, and the like, as a basis for arriving at firm principles with respect to the ranges of variation to be taken into consideration in the application of ratings to particular work situations (87, p. 227 ff.). Research is also needed to examine further the possibility of eliminating or minimizing ratings through the application of a statistical approach, as suggested by Lorge (46) in 1935, and in a more recent analysis of time-study methods by Gomberg, who considers the possibility of applying "probability reasoning" to the field of time study and of treating the concept of "average" or "normal" as "some quantitive characteristic of a parent population" (31, p. 133).

The Reliability of Ratings. Of importance in the evaluation of time-study methods and findings is the distinct possibility, early recognized by Barth (8) and other pioneers in this field, that equally competent time-study engineers using the same rating factors might not agree in their evaluation of an operator's performance. Furthermore, there may be inconsistencies in ratings made by the same analyst from day to day. Involved here is the recurring question of the *reliability* of subjective estimates.

In a study bearing upon this problem, reported by Uhrbrock (101), six judges, using a 10-point scale, independently rated 23 men on *quality of output*, sometimes used as a basis for evaluating skill. Correlations between the ratings of two judges proved to be approximately .40, and of two independent sets of three judges, .63. Neither level of agreement can be considered as satisfactory, particularly in a situation where the size of the pay envelope and possibly also the tenability of a negotiated wage rate are affected by the ratings.

Basically, the problems of reliability arising from the use of rating factors in time study are the same as these which arise wherever ratings are used. As a result, findings on the influence of the number of judges, on the effect of the number of variables rated, and the like, drawn from research in the field of merit rating (11, 70) and job evaluation (64, 106), have a bearing on the problems of reliability in rating or leveling. There is the possibility that reliability can be increased through the use of films as a substitute for direct observation of the operator (61b). Nevertheless, in spite of some research in this area, the problem of augmenting the reliability of rating in time study needs to be solved as a necessary step in improving the construction and administration of wage-incentive plans.

Recent reports indicate that studies directed toward this end are included in the research plans of the *Rating of Time Studies Project* supported with funds derived from the sale of the film series "Study on Performance Rating" (89), described on page 36.

The Validity of Leveled Times. Closely allied to the problem of reliability is that of the *validity* of time standards arrived at through the application of rating and similar methods. One aspect of this problem is illustrated in a study by Cohen and Straus, involving 21 workers on a folding operation (12a). Each operator was rated on skill and effort by three time-study engineers. Leveling factors derived from the engineers' ratings were then applied to the elapsed time of each operator as determined by a motion-picture time study involving the use of a 16-frames-per-second constant speed camera. In applying a rating or leveling procedure, the time-study engineer assumes that the base or leveled time (actual time multiplied by leveling factor) established by observing one operator will be exactly the same as that arrived at by observing any other operator, in spite of actual differences between the operators in skill, effort, and the like. In the study under consideration, leveled times were found to vary between a minimum of 59.04 and a maximum of 124.70, a range far beyond the limits of acceptability in setting what is presumed to be a valid index of the performance of an average worker of average skill working with average effort under normal conditions.[8]

This situation in time study, and also its practical implications, are further illustrated in a study, reported by Gomberg (31), in which seven jobs in a garment-making plant were analyzed independently by a company and by a union time-study engineer. Differences in actual cycle time recorded by the two engineers were all smaller than 2 per cent. However, disagreements between time-study engineers with respect to the magnitudes of the rating factors [9] were such that the standard time unit assigned after leveling by a firm engineer was lower for each job than that assigned by a union engineer. There immediately arises a question as to which of the two standards can be considered as the more *accurate index* of the *actual performance* of an average man, working with average effort, under normal conditions, on each of the jobs. The possibility also exists that neither may be valid, in the sense that neither typifies the performance of

[8] Ryan chooses to discuss the findings of this experiment as illustrating the low *reliability* characterizing time standards "arrived at through studies of *different* workers, either by the same or different rate-setters" (87, p. 218), although recognizing that the problem considered might with equal propriety be viewed as one of *validity*.

[9] Differences in the magnitudes of the rating factors ranged from a low of 3.48 per cent (blind stitch bottom) to a high of 16.70 per cent (set sleeves), with the rating factor assigned by the union engineer being in every instance *higher* than that allowed by the firm engineer.

the conceptualized average or normal worker on the job or orders the job in correct sequence with reference to the other jobs.

The literature on time-study methods reveals a growing awareness of the fact that conventional rating methods may yield times which are not in accord with the criterion of "standard time" as defined by the time-study engineer. Mundel has suggested the use of motion films as an aid both in formulating the criterion and in increasing the accuracy of rating (61b). Under this proposal, a series of films of operators working at different paces on simple jobs is prepared. One of these is selected by management, or through joint negotiations by labor and management, as presenting the desired standard pace, that is, "the rate of activity representing 100 per cent standard pace." Films showing step-by-step deviations (preferably of the order of 6 per cent) from the accepted standard pace are then prepared and used as a basis for rating the pace on an observed job. Comparison of pace on the observed job with the "step" films projected into a shadow box placed near the job, or direct comparison of the "step" films with a film of the observed job, are among the methods recommended for use in establishing the pace rating. In an experiment by Lehrer, cited by Mundel, a group of experienced time-study men making comparisons with "step" films were able to place 64 per cent of their ratings within ± 5 per cent of the *correct* value, in contrast to 19 per cent when conventional methods of rating were used by the same men.

The experiment referred to above is of particular interest in comparing the accuracy, and in this sense validity, of one rating procedure as compared with another. Many more such comparisons are needed to establish the relative validity of time standards arrived at by different rating methods and for different tasks through the use of the same method. An effort has been made to overcome variations in standards due to differences in methods through the development of a series of films, showing 24 separate industrial, clerical and laboratory operations, designed to present "a uniform concept of a fair day's work" (89, p. 4). Prepared under the auspices of the Society for the Advancement of Management, the films are based on approximately 150,000 ratings by more than 1,800 time-study engineers in over 200 companies throughout the nation. Data obtained through the application of the methods commonly used by these engineers were combined into a single standard *viz.* "the allowed time for the average of qualified incentive operators" (121, p. 53). According to the SAM report, the film provides "a concept of normal that can help solve disputes about specific time standards" (89, p. 4). However, Gomberg and others have raised questions both as to the acceptability of the methods used and as to the possibility of arriving at an accurate concept of

"normal working speed" through a study in which only management engineers and no union engineers participated (121).

Criticisms of this kind, as well as the general consideration of time-study practices, point to the necessity for examining the criteria employed in setting the goals in a time-study program. Involved here, as suggested by Ryan (87, p. 221 ff.), are questions bearing upon: the acceptability of absolute reference points in rating, such as "average" worker (47); a pace equivalent to walking at 3 miles per hour (72); "average person . . . working at a pace of 100/130 of the maximum pace that can be maintained, day after day, without harmful physical effects" (61b), etc. Also involved are broader questions bearing upon what constitutes a "fair day's pay" (121), upon the role and objectives of incentives in a social order, and others which challenge the ingenuity of the social scientist, as well as that of the wage-incentive engineer.

THE USE OF ALLOWANCES IN SETTING STANDARDS

In addition to the application of ratings in setting time standards, further adjustments are generally made in the form of *allowances* to provide for personal needs, for delays over which the worker has no control, to prevent undue fatigue, and the like. Thus, in an illustration cited by Barnes (4), an average elapsed time for a work operation of 2.20 minutes is increased to a base or leveled time of 2.93 minutes by the application of skill and effort ratings, and then further increased to 3.10 minutes by the application of a 5-per-cent allowance for fatigue and personal needs.

As in the case of rating factors, there are variations among time-study engineers with respect to the types of allowance and to the time allowed. Thus, in a study reported in 1928, allowances for fatigue were found to range from no adjustment at all to an allowance as high as 65 per cent (95). A survey of time-study literature by Mundel, in 1950, shows a range of "personal allowances" from a maximum of 4 per cent under one system to a maximum of 50 per cent under another (61c).

Studies of time taken by workers to attend to personal needs can furnish objective data for estimating the allowance for such needs. Similarly, data on delays caused by machine breakdowns and other factors not under the control of the worker can provide a factual basis for the delay allowance (1, p. 252 ff.). Data from studies of work decrement during various parts of the day—particularly at the end of the work shift—have been used as a basis in deciding on the size of the fatigue allowance (4, 87). However, many problems, involving both the theory and practice of time study, are involved in setting allowances (41a). From the viewpoint of a scientific approach, arriving at allowances for fatigue constitutes a problem of par-

ticular complexity, since studies by psychologists and physiologists have produced little in the way of usable techniques (other than output itself) for measuring fatigue. Furthermore, much difference of opinion still exists with respect to the very nature of fatigue and, in particular, as to whether reduced output (work decrement) provides an adequate measure of fatigue effects (8a, 31, 32, 63, 87). It has been suggested that this situation might be relieved by eliminating allowances for fatigue through the substitution of properly spaced rest pauses of appropriate duration. However, although attention was called to the problem by Uhrbrock in 1935, research is still needed to establish scientifically "whether or not it is most effective and desirable to add a short time allowance for fatigue to the time required to perform each element of work or to provide carefully spaced rest periods of several minutes' duration throughout the working day" (101, p. 21).

TECHNICAL PROBLEMS IN TIME STUDY: A SUMMARY

The use of ratings or leveling factors and allowances of various kinds means that the standards used as a basis for wage incentives are derived from a series of measurements supplemented by qualitative observations and judgment. This situation was accurately described as early as 1921 by an outstanding exponent of scientific management: "The time-study job," according to Spaeth, "is to set a fair wage on the basis of his observations not only of time intervals, but with the addition of allowances for fatigue, delays, etc. The final result, therefore, whether with a stop watch or with a moving picture technique, is made up of a combination of some very accurate measurements and some guesses. Consequently, your best guess necessarily determines the order of accuracy of the final result" (92).

There is evidence of growing recognition of this situation by the exponents of time study. There are indications that the problems of reliability and validity are receiving increasing attention by time-study engineers. Developments in the field of time study, involving in some instances an effort to substitute statistically developed procedures for conventional time-study procedures (96), may reflect wider acceptance of an approach, favored by Lorge (46) and by Gomberg (31), which avoids or at least minimizes the use of subjective estimates in time study. However, in practice today, time standards continue generally to represent figures derived from a combination of measurements made under more or less uniform conditions with allowances reflecting the judgment of time-study engineers. In other words, standards are generally not based solely on *objective, accurate, reliable,* and *verifiable* data. This situation, according to Uhrbrock, has contributed to employee opposition to wage-incentive plans, since workers can justifiably raise questions concerning the judg-

ments which are made, and become skeptical as to the exactness of the standards arrived at through the procedures ordinarily used in setting standards (101). Increasing demands by unions for time-study data prepared by the company, and the support of such demands by NLRB decisions, provide another practical reason for the improvement of methods to furnish data which will have a sound scientific basis and be uniformly meaningful to both the company and union representatives.

INCENTIVE ENGINEERING AND HUMAN ENGINEERING

It is evident, from the foregoing discussion, that much is needed in the way of technical improvements in methods used in the development of wage-payment systems to insure the optimal utilization of the wage incentive in industry. However, in the opinion of many observers, the technical improvement of wage-incentive systems represents only a partial answer to the effective motivation of employees. For example, according to Whyte, "Systems of financial incentive in industry yield a net gain in productivity, but most of them fail to release more than a small portion of the energy and intelligence workers have to give to their jobs." This, he adds, is because "the setting of incentives has been traditionally considered a technical engineering problem," and there has been failure to recognize that "the problem has important human relations aspects that cannot be solved through the enforcement of any technical standards . . ." (115, p. 79).

The need for considering wage incentive systems as a problem in human relations (as well as a technical problem) appears clearly in studies of employee reactions to wage incentives, discussed in Chapter 3. Such studies, and other research in industry, have also turned attention to the consideration of other factors, discussed in succeeding chapters, which operate alongside of, or apart from, the hope of financial reward in determining the levels of employee production, job satisfaction, and morale in the individual plant and in industry at large.

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3

The Worker and Wage Incentives

"I HEARD the company hired one of those efficiency experts. Up to now this has been a pretty good place to work, but he'll probably ruin everything!" (12, p. 87). This thought, expressed by workers of one company when they learned that an industrial engineer had been engaged to install an incentive system, typifies the suspicion and distrust with which wage-incentive plans are frequently viewed by workers.

In some instances, suspicion has developed into direct hostility to wage-incentive systems and to the way in which they have been administered in industry. Such antagonism has been reinforced by a systematic policy of opposition on the part of some unions, and by skepticism with respect to the merit of wage-incentive plans on the part of other elements of the population (23, 24).

EARLY RESISTANCE TO WAGE-INCENTIVE SYSTEMS

Opposition to wage-incentive systems appeared in this country almost immediately after their introduction by Taylor. According to his biographer, Taylor continually fought against the opposition of workers when he introduced his methods at the Midvale Steel Co. and, as a young foreman, Taylor was "frequently threatened with violence, and the fight increased in bitterness; the men resorting to such things as the deliberate breaking of machines, and their foremen to large-scale fining and firing" (4, p. 5).

Antagonism to the principles and practices of scientific management was emphasized in a report of a Congressional committee, in 1912, which described "stimulation" as the "crux of the difficulty in the introduction of the Taylor or any other system of so-called scientific management"; de-

cleared that no such system should be introduced without prior consultation with workers or imposed upon an unwilling working force, and recommended that stop-watch time-studies should not be made without the consent of the workmen involved (26). Sufficient public support was aroused to lead to the introduction, in 1914, of an amendment to a bill regulating the method of directing the work of government employees which would have prohibited time studies of Federal employees (27). While the bill was not actually enacted into law, the fact that it was introduced illustrates the hostility to wage-incentive methods and plans which developed simultaneously with the use of scientific management.

THE EFFECT OF LACK OF UNDERSTANDING

Interviews with workers have shown that, even in the absence of overt hostility, wage-incentive systems frequently receive merely passive acceptance as a necessary or inescapable evil (1, 5). It has also become apparent that failure to understand the plan—a lack of clear perception of the goals—is, at times, at the root of such attitudes. Difficulties of this sort, resulting from defects in the engineering and administration of wage incentive plans discussed in Chapter 2, are illustrated in a worker's comment, cited by Uhrbrock, to the effect that "*Well, the main trouble with that Wage-Incentive as I see it is that it's too complicated for the ordinary working man to understand*" (25, p. 9). Another illustration comes from a study conducted in two large British engineering (metal-trade) factories on behalf of the Industrial Health Research Board. "*We've been to ask them to explain,*" said one of the female operatives, "*but the gentlemen in the office say it's in decimals which we couldn't understand, and that we must go back to work and not make a fuss*" (5, p. 58). Workers sometimes fail to heed such advice and, instead, develop deep-seated antagonisms to wage incentives. The crucial character of this situation is well illustrated in the conclusion, reached by union leaders, that, "if the industrial engineers of today would tear the veil of secrecy and mysticism from the application and operation of their innumerable wage incentive plans, we might be able to achieve a mutually satisfactory acceptance of wage incentives . . . Any wage incentive plan, any standard that has been set, that will not stand frank open discussion and complete explanation to the people concerned, leaves a lurking suspicion of unfairness and dishonesty" (8, p. 56).

Employee Attitudes toward Incentive- and Nonincentive-Wage Systems

Information concerning workers' appraisals of wage incentives is available from surveys which have dealt with employee attitudes toward *in-*

centive as compared with *nonincentive* systems of wage payment. Illustrative of studies bearing upon this question is a survey conducted in 1945, by the Opinion Research Corporation (29), involving a nation-wide sample of manual workers in manufacturing plants located in cities with a population of 25,000 and over. All of the workers involved in the survey, totaling 919, were asked, "*On a job which could be paid by either piece rate or hourly rate, which one would you rather work on?*" The results, summarized in Table 3, show that (1) 24 per cent of the workers on an hourly rate say they would prefer to be paid by piece rate; (2) 22 per cent of workers on piece rate and 39 per cent working under other incentive plans would prefer to be paid at an hourly rate; (3) workers tend to prefer the wage plan under which they are actually working; (4) preference for hourly rate is higher among union members than among nonunion members of the working force.

Employees working under a piece-rate plan were asked, "*If you had another job would you like to be under the piece-rate system or some other system?*" Those working under some other incentive-pay system were asked, "*If you had another job, would you like it to be under a system like the one you're now on, or some other system?*" The members of both of these groups were asked, "*What are some of the things you like about your present system?*" The replies, summarized in Table 4 (top section), show again that most workers express preference for the system under which they are already working. The table (bottom section) also shows what workers like about a system of wage payment in which earnings are related to production.

TABLE 3. Replies to Question: "*On a job which could be paid by either piece rate or hourly rate, which would you rather work on?*" (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1946)

	No. of Mfg. manual workers	*Per cent who prefer*		
		Piece rate	*Hourly rate*	*Don't know*
Total	919	36	61	3
Paid by:				
Hourly rate	658	24	73	3
Incentive plan	131	57	39	4
Piece rate	130	75	22	3
Union status:				
No union where work	220	43	53	4
Have union	699	34	63	3
Members	597	33	65	2
Nonmembers	102	35	54	11

TABLE 4. *Employees' Attitudes toward Wage Incentives* (after *Public Opinion Index for Industry,* Opinion Research Corporation, 1946)

	Paid by	
	Incentive	*Piece*
Number	131	130
	Per cent	
Prefer new job on present system	69	61
Another system	30	35
Don't know	1	4
What liked about present system		
Number preferring present system	91	79
	Per cent *	
It's up to me what I make: Tests my ability; individual energy is rewarded; pay doesn't depend on others; I get paid for what I do	42	49
I'm my own boss: No one hanging over me to see I work; I work fast or slow as I please	10	24
Make more money than on hourly rate: If rate is set fairly you make a good income	23	22
Sure of at least minimum pay: Not under strain because you know you'll get a certain amount	12	0
Can figure pay easily: If you've done so much work you know you'll earn so much; no argument about amount coming	4	10
Can increase earning power: If you stay on one job, get more skill, you can earn more	5	8
Everybody works together: All pull together; if you get stuck someone helps you out; you have a feeling of co-operation, crew work	8	0
Miscellaneous reasons	19	4
No reason given	3	0

* Percentages add up to more than 100 because some respondents gave more than one reply.

According to *Factory*'s fourth annual survey of *What the Factory Worker Really Thinks,* reported in 1947, also involving a nation-wide sampling of nonsupervisory factory employees, 30 per cent of those interviewed said they were paid on an incentive or bonus basis. Of these, 85 per cent of nonunion workers and 75 per cent of union workers, constituting 79 per cent of all receiving incentive wages, stated that the incentive systems in their plants were fair. Moreover, 51 per cent of workers *not* paid on an incentive basis are reported as saying that "they would like to work under such a system if it were fairly run." According to the interpretation offered by the editors of *Factory,* the "workers who are not on incentive

but want to be, constitute a real challenge to management—and to those unions which stand in the way of introducing incentive systems" (33, p. 88).

Evidence that the wage incentive represents, at best, only a partial solution of the productivity problem is found in a survey by the Opinion Research Corporation, conducted in 1949, involving 1,021 manual workers comprising a national sample of employees of manufacturing companies. As appears in Figure 4, 65 per cent of the workers agree that incentive

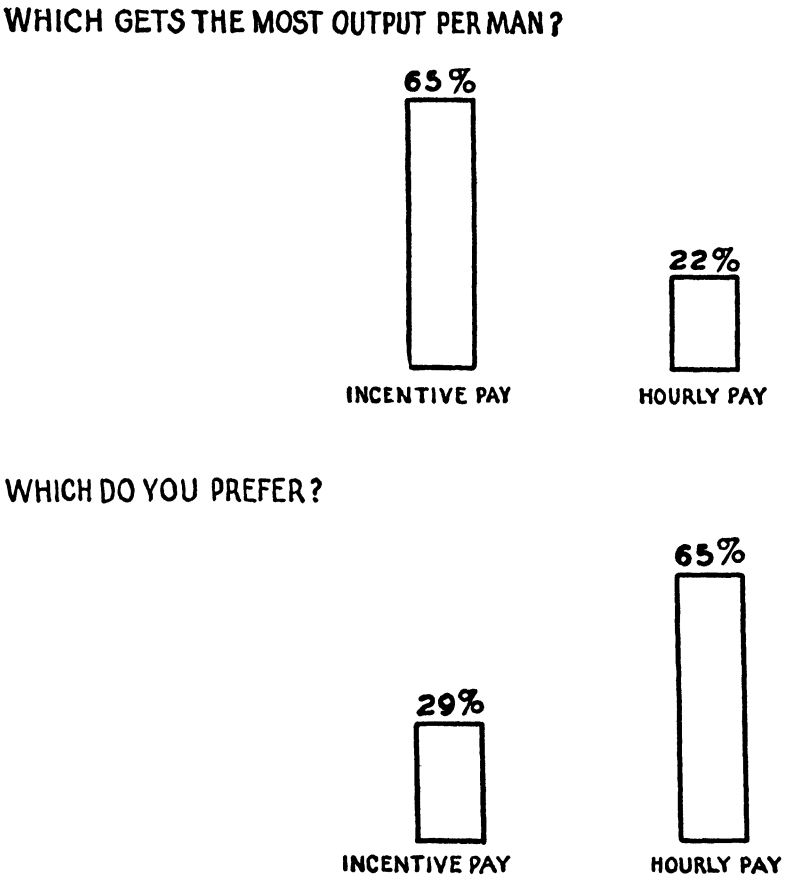


Figure 4. Workers Acknowledge that Pay Geared to Output Raises Production but a Wide Majority Prefer to Work on Hourly Pay *

pay results in the most output per man, but the same percentage prefer hourly pay to incentive pay. The ratio of preferences for *hourly* pay was found to be 74 to 20 in the case of *hourly* workers; 59 to 36 in the case of

* By permission, from *Public Opinion Index for Industry*, Opinion Research Corporation, 1949.

workers *already on incentive pay*. These findings are interpreted as showing that "*as useful as incentive pay is in raising output, it does not in itself solve the problem of obtaining workers' cooperation. In some circumstances it may intensify that problem*" [1] (19, p. 18).

REASONS GIVEN BY WORKERS FOR RESTRICTING OUTPUT

It is apparent that the findings and conclusions from surveys bearing upon employee attitudes towards wage incentives are not in complete agreement. Differences in population samples, in the forms of questions, and in other conditions discussed in Chapter 12, help to explain such discrepancies. The situation is further complicated by the possible effects of lack of direct knowledge on the part of the worker of wage systems other than that under which he is employed. In general, too, the worker's preference for the system under which he is working, whether it be an hourly rate or a wage incentive plan, may reflect the influence of a deep-seated human characteristic, viz., *resistance to change*—the tendency (of each of us) "to fight against recognizing the necessity for changes that is apparent to everyone but ourselves" (14, p. 53). However, both day-to-day observations in industry and systematic studies of output restriction indicate quite clearly that the sources of employee discontent with wage-incentive systems and their administration are both numerous and complex in character.

Production is adjusted by the worker not only because of the human tendency to resist change, but also because of fear of rate cuts and resentment against speed-up; as a means of postponing layoffs; steadying employment, and stabilizing earnings (15). In addition, such factors as grievances, "hard feelings" toward management, and discouragement unquestionably interfere with maximum production (3, 17). Opposition to increased productivity, in the face of wage incentives, may result from the belief that profits are too high (29, 33); from the popularly phrased argument "*Why should I break my neck so that the boss's wife can have a second fur coat?*" (6, p. 82), reflecting the worker's opinion that if he produces more the company pockets the gain and he does not share fairly in the benefits of increased output (19). An effort to protect the interest of less competent fellow workers is at the base not only of union policies with respect to the restriction of output, but of voluntary restriction on the part of the individual workers (1). Lack of confidence in standards established by company rate-setters without direct participation of workers' representatives (29) is increasingly stressed, particularly by union leaders and members, as a reason for withholding effort under a wage-incentive plan (8).

The fact that such feelings and sentiments determine the attitudes

[1] Not italicized in the original.

of employees towards wage incentives is evidenced in the second annual nation-wide survey of what the worker really thinks conducted for *Factory* by the Opinion Research Corporation, in 1945 (32). As stated on page 5, 49 per cent of all the manual workers questioned were of the opinion that "*when a man takes a job in a factory he should turn out as much as he can.*" The opinion that he should "*turn out the average amount*" was expressed by 40 per cent of all manual workers. Workers who gave the latter response were asked, "*What do you think would happen if he turned out* MORE *than the average?*" The replies, summarized in Figure 5, reveal the extent to which some of the sentiments referred to above influence workers' reactions to wage incentives.

Question: **(addressed only to those who said "average amount"): What do you think would happen if he turned out *more* than the average?**

Answer:

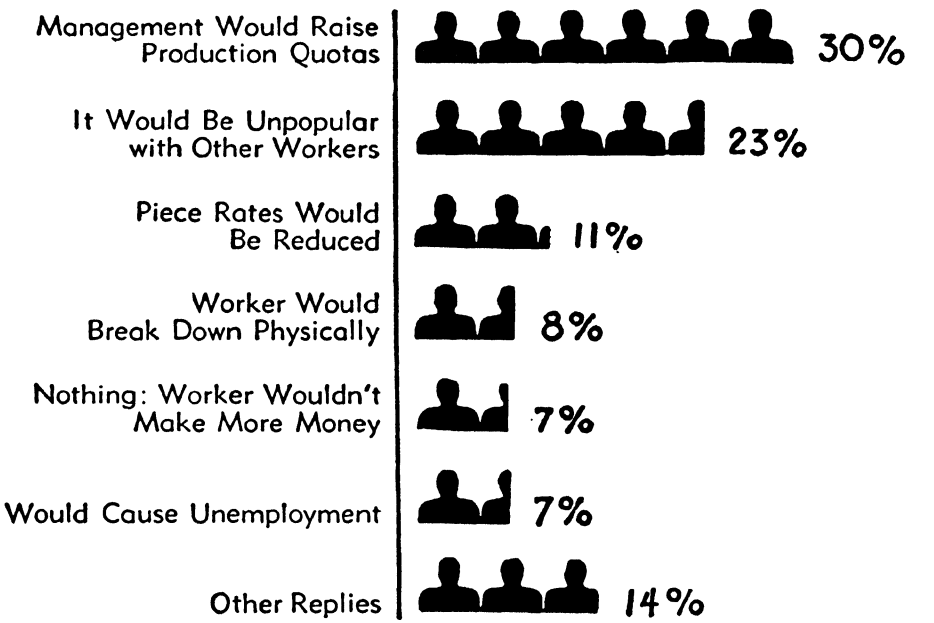


Figure 5. Reasons Given by Manual Workers for Withholding Output *

In a later study, conducted by the Opinion Research Corporation (19) for their Public Opinion Index of Industry in 1949, involving a nation-wide sample of 1,021 manual workers, 38 per cent expressed the opinion

* By permission, from "What the factory worker really thinks about productivity, nationalization of industry, and labor in politics," *Factory Mgmt. Mainten.*, (January) 1946, 104, 80–88.

that it would be *"bad for me"* if all workers in the plant turned out more work per hour than they do now. This study was made at a time when there had been a considerable number of layoffs in American industry. Workers were asked if layoffs were likely at their plant in the next three months or so. Of those questioned 27 per cent replied *"Yes, likely"*; 52 per cent said *"No, not likely"*; and 21 per cent expressed no opinion. Table 5 shows that those who fear layoffs are consistently more unfavorable in their views on productivity. The table also illustrates further the variety of reasons given by manual workers for withholding output.

TABLE 5. *Relation between Fear of Layoff and Attitude towards Increased Output* (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1949)

	Per cent Replying	
	Fear layoffs	*Do not*
Greater output would be bad for me	50	32
My company would just add production increase to profits	68	46
Work speed is too fast in my shop	25	16
Disagree that workers get chief benefit of production improvements	64	52
My company is not doing its best to give steady work	38	15

It is to be noted that seven per cent of the workers questioned in the *Factory* survey referred to above state that the *worker would break down physically* if he turned out *more* than the average. In this connection, it is of interest to speculate upon the functions of voluntary restriction as a protective device against overfatigue. Yoder (34, p. 380), for example, quotes the observation by Adam Smith that "workmen, when they are liberally paid by the piece, are very apt to overwork themselves, and to ruin their health and constitution in a few years." In contrast, Gardner points out that while "some theorists have even felt that workers were so 'money hungry' that they were apt to overwork themselves in piece-work, actually such simple faith in the incentive value of piece-work has rarely been justified in practice" (7, p. 150). Statements by women workers, cited by Davis, such as *"What's money compared with losing your health?"* or *"I've come to realize that a rest's worth more than overtime"* (5, p. 55), may represent expressions on the part of the worker of his psycho-physiological limitations in face of the demands of modern industry. In addition, the possibility cannot be overlooked that, in some instances at least, restriction of output results from a disinclination to

work, and that this sometimes explains slowdown and perhaps actual sabotage on the part of some workers.

Plant Studies of Output Restriction

It is apparent that many factors must be considered in an effort to explain why workers engage in output restriction. These will be considered further in later pages. For the moment, it is sufficient to note that *evidence from employee-attitude surveys clearly supports the opinion that unfavorable attitudes toward incentive wages are widespread among workers.*

Both day-to-day observations in industry and studies of voluntary restriction in industry provide additional evidence of *voluntary restriction of output* by employees in unionized and nonunionized plants; in plants with, as well as in plants without, wage-incentive systems. There is sound ground for the opinion that there is a large reserve of productive potential which is not tapped because of voluntary restrictions—because of "conscientious withdrawal of efficiency" achieved by slowdowns, bungling, and direct obstruction (28). It has become evident, as suggested by McGregor, that "*people often expend more energy in attempting to defeat management's objectives than they would in achieving them*" (17a, p. 323).

For many years unions have established a frank policy of controlling output in order to increase their power (12a, 13); to stretch out available work as a means of curtailing layoffs; to avoid reduction in piece rates, and to protect the worker from an undue expenditure of energy (16). Such restriction is well exemplified in the limitation of the number of bricks by the bricklayers' union; in the refusal of painters' unions to allow the use of a brush wider than 4½ inches; in the demand by plumbers' unions that pipe be cut and threaded on the job, etc. (31). Spray guns for painting are permitted in some cities, but not in others. "Make-work" practices in the building trades, "featherbedding" in the railroad industry, represent essentially other, although more indirect ways, of curtailing the productivity of individual workers with the avowed purpose of safeguarding job security; of furnishing employment to more union members, or of otherwise protecting the entrenched interests of organized labor (2).

A LARGE-SCALE STUDY OF VOLUNTARY RESTRICTIONS OF OUTPUT

Voluntary limitation of output is not, however, limited to organized workers. As Mathewson (17) has shown in an early study, it is practiced on an enormous scale by factory and office workers at diverse occupa-

tional levels in practically every industry. Evidence of this was obtained by means of first-hand observations and from interviews with approximately 350 workers and 65 executives. While making observations, the investigator actually worked as a laborer, machine operator, and in other occupations, living with working people in their home environments. Interviews included *formal* conferences with people who had been informed of the purpose of the inquiry and *informal* conversations with fellow workers. In addition to observations made by the investigator himself, a group of six workers co-operating in the study made a series of separate reports in the form of personal letters from industrial centers. Recorded in detail were 223 instances of obvious restriction. These were found in 105 establishments in 47 localities, representing 25 classified industries and 14 miscellaneous industries. Cases included two types, (a) those in which production was actually reduced and (b) those in which the intent to restrict was clearly evident, whether or not restriction actually resulted.

The nature of restrictions and the character of the underlying factors are well illustrated by data gathered in a machine manufacturing plant, where the investigator was one of a gang of three production workers, on a group bonus, who believed that if earnings rose above 95 cents an hour, the management would reduce rates. Although the men could easily have produced approximately twice as much work, output was intentionally restricted to the lower figure to prevent rate cuts. In another of the many illustrations of output restriction cited by Mathewson, workers on a conveyor line expressed their resentment of "speed-up" by throwing a piece of scrap tin into the works, or putting a can in crookedly, in order to stop the belt after it had been speeded up 33⅓ per cent by a "cheese engineer" (17, p. 22).

ILLUSTRATIONS OF OUTPUT RESTRICTIONS

Repeated observations in industry confirm Mathewson's conclusion that restriction of output, and a strong shop opinion supporting it, exist in some of the most enlightened and efficiently organized industries (30). As Drucker has pointed out, open restrictions on efficiency and productivity, as represented in restrictive union rules and "featherbedding" practices, "are only the part of the iceberg that is above the water. Much more important are the invisible, unwritten, informal restrictions decreed by the custom and common law of every plant" (6, p. 83), as reflected in ironclad arrangements to restrict output; a tacit setting of production quotas which a worker would be ill-advised to exceed; withholding from management of new ways or gadgets developed by workers for doing the job better and faster, etc.

Attempts by management and supervision to overcome such informal restrictions may not only strengthen them but even be used by the workers to enforce their own production code. This is illustrated, according to Drucker, in the experience of a large Midwestern candy plant, where packers are paid on a sharply rising scale for *any day's* output above the standard. Each team of packers manages to turn out a truly phenomenal number of filled candy boxes one day each week, thus earning the highest bonus. On all other days each team turns out just enough not to get "docked." During the day allotted to a team for record production—always the same day each week—all the other teams in the packing room are expected to help the day's high producers! In this way each worker manages to earn a good deal more than if he were to exceed his quota every day by a small amount, and at the same time this system prevents any increase in the production quota. The "bosses" in the plant have learned that an attempt to break the production code will bring serious trouble, and it is possible, according to Drucker, that they also sympathize with the workers' attitude and may themselves share the workers' fear that increased productivity will cost some of them their jobs.

AN INVESTIGATION OF RESTRICTION OF OUTPUT IN A MACHINE SHOP

The illustrations presented immediately above represent more or less casual observations of restriction, as contrasted with the systematic study by Mathewson referred to in earlier pages. A later and comparable study by a "social scientist," applying to a single shop, appears in the detailed observations and analysis of output restriction by Roy (21), who worked for 11 months in 1944 and 1945 as a radial drill operator in the machine shop of a steel-processing plant. For 10 months of this period Roy kept a daily record of his "feelings, thoughts, experiences, and observations" and of conversations with fellow workers. These were noted from memory at the end of each workday. Simultaneously, he openly recorded his own production in the shop.

Observations made by Roy led to the conviction that *systematic restriction of output was the rule of the shop.* Conversations with other workers led to the opinion that *fear of price cutting* was largely at the base of restriction in the shop. Workers here firmly believed that if they exceeded their quotas—where this was possible—"the consequence would be either reduced earnings for the same amount of effort expended or increased effort to maintain the take-home level."

Jobs in the shop were categorized by workers into two groups, viz., "*gravy*" jobs—on which the "bogey" or quota could be attained—and "*stinker*" jobs—where standards were such that the "bogey" could be

reached only with great difficulty, if at all. Experience in the shops suggested that "operators, ignoring finer distinctions in job timing, sort jobs into two [mental] boxes, one for 'gravy' jobs, the other for 'stinkers'" (21, p. 429). Support of this "hypothesis" is found in a bimodal distribution of output, observed both in the investigator's own work and in the shop as a whole, which suggests, according to Roy, that output restriction can be classified into two major types, viz. "quota restriction" and "goldbricking." *Quota restriction* is a limitation on "gravy" jobs in order not to exceed set maximums and thus to avoid cuts in piece rates. *Goldbricking,* by contrast, appears to be a "holding back" or failure to release effort when the "bogey" appears to be unattainable.

During the ten-month diary period, 75 different piece-work jobs were assigned to Roy. He reports that he "made out" in only 31 of these. Of the 31 jobs, 20 afforded quota earnings of $1.25 an hour or more. By extending his efforts past quota limits to find the earning possibilities of the jobs, Roy discovered that on 16 of the 20 quota jobs he could have earned more than $1.30 per hour. By including four additional jobs on which he made "slow starts," and which were not assigned again, Roy found 20 jobs with excess-quota potentials capable of yielding $1.30 per hour or more.

Table 6 presents data on five of the 20 jobs which showed potentialities of yielding hourly earnings in excess of $1.30 per hour. Waste time and loss in earnings is computed for each job according to maximum earnings indicated in each case by actual tests and according to the number of hours devoted to each job. "For instance, operation 'pawls,' which leads the list with 157.9 total hours worked, showed, by test, possibilities of earnings of $1.96 per hour. At potentialities of $1.96 per hour, over 36 per cent of each hour is wasted when the operator holds his turn-in to $1.25 an hour. Total waste time in the 157.9 hours expended on the pawls could then be computed at 57.2 hours or over a third of the time actually put in. Earnings might have been, at $1.96 per hour, $309.48; whereas, at the quota level of $1.25, they would have been but $197.38—a loss of $112.10" (21, p. 433).

Waste time for the 20 jobs was found to total 286 hours, or 36.4 per cent of a total 786.5 hours actually put in on them. This represents, *on the jobs under consideration,* a wastage of 2.9 hours on each eight-hour day put in, or a total loss of 35.75 days out of 98.3 actually worked. With potential earnings of $1,584.43 for the 98 days and with quota earnings at $983.18, the wage loss to the worker, Roy points out, would be $601.25, or $6.12 per day, or 76½ cents per hour. "By this logic, if the worker could 'cut loose' on the 20 jobs listed, he would average $2.01 an hour instead of $1.25. And since the 786.5 hours actually put in on the 20 jobs repre-

sented 58.2 per cent of the 1,350.9 total piecework hours for the period, and 42.5 per cent of a grand total of 1,850.5 hours that included all non-piecework activity as well, it is evident that losses resulting from quota restriction alone could represent wastage of considerable magnitude—an over-all hourly income loss for 1,850.5 hours of 32½ cents an hour!" (21, p. 434).

TABLE 6. *Time and Earnings Losses on Operations with Potentialities of Yielding Hourly Earnings in Excess of $1.30 per Hour* (after Roy)

Operation tested	*Total hours worked*	*Maximum earnings (per hour)*	*Waste time (per hour)*	*Total waste time (in hours)*	*Potential earnings*	*Earnings at $1.25*	*Loss in earnings*
Pawls	157.9	$1.96	0.3625	57.2	$309.48	$197.38	$112.10
Pedestals	120.5	1.71	0.2625	31.6	206.08	150.63	55.43
NT bases	111.0	2.55	0.5125	56.9	283.05	138.75	144.30
Sockets	75.8	1.76	0.2875	21.8	133.41	94.75	38.66
Gear parts	24.0	1.83	0.3000	7.2	43.92	30.00	13.92

The investigator recognizes that generalization applied to the drill line from observation of his own behavior is valid only if it could be established that he was an "average" performer, and that the jobs assigned to him were characteristic of those assigned to other operators. Comparison of his performance with that of other men in doing the same kind of work on the same shift leads him to conclude that he was, in fact, an "average" worker. Furthermore, the appraisals made in Table 6 were checked by an analysis of his actual production records to determine the *actual* amount of time wasted by him through quota restriction. The average time *actually* wasted through *quota restriction* for a six-months period proved to be 1.39 hours out of every eight. If, Roy points out, his wastage of about two hours a day on quota restriction during the last two months of employment is accepted as characteristic of the behavior of more seasoned operators, efficiency (in the shop) would be at the 75-per-cent level, with immediate possibilities for a 33.3 per cent increase in production in quota jobs (21, p. 442).

A summary of his observations—particularly with respect to quota restriction—leads Roy to hypothesize that "if organizational changes were instituted to induce operators to abolish quota limits and 'open up' production, the writer's discovered maximums would be quickly raised to higher levels by the efforts of the group" (21, p. 435). Similar analyses of "goldbricking" practices on "non-make-out piece work" and on "day work" are interpreted by Roy as supporting the above generalization and the further conclusion that "the concept of 'cultural drag' might be more

descriptive than 'cultural lag' in depicting the trailing of some of our industrial practices behind technological advance" (21, p. 442).

Exception might well be taken to such generalizations on the ground that the observations were limited to a single shop, by a single and possibly "biased" observer. However, as shown in Figure 5, a considerable proportion of workers surveyed by the Opinion Research Corporation for *Factory* were of the opinion that management would raise production quotas if the worker turned out more than an average amount. There also appears ample evidence from day-to-day observation in industry to support the view, as colorfully stated by Hard, below, that the fear of price cutting has frequently been justified by the experience of the worker.

> "Management sends a time-study man to observe a worker at a machine. This lofty character has a watch which divides a minute not merely into 60 parts but into a hundred. With its help he decides the exact length of time required for a certain operation.
>
> "So the worker gets to work. He 'speeds up.' He beats the time-study man's time. He climbs, let us say, to $1.50 an hour. *Then management cuts the number of cents per operation till the worker is earning no more going fast than he used to earn going slow.*
>
> "This has happened to a million workers in American industry. To my knowledge, it has happened repeatedly ever since the war began. It makes workers wary. It makes them hold back. It causes great masses of them habitually to work way below their productive power. *Here is the greatest single loss of human energy in American life*" (11).

The Decline of "Economic" Man

In general, studies of the type cited above give continuing support to the conclusions reached by Mathewson, as a result of plant observations and interviews with management representatives, that

> "1. Restriction is a widespread institution, deeply intrenched in the working habits of American laboring people.
>
> "2. Scientific management has failed to develop that spirit of confidence between the parties to labor contracts which has been so potent in developing good-will between the parties to a sales contract.
>
> "3. Underwork and restriction are greater problems than overspeeding and over-work. The efforts of managers to speed up working people have been offset by the ingenuity of the workers in developing restrictive practices.
>
> "4. Managers have been so content with the over-all results of man-hour output that only superficial attention has been given to the workers' contribution or lack of contribution to the increased yield. Attempts to secure increased output have been marked by traditional and unscientific methods, while the workers have held to the time-honored practices of self-protection which antedate time study, bonus plans, and other devices to encourage capacity production.

"5. Regardless of how much the individual may or may not desire to contribute a full day's work, his actual experiences often turn him away from good working habits" (17, p. 146).

The existence of antagonism on the part of workers to the concept of wage incentives and the operation of wage-incentive plans does not represent proof that what is being attempted is essentially wrong (18). Neither does employee antagonism represent proof that the employee is not motivated by the desire for more money to be used in satisfying basic material needs and in raising his standard of living. Nevertheless, it has become increasingly evident that the effectiveness of the financial incentive, as embodied in piece-rate and similar systems, can be reduced to nil if wants and needs not gratified by the monetary reward are thwarted in the formulation or administration of the plan. Group cohesion in the restriction of output under wage-incentive plans, such as that observed by Mathewson and Roy, and facts uncovered in other studies, have completely destroyed the myth of the employee as an "economic man" responding with ordered simplicity and as a "rugged individualist" to the pressure of material needs. "Certainly," write the Selekmans, "by now everyone agrees that a multiplicity of social institutions condition human behavior; that the completely rational individual, propelled by self-interest, making all his decisions in daily living by calculations of incremental utility, is a figment of the scientific imagination" (22, p. 114).

Consideration of the problems of productivity, satisfaction, and morale in industry has led many thoughtful observers to the opinion that a predominantly economic orientation toward employee motivation, as reflected particularly in the industrial engineer's emphasis upon wage incentives, overlooks the complex nature of human motives (20). Investigations described in Parts III and IV of this volume have made it apparent that the desire for money is only one of many motives which influence production and determine the satisfaction derived by the worker from his job (10). It has become increasingly evident that the worker seeks more than a financial reward from his job, and that the extent to which other needs and wants are satisfied both has a bearing upon how well a wage-incentive system will work in a particular situation, and exercises a *direct* and frequently predominating influence upon employee performance and satisfaction at work, and upon employee morale.

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Part 2

THE BACKGROUND OF MOTIVATIONAL THEORY

4

Motives, Attitudes, and Incentives

DURING the early 1920's Whiting Williams, fresh from a job as Personnel Director and Vice-President of the Hydraulic Steel Company, donned overalls and obtained employment in a variety of jobs on the railroads, in the mines and factories of this country and Europe (82, 84). Underlying this move was an interest in obtaining a first-hand view of the attitudes of workers toward their jobs, their associates, their managements, their home problems, and toward other groups, conditions, and activities which might influence their desire to work and their interest in work. One conclusion derived from his experience as a workman was that a fundamental factor in man's attitude toward his work is the pay check. However, according to Williams, the pressure of the week's indispensable pay check is only one of a series of wants for which fulfillment is sought on the daily job, and the financial incentive represents only the beginnings in tapping the resources of the worker. In *Mainsprings of Men*, Williams reports a personal experience to illustrate this important fact.

> *" 'Charley, how'd you like to join the millwright gang?' the foreman called to me* [*Williams reports*]. *He appeared to think he was offering a distinguished honor—in spite of his explanation that it paid only 2 cents an hour more. The change was accepted with indifference; surely so slight an increase in pay could not mean much of a promotion. Half an hour sufficed to prove my error. As I came by my former companions, carrying oil can and wrench, I made a veritable sensation! Every one of these old friends leaned upon his shovel and wiped the sweat and dirt out of his eyes while he exclaimed:*
>
> *" 'Hey, Boodie! Where you catch-em job? Meelwright gang? Oil can and wr-rench! No more . . . shovel! My Ga-wd!'*
>
> *"From that moment it was possible to talk familiarly with the first and*

second helpers, those experts who peer through their colored spectacles into the changing conditions of the furnace's 'bath' of 'hot metal' up to the instant of the 'tapping.' For three weeks I had puzzled why these men would have nothing to do with me. Now we were suddenly become pals! But this was not all. My elevation brought honor not only inside but outside the plant. Without doubt, if my wife had lived nearby, she would have received the congratulations of the wives of the unskilled laborers: 'Your man he catch-em fine job!' And not one of them but would have observed closely, the next day, to see whether she continued to speak to them!" (83, p. 56).

In a series of such dramatic presentations Williams drew forceful attention to the significance of the "desire for standing among fellow workers" and of other similar wants which the worker brings into the factory or which arise in the course of work in the plant. Consideration of the industrial scene by many thoughtful observers, e.g. Parker (54), Debreuil (18), Tead (67), Mayo (45, 46), and the day-to-day experience of management with problems of productivity, satisfaction and morale, have also focussed attention upon the necessity of determining, as accurately as possible, the nature and strength of motives which operate in releasing the energies of workers.

THE NEED FOR THEORETICAL CONTEXT

The identification of motives operating in industry or elsewhere, and the determination of their strength once they have been identified, present many difficulties. Effective results can be achieved only through systematic research conducted within a sound theoretical context. Theory is important because it supplies a frame of reference for the integration of specific findings, i.e., a framework of analysis which makes it possible to comprehend a vast mass of facts and observations (17, 56), and for arriving at acceptable generalizations or principles. Furthermore, theory is a source of propositions or hypotheses to be tested by further experimentation in order to reinforce and expand generalizations or principles derived from research.

The purpose of Part II of this volume is to consider briefly the theoretical background of experimental studies and surveys in the area of motivation and morale. Familiarity with theory is desirable not alone from the viewpoints outlined above, but also because, in the absence of exact facts, decisions based upon acceptable theory can be more productive than those based upon more questionable theory (5). For the student of industrial psychology the discussion of theoretical background is necessary as an aid in the comprehension of underlying problems and in the design of research on motivation and morale. The discussion of motivation and morale in terms of psychological theory can also be of interest

to readers from industry. On the other hand, *nonprofessional readers may prefer to bypass some of the more detailed discussion of theory, particularly since it involves consideration of terminological distinctions sometimes described as the "weird jargon" of the social scientists* (80, 81). *Nevertheless, a consideration of the relations among motives, attitudes, and incentives, on pages 76–79, of the "high-lights" of Chapter 5, especially pages 83–85 and sections dealing with industrial implications, and of the concluding portion of Chapter 6 (pages 116–121), is recommended to such readers.*

The Instinctive Basis of Economic Activity

In their search for basic motives in work, a number of psychologists, economists and sociologists—among them Patten (55), Veblen (74), Trotter (73), Tead (67), DeMan (19)—pounced upon *instinct* as the prime mover in economic activity. This emphasis on the instinctive and presumably impulsive basis of human conduct represented a reaction against earlier viewpoints, reflected in the concept of the "economic man," which regarded behavior as wholly rational and volitional in character (35). Proponents of instinct as the "prime mover" accepted as a fundamental assumption McDougall's *early* assertions that *"instinctive impulses determine the ends of all activities and supply the driving power by which all mental activities are sustained,"* [1] and that "without them the human organism would become incapable of activity of any kind; it would be inert and motionless like a wonderful clockwork whose mainspring had been removed or a steam engine whose fires had been drawn" (40, p. 44).

The significance attached to instincts in industry is perhaps best illustrated in Parker's studies of motives in economic life (54). Man, according to this economist, "is born into this world accompanied by a rich psychical disposition which furnishes him ready-made all his motives for conduct, all his desires, economic or wasteful, moral or depraved, crass or aesthetic" (54, p. 133). Economic, as other forms of activity, is motivated by the demand for the realization of these instinctive wants, which are the efficient and tried guides of conduct, representing "the result of endless experiments of how to fight, to grow, to procreate, under the ruthless valuing mechanism of the competition for survival" (54, p. 135).

Every instinct,[2] according to Parker, is subject to the Freudian for-

[1] Not italicized in the original.

[2] The list of instincts used by Parker include sixteen, classified as follows: Instinct of gregariousness; instinct of parental bent; instinct of curiosity; instinct of acquisition; instinct of fear and flight; instinct of mental activity; the housing or settling instinct;

mulae of repression, rationalization, and sublimation. If balked, it will break out in nervous disorder. If properly directed, its motive force may be sublimated into socially beneficial channels (20). If an environment interferes with the play of these instincts, the human organism may undertake a complete, tenacious, and destructive revolt against it—a revolt which, in industry, may express itself in the form of mild restriction of output, of severe sabotage, or of a rising against the very form of organization itself. This revolt expresses not willful, responsible behavior, but a stereotyped reaction against these conditions. The forces which interfere with instinctive expression in the industrial environment include monotonous work, dirty work, specialized work, automatized work, the menial role of labor, insecure tenure of the job, injustice in hiring and firing, seasonal employment, etc. (20, p. 48). Unhealthy fixations, irrational inferiority obsessions, are made part of the worker's personality by the presence of these conditions in his daily task. Inferiority compensation finds its outstanding expression in the strike, the violence of which varies directly with the psychic annoyance, and which, in large part, reflects the mental ill-health generated by the worker's experience in the plant. The ultimate effect of the interplay of these forces is a "true psychosis, a definite mental un-balance, an efficiency psychosis, as it were," which cannot be cured by "our present moralizing and guess-solutions" or by "a ten per cent wage increase" (20, p. 50).

The defence of the instinct hypothesis by Parker rests on a study of activities and conditions of work of migratory workers—the casual laborers—of the western and northwestern parts of the United States. However, according to this author, conflict appears wherever industrial conditions fail to satisfy the instinctive wants.

INADEQUACIES OF THE INSTINCT HYPOTHESIS

In contrast to the popularity, not so many years ago, of the instinct hypothesis, most current discussions of motivation relegate instinct to a relatively unimportant position in the consideration of *human* motivation. The questions to be answered in deciding whether behavior can be regarded as instinctive center around the extent to which an organism exhibits behavior which is unlearned (68), and the identification of those particular aspects of its behavior which are unlearned (32). Examples of complex behavior which the organism has had *no opportunity* to learn can easily be found among lower animals, insects (55a), birds (58a),

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instinct of migration; instinct of hunting; instinct of anger; instinct of revolt at confinement; instinct of revulsion; instinct of leadership and mastery; instinct of subordination; instinct of display; instinct of sex.

fishes (68a), and some mammals, e.g., rats (2a). However, the role played by environmental determiners in the organization of human behavior, even in connection with biological processes, is so important that it is very difficult, if not impossible, to point to instances of *human behavior* which meet the criteria of instinct.

Hayes (29), for example, points out that the use of the concept of instinct as an explanation for human behavior is particularly hard to defend when behavior has relevance to social situations. Illustrations of the systematic variation of human motives and attitudes under different cultural patterns can be found in the work of anthropologists, such as Benedict (2b). The weight of anthropological evidence on the occurrence of competition, to select but one example from many, leads to the conclusion that there is by no means a "competitive instinct" among humans as James, for instance, would have us believe when he speaks of "emulation or rivalry" (31, II, p. 408). The same may be said to be true of the other social behaviors which have from time to time been included in lists of instincts postulated by James (31), McDougall (40), Parker (54), Tead (67), and others.

Varieties of Motives

It is now generally acknowledged that the tendency of earlier writers to regard any behavior as "explained" once it had been labeled "instinct," represented an oversimplification of the problem of human motivation both in industry (79) and in other aspects of daily life (47). As a result, attention has been directed toward a broader systematic approach (32) which regards adult motives as infinitely varied and complex (2), and as derived from the operation not alone of an internal system, but from the interaction of the individual and his environment.

In the development of current views of motivation, the many instincts of James (31) and McDougall (40) were questioned and also reduced in number by Watson (77). An even more radical position was taken by Kuo (37a) who suggested that the concept of instinct be done away with entirely in discussing the behavior of *any* species. However, although the work of Cannon (8), Coghill (15), Loeb (38), Richter (58), Sherrington (61), Stone (65), and others has contributed to a more detailed analysis of *biological mechanisms* in behavior, it has not led to the abolition of the concept of instinct. Many psychologists concerned with motivation make use of the concept, but also take the position that instincts belong to a broader class of behavior, associated with the operation of biological mechanisms, commonly referred to as *primary motives*. The multiplicity of complex human motives allegedly derived from the latter by processes of differentiation, integration, condi-

tioning, sublimation, substitution, etc., as the result of the interaction between organism and environment, are generally classified as *secondary motives*. While this may be considered an oversimplification of the situation, it nevertheless appears to represent an accurate condensation of one major trend in the current approach by psychologists to the problem of motivation.[3]

NEEDS, DRIVES, AND MOTIVES

One outcome of this trend has been the emergence of classifications of dynamic mechanisms designated by the terms *need, drive,* and *motive.*[4] Although these are frequently used interchangeably in discussions of motivation, fairly sharp and systematic distinctions have been made in the case of the so-called *primary* or *biological* mechanisms.

The basis for the term *need,* in the consideration of such mechanisms, lies, in general, in the fact that organisms are not closed systems, completely independent of their environment. They expend energy and to survive they must maintain in their bodies a supply of the materials from which that energy is derived. Even more critical for the continuation of an organism's life are the many physical and chemical characteristics of its tissues which must be maintained within very narrow limits, e.g., the acidity of the blood, the body temperature, the water content of the blood, the oxygen supply of the blood and other tissues, to mention a few. An organism which momentarily lacks any of the material necessary for the maintenance of life is said to be in a state of need. *Need,* therefore, is used rather precisely, in a *physiological* sense, to designate states of bodily *deficit* or the approach of physical and chemical conditions to those limits beyond which life is not possible (47). It is, however, possible also to conceive of real or imagined deprivations in a purely *psychological* context where no question of organic survival is raised. Such analogues of the physiological deficits are also called *needs* [5] (47, p. 437).

Many conditions of need are accompanied by activity or behavior on the part of the organism. The correlation between need and activity is, in some cases, so marked that the behavior of laboratory animals can be controlled by withholding food or water and thus artificially inducing

[3] Variations of the basic pattern include such classifications as Woodworth's transformation of "mechanisms" into "drives" (85), Morgan's "biogenic" (or "viscerogenic") and "psychogenic" needs (47), Tolman's "superordinate" and "subordinate" goals (71), Lewin's "true needs" and "quasi-needs" (39), Stern's assumption with respect to the conversion of "phenomotives" into "genomotives" (63), Allport's concept of "functional autonomy" (2), etc.

[4] Along with these there is frequent reference to *wants, wishes,* and *desires.*

[5] The distinction here is between what are frequently designated as *biogenic* and *psychogenic* needs, respectively.

a need state. It is possible, in general, to distinguish two aspects of activity related to needs. One aspect is related to the fact that organisms show a simple increase in the number and vigor of their movements or, as some prefer to say, they become restless or act randomly, in an *undirected* fashion. This phase of need-related activity is said to give evidence of *drive*, since it seems to represent the release of organic energy without any particular direction or guidance (25, 30).

Under normal conditions this undirected behavior gives way to behavior which can be viewed as *oriented toward* the achievement of some end state or *goal*. Characteristic of this *directed* behavior is the fact that the organism does not behave randomly, but in a more or less persistent fashion performs a series of acts appropriate to the achievement of the goal. Within the bounds of such a theoretical approach, the term *motive* is used to describe any condition of the organism which permits the appearance of such *directed behavior* (59, 66). This definition makes it possible to designate behavior as motivated even in situations where it is not possible to identify corresponding needs. It is important to note that the condition referred to as a motive is not simply the need existing or presumed to exist at the time the motivated behavior occurs. Also necessary for the appearance of directed behavior are conditions facilitating muscle co-ordination, sensory discrimination and, in some cases, the ability to solve problems and to remember solutions accomplished earlier (71).

The richness and complexity of human *secondary* or *"derived"* motives, together with current inability to identify the corresponding needs with the precision possible in the case of physiological needs, produce an atmosphere in which motivational terms are often used so loosely as to reflect little more than the personal preferences of various writers (66). Thus, in discussion of complex motivated behavior in social situations, one psychologist speaks of a *need* for recognition (49, p. 145); another of a *drive* for recognition (57, p. 275), while a third discusses striving for status in a context which suggests that a status *motive* exists (27, p. 168). In succeeding sections of this volume, the terminology favored by each investigator will be used in reporting his findings and point of view with respect to the nature and sources of motivation. The reader will also find instances in which these terms have been used by the author as a cluster of concepts in the interpretation of findings from diverse studies.

THE CLASSIFICATION OF MOTIVES

There is considerable agreement among psychologists in categorizing motives as *primary* or *secondary* in character, but there are many detailed variations among classifications of motives within each of these

major categories. Systematic classifications are to be found in the literature on motivation, including publications by Maslow (44), Murray (49), Tolman (71), Morgan (47), and others. A few illustrations, taken from such classifications, are cited below.

It is generally agreed, as stated above, that the *primary* motives are those which serve some biological function for organisms or species. Commonly included in classifications of primary motives are those involved in obtaining nourishment and those involving reproduction. Representative of other motives classified as primary are elimination, sensory experience, and exploration.

There is general agreement that *secondary* motives are largely *social* in nature. Frequently mentioned as belonging to this class are motives to achieve *status* (or some equivalent); to *affiliate with* other individuals or *groups*, and to achieve some measure of *self-esteem*.

Several psychologists, e.g. Newcomb (52), have subdivided the secondary motives so as to produce a third class, referred to as *personal* motives. Personal motives are regarded as generally social with respect to their derivation, but are distinguished from motives common to all the members of a group in that they are involved in the pursuit or maintenance of standards and ideals which are "private" and peculiar to the individual and not *shared* with most other members of the group.

THE CONCEPT OF PREPOTENCY

There is no right (in the sense of universally accepted) classification of motives, although there is some similarity in the patterning of classifications favored by individual psychologists. Moreover, as stated earlier, classifications of human motives are generally characterized by an emphasis upon the role of secondary or "social" motives in the behavior of the individual—of motives which arise out of or are structured by the individual's identification with one or another group (48, 69). Furthermore, the position has been taken that there are differences in the order of strength or *prepotency of motives* (44, 49). In some instances, the order is regarded as independent of the classification of motives as primary or secondary. In others, as in the case of the classification of "needs" by Maslow, these are said to arrange themselves in a *hierarchy of prepotency*, from the most elemental (*physiological needs*) to those (*higher*) needs which underlie the higher development of the individual (44). According to Maslow, "the most prepotent goal will monopolize the consciousness and will tend of itself to organize the recruitment of the various capacities of the organism. The less prepotent needs are minimized, even forgotten or denied. But when a need is fairly well satisfied, the next prepotent ('higher') need emerges, in turn to dominate

the conscious life and to serve as the center of organization of behavior, since gratified needs are not active motivators" (44, p. 394).

MOTIVATION AS A STATE OF TENSION

In dealing with problems of motivation in industry there is wide acceptance of the view—inherent in a number of motivational theories—that seeking or avoidance (i.e., the action, the behavior) is associated with the existence of a *tension system*, or *state of disequilibrium*, which the organism seeks to restore to a state of rest or balance. In this sense, the terms "tension system" and "condition of disequilibrium" usually refer to the conditions previously referred to as needs, while "the terms 'motive' and 'motivation' are . . . used to refer to the inner directing processes which determine the movement or behavior towards ends or goals. They represent conditions of tensions or disequilibrium within the person, with the ensuing behavior serving in some measure to relieve the tension or the disturbed equilibrium" [6] (34, p. 217).

The Nature and Role of Attitudes

As suggested earlier, a major outcome of recent developments in motivational theory presented in this chapter has been to focus attention upon a large variety of motives, drives, and needs which are taken to represent the mainsprings of human behavior. It is increasingly recognized that the solution of problems of production and morale in industry involves the close consideration of the wants of the worker which reflect either previously established tension systems in the individual or the effect upon him of the immediate social situation.

The possibility of identifying such wants is complicated by the fact that motivation as such—or more specifically motives, drives, and needs—cannot be observed directly. Experimental inquiries have disclosed tissues, glandular mechanisms, and hormones which are involved in motivated behavior (3, p. 36). In general, however, it is possible only to infer the existence of drives, needs, and wants (34, p. 217), in part, from observed changes in behavior, especially in controlled experimental situations; in part, from *measurements of attitudes* which express the way in which and the extent to which given objects or situations are felt to satisfy wants, needs, desires, etc.

ATTITUDES AND BEHAVIOR

As in the case of other psychological concepts, there is far from uniform agreement in defining the term attitudes and in the delineation

[6] Generally excepted from such treatment are "lower-order" activities, such as reflex response, directly referrable to specific bodily mechanisms "triggered" by particular environmental stimuli without the intervention of motives, drives, or needs.

of psychological processes involved in the formation and expression of attitudes.[7] Common to most definitions is the view that an *attitude* is a fundamental *state of readiness* for motive arousal or a reaction in a characteristic way to certain stimuli or stimulus situations (52, 62). Furthermore, it is commonly assumed that attitudes are charged with *affective* or *value properties* in varying degrees (60). Thus, according to Kornhauser, "An attitude is a more or less specific tendency or readiness to react toward (or away from) an object, person, or relation; it is a particularized motivation or 'set,' usually with marked favorable or unfavorable feelings toward the object of the attitude" (34, p. 218).

From this point of view, attitudes may be "conceived as integrations mediating between the fundamental psychological processes and reactions" (37, p. 131). As a result, psychologists have used the *measurement of attitudes* as a device both for *making inferences concerning* motives and as *predictors of behavior*. It is from this point of view, for example, that the measurement of *attitude toward layoff* has been viewed as providing information concerning the *need for security*. Likewise, the determination, by means of attitude surveys, that attitudes toward wages are unsatisfactory has been interpreted to mean that a change in wage rate will stimulate basic drives leading to desired conduct in the way of higher production.

There has, of necessity, been much oversimplification both in making inferences concerning motives and in prediction from the measurement of attitudes. Furthermore, as will be made clear in Chapter 12, there is reason for skepticism concerning the effectiveness of available attitude measures as predictors of behavior. Nevertheless, both verbal and behavioral measures of attitudes have yielded valuable information concerning the "feeling attachments" or "affective properties" of attitudes and have thereby provided a basis for a more complete understanding of what workers consider to be important or unimportant in the specific conditions, policies and practices of the industrial plant.

The fact that attitudes, motives and conduct are closely interrelated has suggested the possibility that a change in attitudes can induce a change in behavior, by influencing the direction of motivation or through actual modification of "the organized pattern of motivation." An orientation toward the modification of attitudes as a way of influencing behavior is found in Allport's early view that the concept of attitude "is probably the most descriptive and indispensable concept in contemporary psychology" (1) and in the definition, by Bogardus (4) and Folsom (22),

[7] Contemporary definitions of attitude are to be found in Allport (1, 2), Cattell (11, 12, 13), Newcomb (52), Sherif and Cantril (60), and Krech and Crutchfield (37).

of social psychology as the scientific study of attitudes (21). The significance of attitudes in relation to social conduct is also seen in more recent approaches to the study of industrial and social behavior. Thus, according to Sherif and Cantril, "the basic psychology of ego formation [8] is essentially the psychology of the formation of attitudes" (60, p. 94). Similarly, from the viewpoint of the "perceptual" approach [9] in the consideration of psychological processes, changes in attitudes associated with differences in the perception of a social situation are viewed as having a distinct bearing upon purposive behavior (9, 28). Furthermore, the application of field theory [10] to the reactions of individual members of groups is, according to Brown, "concerned with the effect of field structure on the individuals' attitudes toward the groups in which they have membership-character and toward other groups" (6, p. 97).

Presentation of the above view of the relation between changes in attitudes and conduct must not be viewed as suggesting that modification of attitudes in a desired direction is invariably—or even generally—accompanied by a change of behavior in the desired direction. Thus, for example, the development of more favorable attitudes toward Negroes on the part of an employer will not necessarily be followed by an immediate change in policy with respect to hiring Negroes. It is not to be expected that the improvement of employee attitudes toward a wage-incentive plan will invariably be followed by a stimulation of motives to the point where the employee "works harder" in order to turn out more production.

In some instances, such transition to conduct is not accomplished because the "state of readiness" or "susceptibility to stimulation capable of arousing the motive" is not sufficiently strong to compete with other attitudes associated with other objects, e.g., the small working group and its production norms, the union and its policies, etc. Other factors help to account for the absence of a one-to-one relationship between attitude and action. In fact, a pressing problem in both theoretical and applied psychology is the arrival at a better understanding of the mechanisms through which the transition from attitude to performance can be facilitated. However, as will be seen from later chapters, evidence exists that this can be accomplished in industry, as in other situations. Furthermore, even when behavior is not changed, satisfaction and adjustment can be increased through programs designed to mould or modify attitudes because of the effects of such programs upon the affective aspects of attitude (50).

[8] See pages 98–10
[9] See pages 93–98
[10] See Chapter 6.

The Nature and Function of Incentives

A major objective in the direction and control of human behavior is to influence attitudes and release, direct, or control motives which will result in desired activities. As Bird has suggested, "we must have knowledge of the forms of social control which will release and facilitate desired activities and which will reduce behavior likely to handicap success in cooperative activities" (3, p. 61). Specifically, the problem, from the viewpoint of management, is to release those psychological forces which will lead the employee to participate willingly, fully and satisfyingly in furthering the production aims and other goals of the industrial organization.

The conditions which start or initiate, decrease or speed up, or partially inhibit and direct activities are commonly known as *incentives*. From this point of view, incentives are situations which function in arousing dynamic forces in the individual (43, p. 97), or arrangements of conditions introduced with the expectation of influencing or altering the behavior of people. Thus, according to Warren

> "If the motivation of conduct be conceived as originating in some maladjustment between organism and environment, the organism's efforts are said to be the result of inner *drive* while the critical environmental conditions are called the *incentive*; i.e., food is an *incentive* to a *hunger driven* animal or person; a badge of honor is an *incentive* to one under the urge of ambition" (76, p. 134).

Incentives may be *positive* in character, in the sense of facilitating or promoting a particular form of behavior, or *negative* in the sense of inhibiting or hampering response of one kind or another. Whether positive, such as material rewards, praise, anticipated success, etc., or negative, such as reproof, penalties, removal of privileges, etc., "incentives do not cause or initiate the behavior to which they are directed. . . . The immediate function of the incentive is to tap motives and to change attitudes which in turn redirect effort" (3, p. 61) and modify behavior.

Applying this viewpoint, *praise* (perceived as appropriate and sincere) functions as a *positive incentive* to the individual and, through the *gratification of basic motives* (possibly the need for status or recognition) and the stimulation of favorable attitudes, *releases energy or directs behavior* towards improved performance in the way of increased production with accompanying feelings of satisfaction and relief from tension. Typical relations which may be postulated under such an approach, as adapted from Charron (14), are as follows

INCENTIVES	→ MOTIVES	→ PERFORMANCE
Fair wages	Economic security	Higher production
Pension plan	Emotional or personal security	Fewer absences
Compensation for sickness and disability	Self-expression	Decreased lateness
Death benefits	Self-respect	Improved quality of work
Bonuses	Recognition status	Active participation in company programs
Profit sharing		
Good working conditions		
Pleasant relations with associates		
Participation		
Knowledge of results		
Development of skills		
Recognition of efforts, etc.		

Both research findings and practical experience have shown that men "exert great effort, endure hardships, overcome obstacles" only when "strong motives impel the men concerned toward a goal they desire" (62). Measurements of employee attitudes, which express the way in which and the extent to which given objects or situations are felt to satisfy personal wants or relieve tension, can contribute to a greater understanding of the effectiveness of incentives in releasing energy and directing motives toward the achievement of desirable goals.

The psychological mechanisms through which incentives operate to produce such results are far from completely understood. However, numerous laboratory experiments on animals and children suggest that previously "neutral" objects—such as poker chips or brass discs—can come to serve as incentives in that they will be worked for, begged for, and subjects will actively learn in order to obtain them. This "incentive" characteristic appears most clearly when the "neutral" object is made relevant to some goal which is important for the individual. Thus Wolfe (86) trained chimpanzees to work for poker chips which they could later exchange for food. Wolfe's animals also begged the poker chips from each other and from the experimenter.[11]

From a consideration of laboratory and industrial studies, Mace has concluded that an incentive functions by engendering a *specific intention*—commonly, in industry, the intention to perform a determinate set of movements resulting in some industrial product conforming to certain standards. According to this viewpoint, "Supervision, verbal encouragement or reproof, the prescription of standards and so forth, are of value,

[11] These and other investigations are well summarized by Miller (46a).

just in so far as, directly or indirectly, they control the specific intention which is operative in the performance of the given task. They may be useless or even harmful in releasing energy in ways which do not contribute to the performance of that particular task" (42, p. 2).

In presenting this viewpoint, Mace further suggests that an intention varies (1) in *direction*, i.e., in what, precisely, the individual is trying to do, or in how "he conceives his task"; (2) in *intensity*, i.e., in how strongly he feels impelled to perform it, and (3) in *duration*, i.e., in the time during which the individual maintains effective concentration. According to this point of view, the study of incentives in industry involves, to a large extent, a determination of the situations or arrangement of conditions which are most effective in stimulating the *direction, intensity,* and *duration* of that intention which arouses attitudes and produces behavior which are considered most advantageous from the point of view of achieving industrial goals. While the concept of intention, as used by Mace, is open to question in terms of current dynamic theories of motivation, primarily because of the emphasis upon conscious and volitional processes, it is nevertheless of interest as representing a frame of reference which has been extensively used, particularly by British investigators, in studies of incentives in industry.

Motives, Attitudes, and Incentives in Industry

A consideration of current trends in theories of motivation reveals a number of changes which have particular significance in the study of workers' motives and in the evaluation of incentives. In the first place, the viewpoint that wages represent the sole incentive to employee production and co-operation, and the single or even primary source of satisfaction at work, runs counter to motivational theory derived from laboratory research and substantiated in industrial studies described in succeeding chapters (79). A major outcome of recent developments in systematic psychology has been to discredit the major psychological assumption made both by business men and economists subscribing to classical economic orthodoxy, viz., that "production and exchange are predominantly (if not exclusively) motivated by the attempt to maximize money gains" (29, p. 289). In addition, the effort on the part of economists (supported by psychologists) to broaden the psychological base for the exploration of economic behavior by reference to instincts finds little or no support in current motivational theory.

On the positive side, current theory postulates a large variety of motives, drives, needs, and wants and recognizes the significance of attitudes and sentiments as overt expressions of the extent to which internal or external conditions, including incentives, can function in stimulating behavior

appropriate to the relief of tension and to the restoration of equilibrium within the person, with ensuing satisfaction to the individual. In this respect, current motivational theory directs attention to the study of motives which were overlooked or disregarded in the earlier and inadequate classical psychological generalization of economics. Of particular importance, as will appear more clearly in the following chapters, is the recognition of the extreme significance of environmental (cultural, social) factors in the integration of motives, drives, and needs, leading to an organic conception of industry as a social institution and the further elaboration of a conception of society in which economic activities take their place as one aspect of the whole social process (78). Of equal significance is the increasing tendency to approach the problem of motivation in terms of the person as a whole—in terms of a total personality functioning in a natural social environment (10).

In general, as suggested earlier, the concepts of current motivational theory provide an indispensable framework for systematic research on motives in industry and on the value of particular incentives. However, the solution to the problem of motivation (as to other psychological problems) is to be found not in theory, but in systematically designed experimental studies conducted, in so far as possible, in the industrial plant. Such research, involving the use of industrial workers as subjects, presents many technical and practical difficulties (26). Whatever the difficulties, "the problems are so central and inescapable and so clearly problems of industrial psychology—if it chooses to be a social science as well as a managerial technique—that it appears well worth our while canvassing the possibilities of further promising research in the field. Among the few greatest questions of our age is that which asks what modern industry means to the individual worker with reference to his satisfactions and fullness of life" (36, p. 351). The accumulation of evidence and the formulation of adequate scientific explanations of the factors basic to these represent a continuing challenge to social scientists and management alike.

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5

The Impact of Social Psychology upon the Investigation of Motivation and Morale in Industry

CONSIDERATION of human experience in the satisfaction of needs, wants and desires shows that "motivated behavior may move forward smoothly to its goal or it may encounter obstacles. The obstacles are sometimes readily surmounted, permitting satisfactory gratification of the desire. In other instances some degree of compromise or indirection provides a way out. In not a few cases, however, more or less persistent frustration occurs, accompanied by various only partially successful adjustments" (84, p. 218).

As is apparent from the above quotation from Kornhauser, something more than the classification of motives is needed to arrive at an understanding of why people behave or fail to behave in a certain way. It is necessary, for example, to know something about the processes involved in setting goals. Consideration must be given to the influence of barriers to achievement—whether these be actual obstacles existing in the real world or psychological states in the individual which in one way or another interfere with the release of internal tension and the satisfaction of basic needs or wants. In so far as the failure to achieve gratification of desires or wants may produce frustration, it is necessary to consider the mechanisms of frustration and associated effects in the way of aggression, fixation, etc.

Those mentioned above and others to be discussed below represent, in fact, concepts derived from various fields of psychology which have been widely used in the consideration of motivation and morale in industry.

Basic concepts and constructs developed from research in *experimental psychology, clinical psychology, psychoanalytic psychology, animal psychology,* and other fields have been effectively applied in the formulation of hypotheses and in the design of investigations undertaken to provide more complete understanding of what motivates workers to higher production, and of the determinants of individual satisfaction and morale in industry.

It is obviously impossible to present, within the limits of this volume, a systematic and detailed discussion of all the concepts derived from laboratory studies and experiments which have a bearing on motivation and morale. On the other hand, it seems quite necessary to discuss a number of concepts which are referred to with some frequency in the discussion of the findings of experiments and of employee-attitude surveys described in later chapters. Furthermore, it seems appropriate, in discussing these, to adopt a frame of reference which is essentially that of social psychology, since the problems of motivation and morale in industry are closely bound to group situations.

THE ORIENTATION OF SOCIAL PSYCHOLOGY

A survey of the development of social psychology will show that virtually no field of psychology or, as a matter of fact, of anthropology, sociology and, to some extent, of economics, has been overlooked by the psychologist concerned with the origins and explanation of social behavior [1] (47). Simultaneously, social scientists in other areas have applied the theory, facts, and methods of psychology in dealing with problems which are described as being primarily anthropological, sociological, or economic in character. This trend is well illustrated in the early work of sociologists such as Durkeim (44), Ross (136), Thomas (150), Cooley (35, 36), and later in the work of other social scientists.[2]

Consideration of basic psychological concepts in the framework of

[1] Standard texts in the field of social psychology to which reference has been made in the preparation of this section include publications by McDougall (103), Allport (4), Bird (15), Dunlap (43), Young (161), Folsom (49), Murphy, Murphy and Newcomb (121), Klineberg (80), Britt (18), Bogardus (16), Newcomb and Hartley (124), Krech and Crutchfield (85), Sherif (144), Vaughn (151), Newcomb (123), Hartley and Hartley (68), and Asch (7).

[2] Illustrative references include publications by G. H. Mead (114), Benedict (14), Malinowski (109), M. Mead (115, 116), Mayo (112, 113), the Lynds (98, 99, 100), Dollard (39), Davis, Gardner and Gardner (37), Roethlisberger (130), Whyte (159), Gardner (58), Warner and his associates (153, 154), West (157), Leighton (89), Greenwood (62), LaPiere (88), LaPiere and Farnsworth (87), Chapple and his associates (32, 33), Linton (96), Kardiner (77), Bakke (9), Chase (34), Drucker (42), Katona (78), and Miller and Form (118).

social psychology (and of allied social sciences) is dictated by the fact that the problems of motivation and morale in industry are so predominantly problems of social interaction of the type with which all social scientists are concerned. This does not mean that the study of the individual—including individual differences—is discarded when attention is focused upon motivation and morale in group situations. Orientation from the viewpoint of social psychology represents merely a recognition of the oft-observed fact that the individual may (and does) act differently as a member of a group than when he is alone, and differently as a member of one group than as a member of some other group with which he is associated (67).

In a factory, for example, the worker is simultaneously a member of a small work group or team, of a division or department, and of the organization as a whole. In addition, under current conditions, he is very likely to be a member of a local union which may also have national and international associations. Within the factory, the worker may also belong to an employees' association, a bowling team, and one or more of many other groups. His attitudes, his morale, his goals and level of aspiration, his behavior at any moment may be predominantly influenced by any one of these associations. To examine the state of motivation and morale outside of the context of such group structures can readily result in an incorrect appraisal of the situation. Moreover, as Whyte has pointed out, while it may be necessary in research to focus attention upon the internal relations of a particular group, it is also necessary to be wary of general conclusions without examining also the "*mutually dependent sets of relations*" among such groups (158).

Motivation and Frustration

OBSTACLES TO THE SATISFACTION OF NEEDS

As stated earlier, obstacles may be encountered as the individual proceeds to the gratification of needs and wants (84). Such obstacles to goal-oriented behavior may be in the form of *internal* barriers. Thus, deficient scholastic ability may block a highly motivated individual in the gratification of his "desire for prestige," to be achieved through the acquisition of an M.D. degree and the practice of medicine.

Barriers to the gratification of needs, wants, desires, etc., can be *external* in character. For example, an intellectually capable and highly motivated individual may be prevented from achieving the goal of medical practice by financial handicaps, by resistance on the part of his family, or even because social norms of acceptability (as represented by prejudices

applying to race or creed, etc.) prevent him from gaining admission to a medical school.

The cases cited above refer to situations in which there is a single or predominant and highly positive goal which clearly patterns the sequence of behavior or goal response (40) to be carried through in satisfying underlying motives. Obstacles to the complete satisfaction of needs and wants can arise out of the existence of conflicting goals. Both of these may be positive or desirable in nature, but movement in the direction of one will result in the satisfaction of one need while leaving another (or others) ungratified. An illustration of an individual "torn between conflicting desires" is found where a man must choose between accepting a "white-collar" job with low pay characterized by considerable prestige value, or a "blue-collar" job with higher pay to which less prestige is attached. Frequently observed, also, is the conflict which arises in the presence of strongly opposed or even mildly contradictory goals and underlying desires. In industry, for example, the worker may view high pay as a desirable goal which, if achieved, would satisfy a basic drive toward a higher standard of living. He may simultaneously be faced with the need of reconciling this with the goal of restricting output as the only means for satisfying the need for status and recognition in the form of acceptance by a work group whose social norms are directed toward the restriction of output.

A FRUSTRATION-AGGRESSION HYPOTHESIS

There are many varieties of *conflict* situations (92). The blocking of goal-directed behavior and the accompanying failure to reduce tension produce a variety of consequences. Some of these are *adaptive* in character and constructive in terms of outcomes (85). In the effort to "get around" or eliminate needs, the individual may arrive at some new way of solving a problem which both relieves the immediate tension and establishes a pattern of behavior better suited to satisfy future needs. In this sense, personal handicaps and the vicissitudes imposed by physical, economic, and social barriers can reinforce motivation, strengthen individual character, and produce highly important results in the way of inventions, organization, or methods of dealing with problems, which have tremendous social consequences.

On the other hand, extended and repeated thwarting of progress toward a goal and the persistent failure to resolve underlying tension can result in various kinds of *maladaptive* behavior. Among such possible consequences of *frustration* or "interference with the occurrence of an instigated goal-response at its proper time in the behavior sequence" (40, p. 7) are various forms of *aggression*. On the basis of relationships first

postulated by Freud,[8] Dollard and others at the Institute of Human Relations, Yale University, have formulated a *frustration-aggression hypothesis.* This takes as the point of departure the assumption that "*Aggression is always a consequence of frustration.* More specifically the proposition is that the occurrence of aggressive behavior always presupposes the existence of frustration and, contrariwise, that the existence of frustration always leads to some form of aggression" (40, p. 1).

It is to be noted that aggression, as used here, is not identical with the term "aggressiveness," but refers to an *attack response* associated with a "motive pattern directed toward inflicting injury" (123, p. 355). Feelings of anger, and hostile attitudes characterizing aggression and the attack conduct, may be and ordinarily are directed against the obstacle itself, i.e., the situation or person perceived as the source of frustration. For example, a child who is denied an ice cream cone strikes his mother with his fists; a worker who is denied an increase by his foreman "beats him up"; workers destroy machines which are perceived as causing unemployment, etc.

In the absence of an opportunity to attack the obstacle itself, the aggression may be *displaced,* in the sense of being diverted toward substitute objects or persons, or even taking the form of acts of aggression towards oneself, i.e. self-injury. Thus, to use an example cited by New-

[8] A summary of systematic contributions to the study of motivation and morale in industry would not be complete without at least a passing acknowledgment of the influence of *psychoanalytic* theory. The import of psychoanalytic theory has its origin in the point of view that a basis of social psychology is to be found in whatever contributes to an understanding of the determinants and dynamics of personality (5, 6, 149). Although the influence of Adler (1) and Jung (75, 76) is to be detected, the main line of influence is to be found in the work of Freud (52, 53, 54, 55, 56, 57). While primarily concerned with the development and abnormalities of individual personality, Freud early took the position that "Only rarely and under certain exceptional conditions is Individual Psychology in a position to disregard the relation of the individual to others. In the individual's mental life, someone else is invariably involved and so from the very first Individual Psychology is at the same time Social Psychology as well" (53). The most apparent contribution of psychoanalytic theory is in the form of terminology which has been widely adopted by psychologists concerned with the development of personality and with motivational theory. Thus, many of the concepts referred to in this section on the theoretical foundations of motivation and morale, such as *frustration, aggression, fixation, ego, superego,* etc., are borrowed from psychoanalysis. While seldom used specifically in their original sense by psychologists who have borrowed these terms, the debt to psychoanalysis is nevertheless clear-cut. Furthermore, as Landis (86) has suggested, psychoanalysis has served modern (including social) psychology (1) by forcing psychologists to inquire into the role of the infantile and early childhood fantasy on the mental life of the adult; (2) in indicating the dynamic role of the unconscious in individual behavior; (3) in calling attention to the significance of sex and sexuality and, in addition, by compelling psychologists to pursue the scientific study of personality as a step in setting up a theory and explanation of personality, and related theory of motivation, more valid and acceptable than those proposed by psychoanalysis (140).

comb, "a frustrated boy who cannot find his baseball mitt because (as he believes) his brother has taken it, and who is prevented by fear of punishment from 'beating up' his brother, feels better after going to his brother's room and tearing up his bed" (123, p. 355). Another widely used illustration with perhaps broader social significance, is derived from a study by Hovland and Sears (71) in which the annual number of lynchings of Negroes and property crimes with violence in 14 Southern states for the years 1882–1930 was used as measure of aggression. The annual per-acre value of cotton was taken as an index of economic conditions, with the further assumption that a low index represented a sign of greater interference with customary goal responses than did a high index (representing good economic conditions). The correlation between this index and number of lynchings was found to be —.67. In other words, the number of aggressive responses increased as the amount of interference with the attainment of an economic goal increased. According to Dollard *et al.*, this correlation indicates not only the functional relation between frustration and aggression, but also that the aggression is displaced from the source of the frustration to the Negroes. "By no stretch of the imagination," it is pointed out, "could it be assumed that the lynched Negroes were the *source* of the frustration represented by the low per acre value of cotton" (40, p. 44).

As will appear in later sections, the aggression response to frustration has wide implications in dealing with specific problems of motivation and morale, and with the problem of industrial strife. In terms of broader social significance, the frustration-aggression principle is seen by the Yale group as underlying (at least by implication) the theories of the class-struggle and of the nature of the state in Marxian doctrine (110, p. 23).

VARIETIES OF REACTIONS TO FRUSTRATION

In the frustration-aggression hypothesis referred to in preceding pages, as originally stated, aggression is viewed as the "primary and characteristic reaction to frustration" and will occur, in the form of one or another direct or substitute response, whenever there is interference with the motivated sequence of behavior. In this sense, as Newcomb points out, "frustration always induces motivation to some sort of aggression, and . . . if no aggression in fact occurs, it has been inhibited" (123, p. 353). Modifications and extensions of this theory, both by its original exponents [4] and by others, have led both to redefinitions of the term frustration and to the point of view that hostile attitudes and aggressive conduct are not the sole, or even the primary, *sequelae* of frustration. Thus, the position has been taken that "if . . . goal-directed behavior

[4] I.e. Dollard and his associates (as derived from Freud).

is interfered with, or if the expected consequence of the activity is not forthcoming, the individual may experience deprivation, frustration, or a threat to his security. Of this," it is added, "the sense of deprivation is the least, and the sense of threat the most, disruptive to the individual" (68, p. 715).

Not only are there varied definitions of the term frustration, but there is an increasing acceptance of the views that frustration leads to a variety of effects, and that aggression may or may not be the most common of these. In fact, members of the Yale group (119, 141) have revised their viewpoint "in such a way that nonaggressive reactions to frustration were reinstated in a position of proper importance" (102). Current literature provides a number of classifications in which nonaggressive reactions are assigned an appropriate role (101, 134, 142) and also reports on studies bearing upon the frequency with which these various types of reaction occur (41, 135). Illustrative of the findings of such studies are data from an investigation by McClelland and Apicella, involving 28 subjects who were subjected to "moderate" and "severe" frustration in the form of derogatory remarks in a laboratory situation (102). In this instance, the analyses of findings indicated that spontaneous comments made by subjects exposed to a blocking of desired goal responses could properly be classified as representative of four "basic types" of frustration-instigated behavior, viz., *withdrawal, attack, limitation,* and *substitution.*

THE MAIER THEORY OF FRUSTRATION

The work of Maier (107, 108) furnishes an illustration of a theory of frustration which includes a variety of frustration-instigated responses. The theory is posited upon a basic assumption that *motivated* behavior differs from *frustration-instigated* behavior. In terms of this distinction, motivated behavior is invariably goal-oriented. Conflicts between choice or preference are resolved, and needs satisfied, by the attainment of one or another goal. By contrast, according to Maier, "in frustration-instigated behavior there is no goal orientation." This theory leads necessarily to the distinction between two possible forms of satisfaction, viz., "relief from frustration, and the removal of a need through the attainment of a goal" (107, p. 99).

According to this point of view, when a situation becomes frustrating, the behavior of the individual undergoes a complete change. An individual who was formerly unemotional and reasonable becomes emotional and unreasonable. Constructive, goal-directed behavior is replaced by stereotyped or compulsive, frequently pointless, and even destructive behavior. The major characteristics of such frustration-instigated responses, as classified by Maier, are *aggression, regression, fixation.* To

these is added *resignation* as a symptom frequently found in case-history studies (107).

As in other classifications, *aggression* behavior is defined as a form of attack. This may be direct, in the form of physical violence. However, inhibitions developed by training generally lead to substitute responses, in the form of direct verbal attacks, sarcasm, gossip, etc.

Regression is a "breakdown of constructive behavior and represents a return to childish behavior." According to this viewpoint, name calling by adults engaged in an argument is viewed as a common instance of regression. In industrial employees signs of regression include loss of emotional control, "horseplay," unreasoned fear, "following the leader" and similar reactions. "Men who pout, girls who cry easily, and workers who form childish cliques or gangs within the plant are expressing regressive behavior" (107, p. 64).

Fixation is used to describe a "compulsion to continue a kind of activity which has no adaptive value." A common expression of fixation is an inability to accept change; a stubborn and unreasonable defense of old methods. According to Maier, "Industrial firms which are relatively free from frustrating situations and have high employee morale are made up of individuals who *seek* new ways rather than *fear* them" (107, p. 67).

Resignation is described as the process of "giving up." Such a reaction has been reported by Bakke (10), Eisenberg and Lazarsfeld (46), and others (31, 137, 162) in the study of changes in the personalities of unemployed individuals. "In industry," writes Maier, "the resigned individual is one who has lost hope of bettering his conditions" (107, p. 68).

THE PREVENTION OF FRUSTRATION: IMPLICATIONS FOR INDUSTRY

Responses of the type described above may be considered as pointless, at least from the viewpoint of correcting the situation which induced the frustration. However, they serve the purpose of providing relief from frustration and in this respect, according to Maier, such responses need not be viewed as being maladaptive in character. It is from this point of view that counseling programs and similar devices which provide employees an opportunity to "blow off steam"—and "express freely pent-up aggression tendencies"—may be considered as having a beneficial effect (111, 131, 132, 17). Furthermore, in terms of Maier's assumptions, relief from frustration—by release of the behavior which it instigates—sets the stage for a return to constructive, goal-oriented or motivated behavior (108). The basic problem, however, is still that of preventing, in so far as possible, the onset of frustration (93). Newcomb, for example, has shown that frustration tends to fixate the attitudes prevailing at the time of

frustration (122). Groups of frustrated individuals can become organized or united around a harmful pattern of aggression. Thus, the IWW (Industrial Workers of the World), active during the early part of the century, which had a history of intensive aggression, may be viewed as a labor organization which conforms to the criteria of a frustration-instigated social movement. "The effects of frustration," writes Maier, "make possible a fanatical type of social movement, in which the individuals are relatively homogenous and are dominated by hatred and destruction. They are persistent, irrational, and ready to follow a leader . . . Frustration-instigated social movements thus constitute a social risk, since they are not oriented to a future goal" (107, p. 72).

A Positive Approach to the Avoidance of Frustration: Such effects, whether at the level of the individual plant or in a broader social sphere, point strongly to the need for a *positive approach* to the avoidance of frustration. This is to be found—regardless of the theory of motivation and frustration which is accepted—in providing conditions conducive to goal-oriented behavior. Adequate rewards—positive incentives of all kinds—are among such conditions. According to Maier the possible effects of rewards are twofold. They may serve to reduce frustration by satisfying needs which, in the presence of continued deprivation, produce frustration. Rewards may, in fact, translate behavior, in Maier's terms, "from the frustration process to the motivation process." Secondly, where a state of motivation exists, rewards tend to maintain and enhance that state (108, p. 196).

A major problem in research bearing upon motivation in industry is that of determining the extent to which various incentives and other conditions contribute toward the stimulation and continuation of behavior oriented toward a goal which both satisfies the needs of workers and the necessities of the industrial situation. The significance of experiments described in later chapters is derived, in part, from what they show concerning the role of potential rewards in the way of higher wages, praise, job security, etc., both in avoiding frustration and in maintaining and raising the level of aspiration in goal-oriented behavior.

Sources of Frustration in Industry: Recent years have witnessed an increasing emphasis upon frustration as a key issue in dealing with human problems in industry, and with the social problems of industrial strife. Underlying this viewpoint is the position that "the job conditions under which people work are responsible, directly or indirectly, for the creation of many tensions and the frustration of many needs and demands" (85, p. 539). These tensions, it is claimed, result in part from *technological changes* (117) which "frequently operate so as to block the expression of many important needs of the worker on the job" (85, p. 539).

Frustration and associated tension are also ascribed to the character of *interpersonal relationships* in modern industrial plants. Thus, according to Krech and Crutchfield, the indirectness of contact between top management and the worker both contributes to the frustration of needs and to the worker's feeling that he is being "pushed around" by management (85, p. 540). The failure to provide an adequate income, with consequent blocking of needs and demands outside of the plant, is also viewed as a source of frustration *off* the job which "frequently intensifies the frustration of needs *on* the job . . . Where the lack of money prevents the expression of needs off the job and the job situation does not permit their expression at work, then we have," it is claimed, "a compounding effect—all of it traceable to the job situation" (85, p. 540).

Still other possible sources of frustration in industry are included in a listing, by Eaton, of seven hypotheses concerning the origins of frustration in industry to which research should be directed (45):

Hypothesis I:	*The worker is frustrated by the insignificance of his work.*
Hypothesis II:	*The worker is frustrated by absentee ownership of the production of his work.*
Hypothesis III:	*The worker is frustrated by the [unfulfilled] expectations of upward mobility which attend his labor.*
Hypothesis IV:	*The worker is frustrated by his lack of a defined role, and by the many alternatives available in his work.*
Hypothesis V:	*The worker is frustrated by the changing techniques and conditions of his work.*
Hypothesis VI:	*The worker is frustrated by the isolation of his work within the community.*
Hypothesis VII:	*The worker is frustrated by the economic insecurity of his work.*

The Role of the Union: One criticism directed against industry is that management does not voluntarily do all that is within its power to remove such sources of frustration and thereby to provide enlarged opportunities for the satisfaction of workers' needs. The strength of the labor union, according to this point of view, lies in the fact that the worker can look to labor organizations for support in eliminating obstacles to the gratification of needs which are not removed by management. Increases in wages and improvement in working conditions achieved through the union are seen as accomplishments in this direction. It is from this point of view that "aggression" behavior in the form of strikes for increased wages, better working conditions, shorter hours, etc., is viewed by Krech and Crutchfield as *adaptive* conduct, even

though it may lead to industrial strife (85, p. 571). In a similar vein, Maier views continued opposition by management to goal-oriented labor unions as an instrument for increasing frustration and converting labor unions into militant, antisocial organizations (104, p. 74).

It has been further suggested that management does not entirely have it within its power altogether to eliminate obstacles to the satisfaction of needs and wants in industry. So, for example, even with the best of intentions, management cannot completely eliminate repetitive work, dirty work, etc., or raise wages of all workers to the point where all their needs outside of the plant will be gratified. As a result, workers must seek "substitute" satisfaction outside of industry. According to Krech and Crutchfield, the chief medium through which workers can obtain such substitute satisfaction is the labor union. The latter, they say, "can better meet most of the worker's needs and demands than can other organizations" in modern society (85, p. 548).

The issue raised above is discussed in some detail in later chapters. For the time being, it seems necessary only to note that this portrayal of the labor union is certainly far from acceptable to management and also to a substantial segment of the general public. Involved here, in large part, are differences in the way of perceiving a situation which are associated with group membership and which reflect the operation of socially developed norms. The nature and origin of such differences, and their effects on employee motivation and morale, cannot be understood without a consideration of *social perception*, *social norms*, and of related concepts.

"Social Perception" and "Social Norms"

According to Hastorf and Knutson, many of the basic problems of attitude formation, persistence, and change can be understood only if it is recognized that "our individual and social purposes are important determiners of what is perceived."

> ". . . differences in the evaluation of a social situation are not differences in conscious judgment and interpretation alone. Prior to these conscious judgments and interpretations, there very well may be more basic differences in the manner in which situations are perceived, depending on differences in past experience and purpose. Fundamental attitude changes are not likely to occur unless there are changes in the individual and social purposes which often play an unconscious selective role in perception . . .
>
> "The attorneys for the N.A.M. and the C.I.O. in debating about the provisions of the Taft-Hartley Bill and the probable effect of its passage on the public welfare really have no parallel topics for debate. They neither perceive the same Taft-Hartley Bill nor the same public welfare.

Since the disagreements are more fundamental than differences in conscious judgments or interpretations, no amount of debate is likely to be effective. These judgments or interpretations may change, but they will still remain judgments or interpretations of differently perceived situations, unless one or the other of the attorneys first undergoes a complete breakdown and reorientation of his identifications and related strivings . . ." (68a, p. 234).

In the above quotation is found an illustration of the current treatment of perception by social psychologists which is of significance in the consideration of motivation and morale in industry. Perception, as traditionally defined, refers to the "awareness of external objects, qualities, or relations, which ensues directly upon sensory processes" (155, p. 196). In the simplest terms, perception is the process through which, for example, a pattern of lines and dots on a piece of paper is observed as a face, a combination of auditory stimuli as a melody or tune, etc. Significant research conducted by the *Gestalt* psychologists, as represented particularly in the pioneering work of Köhler (82, 83), Koffka (81) and Wertheimer (156), has shown that "the qualitatively distinct character of perception of form, melody, rhythm, meaning, is not derived from the distinct properties of the parts in isolation, but that (on the contrary) the parts derive their quality from their functional membership in the whole" (144, p. 157). Furthermore, it has long been recognized that the attainment of meaning in perception is achieved, in part, through an application of the past experience of the individual to the interpretation of objective stimuli in the external world. For example, according to Cantril:

"If a person in a dark room sees two illuminated toy balloons, one of which expands as the other gets smaller, he will interpret this not as a change in the size of the balloons, but as a change in their distance from him. The one that expands will seem to be coming toward him; the one that contracts will seem to be rushing away from him. What the individual experiences, then, is movement of the balloons.

"Why does he experience movement instead of a change in size? The apparent answer is that from past experiences the assumption is made that two things (two toy balloons) which are similar are likely to be identical. And from our past experience we know that if two things are identical and one is larger than the other, it should be closer to us. And so when one balloon is made larger, we see it coming closer while the one made smaller recedes" (25, p. 51).

The process of perception was at first treated by psychologists as one of interest only from the viewpoint of the individual functioning in isolation. More recently, research by Sherif (145, 146) on group influences on the perception of the *autokinetic effect* (i.e., of the apparent movement of stationary objects); by Bartlett in the field of "remembering"

(11); by Hallowell on the personality of primitive man (64, 65); by Bruner and Goodman on the perception of size of coins by "poor" and "rich" children (21); and studies of the perceptual process in varied contexts by Murphy and others (90, 91, 143); by Postman and his associates (2, 126, 127), etc., have turned attention to the problem of the *social determination of perception* and the related problem of the *perception of the social* (106). Such research has led to the conclusion, by Hartley and Hartley, that "the process of perception itself is susceptible to social influence and in turn largely determines social behavior" (68, p. 226).

THE DEVELOPMENT AND INFLUENCE OF "SOCIAL NORMS"

According to Goodenough and Anderson (60), Sherif (147), and others, the field of perception has become a common meeting ground for social scientists and "perceptual reactions have become the prototype of all psychological reactions for social psychologists in singling out the effects of socio-cultural influences on the one hand and biological and strictly personal factors on the other" (147, p. 11). Of particular significance in this approach is the emphasis placed upon the role of *group-determined frames of reference* or of *social norms* upon the attitudes and performance of the individual. Underlying this approach is the view that "*all* perception is to a lesser or greater degree social perception" since, according to Bruner and Postman, "the set which the individual brings to a perceptual situation is a function of his prevailing motives, needs, attitudes, and personality structure—all of which, in turn, are products of the interaction between the organism and his social environment" (20, p. 71).

It is not within the province of this volume to examine the detailed mechanisms by which social perceptions arise, the processes through which perception influences social behavior, and the way in which "social norms" are developed in the operation of perception and of other mental processes. The reader who is interested in a detailed treatment of such psychological processes is referred to Helson's treatment of quantitative methods for the prediction of frames of reference (69) and to the detailed consideration of social norms in texts by Sherif (144), Rohrer and Sherif (133), Krech and Crutchfield (85), Cantril (25), Hartley and Hartley (68), and others. However, a few illustrations of the operation of "social perceptions" and "social norms" may help underline the significance of these concepts, and facilitate the interpretation of experiments and attitude surveys bearing upon motivation and morale described in later chapters of this volume.

The import of culturally determined norms in evaluating man's psychological responses to the physical objects of his external environment (66)

can be illustrated by reference to an observation of a primitive culture by Linton. He observed that in one of the small tribes of the southeast coast of Madagascar, iron cooking pots were owned by most families. These had been introduced about twenty years before his visit by men who had returned to the tribe after working as contract laborers. To do work of this type conferred prestige on a man and the iron pots, purchased from one's earnings, became a durable symbol of that prestige. To have a long row of iron pots on display "had become a symbol of the social importance of the household" (97, p. 477).

IMPLICATIONS FOR INDUSTRY

It is apparent that the meaning attached to the pots extends beyond their usefulness as cooking instruments. This illustration shows clearly that an object is seen not merely as possessing form, color, and utility, but is viewed or *perceived* by members of a particular culture or of a specific group as having certain socially significant connotations. Differences in norms of evaluation among smaller groups within the same culture are apparent, for example, in the contrasting value attached to old, rebuilt, and sometimes highly decorated "hot rods" by teen-agers and adults respectively within the American scene. In industry, as has been pointed out by Roethlisberger (130) and Gardner (58), the physical location of an office, office furniture, floor carpeting, ash trays, etc., are not seen merely as physical appurtenances of the work situation, but as symbols of status and prestige. The *Rank-Has-Its-Privileges* Executive Evaluation chart, duplicated on page 448, which has been widely passed around in management circles in the United States, strikingly reveals the significance actually attached to such physical objects as status symbols in the social microcosm represented by the modern industrial organization.

As has been suggested earlier, one product of social interaction is the development of norms which reflect a group-determined frame of reference in viewing a situation. Such *social norms* appear along with the formation of a group, as is illustrated in the new and higher norms of production established along with the growth of the "informal social organization" in the Relay Assembly Test Room, in studies conducted in the Hawthorne Works of the Western Electric Company, discussed in Chapters 10 and 11. Once established, such norms of conduct by the group can persist for a long time, as illustrated in the restriction of production by the Bank Wiring Group observed in the same series of investigations, and also in the numerous instances of restriction of output by group members referred to elsewhere in this volume. An important aspect of this situation is the fact, established in the laboratory study by

Sherif, that "group norms enter to shape the reactions of the individual member even when he is no longer actually in his group" (144, p. 177). In industry, it has been frequently observed that an individual carries such group-determined norms with him as he moves from one situation to another. This is well illustrated in a report, by Gardner, of the influence of a group-established norm bearing upon the rate of learning by a worker as he moves into a new job.

> "One old-timer had been brought in from another totally different job and put on sand-blasting. He had had experience on sand-blasting years before and picked up the work very rapidly. He watched his daily reports very carefully, however, and showed only a moderate increase each day even though he was well below what was considered a fair day's work, and was not working very hard. When asked about the work, he said that he could have reached the average output within three days but was careful not to progress too fast. He explained that the proper learning curve for a new man on the job was one which showed fairly rapid improvement for about a week and then a gradual slowing of progress so that it would take several weeks to reach average output. He was making his output conform to this proper pattern, since if he improved too fast, the foreman would know that the group were taking it fairly easy and would try to make them increase their output" (58, p. 158).

Illustrations cited above reveal the intimate relations between "social perceptions" and "social norms" on the one hand, and motivation on the other. Thus, according to Newcomb, "Motivation is the concept in terms of which we describe the over-all consistency of overt-perceptual behavior of each man. This consistency could not occur without selectivity in taking note of the environment. The 'outer' part of motivation is thus dependent upon perception" (123, p. 89).

In this sense, the strength of the "drive" exerted toward acquiring a particular make of automobile will be influenced by the perception of the vehicle as "large" or "small," and by the wider social frame of reference through which the status or prestige value of the particular make of car is evaluated. Similarly, the strength of the desire for higher wages (and the amount wanted) may be a function of the extent to which wages are viewed or perceived as placing workers in a group "in line" or "out of line" with area levels and with the earnings of other individuals.[5] Furthermore, as Newcomb also points out, the relationship between social perception and motivation is circular in character, in that "selectivity in perception is determined by the existing state of motivation." In this sense, the individual may perceive a particular make of automobile as being particularly attractive or as having certain superior characteristics because he has already become highly motivated in terms of pur-

[5] See Chapter 15.

chasing this make of car. Similarly, a worker already poorly motivated from the viewpoint of production may perceive many elements of the work situation in an entirely different context from that of the highly motivated worker.

Ego, Status, and Role

A problem of both theoretical and practical importance in the consideration of social norms in relation to motivation centers around the question of the influence of such norms upon the way in which the individual regards *himself* and *his* needs. Stated in different terms, this question bears upon the nature and the origin of the *ego*, defined by Warren as "the individual's conception of himself" (155, p. 89) and by Cantril as "a concept to describe what each individual subjectively regards as *me*" (24, p. 44). Either of these appears acceptable as a "working" definition for purposes of this text although, as has been made clear by Allport (3), there is far from uniform agreement among psychologists in dealing with this concept.[6]

With respect to the genesis of the ego, theories range from McDougall's conceptualization of self-regard as instinctively determined (104) to the view of the "ego as the subjective organization of culture." Somewhere midway between an extreme emphasis upon "internal" and "external" factors, respectively, is the position taken by Cantril that "the ego of an individual is essentially composed of the many *social* and *personal* values he has accepted" [7] (22, p. 197). However, according to the latter, "since the ego for most individuals is so largely composed of social values, almost every person to some extent evaluates himself in terms of the norms of his particular society" (24, p. 42). At the same time, also according to Cantril, "a person's ego and, consequently, the way in which he regards himself, are by no means always entirely bound by the surrounding culture." Thus, the individual may cherish values shared by the family circle, a few professional colleagues, etc., more than the more common values of society conducive to social recognition. And sometimes he may cherish, as most important of all, those values which he has worked out for himself and thinks of as his own (24, p. 44).

Although differences of opinion exist concerning the significance of *social* and *personal* factors in the genesis and development of the ego, there is common agreement that *rewards or incentives can have but limited value as motivating forces except in so far as they cater to the satisfaction of ego-involved needs, and contribute to the maintenance*

[6] Although derived from psychoanalysis, the term "ego" is not generally used by psychologists in the strictly psychoanalytic sense.

[7] Not so italicized in the original.

and enhancement of the ego. A practical problem in industry centers around the question of how to bring about this enhancement of self-regard in such a way that both the needs of the individual and the necessities of the industrial organization will be simultaneously served. Stated in other terms, the problem is to facilitate the development of a "constellation of ego-attitudes" (148) which will lead the individual to perceive greater production as *his* goal; to look upon the foreman as *his* foreman; to view the company as *his* company. Thus, according to Sherif and Cantril, the outstanding accomplishment of the Lincoln Electric Company *incentive management* plan (95, 152) may be ascribed to the fact that Lincoln "employees regard themselves more as 'businessmen' . . . identify themselves with the company and its welfare, not with other working people in the larger world outside" (148, p. 373).

A crucial element in this situation is the character of the social norms existing in the miniature society represented by the Lincoln plant. It is the operation of social norms which leads the individual to consider his status to be that of "businessman" rather than a "hired hand" and brings about behavior—sometimes identified as *role behavior*—appropriate to *his* evaluation of *himself* in terms of the norms of this particular society. This illustration brings into relief a number of concepts, viz., *position, status* and *role,* which have been widely referred to in the literature of social psychology in dealing with the development of the "ego," and in grappling with problems of motivation and morale associated with social interaction in industry.

CLASS CONSCIOUSNESS IN CONTEMPORARY AMERICAN SOCIETY: IMPLICATIONS FOR INDUSTRY

Such problems, as they occur in industry, are discussed in later chapters of this text. Of broad interest, as a background in dealing with such problems, are investigations bearing upon the relation between *status* in terms of "class" identification and the attitudes, goals and behavior of "class-conscious" individuals (97a, 125a). *Status,* as used in this connection, refers specifically to the individual's rank or position in society as *he* sees it.[8] Studies of "class identification" or "class consciousness" by Kornhauser (84), Cantril (23), Hyman (72), Centers (27, 28, 29, 30), and others (125) are generally interpreted as supporting the conclusion that "the American people do identify themselves with a social class"

[8] There is a good deal of disagreement in the usage of the term "status" and of other concepts mentioned above. Thus, Sherif and Cantril (148), use the terms "role" and "status" interchangeably, while Linton (96), makes specific distinctions between these. Similar contradictions apply to the use of the concept "position." For detailed consideration of the meanings attached to these terms, the reader is referred to Guthrie (63), Hartley (67), Sargent (138), and Hartley and Hartley (68).

and, furthermore, that "this identification is highly correlated with the particular roles they play in a highly industrialized society" (148, p. 194). Thus, for example, a study by Cantril (23) showed that 99 per cent of a nation-wide sample of the American adult population gave a definite answer—each member placing himself in a specific "social class"—in replying to the question "*To what class in this country do you feel you belong—middle class, the upper, or lower?*" Furthermore, in this case, approximately 90 per cent identified themselves with the "middle class."

In a later study, by Centers (26), approximately 1,100 individuals, representing a cross section of the adult white male population, were asked: "*If you were asked to use one of these four names for your social class, which one would you say you belonged in: middle class, lower class, working class, or upper class?*" Replies were distributed as shown in Table 7. Significant in this distribution is the shift from self-classification as members of the "middle class" to that of the "working class" when the latter category is added to the list of classes. This shift toward identification with the "working class" and also "laboring class" has again been observed in later studies by Centers.

TABLE 7. *Percentages of the Population Affiliating with Each Social Class* (after Centers)

	Per cent
Upper class	3
Middle class	43
Working class	51
Lower class	1
Don't know	1
Don't believe in classes	1

The Influence of Socio-economic Position: A number of the investigators referred to above have dealt with the criteria employed by individuals in identifying themselves with one or another of the "social classes." Findings indicate clearly that self-placement within one or another social "class" is related to socio-economic position, particularly as reflected in the occupations of adults and, in the case of children, in the occupations of their parents (124a, p. 166 ff.). Thus, analysis of data referring to the sample of approximately 1,100 adults interviewed in the study by Centers (26, 29) showed that approximately 13 per cent of owners or managers of large businesses classified themselves as "upper class." Only 3 per cent of owners and managers of small businesses placed themselves in this category. Furthermore, no unskilled worker classified himself as "upper class." Similarly, approximately 75 per cent of owners or managers of large businesses classified themselves as "middle class" as

contrasted with approximately 30 per cent of skilled manual workers who identified themselves with this social "class."

The individual's conception of his position with respect to "social class" is of importance, from the viewpoint of motivation and morale in industry, because his attitudes are related to his status as *he* sees it. Furthermore, attitudes which are related to role or status are ego-involved (148). Examples of such relation between "class" status and attitudes toward wages, job security, unions, and other specific aspects of the industrial situation are reported in later chapters. Moreover, Centers has shown that there are differences among "classes" with respect to attitudes toward broad political and social issues, such as government ownership of industry, America as a land of opportunity, the role of government in providing security, attitudes toward labor, etc. (26, 27). According to Centers, "*an examination of these differences can leave little doubt that people's politico-economic orientations are closely associated with their statuses and roles in the economic order*" (26, p. 482).

The above discussion has been concerned with the broad problem of status in relation to social "classes." The question of status is of equal—and perhaps of greater—importance in relation to smaller social groups. In the miniature society of the industrial plant, as well as in society at large, there are variations in status and associated behavior roles. In fact, one of the current problems in industry arises from difficulties experienced by employees in subjectively accepting a change in status when there has been an actual modification of position in the industrial hierarchy. This appears particularly in the case of first line supervision (50).

"*Subjective*" *and* "*Objective*" *Status*: In the preceding section status has been considered from the view of the position or rank of the individual in a society as *he* sees it. This can be referred to as the subjective orientation of status, as implied in Cantril's definition of status as "the relationship between a person's interiorized values and the norms of his society" (24, p. 42). Status may also be looked upon as the ranking or position assigned to an individual by others in the group with which he is associated. From this point of view, status might be considered as synonymous with "social recognition." It is partly in this sense that, as reported by Whyte (160), workers at the salad station in a restaurant are accorded higher status by fellow employees than those engaged in the preparation of vegetables or fish.

Difficulties can arise out of the dichotomous aspects of status, because of discrepancies between the individual's *subjective* evaluation of his status and the *objective* evaluation of his status by his associates or superiors within the framework of the social structure. Thus, for example, the foreman may look upon himself as occupying a key position

in an industrial plan whereas he may, in fact, occupy a position of little responsibility or authority because of a management outlook which considers the foreman to be far from an indispensable cog in either its operating or industrial relations program.

STATUS AND "ROLE BEHAVIOR"

This problem is discussed in Chapter 23. For the purposes of this section, it seems desirable to turn to another and important aspect of status relationships—specifically, the function of status in specifying the *role behavior* of individuals at various levels in the hierarchy of a social structure. As Hartley and Hartley have pointed out, more or less specific forms of behavior are prescribed for the contacts between persons at different levels of a hierarchy of status. "Status systems customarily define the pattern of relationships which govern interaction among group members" (68, p. 572). Behavior roles may be graded with regard to the extent to which the role behavior is determined by consideration of status. Thus, the accepted custom of deferring to the "boss"—in tone of voice, in order of entering a room, in a "thousand other more subtle details of behavior" —is an obvious example of "ordering behavior to status demands" (68, p. 573). How status affects relationship and defines roles in industry appears, according to Gardner, in an entire series of man-boss relationships in which

> "each person is intensely concerned with how his boss judges him and at the same time is busy judging his subordinates. Each is constantly looking at his subordinates, trying to determine how well they are doing their jobs, and how they might do better work, and each is constantly being irritated and disturbed when they fall short of what he thinks they should be doing. At the same time his concept of the job is constantly being mixed up, with what his boss will think and what he expects, until 'doing a job' often becomes a matter of 'doing what the boss thinks is good.' Often this concern is not merely with what the boss expects in terms of the work itself, but also with what he thinks is 'proper' behavior. As a result each level is constantly judging his subordinates not merely in terms of the work accomplished but in terms of 'what would my boss think if he saw them?' " (58, p. 9).

The above illustration suggests that the choice of role behavior which is "situationally appropriate" presents difficulties even when the worker is concerned only with his status in relation to that of his immediate supervisor. This situation is further complicated by the fact that the individual worker is simultaneously a member of a number of groups which, because of varying group expectations and demands (138), impose different and at times contradictory roles upon him (67). According to Linton, "in those cases in which . . . statuses whose roles are funda-

mentally incompatible converge upon the same individual, we have the material of high tragedy" (96, p. 80). Linton goes on to point out that such conflicts rarely arise in primitive societies, but become fairly frequent under conditions existing in modern society. In an era of rapid technological and social change, the individual "finds himself frequently confronted by situations in which he is uncertain both of his statuses and roles and of those of others" (96, p. 81). The decisions which he makes in terms of the behavior to be carried through may prove to be "out of line" with reciprocal expectations, with resulting disappointments and frustrations.

In the industrial plant, the worker faces the necessity imposed by management of being a high producer. Simultaneously, he may be presented with expectations on the part of his work team in the way of behavior designed to restrict production. He can obtain ego-satisfaction by "enacting the role" of "a loyal" employee, but may simultaneously be faced with conflicting demands for contradictory behavior by his union. Having improved his position (in the formal structure of the plant organization) by promotion to the job of foreman, he is faced with the risk of "losing status" among his former associates if his behavior is "situationally appropriate" to his new role.

Such conflicting demands account for many of the difficulties in increasing motivation and raising morale in industry. Nevertheless, as will appear in later chapters, such devices as good supervision, employee participation in decision making, etc., serve to promote ego-involvement with a plant objective; raise levels of aspiration; [9] induce role behavior which is desirable from the viewpoint of achieving the objectives of industry. It is from this point of view that studies described in later sections of this volume will be of particular interest to management.

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[9] The fact that ego-involvement raises the level of aspiration has been demonstrated in a number of studies. The reader interested in contributions from this area from systematic psychology is referred to publications by Hoppe (70), Dembo (38), Lewin (92), Frank (51), Gould (61), Preston and Bayton (129), Irwin (73, 74), Festinger (48), Sears (139), McGehee (105), Bayton (13), Lewin *et al.* (94), Preston, Spiers, and Trasoff (128), and Bayton and White (12).

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6

Field Theory and Action Research in Group Dynamics

AMONG systematic contributions from experimental psychology which have had a strong influence upon the investigation of motivation and morale in industry are developments in the way of *field theory* and *action research* in *group dynamics*.

Field theory,[1] as formulated by Lewin, pictures psychological events as the outcome of dynamic forces operating within a mathematical-spatial construct constituting the individual's *psychological field*. A common industrial situation can be used to illustrate elements of field theory (22, 23, 31) and also Lewin's contribution to motivational theory:

> "Let us suppose that a worker learns from the bulletin board that a job which he desires is open. This job is located in a company plant which is farther from his home than the office in which he is now working. In Lewin's terminology, the desire for the job means that a *region under tension* exists within the worker. When he perceives that a new opening is available, he can be expected to make a move toward obtaining it. Such *locomotion* could be anticipated so long as the person concerned is not restrained by impassable *barriers* or repelled by opposing *forces*. In this situation, the job would be said to have *positive valence* for the person. Any object or condition which has positive valence attracts the person from all points in the field, and is thus the center of a *force field* in which forces are directed toward the object or condition from all points in the field."

[1] The backgrounds of field theory are to be found, in part, in laboratory research conducted by Wertheimer (42, 43), Köhler (17, 18), and Koffka (16). They called attention to the significance of the total configuration or the *Gestalt* in psychological activities, and initiated a series of experiments on whole-part relationships which veered completely away from the atomistic approach of earlier studies of psychological processes and behavior.

In considering the above psychological situation, field theorists would refer to the *life space* of the individual. As used by Lewin, life space is the "totality of facts which determine the behavior of an individual at a certain moment. The life space represents a totality of possible events. The life space includes the person and the (psychological) environment" (23, p. 216) of the person.

Field theory treatment [2] of individual (and also social) psychology proceeds by making as accurate a description or diagnosis of the essentials of particular psychological situations as possible. Two kinds of concepts are used in these descriptions: spatial or *topological* and dynamic or *vector* concepts. Lewin believed that with the aid of certain arbitrary conventions it was possible to display both simple and complex psychological fields in diagrams of two, or sometimes three dimensions, and to deduce from these diagrams the behavior to be expected of the individual or group.

A life-space diagram which embodies some of Lewin's most commonly used concepts is presented in Figure 6. *P* represents a person, and the rest

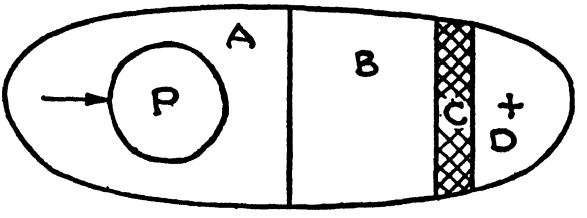


Figure 6. P = a person. A, B, C, and D are regions in the person's environment. D is a goal region having "positive valence" $(+)$. The arrow represents the tendency of the person to move from A to D. C is a region which offers resistance to the person's passage (a "barrier").*

of the diagram represents a situation in which the person is found at a particular moment. This situation has four *regions*: A (where the person now is), B, C, and D. One of these regions, D, attracts the person or constitutes a *positive goal*. In Lewin's language, this region is said to have *positive valence*, and this fact is indicated by the plus sign. Whenever a positive valence is present, the person will tend to move toward the goal. This fact is represented by the arrow which points toward this region. The arrow symbolizes what Lewin calls a *psychological force*

[2] The author is indebted to F. W. Irwin, University of Pennsylvania, for help in the simplified treatment of basic concepts in field theory on pages 110–112.

* Acknowledgment is made to F. W. Irwin, University of Pennsylvania, for the above diagram.

acting upon the person. The strength of this force can be indicated by the length of the arrow.

The *topological* aspects of this situation are, then, the fact that the person is now in region A, and that, in order to reach the goal region, D, he must leave region A and go through regions B and C in that order. The *dynamic* aspects of the situation are the facts that region D has positive valence and that a force of a certain strength is impelling the person toward that region. In addition, the diagram represents region C as having the dynamic characteristics of a *barrier*, i.e., of offering resistance to the person's progress through it; in the diagram, this is indicated by the cross-hatching. Another way of representing a barrier is to diagram it with a heavy line as the entrance boundary of a region. Such barriers are thought of as having different degrees of resistance.

Since the diagram shown in Figure 6 represents a set of abstractions, such as *regions, barriers, valences,* and *forces,* it can be employed for any psychological situation whose essentials are the same as those represented here. For example, the person may be the worker (*P*) referred to on page 110, who desires a transfer to a new job which can be obtained by going to the Personnel Department (*B*); arranging to use his own car for transportation (C), and completing the transfer to the new job (*D*). It is assumed that transportation involves some difficulties or problems and therefore constitutes a "barrier." However, the diagram might equally well represent a salesman who wants to interview a prospect (*D*), and who must not only go to another part of the town (*B*) in order to reach him, but must get by the defenses of his prospect's secretary (C).

From the same point of view, Lewin is able to represent situations in which the person is *repelled* from some region. Such a region is said to have *negative valence,* and is marked by a minus sign. The person's tendency to move away from such a region would be diagrammed by an arrow pointing away from it. A *conflict* exists whenever the person has forces acting on him in opposing directions. In the example given earlier, such a conflict would exist if the new job wanted by the worker involved shift work which he considered to be undesirable. A similar conflict would exist if the salesman were somewhat intimidated as a result of an earlier unhappy experience with gruffness on the part of his prospect. To diagram such conflict situations' characteristics would require the placing of a minus sign together with the plus sign in region D and drawing an arrow pointing away from region D with its head applied to the person, P.

Those given above represent basic concepts or constructs in Lewin's motivational theory (33). In this theory, a state of *tension,* existing within one or more regions of the person, is "coordinated with those patterns of behavior that are generally recognized [in the more conventional

treatment of motivation discussed in Chapter 4] as representing drives or motives; and the discharge of a system under tension as coordinated with the satisfaction of a drive or motive" (11, p. 206). However, these forces may vary with other factors, such as *distance, cognition of barriers,* etc.

As is pointed out in later sections of this chapter, field theory, originally directed toward dealing with the psychology of the individual, has been embodied into social psychology. A further consideration of one of the concepts treated above, and of a number of additional constructs, is required as an introduction to the consideration of field theory in social psychology.

The satisfaction of drives or motives involves movement toward or away from an object or situation. Such movement is described by Lewin in the term *locomotion.* As stated earlier, the direction of locomotion, i.e. toward or away from an object, will depend upon the strength of the attracting forces (*positive valence*) or/and of repelling forces (*negative valence*) surrounding it. In the examples cited on earlier pages, locomotion may be physical in character, as in the case of the worker who goes to the Personnel Department to arrange a transfer to the new job. However, inherent in Lewin's system is the view that locomotion need not involve actual movement in a physical world.

Locomotion, in the Lewinian sense, may be "quasi-physical, quasi-social, and quasi-conceptual in nature" (23, p. 59). Thus "to 'come closer' to another person through conversation" is a case of "social locomotion which, although it involves no physical movement, is psychologically real . . . There can be psychologically real locomotion in quasi-conceptual fields" as in proceeding from an "unclear, unstructured region" in starting to solve a mathematical problem to a goal in the way of a solution of the problem (23, p. 49). In illustrating such aspects of the construct "locomotion," Lewin uses the example of a 16-year-old boy (*P,* Figure 7) whose goal is to become a physician.

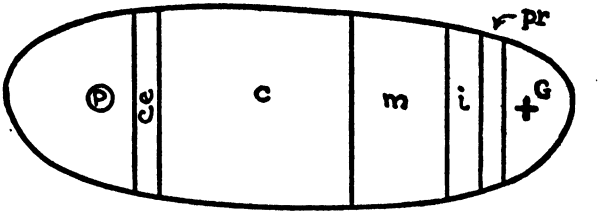


Figure 7. Situation of a Boy Who Wants to Become a Physician.* *P* = person; G = goal; *ce* = college-entrance examinations; *c* = college; *m* = medical school; *i* = internship; *pr* = establishing a practice.

* By permission, from *Principles of Topological Psychology,* by K. Lewin. Copyright 1936, McGraw-Hill Book Company, Inc.

"The 'path' to this goal (G) leads through definite states: college-entrance examinations (ce), college (c), medical school (m), internship (i), establishing a practice (pr). The boy may have a fairly clear idea of college. Medical school and the following stages may constitute a more or less undifferentiated region 'beyond' which lies the goal of being a physician. Of this the boy may have a false but nevertheless a clear picture.

"When he passes his college entrance examinations he has made a 'step forward' on the way to his goal. This movement is certainly not a bodily one. Nevertheless it is real locomotion, a real change of position in the quasi-social (and as a matter of fact also in the objective social) life space. The examinations have brought him a step closer to his goal. The reality of the change in his position becomes clear when one considers that many things are now within his reach which were not before. He can go to college or university, his time is much more within his own control than before. His social position too is changed: he can play on the college football team, go to the dances, etc. His examinations therefore had for him the character of a boundary between two distinct regions. He had to cross this boundary if he wished to go from the one region to the other.

"Had he failed in his examinations, then he would not have made this advance toward his goal. But also in that case there would have been a real change in his life situation. The failure would have changed the barrier between him and the region of college, which was shortly before in his immediate neighborhood. The barrier would seem much more solid, almost impassable. The youth would be thrown back and possibly would seek an entirely new goal" (23, p. 48).

In Lewin's system the life space of a person *may* correspond to the real world with which he is in contact. On the other hand, it *may* be out of touch with reality in the case of the person "living in a world of fiction and phantasy" (9, p. 217). These possible differences in the life space are treated by Lewin as falling along a separate dimension which he calls the dimension of *reality-unreality*. "A day dream, a vague hope, has in general less reality than an action; an action sometimes has more reality than speech; a perception more than a change; a faraway 'ideal' is less real than a 'real goal' that determines one's immediate action. Action itself," adds Lewin, "can be of very different degrees of reality" (23, p. 196). Thus, processes involving strong needs which can be overcome only by surmounting strong barriers have a high degree of reality. However, in the face of such needs, the person may resort to "wishful thinking," representing a high degree of irreality.

In later developments of his system Lewin added still another dimension to the life space, that of *time perspective*.[8] This, as will appear later, is thought to have particular implications for production and morale

[8] A concept first used by Frank. See L. K. Frank, "Time perspectives," *J. Soc. Philos.*, 1939, 4, 293–312.

in industry. Time perspective, as defined by Leeper, is "the definition by the person, at any given moment, of what has been the pattern of his relevant psychological past, and of what probably will be his future situation and position with regard to some other regions of valences which are now important in his life space" (20). In other words, time perspective includes not only a person's present outlook but, in addition, his past and future as they affect him at *that moment*. Thus, in the example of the worker interested in transfer to a new job, an evaluation of his past experience and of the potentials of the new job would constitute part of the worker's present life situation.

Action Research in Group Dynamics

As stated earlier, the field theoretical approach was first applied by Lewin to problems of individual behavior. The construct of *psychological field* was originally developed as an aid in dealing with the development of individual personality.

Although the first systematic application of field theory to social problems is found in the work of Brown (4), the construct of *social field*, pointing toward a field theoretical study of group life, is nevertheless implicit in the early work of Lewin. This "social" viewpoint found fruition in *action research* and in research in *group dynamics* (24, 27).

Action research is a method of field research oriented toward collecting objective information to be used as a basis for action decisions. Action research was viewed by Lewin as consisting of experiments conducted in the actual social situation, with key individuals in the group involved being drawn in as co-operating recorders, observers, and analyzers.

Information collected for action decision is also analyzed from the theoretical point of view by research personnel interested in *theory of group dynamics*. As implied in the term, group dynamics places emphasis upon interpersonal relations—social interactions—of individuals in groups and among groups (41), the term "dynamic" referring to the forces which facilitate or inhibit changes in groups.

The special significance of field theory for social psychology is that it looks upon the individual not as a static entity or unit, but rather as a dynamic being whose characteristics and behavior change under the varying influences of the *social field of force* of other persons and events constituting the whole situation. This leads directly into the field theoretical study of *group* life. According to Lewin, Lippit, and Escalona, "A field theoretical study of group life must: (1) regard the group as a whole, existing in a larger social field, with many overlapping dynamic relationships (influence of family and school membership, etc.); (2) regard the group as composed of interdependent parts of members (implies criterion of

interdependence as basic definition of a group); (3) regard each member as existing in a social field in which even the 'individual' problems must be viewed in a framework of group membership; (4) demands that observational analysis shall recognize these basic assumptions by observing group and individual activities in terms of meaningful wholes, always relating units of observation to their larger setting" (25, p. 53).

Industrial Implications of Field Theory

The "impact" of field theory on industrial psychology is to be found in (a) increased concern for the forces in the total industrial situation acting upon the individual and (b) an emphasis upon the analysis of interactions within groups and among groups in the industrial setting. Since good or bad industrial relations depend upon the adjustment of an aggregate of individuals, the problem in industrial relations is to discover the strains and stresses, the internal and the external pressures which force the point of equilibrium outside of the worker's area of tolerance to the point where the total situation becomes unbearable to him (8). An objective in this approach is to help set standards in the environment so as to make it improbable that conditions will strain the powers of adjustment of a significant number of employees. In terms of field theory, this cannot be done without considering (a) the individual worker as a whole personality, subject to various internal tendencies in the total environment which make various demands upon him and (b) the relations among competing and integrating forces in the total situation (10).

THE RESEARCH CENTER FOR GROUP DYNAMICS

Industrial applications of field theory were initiated, under the direction of Lewin, in the plant of the Harwood Manufacturing Company. Research in this area—and also in the application of field theory to other social problems—was extended through the organization of a *Research Center for Group Dynamics,* originally located at the Massachusetts Institute of Technology, and later transferred to the campus of the University of Michigan (27). This was conceived as a research center for building an experimental social science which would draw upon and co-ordinate the fields of psychology, sociology and cultural anthropology (27, 29, 32).

THE TAVISTOCK INSTITUTE OF HUMAN RELATIONS

Parallel with the development of the Research Center for Group Dynamics in this country, there arose in England, at the close of World War II, the *Tavistock Institute of Human Relations,* described by Jaques

as an "outpatient clinic for social disorders," which has applied field theoretical and psychoanalytic concepts and techniques, and also sociometric procedures, in the study of social interactions (14, 46). As in the American center, attention was focused upon industrial morale and other problems in industry, as well as upon field theoretical research in other social situations (13). Research in industry is represented by a 3-year investigation conducted in the plants of the Glacier Metal Company (12, 45). Here, a field theory approach was used (1) to study the psychological and social forces affecting group life, morale, and productivity of a single industrial community; (2) to formulate more effective ways of resolving tension within and between groups and to find out how to overcome resistance to change. Research directed toward these ends was conducted by teams of professional workers simultaneously responsible for both making research observations and providing professional advice to the firm. According to the investigators, this approach, taken from clinical medicine, brings the team "into contact with areas of the life of the factory which in normal circumstances remain inaccessible" (12, p. 15) to research personnel and provides access to data which might otherwise remain unrevealed (13a).

The resulting case history of developments "in the social life of one industrial community" furnishes information as to the variety and complexity of forces involved in the social behavior of factory personnel and insight—in field theory terminology—with respect to the magnitude, distance, direction, strength and valence of such forces. Although not discussed in detail in this volume, the survey is of interest—in spite of the failure to use measurement techniques—in providing a "description of the field of forces, at a first level of approximation" (12, p. xv), operating over a period of time within the total situation represented by a "going" business concern.

INDUSTRIAL STUDIES IN THE UNITED STATES

The impact of field theory context in the United States is seen most clearly in investigations at the level of the "face-to-face sub-group" (7a), described in later chapters.[4] Thus, in the Harwood Manufacturing Company investigation, described on pages 164–169, *labor turnover* and *absenteeism*, viewed as indicators of low morale, are ascribed to frustration associated with conflict between (1) increasing difficulty in meeting a production "goal" as a worker nears it, and (2) an associated increasing desire or drive to do so (36, p. 33). Lowered morale is thus viewed as the end effect of a discrepancy between "level of aspiration" and actual performance. Applying field-theory constructs, *resistance to change* to a

[4] See particularly Chapter 9.

new job—appearing in a slow rate of relearning and below-standard output—is referred to negative attitudes associated with "locomotion" from production "regions" with strong "positive valences" to "regions" of strong "negative valences" in terms of pay, job security, factory status, and personal success (37).

Participation in Decision-Making: As appears in Chapter 9, employee *participation in decision-making* plays a large role in Lewin's approach to the problem of motivation in industry. In a number of experiments, Lewin and his coworkers have shown that production can be increased by creating a social situation in which workers are, in Allport's terms, "participant in cooperative activity" (1). Employee participation in decision-making, within the scope of the field theoretical approach, becomes an effective device for lowering resistance to change, and raising production, by lowering the resistance of barriers to the "goal" of higher output (3, 6, 38). While increased production can be obtained by pressure which increases the strength of the forces pushing in the direction of the desired change, the use of group participation permits smoother "locomotion" to the same "goal" without the creation of "tensions" which may lead to industrial strife. Participation in decision-making in industry is generally viewed as an experience wherein attitudes favorable to change are taken on by the workers. The group-determined decision, according to Lewin, provides the link between motivation and action (32, p. 233).

Group decisions are also said to depend partly on how the "goal" and the total situation are viewed by the group. As a result, before a decision to change can be made, there must be a change in group perception which includes also a perception of the result of change. Prior to effective group action on a proposed change, the objective must be clarified; the way to the "goal" and the available means for reaching this "goal" must be determined. A strategy of action must precede action. These, according to Lewin, are among the *feedback problems of social diagnosis and action* (28).

As has been stated in Chapter 5, frustration arises when the individual is faced by goals with different "valences" or even by goals associated with "forces" of different strength (32). In the opinion of Lewin and his coworkers, participation in decision-making contributes to the avoidance of such conflict situations. The potential for industrial strife is lowered, since the change in group perception associated with group participation tends to bring the production "goal" closer to the standard desired by management. Furthermore, "emotionality" is lowered, since workers playing the "role" of planners tend to keep discussion at a relatively depersonalized level (30).

As indicated on page 114, "time perspective" is viewed by Lewin as playing a crucial role in morale. A "positive time perspective" is not only a basic element of good morale, but "at the same time," according to Lewin, "the process is reciprocal; high morale itself creates a long-range time perspective and sets up worthwhile goals" (26, p. 64). The "life space" of every person includes not alone the present, but the past and future as well, as they affect him at the moment. The feelings, emotions, actions and morale of a person at any given time depend upon his total "time perspective." Thus, members of a factory group may be expected to reach higher levels of production and have better morale if there is a realistic relation between their actual production and "level of aspiration" for future production. This is illustrated, according to Lewin, by the fact that a group of new employees for whom a production goal was set weekly progressed more rapidly, and reached higher levels of production, than did a group whose members were simply told, after a week's training, that they were producing only 20 to 25 per cent of the standard set for skilled operators (26).

Authoritarian and Democratic Leadership: Of special interest to industrial psychology is the impetus given by Lewin and his associates to controlled experiments with social groups which include an analysis of the leader and the effects of *authoritarian, democratic* and *laissez-faire* types of leadership upon the group and its individual members (24, 34). According to Bavelas, who has applied field theory to industrial research, motivation and morale reach high levels in a "democratic" atmosphere where there is active participation between the leader and members of his group (2, 3). In the "autocratic" group the work goals are set by the leader; it is he who determines work morale and makes the group an organized unit. In contrast to this, the democratic group is more "we-centered"; its members play an active part in setting group goals in a "permissive" atmosphere. As a result, the "time perspective" of members of the group is more independent of the leader than is the case of the "autocratic" group. As a further consequence, it can be anticipated that the production and morale of the "democratic" group will "hold up" better than that of the autocratic group, should either lose its leader (27).

The Social Climate: The contrast between authoritarian and democratic *social climate* has served as a point of departure for "field theoretical excursions" into the processes and social resultants of group life (25). Techniques for experimentally inducing "group atmospheres" originally employed with children in laboratory situations have been adapted for the investigation of autocratic, democratic, paternalistic, and laissez-faire atmospheres in industry (34). Attention has been directed toward the

problem of *communication*, since inadequate communication as well as poor leadership become sources of frustration both in the formulation of "goals" and in the effective achievement of individual and of group "goals" (15, 35).

The study of the nature of leadership and of varieties of "social climates" has led directly to field theoretical investigations bearing upon the *structure of the group*. Thus, from a study of work satisfaction in the textile industry, Hutte concludes that ". . . an industrial organization is a whole system of relations, in which the parts in a complicated way influence each other in their own functioning. The properties of this 'whole' are not observable by studying the properties of the constituent parts . . . the parts function hierarchally, allowing some parts to have a more embracing or more centralized influence within the whole. This hierarchal functioning, may be denoted by the concept of integration" (10, p. 190). According to Hutte, a field theoretical context is required in research on group structures to understand this phenomenon of integration.

Changing Group Structures: Principles for inducing changes in groups, of interest from the viewpoint of motivation and morale in industry, have been derived from application of the field theoretical approach by Festinger, Schacter, and Back (7). Their studies of how groups function and why they function in a particular way have suggested that *homogeneity*, *physical proximity*, and *group norms* are important variables related to group functions. The effectiveness of group norms or standards, it is said, is associated with *cohesiveness* of the group, and the presence of subgroups tends to disrupt the cohesiveness of the "parent" group. Group norms exhibit "power fields" or spheres of influence in relation to both morale and group action. Social groupings, it was found, create definite channels of communication, and the type of information most frequently communicated through these channels is that relevant to the functioning of the group. A further significant outcome of these studies is the conclusion (representing a confirmation of Lewin's view) that it is easier to change a whole group at once than to change an individual while leaving the remainder of the group unchanged.

AN APPRAISAL OF FIELD THEORY

As will become evident from the detailed discussion of studies in later chapters, it is *not* always apparent that the results achieved by investigators employing field theoretical contexts can be accounted for *only* by reference to field-theory constructs. It seems true, as suggested by Krech, that "Kurt Lewin and his co-workers . . . have made brilliant and lasting contributions to the formulation of psychological laws and techniques

of analysis where the *individual's* [5] psychological field was the subject of study" (19, p. 678). Furthermore, Lewin and his associates unquestionably deserve considerable credit for undertaking to provide a comprehensive theoretical context and for enlarging the techniques of action research in the investigation of group life and of social atmospheres.[6] Lewin's insistence that without a "good" theoretical foundation applied research follows a path of trial and error, and becomes misdirected and inefficient, has had a profound influence upon research bearing upon *motivation and morale in industry*. Findings from individual studies have helped to establish the importance of the view (earlier formulated by the Hawthorne investigators) that the levels of motivation and morale are not necessarily the end effects of specific incentives—of specific elements in the work situation or specific items of personnel policy (39, 40, 44)—but of the whole or total situation and of the many overlapping dynamic interrelations of its parts, involving both the individual and the smaller groups in a larger social field (25).

Acknowledgment of this debt to field theory does not call for the belittlement of theoretical and factual contributions from other sources. From the viewpoint of theory, there may be justification for the question, raised by Krech, as to whether "genuine group law" can actually be established by merely transforming principles established for individual behavior by "substituting the word 'group' for 'individual' and the term 'social field' for 'psychological field' in the original formulations" (19, p. 678). Whether or not the specific criticism by Krech is justified, there nevertheless appears a need, in the current striving toward definitive laws of psychological reactions, for a balanced approach which calls for a tolerant view with respect to all possible explanations of social interactions. It is in this spirit of eclecticism that this section on theoretical backgrounds has been written, and an effort made to interpret the findings of studies described in later chapters with reference to alternative explanations, rather than upon the assumption that any single theory represents the "one bright hope in an otherwise desperate social picture." [7]

[5] Not italicized in the original.

[6] It should however, be noted that this viewpoint of action research was anticipated in earlier studies conducted in the Hawthorne Plant of the Western Electric Company (40, 44) under the influence of Mayo (39).

[7] A phrase used by Tolman (41) in referring to the concepts and techniques of field theory as elaborated by Lewin and his coworkers into a progress of "group dynamics."

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Part 3
EXPERIMENTAL STUDIES

7

The Influence of Job Preference, Size of Work Group, and Knowledge of Results

MOTIVATIONAL theory, discussed in Part II, provides a frame of reference for research directed toward the identification and evaluation of significant motives, attitudes, and incentives in industry. Progress toward the maximum utilization of human resources in increasing productivity and in raising the levels of job satisfaction and morale calls for fact-finding investigations conducted in industrial plants and through associated laboratory studies. The prime object of such investigations will be that of determining how the worker reacts to factors in and outside of the plant which may influence his feelings, sentiments, attitudes, and behavior in the plant.

The scope of investigation in the area of motivation and morale is almost unlimited. It calls for an intensive study of the influence of hours of work, methods of wage payment, plant physical conditions, personnel policies and practices, structural organization of the company, labor-management relations, and also of the effects of age, schooling, marital status, socio-economic status, etc., upon employee attitude and performance. A comprehensive research program will involve a detailed and direct study of the feelings, attitudes, and sentiments of individual workers by means of such scientific techniques as are available. It will lead to a comparison of different groups in the same plant and of different plants as an aid in the isolation of the factors which determine the attitudes of the individual employee and the morale of workers as a group or "class" in the structuring of society as a whole (15). It will invariably

and emphatically stress *the observation of facts and their interrelations* as the *sine qua non* of the scientific study of motives-in-work.

"TRUE" AND "NATURAL" EXPERIMENTS

Of the various research methods available for the investigation of the sources of motivation and morale, "true experiments" and accidental "natural experiments" generally yield the most direct and unambiguous results (16). In the former, specific and controlled changes are made in the work situation and data are accumulated on parallel changes in workers' feelings, sentiments, attitudes, and performance. Such experiments are typified in the study of wage incentive systems, by Wyatt, discussed below, and in the Hawthorne experiment, described in Chapters 10 and 11. In the second type of investigation, advantage is taken of existing or newly introduced variations in the work situation and comparisons made of the productivity, satisfaction or morale of groups exposed to specified differences in objective conditions. Illustrative of such "natural experiments" are the comparison of output of differently sized work groups by Marriott, described below, and studies of the morale of "low-production" and "high-production" groups and comparisons of production and morale under different supervisors, conducted by the University of Michigan Survey Research Center, discussed in Chapter 8.

The number of both "true" and "natural" or "ready-made experiments" is small, in part because of the hesitation of industry to permit research. For example, 66 replies from 158 member firms surveyed by the backwardness on the part of industry in supporting "human relations" research. For example, 66 replies from 158 member firms surveyed by the American Management Association, in 1949, showed that only "*a dozen companies* are doing work of a type which can properly be described as personnel research, even though they are spending on it only a penny or two out of each personnel function dollar . . . Two-thirds of the companies replying reported that they are doing no such research at all, and a few wrote that they were too busily engaged in collective bargaining to reply" (5). At the same time, according to the survey report, "practically every reply to the AMA survey began or ended with an expression of gratitude that a start was being made in presenting what management is doing to raise the knowledge of human behavior in industry" (5).

In spite of general lack of management support, a number of companies have provided the opportunity for "true" and "natural" experiments. Such research, typified in experiments described in Part III of this volume, has been supported not only by industry, but with funds provided by government agencies, research foundations, and universities,

supplemented frequently by contributions of the time and efforts of university personnel.

An Investigation of the Role of Financial and Nonfinancial Incentives

Illustrative of such experiments is an investigation, sponsored by the Industrial Health Research Board, which also provides a striking example of the possibility of studying simultaneously both the effectiveness of different wage-incentive plans and the influence upon production of factors other than the desire for more money. The significance of this study is particularly marked because of the fact, referred to in Chapter 2, that wage-incentive systems are seldom installed under conditions which permit an evaluation of different wage-incentive plans and of the direct effect of the wage incentive in comparison with the influence of other factors.

The subjects of the experiment were ten girls aged between 15 and 16 years, selected on the basis of personal characteristics as shown during an interview and in the performance of special tests (24). The experiment was conducted in a chocolate manufacturing plant, and the material and methods of work employed were similar to those used in the corresponding departments in the factory. The operatives were part of the ordinary factory staff, but the experiment was conducted in a separate room specially equipped for the purpose by management.

Under ordinary conditions each worker is usually employed on a single operation. In the present experiment each of the ten workers learned and became thoroughly experienced in five different repetitive operations. These, in order of increasing complexity as evidenced in average time taken to complete the operation, included (1) *unwrapping*, (2) *wrapping*, (3) *packing*, (4) *weighing*, and (5) *weighing and wrapping*.

The hours of work were from 8 to 12 and from 1 to 5, but the first 5 and the last 10 minutes in each spell were devoted to answering questions on feelings of fitness, boredom, fatigue, and the like, making the actual number of hours worked in each spell 3¾. Output was recorded every quarter hour. In addition, the behavior of the operatives during work, their remarks and appearance, were noted by the experimenter.

THE EFFECTS OF VARIOUS WAGE SYSTEMS UPON PRODUCTION

In accordance with the usual practice in industry, the workers in this experiment were first paid a fixed weekly wage (*Time Rate*). This method of payment was continued for 9 weeks and was followed by a competi-

tive-bonus-wage system which remained in operation for 15 weeks (*Bonus Rate*). During the latter period the operatives were ranked each week according to output, and the slowest worker was given the same wage as before. The next in order of output received an additional sixpence and so on throughout the group, so that the fastest worker earned 4*s.* 6*d.* more than the slowest. This system of payment was followed by a flat *Piece Rate* which remained unchanged for another 12 weeks. Thus, for a period of 36 weeks, the different methods of payment represented the only significant external changes in the conditions of work.

As a first step in the analysis of results, the production records of all the workers engaged in the five different processes were combined, production during successive weeks being expressed as a percentage of the output during the first week of the experiment. As is apparent from Figure 8, the amount of improvement from week to week during the

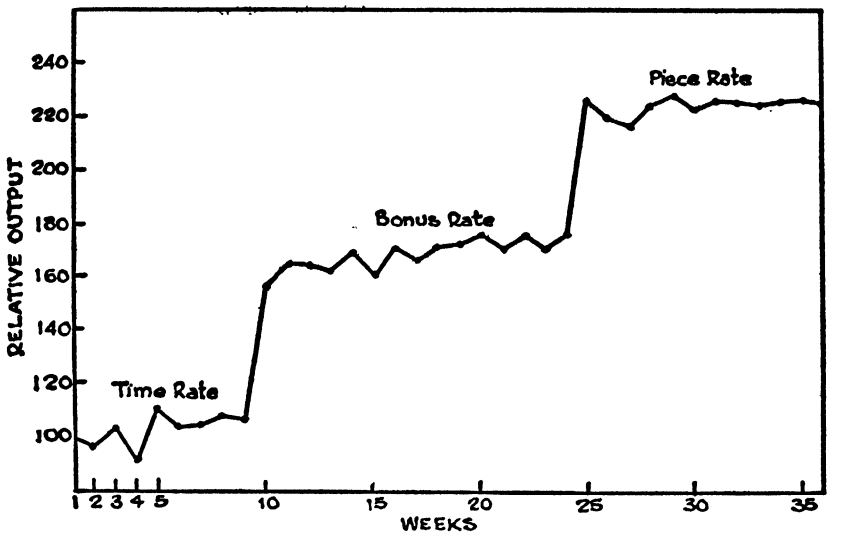


Figure 8. The Influence of Various Wage Systems upon Production*

Time-Rate period was relatively small, averaging 12 per cent. There were also indications that a continuation of this method of payment would have resulted in no appreciable increase in output. The immediate effect of the introduction of the *Bonus Rate* was an increase in output of 46 per cent, and the output curves continued to rise for the greater part of this period, becoming stabilized at a fairly uniform level by the end of the 15 weeks. Following the introduction of the flat *Piece Rate* there was an almost immediate increase in output of 30 per cent which, after

* By permission, from S. Wyatt, *Incentives in Repetitive Work*, (Industrial Health Research Board Report No. 69), Her Britannic Majesty's Stationery Office, 1934.

a temporary drop, was maintained with very little change throughout the remainder of the 12-week period.

In a later phase of the investigation, the *Piece Rate* was retained in the *wrapping* and *packing* operations, the *Bonus Rate* was substituted in the *weighing* and *weighing and wrapping* processes, while in *unwrapping* the original *Time Rate* was revived. The most significant outcome of such changes was the marked decrease in output caused by the revival of the *Time Rate*. The findings suggest that the lower output caused by the time rate is not confined to the early stages of the learning process, but may be equally apparent in the case of more experienced workers. This aspect of the situation was further investigated by substituting a *Piece Rate* for the *Time Rate* in the case of a group of experienced workers employed in feeding wrapping machines with chocolate. The introduction of the wage incentive system resulted in an average increase in output of 36 per cent. As in the case of the earlier experiment reported by Kitson (14), it would appear that in the absence of an adequate financial incentive, these experienced workers had settled down to a production rate well below the limits of their potential achievement levels.

It is evident that, for the type of work done in both the main experiment and subsequent studies, the *Time Rate* proved to be a weak incentive to production. Under this method of payment output became stabilized at a level much below the limits of possible achievement. An analysis of observations made by the experimenter and of interview findings showed that work under this system of wage payment was characterized by an attitude of indifference on the part of the operators concerned, and that output "seemed to be largely dependent on constant supervision and the fear of dismissal" (24, p. 55). The *Time Rate* was conducive to boredom and responsible for an increase in the number and duration of voluntary stoppages although, on the other hand, it tended to reduce instances of jealousy among employees with different production rates and to promote friendly relations.[1]

The introduction of the wage-incentive systems resulted not only in marked increases in production, but also in increased interest, in decreases in the amount of lost time, and in fewer instances of "troublesome" conduct. However, particularly under the *Bonus Rate*, there was an increase in the frequency of disagreements among workers and of other signs of stress including, under the *Piece Rate*, greater faultfinding with materials and with other conditions which seemed to interfere with productive activity. The experimental design did not permit a clear-cut evaluation of the comparative merits of these two wage-incentive

[1] See Chapter 11.

systems since, as shown in a supplementary study, the relative increases noted under these systems might have been a function of the order in which they were introduced. However, according to the investigators, the *Piece Rate* was regarded by the workers as the fairest of the three methods because individual rewards were dependent upon individual achievement and because it tended to produce closer application as evidenced, for example, in decreased talkativeness, fewer instances of troublesome conduct, and a reduction in the frequency and duration of stoppages.

THE RELATION BETWEEN JOB PREFERENCE AND PRODUCTION

The analysis of the results from all the processes studied leads to the conclusions that *"the rate of working both during and after the learning period is largely dependent on the method of payment"* and that *"output seems to become stabilized at a level which is proportional to the strength of the monetary incentive"* [2] (24, p. 9). However, a further analysis of the results, applying to individual processes, also provides evidence that, *in a work situation which fails to satisfy other basic needs or wants, wage incentives will not, in themselves, produce that "prolongation of effort"* (18, p. 52) *which, according to Mace, is among the principal beneficial effects of incentive systems.*

THE INFLUENCE OF JOB PREFERENCE

Evidence as to ineffectiveness of wage incentives under such conditions appears in a comparison of the preferences for the five work processes included in the main experiment by Wyatt and his associates. From weekly statements obtained from the 10 workers it was found that the order of preference for the five operations was as follows

1. *Wrapping*
2. *Packing*
3. *Weighing and wrapping*
4. *Weighing*
5. *Unwrapping*

Figure 9 shows the relative output in the 36 successive weeks of the main experiment for each of the five work processes, each point representing the combined results of ten workers expressed as a percentage of output of the first week. It can be seen that the effect of the wage incentives is most marked in the operations which aroused the more favorable feeling and that it is completely absent in the case of the

[2] Not italicized in the original.

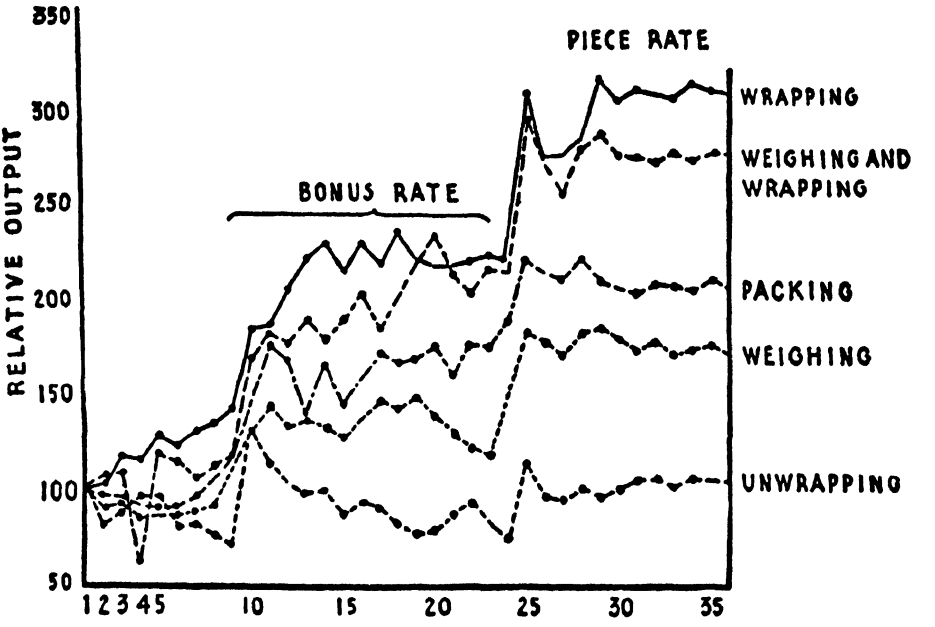


Figure 9. Relative Output in Successive Weeks in Different Processes under the Influence of Various Wage-Payment Plans *

least popular operation, *unwrapping*. As a matter of fact, in the most preferred operation, *wrapping*, the rate of production was trebled by the end of the experiment, while in the very similar but converse process of *unwrapping* there was practically no improvement, and output throughout the experimental period was usually less than that recorded during the first week. An analysis of observations of the experimenter and of interviews suggested that the lack of improvement in the latter operation could be attributed, in part, to the belief of the workers that *unwrapping* was a wasteful and comparatively useless procedure. Neither continued practice on the task nor wage incentives produced any effect in the way of stimulating output on an operation to which the worker attached little value—which "failed to give that satisfaction which accompanies the production of attractive and saleable commodities" [8] (24, p. 26). Such findings support the viewpoint, which is gaining

[8] Since the processes differed in complexity, it could be hypothesized that the rate and amount of improvement in any process is a function of the complexity and of the number of times each cycle of movements is repeated in a given period. According to the investigators, an examination of the results showed that the possible effects of such factors seem to be submerged by the influence of the extent of interest in the process.

* By permission, from S. Wyatt, *Incentives in Repetitive Work*, (Industrial Health Research Board Report No. 69), Her Britannic Majesty's Stationery Office, 1934.

ever widening acceptance, that a *financial incentive may have no effect if the work operation is disliked; if the work fails to satisfy or conflicts with other sentiments or needs which influence the will-to-work.*

THE EFFECT OF "GROUP ATMOSPHERE"

Other results from the main experiment in the series of studies by Wyatt and his associates provide clues as to other characteristics of the work situation which affect the *will-to-work* (17, 18). These showed that variation in the rate of working of different individuals was dependent upon the prevailing group or *social atmosphere*, i.e., on a "collective influence which formed an intangible background and determined the general nature of the reactions to the conditions of work." However, certain individuals were found to have a particularly great influence on the output, attitude and behavior of the remaining workers. For example, the absence of such a worker, characterized as being of the "domineering and disturbing" type caused an increase in output of 12.5 per cent on the part of the remainder of the group. The production of an operative was also found to be closely related to that of her immediate neighbor. The output of a worker tended to increase when she was moved from the neighborhood of a slower worker to that of a faster worker and vice versa. In several such cases the change in output varied from 15 to 20 per cent and there were striking changes in the disposition, moods and pleasure accompanying work. The average output of individual workers increased when each worker was isolated, in turn, from the remainder of the group. Such findings, according to the investigators, "show the interactions between one worker and another and illustrate the futility of regarding the individual as an independent unit . . . When," they add, "workers are employed as a fairly compact group they no longer behave as individual units but respond as a collective whole to the prevailing group 'atmosphere' . . . The creation of a suitable attitude or 'atmosphere' is accordingly of some importance and as a rule there is scope for improvement in this direction" (24, p. 51).

The Size of the Work Group

The observation that workers employed as a compact group react as a "collective whole" raises a question concerning the relation between the *size of the work group*, on the one hand, and production, job satisfaction, and morale, on the other. A survey of 22 American plants, reported by Balderston (1), in 1930, showed that 16 firms preferred work groups consisting of fewer than 50 individuals, and that 8 of these considered 20 to be the optimal upper limit. A study reported by Handyside (7a), in 1952, indicates that the average size of the primary working group in

British industry is 21.9, and that the average number in groups of production workers varies between 16.8 (in chemical plants) and 33.3 (in textile plants). Not alone Balderston, but also Dickinson (7), following a study of wage systems, reaches the conclusion that "small groups provide the greatest incentive although larger groups are practical in progressive manufacture where automatic conveyors or other transporting and reporting devices may enable workers to co-operate who cannot see or hear each other at work" (21, p. 47).

A STUDY IN TWO BRITISH FACTORIES

The relation between the size of work group and output has been investigated, by Marriott (21), in two Britsh motorcar factories. Employees in both plants were men on direct production work who were paid on the basis of total earnings of the group in which they worked, the amount being divided pro rata to the base rate of each individual and the number of hours he worked. In *Factory A*, the wage system was in the form of a group bonus, based on an "efficiency" percentage, i.e., the ratio of the time allowed for an operation to the time actually taken, expressed as a percentage. The *efficiency percentage* was used as a measure of group output in *Factory A*. In *Factory B*, payment was based on group piecework, each group being paid on the basis of the number of units produced. In *Factory B*, the average piecework earnings (in pence) per man per hour were used as a measure of group output. Both measures are directly proportional to output, and can therefore be used in comparing the productivity of work groups.

In *Factory A*, *efficiency percentages* were collected for 15 consecutive months (five quarterly periods), from January, 1946, to March, 1947. Throughout this period, the groups were very stable as regards size, and the mobility of individual men was normal for existing industrial conditions. In *Factory B*, there were marked variations in over-all conditions during the period of the experiment. For example, in order to counterbalance production needs, some groups were varied in size from time to time and there was some movement of the men involved. Because of these and other factors, collection of data was limited to the four most stable six-week periods, free from holidays and which, although differing in the number and distribution of hours worked, provided full-time and similar working conditions for all the groups. However, interpretation of earnings data was complicated in *Factory B* by the fact that a temporary additional bonus had been allowed on many of the assembly lines, in the form of an addition of from 7½ to 12½ per cent to the usual earnings, varying according to the production planned. Since this bonus was not proportional to output, it was deducted from the group

earnings before the average net piecework earnings (the output measure used) were calculated.

Elimination of 16 groups for which data were incomplete in *Factory A* left a total of 153 groups for analysis in this plant, distributed with respect to size as shown in Table 8. In *Factory B*, of the total groups 51 were constant in size throughout the 18 months; 20 varied in size, generally moving up or down one class only in one or two periods; 16 groups were present in only three of the four six-week periods used in the analysis, and 18 in only two. In the treatment of the individual periods, the latter were included, two appearances being considered as a reasonable criterion in defining the existence of a group. As shown in Table 8,

TABLE 8. *Number and Size of Groups Studied in Investigating the Relation Between Size of Working Group and Output* (after Marriott)

Size of group—number of workers	*Factory A*		*Factory B*				
	Average number in group	*Number of groups*	*Average number in group*	*Number of groups—Periods*			
				1	*2*	*3*	*4*
Under 10	6.5	20	4.0	60	71	59	56
10–19	14.7	41	15.8	10	10	9	10
20–29	24.3	35	23.8	6	6	7	6
30–39	33.6	24	34.6	2	3	1	1
40–49	43.5	13	45.6	3	1	4	
50 and over	88.9	20	69.2	5	7	6	6
All groups	30.9	153	13.0	86	98	86	79

even this treatment provides too few of the larger sized groups, especially 30–39 and 40–49, to give "reliable" averages, although it should be recalled that data were averaged for six-week periods and for fairly large numbers of men.

THE RELATION BETWEEN GROUP SIZE AND OUTPUT

The over-all relation between group size and output (as represented in earnings under incentive wage systems) is shown in Figure 10, *Part A*. Differences in output among variously sized groups were found to be substantial in practical terms, ranging from an average *efficiency percentage* of 126.1 to one of 133.8 in *Factory A* and from 31.0 to 36.4 in hourly piecework earnings (in pence) in *Factory B*. When the average output of the smallest group is given a value of 100, the averages of the smallest groups prove to be from 6 to 8 per cent higher than those of

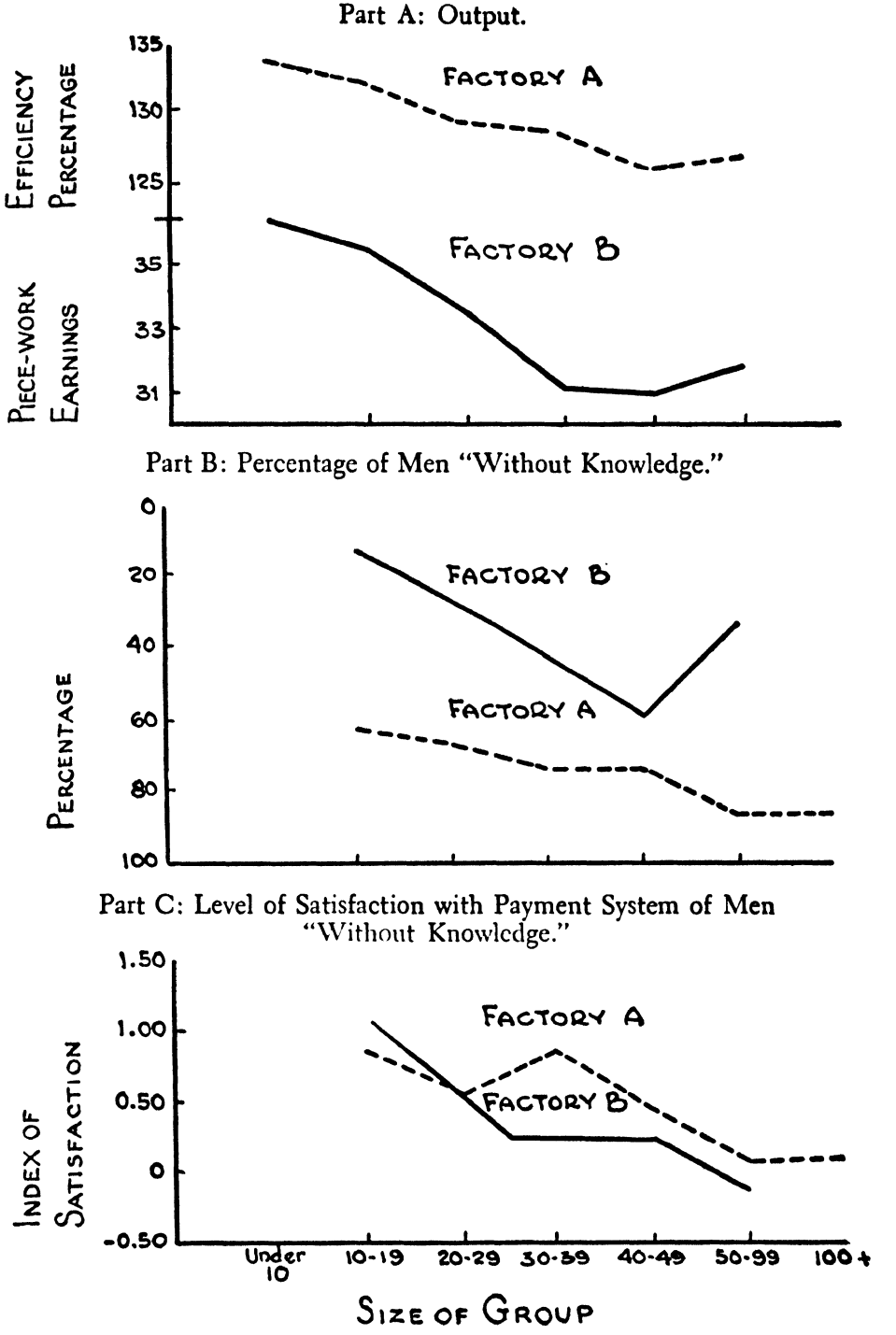


Figure 10. Relations among Size of Work Group, Knowledge of Results, Output, and Satisfaction.*

* By permission, from H. Campbell, "Group incentive payment schemes: the effects of lack of understanding and of group size," *Occup. Psychol.*, 1952, 26, 15–21.

groups containing between 40 and 49 men [4] (22). Correlations between size of group and output in each of the quarterly and six-week periods, respectively, were all found to be negative and statistically significant,[5] ranging from —.203 to —.277 for all groups in *Factory* A, and from —.287 to —.491 for all groups in *Factory* B.

Both plants were located on the outskirts of towns of 100,000 population, and travel, housing and similar facilities were much alike. The nature of the work processes was almost identical in the two factories, and physical conditions and welfare amenities were of a high order and much alike. However, there were marked differences between the two plants in terms of employee satisfaction, the quality of supervision, employee co-operation in meeting quotas, personnel policies, etc. The fact that "in these two contrasting conditions, one in which the workers were stimulated to increase productivity, and the other in which restriction appeared to be forced on them, the effects of group size were so consistently similar" (21, p. 55), is interpreted as showing that *group size influences productivity.*

FURTHER EVIDENCE ON THE BENEFICIAL INFLUENCE OF THE SMALL WORK GROUP

Interviews with managers and foremen in the two factories showed that their preference was for smaller-sized groups.[6] In *Factory* A, 75 per cent expressed opinions favoring groups smaller than 50, the majority preference being for groups with from 20 to 40 men. Similar results were obtained in *Factory* B. Workers' opinions are not reported in the publication on this study. However, investigations conducted in the United States have provided some information concerning the relation between group size and the feelings and sentiments of both employees and of young people planning to enter the labor market. Thus, from studies conducted by the Survey Research Center, University of Michigan, Katz concludes that "employees of small work groups are more satisfied than employees of large work groups" (12, p. 168). Evidence as to preferences of young people with respect to size of work group was obtained

[4] In both factories, the output of groups with 50 or more men was higher than for groups with 40 to 49 men. It is indicated that it was not easy to explain this tendency for output to rise in the groups with 50 or more men. It is suggested that the more frequent use of power conveyors by such large groups may account for the situation. According to Marriott, "it seems likely that the more constant rate of working imposed by them (i.e., the mechanical conveyors) counterbalanced the effect of size in the largest groups where it [size] lost its discriminating power."

[5] With a single exception, in the treatment of subgroups with special allowances.

[6] An interesting possibility, not examined in any of these studies, is suggested in the findings of an exploratory study by Hemphill (8) which suggest that "the *size* of the group is a variable which to some degree conditions leader behavior."

in a survey of 6,789 tenth- and twelfth-grade students in 56 Michigan public and private high schools, conducted by the Social Research Service, Michigan State College in 1949. As shown in Figure 11, young people prefer to work in small work groups (26). Studies in a metals-fabricating plant, by Kerr, Koppelmeier and Sullivan (13) lead to the conclusion that "large departments, even though they may encourage many aspects of job satisfaction, perhaps fail to provide as attractive long-term goals as do small departments" (13, p. 51).

Relationships between group size and *morale* have been noted in a study, by Hewitt and Parfit, conducted in a British textile plant (8a). Here, the "non-sickness" absence rate was found to be significantly greater

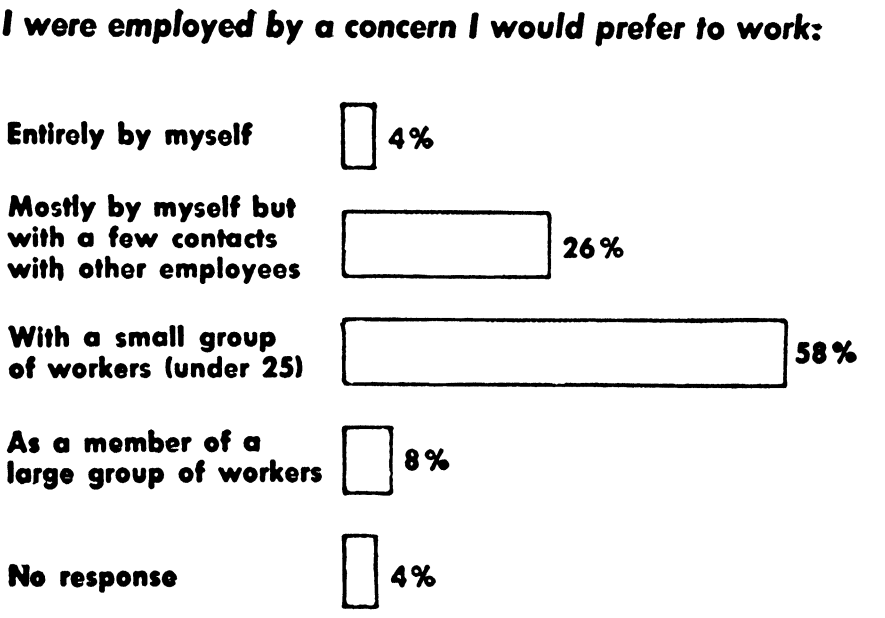


Figure 11. Attitudes of High-School Children toward Size of Work Group *

among workers in large-sized rooms than among those in smaller rooms accommodating fewer employees. On the assumption that a high absence rate is an indicator of low morale, it is hypothesized that "there may be some analogy between the spread of poor morale and the spread of infection." According to the investigators, "one would expect the risk of coming into contact with poor morale, like the risk of infection, to be greater in the larger workshops" (8a, p. 41). In some respects, the findings of this British study are in agreement with those from an earlier study in the aircraft industry, conducted during World War II by Mayo

* By permission, from *Youth and the World of Work*, Michigan State College, 1949.

and Lombard (23), which suggested that absenteeism (thought of as an objective index of employee morale) [7] was a function of group teamwork. "Natural," congenial work groups, conducive to such teamwork and associated advantages, are said to develop more readily when the number in the group is small, although strong cohesion may also occur in larger "family" groups characterized by a substantial core of employees who have worked together for a long time.

IMPLICATIONS FOR MANAGEMENT

In considering the findings of the study in the British motorcar factories, Marriott also reaches the conclusion that "the inverse relationship between group size and productivity is the result of greater cohesion in small teams because men know each other better, can see each other at work and, consequently, are less suspicious and require less supervision" (22, p. 18). However, exception is taken to the viewpoint, inherent in Mayo's theory of "informal social organization" in industry,[8] that size of work group is important only when groups develop "naturally," and not when groups are organized as working units by management. On the contrary, according to Marriott, "as far as output is concerned the size of management-organized groups is important . . . the study of the optimum size for each situation may lead to greater efficiency, and the resulting higher earnings to greater satisfaction" (21, p. 57).

As has been suggested by Marriott, further research is needed—particularly in the form of controlled or "true" experiments—to determine optimal size of work groups for different types of work and under various organizational conditions. Nevertheless, available data suggest the need for management attention to the question of the size of the work unit. Consideration of this problem will involve not alone the question of number, but also the need for partitions and other surroundings which will help establish a "small group atmosphere." Management must be prepared not only to keep the work group small, but also to cast aside its predilection for the "wide open spaces" in offices and factories, and to provide physical settings which will contribute to the integration of small work groups into productive and satisfied social units.

The Influence of "Knowledge of Results" in Relation to the Size of the Work Group

Although group cohesion appears to be in itself an important factor in accounting for higher output in smaller work groups, other elements

[7] See pages 211–213.
[8] See Chapter 11.

in the situation may contribute to this result. Campbell has suggested that "*the worker's knowledge of the relation between his effort and earnings is likely to decrease as the size of the group increases, and there may be a corresponding weakening of the incentive to work*" [•] (4, p. 15).

EXTENT OF KNOWLEDGE OF RESULTS IN RELATION TO SIZE OF WORK GROUP

This hypothesis has been tested through an analysis of data obtained in the two British motorcar factories, referred to in preceding pages, in which Marriott investigated the relation between size of the work group and output. In both factories the "usual" methods for explaining incentive schemes were used, including booklets, explanations to individual workers, and detailed instructions for supervisors and for workers' representatives. Nevertheless, interviews with a 10-per-cent sample of workers in *Factory A* showed that two-thirds of the 340 men working under the *efficiency percentage* plan had no effective knowledge of results of their efforts, as represented by their incentive earnings, until they received their wage sheets in the following week. In *Factory B*, even with a much simpler payment system (*group piecework*), one-quarter of the 217 men (20-per-cent sample) interviewed were in a similar position.

A further analysis indicated a definite tendency, evident in Figure 10, *Part B*, for the proportion of workers *without* knowledge of results to become larger as the size of the work group increased. Of further interest in Figure 10, *Part B*, is the fact that in *Factory B* the proportion of workers without knowledge of results did not rise in groups including 50 to 99 men. According to Campbell, the workers in such groups were assembling whole cars, and it was therefore quite easy for them to count the number going off the line. This effect did not occur in groups of 100 or more men also engaged in assembling cars in *Factory A*, apparently because the larger size of the group made the counting more difficult.

RELATION BETWEEN KNOWLEDGE OF RESULTS AND SATISFACTION WITH JOB

Interviews with workers yielded an "index of satisfaction" toward the wage-payment system, expressed on a scale ranging from 2 or "very satisfied" to —2 or "very dissatisfied." As shown in Figure 10, *Part C*, with the exception of one group in *Factory A*, the level of satisfaction of the workers *without* knowledge of results decreased as the size of the group increased. On the other hand, group size was found to have no effect on the satisfaction of those *with* knowledge. In order to check

[•] Not italicized in the original.

these findings, derived from separate analyses in the two factories, the workers from each factory were combined into two groups representing *satisfied* and *dissatisfied* workers. In the case of those without knowledge of results, the proportion of dissatisfied workers became progressively and significantly larger as the group size increased ($X^2 = 19.44$; $n = 5$; $P = < .01$), but there was no consistent or significant difference in the case of those with knowledge ($X^2 = 4.36$; $n = 4$; $P = > .30$).

According to Campbell, the explanation of these findings may be found partly in the social structure of the groups. The compactness of the small group allowed its members "to get to know each other well," and information (including presumably that concerning the incentive system and output) could be passed on quickly. In general, a common purpose appeared to bind together the members of the smaller groups "evoking loyalty to the group and a trust in each other." In contrast, the sustaining "quality of belonging to a known and trusted social unit" appeared to be absent in larger groups, with resulting adverse attitudes in the way of suspicions of malingering on the part of fellow workers, dislike of dependence on others, etc. However the findings also clearly indicate that *knowledge of results* operates in determining feelings and attitudes under wage incentive systems.

"KNOWLEDGE OF RESULTS" AS A DIRECT INCENTIVE TO PRODUCTION

The emphasis in the experiment described immediately above was on knowledge of results in relation to the size of the work group. However, it brings into relief the role of *knowledge of results*, sometimes known as *K of R*, as an independent and direct incentive to production and satisfaction at work. Many laboratory experiments and a number of industrial and military studies have shown that efficiency of learning can be increased by supplying knowledge of results, in the way of information on progress in learning (25).

Illustrative of experiments on the motivating influence of knowledge of results is a series of studies conducted by the Applied Psychology Unit of Cambridge University (20). In one of these, reported by Macpherson, Dees, and Grindley (19), the subject was given the task of pressing a telegraph key for a set time of approximately 0.7 seconds. Under one set of conditions subjects were able to discover how well they were doing by observing a scale on a mirror galvanometer. Under the second set of conditions they were deprived of this knowledge of results. Figure 12 shows the average results of 10 subjects on a series of runs involving the alternation of 10 trials *with* knowledge of results (*K*) and trials *without* knowledge of results (*N*), followed by another series of runs *with* knowledge of results (*K*). *Section* A of Figure 12 shows the progress

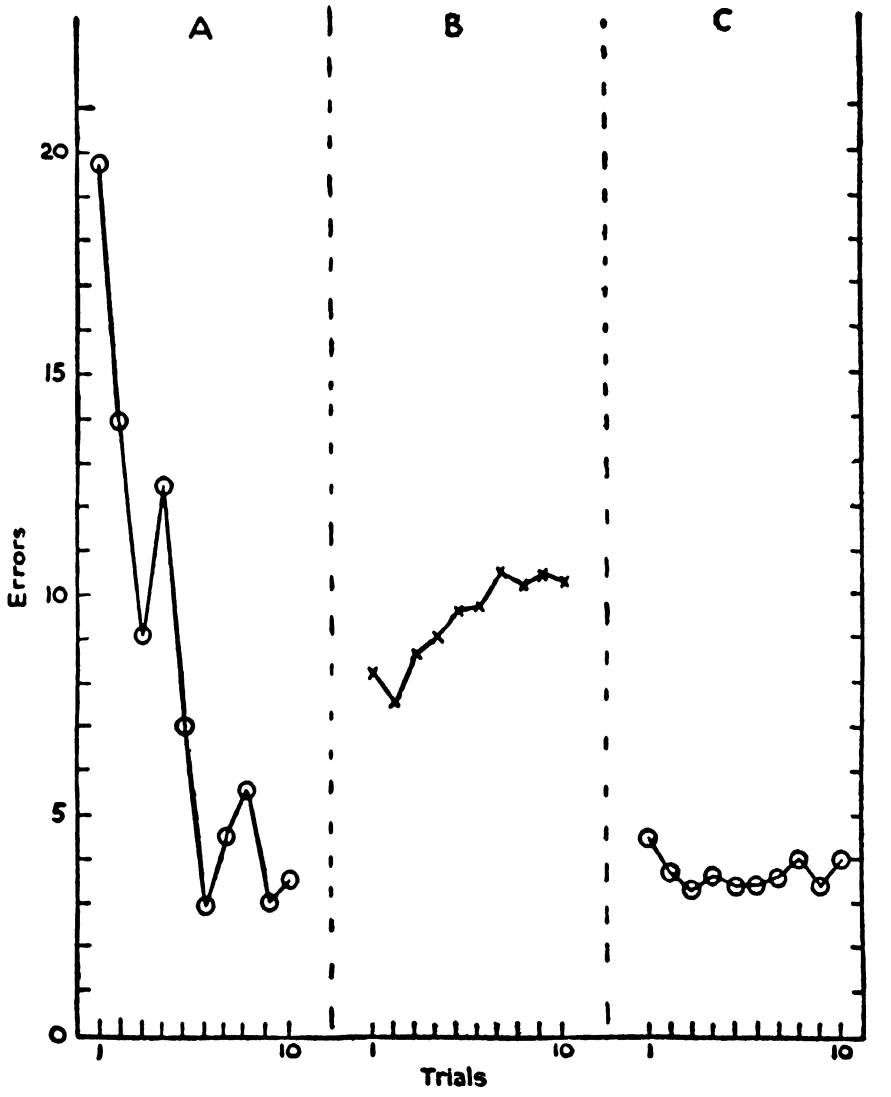


Figure 12. Average Errors of Ten Subjects with Alternate Runs of K and N Trials.* Curve A represents the average errors during the very first run of ten K trials. Curve B represents the average errors during the whole subsequent fifteen N runs. Curve C represents the average errors during the whole subsequent fourteen K runs.

* By permission, from S. J. Macpherson, V. Dees, and G. C. Grindley, "The effect of knowledge of results on learning and performance," *Quart. J. Exper. Psychol.*, 1948, 1, 68–78.

of learning when knowledge of results is given. *Section B* indicates clearly the marked and statistically significant deterioration which takes place when knowledge of results is withdrawn, while *Section C* shows the improvement when the subject is again given an opportunity to observe how well he is getting along on the task.

The principle that the learner makes most rapid progress when he is aware of how well he is doing and of the nature and number of errors he is making has been put to practical use in a number of military situations. For example, in the case of radio-code instruction, the traditional method of training was to present a whole series of signals before the trainee was given information as to whether or not his identifications of signals were right or wrong. Studies conducted during World War II resulted in the introduction of a "code-voice" method, in which the correct letter was given immediately after the trainee had written down the signal as he understood it (9, 10). The use of this method, which gave immediate knowledge of results (and also included the feature of "whole-learning") resulted in reducing by more than 25 per cent the time taken to reach a speed of five words per minute, and in decreasing the proportion of those failing to reach this speed from 15 to 3.4 per cent. In another military situation, it has been shown that men learned to track a gun more accurately when the instructor sounded a buzzer to indicate that the tracker was off target than when they were not immediately informed of these errors (2). Conversely, according to Lindsley, men learning radar operation became less accurate, in the course of six days of practice, because they were not given information as to their errors and rate of progress (11).

AN ILLUSTRATION FROM AN ELECTRIC GENERATING PLANT

Studies of the influence of knowledge of results as an incentive have been almost exclusively limited to learning situations. The possibility that *K of R* can have useful implications for stimulating production in the day-to-day activities of experienced workers is illustrated in an experience reported by Bingham in 1932. Following an analysis, conducted by Outhwaite, of the fireman's job in an electric generating plant, it was decided that, in addition to what the firemen know as to the efficiency of each battery of six boilers, data were needed as to the actual operation of the separate boilers stoked by different men. As a result, instruments were installed to provide each man with information as to what was expected of his own boiler and precisely how efficiently or inefficiently it was working. "For the first time," according to Bingham, "the men really knew when they were being successful in their work. A new spirit spread among them. A fresh pride replaced the old indifference. Graphic

daily and weekly records for each boiler were posted. Rivalry sprang up, competition between the three eight-hour shifts. Moreover, each man could compare his own performance today with his last week's record, and try to improve it" (3, p. 262).

The experiment was so successful that it was extended to other batteries of boilers and later to all the power plants. Manuals of instructions were prepared for use by the men in learning how to manage their furnaces still more economically. The firemen were given a new status, in the form of a new job title of "stoker operator." Because of the increased efficiency in operation, it was found possible to grant a substantial raise in wages. Labor turnover dropped. The company profited in the form of savings in cost of coal, which was estimated to be $330,000 a year in the main plant alone. But, says Bingham, "the psychologist chiefly values the fact that (as a result of changes premised upon knowledge of results) the men now liked their work. They had a sense of accomplishment. Their work had become worth while" (3, p. 263).

Keeping Workers Informed of Progress and Achievement

Management and supervisory personnel in American industry have not been unaware of the need for keeping workers informed of their accomplishments. Many supervisors and foremen who are unfamiliar with the phrase "knowledge of results" make a practice of supplying workers with an answer to the question *"How'm I doing?"* on a day-to-day basis. Numerous devices have been developed to help keep workers informed about the rate and quality of their work. Nevertheless, there are also indications of a failure to make advantageous use of the fact that groups of workers without knowledge of results tend to show a persistently lower level of performance than workers on the same tasks who continuously know how well they are doing. Perhaps further consideration should be given, particularly in repetitive work, to wider use of readily visible output-recording devices which, according to Wyatt, Langdon and Stock, would not only provide *K of R* but would "induce" the operator to compete against himself (24). As a matter of fact, it is suggested by these British investigators that the incentive would be particularly strong if the indicator registered the accumulating output in terms of pounds and shillings (or dollars, in the U.S.A.).

As is evident from the discussion of restriction of output in Chapters 2 and 3, accurate and immediate records of output can produce "boomerang" effects where plant conditions or policies and practices are otherwise adverse to the stimulation of the will-to-work. In particular, workers become suspicious and frustrated when they are unable to understand

the wage systems under which they work (6, p. 144), and are therefore unable to determine how they are doing. Under no circumstances can there be any justification for a wage-incentive system which is so unclear —either in structure or in its presentation—that workers can derive from it no knowledge of their accomplishments from day to day. Simplification of the structure and functioning of wage systems, and clear explanations of their operation to workers, can help eliminate such difficulties. Steps in this direction are important because, as clearly shown in this chapter, *knowledge of results, obtained through an understanding of the wage system, enhances the value of wages as an incentive to production and contributes to satisfaction and adjustment on the job.*

In Summary: As shown in this chapter, "true" and "natural" experiments are throwing light upon the value of particular incentives and specific sources of motivation in industry. Such experiments confirm the viewpoint that the financial incentive, while important, is not the sole medium for stimulating production, increasing job satisfaction, and raising the level of employee morale. Both production and satisfaction tend to be higher in jobs that are "liked" than on those that are "not liked." The size of the work group affects output and attitudes, which both tend to be better in smaller-sized groups. Immediate knowledge of results acts as a stimulating influence, although its effects are also related to a pattern of interpersonal relation which is apparently more characteristic of smaller than of larger groups. It is apparent, from the studies cited, that effects of specific incentives, such as those considered in this chapter, can be isolated. However, there also appears a consistent thread of influence derived from the group make-up which requires consideration, along with and also apart from discrete and measureable factors such as "liking the job," size of the work group, and knowledge of results.

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8

Supervision, Productivity, and Morale

CONSIDERATION of the problems of production, job satisfaction, and morale has been marked by a constantly recurring note emphasizing the influence of supervision and of management. Thus, according to Elliott Smith, "A company pays the same for labor whether it is managed well or whether it is not, but what it gets from its labor depends not only upon the methods and equipment that the management provides, but upon whether the employees work with a will. This in turn depends largely upon the skill of the junior executives in dealing with human nature" (18, p. 220).

The Relation between Supervision and Output

The hypothesis that motivation and morale are influenced by the quality of supervision has been tested in a number of experiments. Evidence that the supervisor can play an important role in stimulating output is found in an experiment reported by Feldman (1). Among the employees of an insurance company were approximately 1,000 clerks, divided into 22 sections. In 1933, a new wage plan providing group incentives for the 22 sections was inaugurated. Costs for each section for the previous 12 months were computed and each was allowed a group bonus on the savings it could effect over the cost for that period. All members of a section, including the supervisor, shared in these savings monthly on the basis of salaries, no change being made either in the basic salary or in established policies with respect to salary increases. For the year 1933, every section showed some improvement in performance, ranging from 2 per cent to 12 per cent, with an average of 8 per cent.

In 1934, management effected a general shift of all section heads, in-

volving a transfer of those who had been in charge of *above-the-average* bonus groups to *below-the-average* sections. One objective in this was to determine whether differences in results were related primarily to differences in supervision or to differences in the quality of personnel or conditions of work in the various sections. An analysis of production for the year 1934 showed increases in production in all sections, ranging from 6 per cent to 18 per cent. The order of merit of supervisors remained practically the same as in the study made at the end of 1933. In spite of reassignment to new sections, those section heads who stood high at the end of the first year were at the top of the list during the second year and vice versa. Changes in relative order were limited to three cases of supervisors who had moved a step or two.

Early in 1935 the management again shifted, by lot, 20 of the 22 supervisors. Although they were reassigned by chance, supervisors generally maintained the same rank orders, in terms of improvements in the productivity of their groups, as they had held in the preceding two years.

Characteristics, Attitudes, and Behavior of "High" and "Low" Production Supervisors in an Office Situation

In the situation described above, the fact that employee performance improved in all sections with the introduction of the wage-incentive plan may be taken as evidence that the desire for more money motivated employees to better production. However, it is evident that the extent of improvement in any group was a function of still another incentive condition—namely, the *quality of supervision.* In the study reported by Feldman, apparently no effort was made to determine and define the characteristics, attitudes, and behavior of supervisory personnel which might contribute to variations in the motivation, productivity, and morale of employee groups. Information of this kind is to be found in a series of studies conducted as part of a long-range research program in human relations and group organization being carried on by the Survey Research Center of the University of Michigan (2, 11).

The initial investigation in this series, undertaken in 1947 with the support of the Office of Naval Research, was conducted in the home office (Newark, N.J.) of the Prudential Insurance Company (9) with (nonunionized) clerical workers and their supervisors as subjects.

The experiment involved personnel from two *departments.* One of these, the Ordinary Policy Department, includes six parallel *divisions,* each duplicating the work of every other division in organization, type of work, type and number of personnel. Each division is made up of 11

sections, each performing a specialized function, and each having a duplicate in every other division. In the second department, i.e., Debit Policy Department, there are four parallel divisions containing four parallel sections.

Productivity in each of the units referred to above is measured by means of a budget system which provides a record of the ratio of actual clerical time spent in completing a given amount of work to an "expected" base. Essentially, the productivity measure is one which provides an *index of the personnel costs for completing a given amount of work.* The "budget ratio" or productivity index is characterized as a valid measure for comparing sections, and likewise divisions, doing the same kind of work during any period of time.

Productivity differences between comparable sections were not found to be great—rarely in excess of ten per cent. Nevertheless, the study was undertaken because some of the comparable sections showed significant differences in productivity over an eight-month period, even though the differences were small.

The experiment involved 12 pairs of sections drawn from the two departments referred to above, each *pair* including sections with about the same number of people, at the same job levels, doing the same kind of work. Ten *high-low productivity pairs* were selected for comparison from the Ordinary Policy Department (*Department A*) and two high-low pairs from the Debit Policy Department (*Department B*).[1] The pairs from *Department A* included sections which provided a range of work from highly routine typing to skilled calculation; of size of work group from 6 to 26; of types of employees from girls recently graduated from high school to men who had been with the company many years. The sections came from five of the six divisions, and sections which belonged in the same division were not consistently either the high or low sections in a productivity pair. On the other hand, the high sections in *Department B* came from one division and the low sections from another. As a result, high-low section comparisons for *Department B* were at the same time division comparisons. Furthermore, the sections in *Department B*, averaging about 32 women employees, were larger than the samplings from *Department A*.

Since all sections and divisions were operating under the same working conditions and the same general company policies, it seemed possible, according to the investigators, to assume that there were only two variables which could account for group differences in productivity: (1) *management and supervision* within the sections and divisions, and (2)

[1] Sections used in the productivity analysis were only those which remained significantly different from each other at the 5-per-cent level (or better) for the eight-month period ending September 30, 1947.

interpersonal relations among employees in the work group, i.e. the "*social psychology of the immediate work group.*" There was accordingly set up an experimental design "with productivity as the dependent variable, supervision and management as the independent variables and worker morale as the intervening variable" (6, p. 3). The design of the study employed three sets of independent measures, viz.: (1) *a measure of productivity,* (2) *a measure of employees' perceptions and attitudes,* and (3) *a measure of supervisory perceptions, values, practices, and attitudes.*

The measure of productivity, in the form of a "budget ratio," has been referred to above. The remaining measures were derived from free-answer interviews conducted with 24 first-line supervisors (section heads) and 419 nonsupervisory, i.e. rank-and-file employees from the paired high and low sections.[2] Supervisory interview schedules included: (1) a description of supervisory behavior, both in relation to subordinates and to superiors, and (2) attitudes toward their own jobs, subordinates, superiors, the company and company policies. The employee interviews measured perceptions of and attitudes toward: (1) their own work groups, (2) their own jobs, (3) company and company policies, (4) job status and salary, and (5) supervision.

Comparisons of high- and low-section heads showed striking similarities in amount of formal education and in length of service with the company. There were no significant differences between the *high* and *low* supervisors in other demographic characteristics, such as age, sex, and marital status. However, *analysis of the findings suggested that supervision of* HIGH-*productivity sections differed from those of* LOW-*productivity sections in certain well-defined characteristics, attitudes, and behavior.* For example, as shown in Table 9, *employee-centered* supervisors proved to be higher producers (in terms of the productivity of their groups) than *production-centered* supervisors.[3] A supervisor was classified as "employee-centered" when he showed a tendency to consider interest in his employees rather than in production as being of primary im-

[2] The groups described in this section were only part of a larger number studied, which included 73 supervisory and managerial interviews and 742 nonsupervisory interviews. The latter are to be used in an analysis of the patterning and interrelationship of employee attitudes.

[3] Chi-square tests were made on the null hypothesis that there was no real difference between supervisors or employees in the "highs" and those in the "lows" on a given item or index. The null hypothesis was rejected and the relationship described as statistically significant when it was found that the obtained value would be likely to occur by chance five times or fewer in 100 if the true difference between "highs" and "lows" were really zero. In such a case it was assumed that the obtained difference was not due to chance alone. All tables reproduced in this section present results which are statistically significant at the 5-per-cent level or better.

TABLE 9. *Prudential Insurance Company: Relation of Section Heads' Attitudes toward Employees to Section Productivity* (after *Productivity, Supervision and Morale in an Office Situation,* Survey Research Center, 1950)

	Employee-centered	*Production-centered*	*Not ascertained*	*N*
Heads of *high* sections	6	1	5	12
Heads of *low* sections	3	7	2	12

TABLE 10. *Prudential Insurance Company: Relation of Proportion of Time Spent in Supervision to Section Productivity* (after *Productivity, Supervision and Morale in an Office Situation,* Survey Research Center, 1950)

Question: "*What proportion of your time is given to supervisory matters? What proportion to other duties?*"

	50% or more of time spent in supervision	*Less than 50% of time spent in supervision*	*Not ascertained*	*N*
Heads of *high* sections	9	2	1	12
Heads of *low* sections	4	7	1	12

portance, as reflected in statements, such as the following, made by supervisors during the interviews

> "I try to understand each girl. I remember I was just one once, and I liked to be kind of known by the supervisor. Knowing the girls helps with handling the work here—you have to know what happens outside too to help them inside here at Prudential" (17, p. 10).

Analysis of the data also showed, as appears in Table 10, that first-line supervisors of *high*-production units spent more time on supervision and less time on productive work than did *low*-production supervisors. Interviewers rated section heads on various personality characteristics, without knowledge of their production records. As appears in Table 11, supervisors of *high*-production sections were more frequently rated as being *less arbitrary* and *less authoritarian* than supervisors of *low*-production sections. Further analysis of the data indicated that, in general, and in so far as the work situation represented by the Prudential Insurance Company study is concerned, first-line supervisors of high-production sections are significantly more likely to

"1. receive general rather than close supervision from their superiors;
"2. like the amount of authority and responsibility they have in their jobs;
"3. spend more time in supervision;
"4. give general rather than close supervision to their employees;
"5. be employee-oriented rather than production-oriented" (9, p. 62).

The Relationship between Supervision and the Productivity of Railroad Maintenance-of-Way Section Gangs

Methods employed in the Prudential Insurance Company study have been used by the Survey Research Center in an investigation involving maintenance-of-way section gangs working in the Pere Marquette District of the Chesapeake and Ohio Railroad (10).

The railroad situation resembled that of the insurance company in some respects. Both the clerical workers in the latter organization and the maintenance-of-way workers on the railroad were generally performing low-skill jobs. Both populations tend to be "low in job mobility aspirations and to be quite satisfied with most aspects of the job situation." However, the two work situations and employee populations differ in many important respects, making it possible to investigate, in a very different setting, some of the factors found to be related to productivity in the first study.

The clerical workers, for example, are not unionized. Most of the railroad workers belong to the Brotherhood of Maintenance of Way Employees, although, according to the investigators, "their work situation minimizes their contact with the union." The clerical situation is char-

TABLE 11. *Prudential Insurance Company: Characteristics of Supervisors of High- and Low-Producing Sections* (after *Productivity, Supervision and Morale in an Office Situation*, Survey Research Center, 1950)

	Arbitrary	*Highly or somewhat reasonable*	*Not ascertained*	*N*
High producers	0	11	1	12
Low producers	5	7	0	12

	Authoritarian	*Democratic*	*Not ascertained*	*N*
High producers	0	11	1	12
Low producers	8	4	0	12

acterized by white-collar groups, consisting largely of young high-school graduates working in large office buildings in a metropolitan area. The workers in the railroad situation are all men, mostly over 40 years of age, with a median education of from fifth to eighth grade. They perform heavy, manual, outdoor labor and live mostly in small villages or towns or on farms. Employees in the clerical situation work in close proximity to other groups of company employees and to various levels of supervision. Contact among the various maintenance-of-way groups in the railroad situation is limited, and the contact of members of the gang with upper level supervision is restricted to occasional visits from track supervisors.

The Pere Marquette District of the Chesapeake and Ohio Railroad is made up of three divisions, containing a total of about 180 maintenance-of-way sections. Each section is headed by a foreman who reports to a track supervisor. The latter is in charge of a number of foremen and reports, in turn, to a division engineer who heads up the Maintenance-of-Way Department for his division.

The three division engineers and their track supervisors independently selected pairs of sections which they judged to be reasonably comparable with respect to working conditions, i.e. in terms of terrain, ballast, weight of rail, single or multiple trackage, and of other physical factors which could produce differences in group performance. In all, 40 pairs of sections (of the total of 180 sections) were judged to be very similar with respect to such working conditions.

These sections were then rated on job performance. Working independently, the division engineers and the track supervisors judged which section in each pair (under their jurisdiction) was doing the better job in terms of "over-all quality and quantity of work performed," smoothness of track and alignment of roadbed being given special emphasis as criteria of work quality. In the case of 36 of the 40 pairs of sections, the division engineer and track supervisor agreed that the same member of the pair was superior in performance to the others. The 36 sections consistently judged to be superior to their counterparts were classified as *high* sections, while the 36 sections consistently judged to be inferior were classified as *low* sections for the purposes of the study.

The total number of workers employed in the 72 sections was 298, including 156 in the 36 *high* sections and 142 in the 36 *low* sections.[4] All workers were intensively interviewed by Survey Research Center staff members between November, 1948, and January, 1949. Interviews were of the free-answer type, and averaged about an hour and one-half in length. The 72 foremen of the paired sections were similarly interviewed

[4] Although the sections in each pair are comparable in size, there were small differences in numbers of men in the gangs in some cases.

after the rank-and-file interviewing had been completed. As in the case of the study of clerical workers, two major categories of variables (derived from the interviews) were tested for possible relationship to *section productivity*, viz.

> "1. The *attitudes of the foreman and his relationship to the men in his section*—i.e. how the foreman and men perceive each other, how the foreman perceives and fulfills his functions, etc.
>
> "2. The *'morale' of the non-supervisory employees*—i.e. their attitudes toward their work and various aspects of their work situations (satisfaction with the company, with their fellow workers, with their chances for promotions, etc.)" (10, p. 6).

Analysis of demographic characteristics showed a significant difference between foremen of *high* and *low* sections in only one respect, viz., more foremen of low sections report that they have had some previous job in another field while more foremen of high sections have worked only on the railroad. On the other hand, *findings from interviews with the foremen and rank-and-file employees show differences between the two groups of foremen in attitudes and behavior.*[5]

As was also true in the office situation, more of the foremen of the *high* than of *low* sections report spending a larger proportion of time in supervision. Furthermore, a significantly greater proportion of *low* than of *high* foremen report spending a larger portion of time in straight production work. Reasons given by foremen for supervising rather than doing production work show that *high*-section foremen tend to stress the effectiveness of *supervision in helping their sections do a better job*, while foremen of *low* sections are more likely to regard *supervision as a routine function.* In addition, statements obtained from foremen on how they spend their working time show, as indicated in Table 12, that a larger proportion of foremen of the *high* sections refer to *planning and performing special skilled tasks*, while a larger proportion of foremen in the *low* sections refer to *"doing the same sort of things as the men do."* Moreover, the foremen's perceptions in this respect are supported by data obtained in interviews with rank-and-file employees. As shown in Table 13, workers in *high*-producing sections perceive their supervisors as better planners than do men in *low*-producing sections.

Analysis of the data showed other similarities between the findings of the studies conducted in two different settings by the Survey Research Center although, in a few respects, the findings of the railroad study failed to confirm those of the investigation of clerical workers. An important difference in the findings of the two studies is apparent in the area of

[5] All differences reported in this section, unless otherwise stated, are statistically significant at the 5-per-cent level.

TABLE 12. *Chesapeake and Ohio Railroad: Relation to Section Productivity of What Foreman Reports Doing on the Job* (after *Productivity, Supervision and Morale among Railroad Workers,* Survey Research Center, 1951)

	Supervisory Duties			*Nonsupervisory Duties*				
	Planning; skilled tasks	*Providing materials to men; watching men*	*Total*	*Same things men do*	*Keeping up track*	*Total*	*Number of duties mentioned* *	*N*
Foremen of *high* sections	42	41	83	8	7	15	98	36
Foremen of *low* sections	25	42	67	15	14	29	96	36

* Responses total more than 72 because many foremen gave more than one answer.

TABLE 13. *Chesapeake and Ohio Railroad: Relation to Section Productivity of Men's Perception of Foreman's Planning Ability* (after *Productivity, Supervision and Morale among Railroad Workers,* Survey Research Center, 1951)

Question: *"How good is the foreman at figuring work out ahead of time?"*

	Per cent				
	Very good	*Pretty good*	*So-so and not very good*	*Not ascertained*	*N*
Men in *high* sections	38	48	2	12	156
Men in *low* sections	27	54	10	9	142

close versus *general* supervision. In the clerical situation, there was considerable evidence that the heads of *high* sections exercised more general, less detailed, supervision over their employees than did the heads of *low* sections. Such differences were *not* found in the railroad situation. According to the investigators, differences in the structures of the two situations may account for the absence of any relationship at all between closeness of first-line supervision and productivity, in contrast to the *negative* relationship which appeared in the study of clerical workers. In the insurance company, work methods are standardized to such an extent that employees get little help of a technical nature from close supervision. In the work of the maintenance-of-way section gangs, on the other hand, working procedures are less "routinized," and sections

are small enough to allow the foreman to give each man the benefit of his superior technical knowledge. However, the fact that there is *no positive* relationship between productivity and close supervision is interpreted as suggesting that the railroad "foreman's technical contribution is not sufficient to outweigh possible detrimental effects of close supervision on worker motivation" (10, p. 34).

Data cited above, and other detailed analyses of findings from the railroad study are summarized by the Survey Research Center staff as follows

> "1. High and low foremen do not differ significantly in degree of satisfaction with their jobs and other aspects of the work situation.
>
> "2. Low foremen do not clearly perceive their leadership role. High foremen are typically more aware of their position as leader and supervisor and are better able to function effectively in this leadership capacity.
>
> "3. Foremen of high and low sections differ in their attitudes toward their men. Foremen of high sections are more positive toward their men, take a more personalized approach to them and give more attention to problems of their motivation.
>
> "4. Foremen of high production sections evaluate their sections more highly than do foremen of low producing sections" (10, p. 22).

The Relation between Employee Attitudes and Productivity

The experimental designs of both the study of clerical workers and that of railroad workers called for comparisons of the attitudes of workers in *high* and *low* productivity groups. Analysis of worker attitudes and perceptions yielded some of the information concerning differences in supervisory behavior discussed in preceding pages of this chapter. In addition, a number of items from the employee interviews were combined to give a single measure for each of the following attitudinal factors

> 1.(a) *Pride in work group,* defined (only in the study of clerical workers) as "the degree of feeling of attachment to and satisfaction with the accomplishment of the immediate or secondary work group of which employee is a member" (9, p. 39).
>
> 1.(b) *Attitudes toward work group,* characterized (only in the study of railroad workers) as "liking for other men in the section, in their feeling that the men stick together well, or in their reactions to the good and poor workers in their groups" (10, p. 24).
>
> 2. *Intrinsic job satisfaction,* characterized as "the degree of satisfaction obtained by the individual employee from performing those tasks which constitute the content of his job" (9, p. 42).
>
> 3. *Company involvement,* described as "the degree to which the employee derives satisfaction from and identifies with the company in which he is employed" (9, p. 43).
>
> 4. *Financial and job satisfaction,* defined as "the degree of satisfac-

tion the employee has with his present and expected earnings and with the status of his present and expected position in the company" (9, p. 44).

Analyses were made of the interrelationships among these attitudes, considered to be significant *dimensions of employee morale*. The *pride in work group index*, yielding .05 as the highest intercorrelation, proved to be quite independent of the remaining measures of attitude. Other intercorrelations among attitudinal indices were in the neighborhood of .30–.40.

Comparison of *high-* and *low*-productivity groups showed that high- and low-producing employees differed consistently only in the evaluation of their own work groups.[6] There were statistically significant differences in this respect (as measured by the index *pride in work group*) in the case of clerical workers, with the *high* section indicating a greater degree of group pride and loyalty. Similarly, men in the *high* maintenance-of-way sections perceived their work groups as being superior to others (*attitudes toward work group*) although the high-low difference in this case was significant only at the 10-per-cent level.

In none of the other measures were there consistent differences in attitudes between groups matched for productivity. Furthermore, contrary to the findings of the study by Katz and Hyman (7), referred to in Chapter 1, the men in the railroad situation who most frequently expressed satisfaction with the content of the work (*intrinsic job satisfaction*) were those in the *low* producing section. A similar, although slight tendency appeared in the case of the clerical workers, but differences between *high* and *low* groups were far short of statistical significance. Of additional interest, in the detailed analysis of employee attitudes, is the absence, in both groups, of any relation between the employees' liking for the company and its policies and practices (*company involvement*) and productivity. Similarly, in the area of satisfaction with job status (*financial and job satisfaction*) there were no differences between employees in *high* and *low* producing groups.

The Motivating Potential of Good Supervision

Findings from the two studies bearing upon employee-attitudes and morale are summarized by the Survey Research Center staff in the statement that "*neither study shows as much relationship between employee attitudes and group productivity as it shows between supervisory attitudes*

[6] In the case of the railroad workers, the possibility was examined that productivity differences may reflect differences in education, length of service, etc. No relationship was found between such demographic characteristics and production.

and behavior and group productivity" (10, p. 35).[7] In reviewing their findings, the investigators point out that the data do not supply definitive evidence as to "causality" in this situation. Consideration is given to the possibility that the personal values and characteristics of the supervisors may be functions of the working groups, in the sense that the group which produces at a higher rate tends to foster the development of the attitudes and behavior traits which characterize the leaders of *high* production sections, and that heads of *low* producing sections become "production-centered" because their employees are doing poorly. It is further suggested that productivity differentials probably function as reinforcement factors. However, according to the staff of the Survey Research Center, "It is difficult to see how such personal values and characteristics could be produced solely by virtue of having groups who produce at a higher rate . . . it seems logical that differences in group motivation are related to differences in supervisory practice and philosophy" (9, p. 36).

The Influence of the Supervisor's Role in the Organization: Throughout the series of investigations conducted by the Survey Research Center, an effort has been made to determine the influence of the relations between the first line supervisor and his superiors upon the attitudes and behavior of both the first line supervisors themselves and of members of their work groups. The studies of office and of railroad workers yielded evidence which suggests that supervisors of *high* production groups are more satisfied with the amount of authority they have, and tend to be under less pressure than supervisors of *low* production groups. Data from

[7] Studies of clerical workers in an insurance company and of railroad maintenance-of-way employees have been followed by an extensive investigation conducted in the plant of a company manufacturing heavy equipment. Analysis of data is still incomplete at the time of writing. Preliminary, unpublished reports by Katz & Kahn (8), Kahn and Katz (4), Kahn (3), and Neel (14) indicate that findings of the earlier investigations concerning the relationship between quality of supervision and productivity have been confirmed in this later study. Thus, according to Kahn and Katz, "In the three studies of productivity the supervisors with the better production records appear to be persons who show in a variety of ways that the individual is important to them, that they understand and appreciate him. In brief, the high-producing supervisors offer an ego-enhancing relationship. The specific characteristics I have had in mind here are the high-producing supervisor's greater time spent in actual supervision, his employee-centeredness, his closeness to or identification with the employees, his personal interest in them both on and off the job, his non-punitive behavior toward him, and his accessibility for communication" (4). Of additional interest in the later study are findings which show that pressure for production *when accompanied by consideration of the human relations values involved* does not act as a deterrent to production. When supervision is a matter of *pressure for production alone*, output suffers. Finally, there are indications that factors such as employee age, experience, and job satisfaction, as well as working conditions, interact with supervisory practices to influence worker productivity.

these and other studies, including a large-scale investigation in an electric utility company, have indicated also that the attitudes and behavior of top management influence the extent to which lower supervisors implement the concepts and practices of good human relations on the job (13).

Problems of "organizational climate" raised by such findings are discussed in later chapters, especially Chapter 23. Of immediate interest for purposes of this chapter is evidence, derived from the electric utility company study, that the influence of the supervisor within the organization directly conditions the effect of his behavior on workers' *satisfactions* (15, 16). Analysis of data from earlier phases of this study showed that employees in small work groups (10 employees or fewer) thought highly of a supervisor who "sides with them" in case of conflict with higher supervision. By contrast, in large white-collar groups, "employees were significantly *less* satisfied with such a supervisor; they preferred a supervisor who sided with management" (15, p. 52).

These and other findings led to a further investigation of the factors which lead employees to *accept* a supervisor, in the sense of following the leader's suggestions, expressing satisfaction with his conduct, etc. For purposes of this study it was postulated that the "supervisor will be 'accepted' by his work group if his behavior helps them to achieve their goals" (15, p. 53). The important element in this situation is the extent of the *supervisor's influence within his department*, since the attempts of a supervisor to help employees to reach their goals will succeed if he has influence in his department; they will fail if he lacks such influence.

Supervisors were classified into "high influence" and "low influence" groups and comparisons made between measures of their behavior and employee attitudes. An examination of correlational indices showed that under *high-influence* supervisors, "siding with employees" and "social closeness" were accompanied by some rise in employee satisfaction in 19 out of 28 comparisons, and that 7 of the positive correlations were statistically significant at the 5 per cent level, a result which is 11 times better than chance. Under *low-influence* supervisors, such supervisory conduct was accompanied "by a rise in employee satisfaction only 8 times out of 28; a loss in satisfaction (negative effect) is the more common result" (16, p. 216). The correlation values were modest in size, but, according to Pelz, positive results under influential supervisors were sufficiently uniform that the total set may be regarded as highly trustworthy" (16, p. 216), in terms, at least, of statistical significance. "It seems fairly clear," it is added, "that a supervisor's influence or power within the department does 'condition' the way his supervisory behavior affects employee attitudes. It is plausible to conclude that *the supervisory*

behaviors of 'siding with employees' and 'social closeness to employees' will tend to raise employee satisfaction only if the supervisor has enough influence to make these behaviors pay off in terms of actual benefits for employees" (16, p. 216). Furthermore, consideration of the situation in the electric utility company showed that "in this company's *small* groups the supervisors who sided with employees also tended to be the ones who had high influence and could get results when they attempted to do something. On the other hand, in this company's *large* work groups the supervisors who took the employees' side were generally the ones without influence; they could not follow up their helpful attempts with concrete gains for employees; as a result, employees were less satisfied than if their supervisors had maintained a neutral position" (16, p. 216).

In contrast to the conclusions reported in earlier sections of this chapter, those on the effects of the influence of the supervisor are derived from research in a single company. For this, and other reasons, caution must be exercised in terms of generalizations to industry at large. Furthermore, the evaluation of these findings from an administrative viewpoint must include a consideration of how far management can go in satisfying workers where the satisfaction of employee goals conflicts with the satisfaction of other goals which must be achieved by the business enterprise. This aspect of the situation—the general problem of conflicting *personal* and *organizational* goals—is discussed in later chapters, especially Chapter 23. In the meantime, although much remains to be done in the further analysis of a complex situation, the studies described above clearly demonstrate that *the attitudes and behavior of the first-line supervisor are important factors in determining the productivity of a work group.* They also provide important clues to the characteristics of the supervisor capable of making a definite contribution to the attainment of productivity goals. In particular, it is clear from these studies that the high producing supervisor looks upon the problem of productivity as one of motivation, seeing his role as being primarily that of "motivating workers to achieve a goal, of creating conditions under which the goal can be achieved" (10, p. xi).

In Summary: It is evident that the achievement of industrial objectives discussed in Chapter 1 requires close attention to the quality of supervision in industry. This need is likewise apparent from studies discussed in Chapter 7, and from the findings of employee attitude surveys described in Part III of this volume. Specifically, it appears that the supervisor who sees the problem of productivity exclusively in the technical terms of work methods and standards is less likely to motivate workers to increased production than one who sees the problem in terms of workers' status, characteristics, needs, and aspirations. The development of

"employee-oriented" supervisors, adequately equipped for dealing with interpersonal relations on the job, therefore represents one promising approach to the solution of problems of motivation and morale in industry.

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9

Employee Participation in Decision-Making

IN THE operation of a business enterprise, executives and supervisory personnel are faced daily with the need for making decisions. Many, if not all such decisions, either directly affect workers or are of interest to them because of the potential effects upon their daily activities and ultimate welfare. Workers, and also subordinate supervisory personnel, "*may have a strong desire, particularly in a nation with deeply-ingrained democratic traditions, to participate in the determination of matters affecting them*" [1] (23, p. 410). As a result, it is important to consider both the influence which employee participation in decision-making may have upon motivation and morale and the form which such participation might best assume (22a, 23).

Investigations bearing upon productivity, supervision, and morale by the Survey Research Center, described in Chapter 8, led Katz to conclude that workers "do better when some degree of decision-making about their jobs is possible than when all decisions are made for them" (11). An elaboration of the underlying psychological processes is suggested by Maccoby who, following a review of findings from the studies, concludes that "Employees may be motivated by repeated external stimulation by the supervisor who is constantly instructing his employees on what highly specific task to do next . . . On the other hand, if a situation can be established, whereby the individual can for the most part furnish his own motivation, where stimulation comes from the perception of a larger and more inclusive task, *the goals of which are clear to him and accepted by him*,[2] then a higher level of performance and a higher level of morale may be achieved (16, p. 5).

[1] Not italicized in the original.
[2] Not italicized in the original.

This conclusion is in accord with that derived from earlier studies, conducted by Lewin and his coworkers in the area of group dynamics, discussed in Chapter 6. A major outcome of such research is the conclusion that *employee participation in decision-making,* in a *democratic atmosphere* created by "permissive" leadership, facilitates the development of "internalized" motivation, and serves to raise the levels of the employee production and morale (1, 2, 7).

Studies in the Harwood Manufacturing Company Plant

Evidence in support of this position is found in a series of studies conducted in the Harwood Manufacturing Company plant by a number of psychologists, including Marrow (president of the company), Lewin, Bavelas, French, and Coch. Production workers in this garment-making plant were paid a piecework rate based on standards established through the use of time and motion study (9). The standard production rate for each job was set at 60 units per hour representing, e.g., 120 dozen buttonholes or 40 complicated fitting operations. Basic wage rates of 72 cents per hour were in line with area scales for the industry, and workers exceeding the standard were paid 100 per cent of the labor savings effected.

OVERCOMING RESISTANCE TO CHANGE

Among the labor problems in the plant was resistance on the part of production workers to necessary changes in jobs and work methods. Such resistance was evidenced in a number of ways. For example, for the simplest type of job in the plant the average learning time for beginners was five weeks. When transferred to the same job, experienced operators required an average of eight weeks to reach standard production. Moreover, employees involved in job transfers and related changes in job methods exhibited a general pattern of low morale, characterized by "expressions of resentment and aggression against management . . . with evidences of frustration, loss of hope of ever regaining the former level of production and status, feelings of failure, and a very low level of aspiration" (21, p. 346).

According to Marrow, it could not be contended that skill habits developed on the original job were interfering with relearning on the new job, since time-and-motion studies showed very few false moves after the first week of change, and transferred operators rarely showed a desire to go back to the old way of work. From such evidence it was deduced that retroactive inhibition [*sic*] could not account for the slow rate of learning the new job methods (20). Furthermore, efforts to solve the

problem by means of monetary allowances, by layoffs, etc., were of no avail. On the basis of these and other considerations, it was concluded that the situation represented a deep-seated motivational problem reflecting *resistance to change* which, it is contended, appears with particular strength in groups with a "we" or "ingroup" feeling antagonistic to management and its objectives, and which may find overt expression in restriction of output (5, 28).

On the basis of such general theory, an experiment was devised to examine the effect of group participation in setting production goals upon overcoming resistance to change and in arousing attitudes and motivation conducive to meeting production standards. Four groups of workers involved in changes in job methods and rates were selected for the experiment. The groups were similar in terms of group efficiency ratings prior to change. The degree of change to be made and the amount of "ingroup feeling" observed were the same for all groups.

In the case of one group, constituting a *control* group, the usual factory routine was followed in making the job changes. The production department modified the job, and a new piece rate was set. A group meeting was held in which the control group was told that the change was necessary because of competitive conditions, and that a new piece rate had been set. The new piece rate was explained by the time-study man, questions were answered, and the meeting was dismissed.

"Democratic participation" methods were used in arriving at changes in the case of the remaining three groups, constituting the *experimental* groups. Before any changes took place, a group meeting was held with the operators to be changed. The group was told that changes in the job were required by the sales department. General agreement was reached that savings could be effected by removing some "frills" and "fancy" work from the garments involved without affecting the opportunity to achieve a high efficiency rating. Furthermore, provisions were made for the groups to participate in planning the details of the change. *Group 1* of the experimental groups was represented in the planning by selected "special" operators. All members of experiment *Groups* 2 and 3 participated in the planning.

As is evident from Figure 13, production of the *control* group dropped immediately after the job changes were made and training completed. Furthermore, this group showed practically no improvement in efficiency by the end of an experimental period of 40 days. Resistance developed almost immediately after the changes were introduced. There were marked instances of aggression against management, including conflict with the methods engineer, deliberate restriction of production, and lack

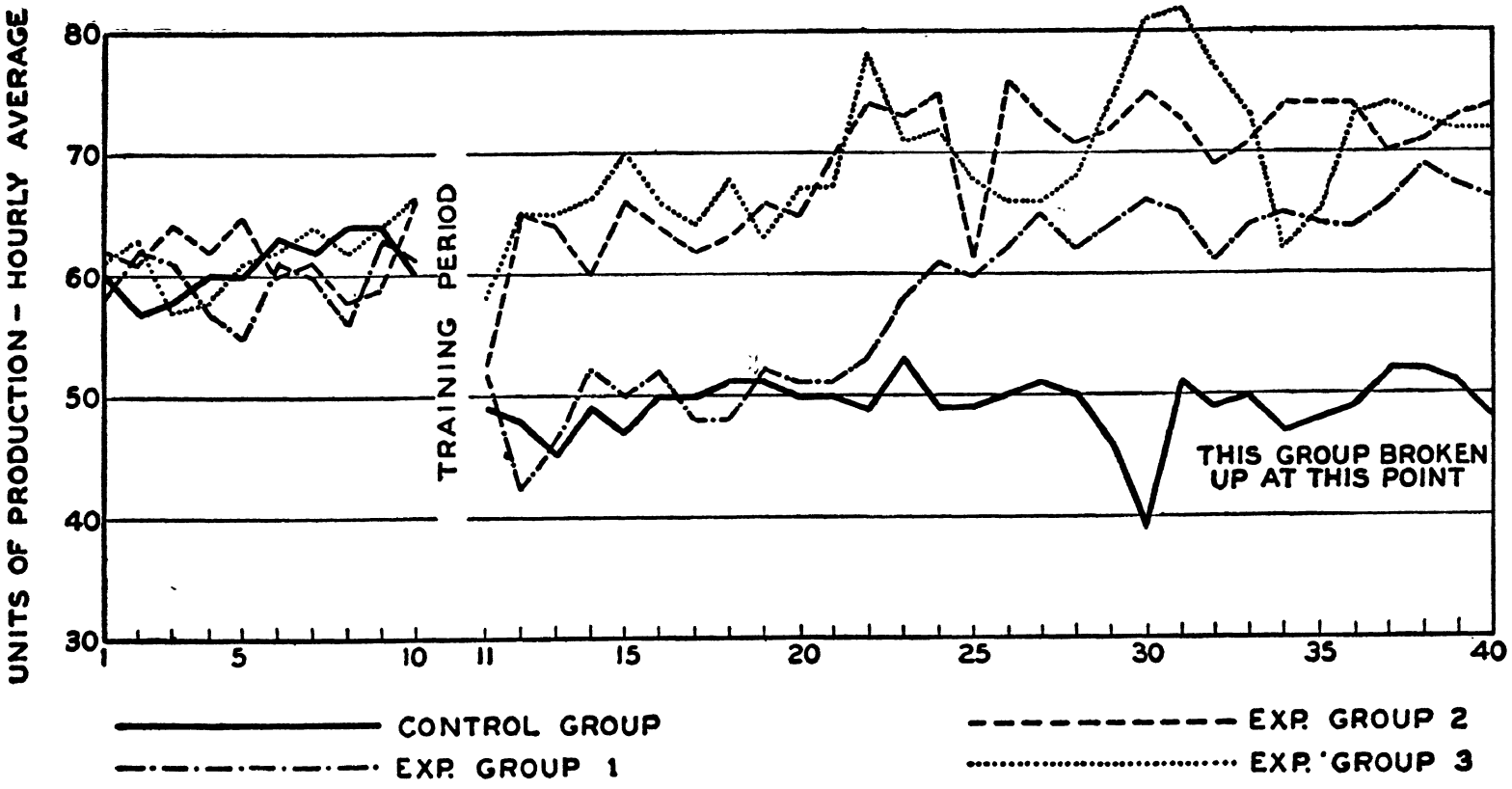


Figure 13. The Effect of Employee Participation in Decision-Making upon Production *

* By permission, from "Industrial psychology pays in this plant," *Modern Industry*, (July 15) 1948, 16, 67–68.

of co-operation with the supervisor. Within 15 days after the change, 9 per cent of the operators quit, and a total of 17 per cent quit within 40 days. Grievances were filed about the piece rate, although the latter, upon checking, was actually found to be a little "loose."

Marked recovery to and beyond prechange levels of efficiency was achieved in the case of all three *experimental* groups. As shown in Figure 13, *Groups* 2 and 3 reached their prechange level of production the second day after change, and by the end of the experiment they had actually surpassed their prechange output level by about 14 per cent. They worked co-operatively with their supervisors; there were no signs of aggression, and there were no quits, within the first 40 days following the completion of training on the new job methods. *Group 1* also exceeded its prechange level of production by the end of the 40-day experimental period, although it required more time to recover to the prechange production level, possibly, according to Marrow, because of an unavoidable operational problem. No quits were recorded for this group. One act of aggression was observed, and this was neither prolonged nor serious.

THE INFLUENCE OF GROUP DECISIONS

Additional evidence that participation in decision-making can help to increase productivity is derived from another experiment conducted by Bavelas, in the plant of the Harwood Manufacturing Corporation. In this study, as reported by French (6), meetings were conducted with small groups of sewing-machine operators, including 4 to 12 workers. In the course of such meetings, the experimenter (trained in psychology and also experienced in dealing with labor) talked about the greater ease of working together as a team; discussed individual production levels with the group; questioned its members as to the level of production which might be obtained if they worked as a team, and asked if they would like to set a team goal for higher production. In addition, an effort was made to *obtain a group decision* as to the level of the new production goal and as to the time in which it should be achieved by the group.

Discussions, according to French, were marked by a "friendly style of democratic leadership," and the experimenter "was careful to leave all decisions up to the group, namely, whether they wanted to set a goal, and if so, at what level and in what time." In some of the groups, designated as *control* groups, no such decisions were made. In most of the groups, the members decided to set a team goal for increased production and specified the time in which the goal would be achieved. In the case of such groups, designated as *experimental* groups, the leader

usually arranged for further meetings to check on progress, during which he provided them with graphs showing changes in productivity for the group.

The experiment covered a period of four months. During this time, the average efficiency rating for the total plant varied between 52 and 58 units per hour. Both the *control* and *experimental* groups were made up of operators who were superior in production, with efficiency ratings (for the groups) ranging from 64 to 68 units per hour. Each *control* group was matched with an *experimental* group with respect to type of job, type of "social setting" and supervision. Analysis of production records showed that in the case of the *control* groups the level of production remained relatively constant over the four-month period. In the case of the *experimental* groups there was, in contrast, an increase in production, averaging 18 per cent, which was consistently maintained for the period of over two months subsequent to the group discussions of production goals. This increase, it is reported, was obtained without any changes in job methods or other physical conditions of work, and can be ascribed "to the leadership and the social factors involved in group decisions." According to French, the results of this and of subsequent experiments, involving both group decision and the use of "pacing cards," justify the conclusion that "*the application of skillful democratic techniques of leadership in industrial settings can result in extremely marked increases in group productivity which will persist over long periods of time*" [3] (6, p. 87).

LIMITATIONS OF THE HARWOOD STUDIES

Experiments of the types described above, conducted in the factory setting, are of extreme interest from the viewpoint of motivational theory. They also have great practical import, particularly in view of the current drive for employee participation in what have been traditionally viewed as managerial functions in industry.[4] This underlines the necessity, basic to any research, of making certain that the influence of all variables which might account for the observed changes be taken into consideration both in the design of the experiment and in the interpretation of findings. The experimental designs of the studies conducted in the Harwood Manufacturing Company plant appear to be defective in these respects. The design for neither study, as reported by the investigators, eliminated the possibility that variables other than participation in decision-making played a role in accounting for the production differences between the *control* and the *experimental* groups.

[3] Not italicized in the original.
[4] See Chapter 23.

Of special importance, in the first of these studies, is an apparent difference in the character of the training received by operators in the two groups. While none of the available reports on this study are particularly clear with respect to this issue, it quite definitely appears that more and better training was received by members of the *experimental* groups than by members of the *control* groups. In the second study, as reported by French, it seems quite evident that each of the experimental groups was supplied with considerable *knowledge of results*, in the form of graphs showing changes in the productivity of the group. There is no indication that similar information was supplied to the *control* groups. As shown in Chapter 7, knowledge of results can in itself lead to an increase in production. There is considerable evidence, from experiments in the training of industrial workers, that better-trained groups perform better than do those who are not given the advantage of systematic training (8, 24). Failure to control adequately the possible effects of difference in training, in knowledge of results (and possibly of other variables) makes it impossible to accept the view that the increased output by the *experimental* groups in the Harwood plant studies was necessarily due *solely* to employee participation in decision-making.[5] Nevertheless, the general nature of the experiments and of findings from these and other studies still support the view that employee participation in decision-making can contribute to increased employee productivity.

A Case Study from the Tavistock Institute of Human Relations

A case study from investigations conducted by the Tavistock Institute of Human Relations, in Great Britain, furnishes another illustration of research on worker participation in decision-making conducted by proponents of Lewin's "field-theoretical" approach.[6] In the Service Department of the Glacier Metal Company there was a chronic condition of low morale, caused by the piecework system of wage payment in use, under which some unskilled workers were earning more than craftsmen. With the consent of both workers and management, a research team undertook the task of investigating the morale problem in this department,

[5] It is of interest to note that a similar defect in experimental design appears also in an earlier experiment by Bavelas (1a) on *democratic vs. authoritarian* leadership, which anticipated the program of group-dynamics research conducted in the plant of the Harwood Manufacturing Company. As Preston has pointed out, the latter experiment did not exclude "the possibility that the [observed] differences in efficiency and morale are due to the differences between lack of training and effective training [of leaders], rather than to the difference between authoritarian and democratic techniques" (21a, p. 27).

[6] See Chapter 6.

and of dealing also with problems arising from a proposed changeover from a piece rate to an hourly-wage method of payment.

There were mixed feelings about the proposed change, arising in part from the fact that some of the 40 workers on piece-rate pay would receive more pay, and others less than under the existing wage system. Many of the workers were suspicious of management's motives. With the aid of the research team a *Wages Committee*—including in its membership an existing Shop Committee, the division manager, the shop superintendent, and the shop accountant—was set up to study the possibilities of this change. To help allay suspicion and to clarify attitudes, *group discussions* were inaugurated at the shop-floor level. For this purpose, the 40 piece-rate workers were divided into five groups, each composed of eight workers with a member of the Shop Committee delegated to each.

After approximately three months of discussion and group meetings the first secret ballot was taken on the proposed changeover. The 40 workers voted unanimously to have their representatives carry out further discussion in the *Wages Committee*. During these meetings it became apparent, according to Jaques, that in order to arrive at a satisfactory solution to the wages question, problems affecting the morale of the shop would have to be dealt with, including such matters as "1. A guarantee from the shop that production would not suffer; 2. A guarantee from management to the shop *re* benefits from increasing productivity; 3. The establishment of some mechanism for making possible increased participation of the total shop in the making of departmental policy" (10, p. 243).

On a second ballot, taken after another month of discussion, 28 of the 40 workers voted in favor of the proposed changeover from a piece rate to an hourly-wage method of payment. On the same ballot was a statement that open questions as to the effects of productivity changes, savings in overhead, etc., upon the new method of wage payment would be left to "the findings of a Shop Council (to be set up as representative of all London Service Station personnel)." According to Jaques, the significant outcome of the discussion sessions arranged by the research team was this decision to establish a "Shop Council which gave promise of being a mechanism through which members of the department could take part in policy making, and in so doing mediate in inter-group relations in the department" (10, p. 249).

Since the issue of the Shop Council was not separated on the ballot from the change in the wage system, it is difficult to know to what extent the voting was influenced independently by (1) the desire for

participation in decision-making, and (2) the desire for a change in wages. This is a particularly crucial question in view of the fact that the "yes" votes may well have been from men who stood to profit by increased wages from the changeover from the piece rate to the hourly-wage method of payment.

An Investigation in a Telephone Company

Further evidence with respect to the significance of participation in decision-making is found in an investigation of turnover and morale among young women employees of the Michigan Bell Telephone Company (26). Subjects of the investigation were all of the operators and service representatives, approximately 600 in number, hired in the cities of Lansing and Grand Rapids, and 97 operators hired in Pontiac during the period from January, 1945, to February, 1948.[7] These were divided into two groups including (*a*) those still in service at the time of the study, designated as *on-force*, and (*b*) those who had been separated from the company, designated as *losses*.

Questionnaires, designed to measure attitudes towards the girls' jobs, were administered, in groups and on company time, to practically all of the *on-force* operators in Lansing, Grand Rapids and Pontiac and to the *on-force* service representatives in Lansing and Grand Rapids. The same questionnaire, with necessary changes in the tense of verbs, was administered individually, in their homes, to as many of the Lansing and Grand Rapids operators and service representatives who had left the Company as could be located. In addition, "depth" interviews were conducted with service representatives and operator *losses*.[8]

Comparisons between *on-force* employees and those who had left the Company (i.e. *losses*) showed that the two groups were not significantly differentiated by biographical data, by employment test scores, or in terms of "neurotic tendency" as measured by scores on "some personality test items" included in the questionnaire. Likewise, the groups were not differentiated in terms of attitudes frequently considered to be important in accounting for turnover. For example, there were no consistently significant differences between the two groups in attitudes toward wages. In fact, there were indications of a trend for young women who had left to "feel better about their wages" than those who remained in the

[7] Exclusive of those on maternity leave in March 1948.

[8] Of these girls, 56, or 47 per cent, of the Lansing operators *losses* were located, as were 47, or 68 per cent, of the Grand Rapids operators *losses* and 25, or 71 per cent, of the Grand Rapids service representative *losses*. Only 8, or 19 per cent, of Lansing service representative *losses* could be traced, so this group was dropped from the statistical treatment of findings.

service of the company. For the most part, those who had left were not any more critical of the policies of the company than those who stayed on the job.

Replies showed a more favorable attitude toward supervision on the part of *on-force* personnel to an extent which, according to the investigator, is "sufficient to deserve some attention." Of particular significance and interest are findings which show that those who stayed on the job tended to feel that (a) *they had a chance to make decisions on the job* and that (b) *they were making an important contribution to the success of the company.*

TABLE 14. *Michigan Bell Telephone Company: Employee Attitudes toward Participation in Decision-Making* (after Wickert)

Answers to Question: "Do you (or did you) have a chance to make decisions on your job at Bell?"

	"Yes, very often" or "sometimes," per cent	*"Seldom" or "never," per cent*	*N*
Operators			
Lansing *			
On Force	78	22	88
Losses	42	58	43
Grand Rapids *			
On Force	74	26	125
Losses	45	55	40
Pontiac			
On Force	73	27	97
Losses	—	—	—
Service Representatives			
Lansing			
On Force	81	19	26
Losses †	—	—	—
Grand Rapids *			
On Force	86	14	36
Losses	38	62	26
Pontiac	—	—	—

* Differences between percentages significant beyond the one-per-cent level of confidence.

† Not reported—insufficient number of cases.

As is apparent from Table 14, in the case of all groups for which comparisons could be made, there is a sizable and statistically significant difference between *on-force* personnel and *losses* with respect to the frequency with which those who stayed on the job answered "*yes, very often*" or "*sometimes*" (rather than "*seldom*" or "*never*") to the question "*Do you (or did you) have a chance to make decisions on your job at Bell?*" Similar differences were found in response to a question dealing with the feeling of contribution to the success of the company. According to Wickert, who conducted the study, the findings show that "the one, clear-cut marked difference was that the girls who stayed [as contrasted with those who left the job] seemed more ego-involved in their work . . . *Here*" he adds, "*is a bit of empirical evidence in favor of industrial democracy*" • (26, p. 197).

An Experiment in Group Participation in Decision-Making by Supervisory Personnel

An experiment by Levine and Butler (12) shows that *group discussions* (representing one medium for participation in decision-making) can be useful at the supervisory level.

The subjects of this investigation were 29 supervisors of 395 workers in a manufacturing plant who were paid an hourly rate. Every six months the workers were rated by their supervisor on five factors, viz., *accuracy, effective use of working time, output, application of job knowledge,* and *co-operation.* The ratings were then used in determining each worker's hourly rate.

An analysis showed that supervisors' ratings were influenced by a "halo effect" in that performance on the job by the individual worker was not being rated alone, but that the grade of the job (whether high or low) was a determining factor in the ratings given. As a result, workers in the higher-grade jobs were paid the *highest* of their respective wage rates, while those in the lower-grade jobs consistently received the *lowest* of their respective wage rates.

The object of the experiment was to compare the effectiveness of group decision versus formal lectures in inducing the supervisors to overcome their biased performance ratings. Supervisors were randomly divided into three groups of 9, 9, and 11. *Group A* served as a *control* group in that supervisors in this group continued making ratings without any special instructions. *Group B* approached the problem from a *discussion* viewpoint and *Group C* was given a *formal* lecture. Only *Group B* (the *discussion* group) showed any significant change in ratings. Both the *control* group and the *lecture* group continued to make biased ratings, while

• Not italicized in the original.

the ratings of *Group B* underwent modification to the point where similar distributions of ratings were achieved for workers in high- and low-grade jobs. The authors view their findings as confirmation of the earlier work of Lewin in demonstrating the greater effectiveness of group decision over a lecture method of training.

The Influence of "Permissive" vs. "Restrictive" Leadership upon Job Satisfaction, Productivity, and Morale [10]

Experiments conducted at the National Training Laboratory for Group Development, by the Research Center for Group Dynamics, with the support of the Office of Naval Research, have suggested the possibility of applying research techniques for the study of "autocratic" and "democratic" atmospheres to problems of intellectual productivity and of team work at management levels (4, 6, 23). Of particular interest, in this connection, is an investigation of interpersonal relations in a naval research laboratory (25), conducted by the Human Relations Research Group, Institute of Industrial Relations, University of California (Los Angeles), under a grant from the Office of Naval Research.

Two divisions, designated as *Division A* and *Division B*, were studied. Employees in both divisions included physicists, engineers, and scientific aides, with supporting clerical personnel, numbering 28 in *Division A*, and 38 in *Division B*. The two divisions differed in the style of leadership under which they operated and in the "atmosphere" which appeared to prevail in each. The head of *Division A* was a brilliant young scientist who directed the division along *restrictive* lines. *Division B* was under the leadership of an older man, a fatherly type, who directed his division along *permissive* lines. The manner in which these two division leaders operated (i.e. the behavior of each division head) was "operationally observed through a collection of specific incidents which characterized his activities" derived from interviews and comments included in sociometric questionnaires.

Each subject from the two divisions was asked, as part of a larger investigation, to indicate on a questionnaire his level of job satisfaction, and his *perception* of the level of productivity and of morale of his own work group, of his division and of the laboratory as a whole. *Job satisfaction* referred to the individual's personal *satisfaction with his position*, as evaluated by himself on a five-point scale, from "very high" (scale

[10] It has seemed desirable to discuss this investigation in the context of participation in decision-making (as reflected in the concepts of *restrictive* and *permissive* leadership), although the findings are also significant in terms of interrelations between supervision, on the one hand, and job satisfaction, productivity, and morale on the other, as discussed in Chapter 8.

value 1) to "very low" (scale value 5). With respect to *productivity*, each individual was requested to evaluate, on a similar five-point scale, the level of production of his own work group, of the division and of the laboratory as a whole. (It should be noted that this rating reflects productivity as *perceived* by members of the group and, as will appear later, is not necessarily an index of actual production or of productivity level as evaluated by superiors.) Following the pattern established in an earlier study by Bernberg (3), which showed that "the collective rating of a group of employees concerning their own morale was the most meaningful single variable related to other criteria of morale," each subject was asked to rate the level of *morale* of his group, of his division and of the laboratory on the five-point scale. While the specific interpretation of the word "morale" was left to each individual, the related questionnaire item "implied a group concept as distinguished from individual job satisfaction." As indicated in Figure 14, analysis of the findings showed that

1. A considerably higher proportion of the members of *Division B*, headed by a *permissive* leader, considered themselves to be satisfied with their jobs.
2. The majority of individuals in both divisions rated the productivity of their work groups as above average. However, a larger proportion of the members of *Division B* rated the productivity of their division and the laboratory as either "very high" or "high" than did members of *Division A*, headed by a *restrictive* leader.
3. A strikingly higher proportion of the members of *Division B* considered the level of morale of their work group, of their division, and of the laboratory to be "very high" or "high" than was the case in *Division A*.

The data so far reported reflects the *perceptions* of members of the two divisions with respect to productivity, job satisfaction, and morale. In addition, interviews were held with five superiors and two staff members, all familiar with the objectives and performances of both divisions, in an effort to arrive at a more objective, critical comparison of the two units. Data obtained in this way included evaluations of the productivity of both divisions. These proved to be of special interest, since, in terms of the standard set by the superiors, *Division A* was judged to be performing an adequate job in spite of the *restrictive* leadership and, as a matter of fact, a better job than the group gave itself credit for. Moreover, the superiors rated the performance of *Division B* lower than did members of the division.

Interviews with the seven key individuals and with division supervisory personnel provided a partial explanation of these discrepancies. In the operation of the laboratory, each division head exercised considerable in-

fluence in determining objectives for his division. It appeared, however, that the objectives which the superiors assumed for *Division A* were more or less identical with those set by the head of this division, who was able to lead his group in that direction in spite of low morale and

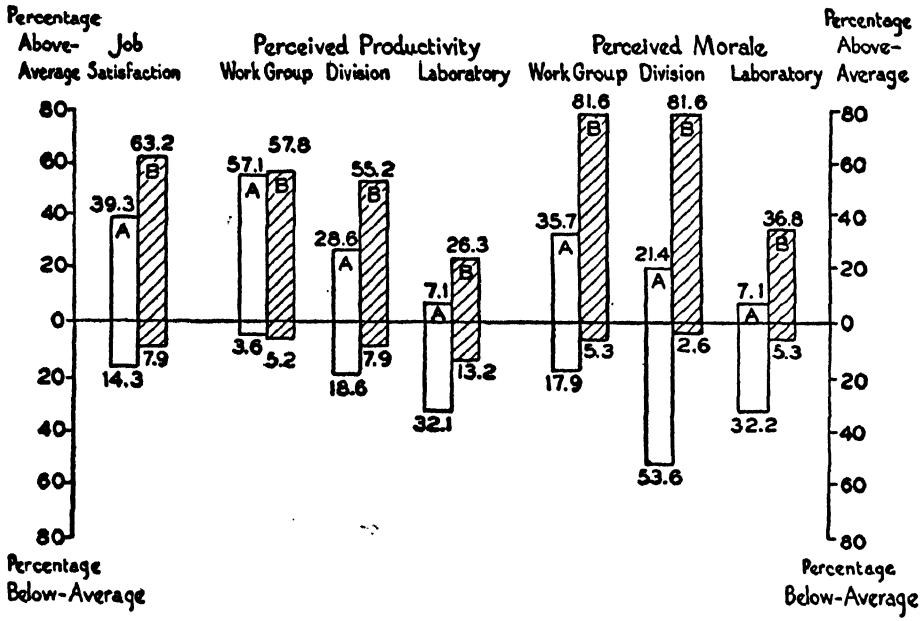


Figure 14. Bar Chart Comparing Percentage Above-Average [Very High (1) and High (2)] Ratings with Percentage Below-Average [Low (4) and Very Low (5)] Ratings for Job Satisfaction, Perceived Productivity, and Perceived Morale (Divisions A and B) *

job satisfaction. On the other hand, the objectives set by the head of *Division B* did not correspond too closely with those assumed by his superiors. As a result, he "*utilized the services of a high morale group and of satisfied people in the performance of tasks which his superiors did not consider of highest importance to the Laboratory*" [11] (25, p. 6).

THE PROBLEM OF "ORGANIZATIONAL" VS. "PERSONAL" GOALS IN GROUP DECISIONS

Detailed analysis of findings in the naval research laboratory study supports the observation, reported in Survey Research Center investigations described in Chapter 8, concerning the lack of relationship be-

[11] Not italicized in the original.

* By permission, from I. R. Weschler, M. Kahane, and R. Tannenbaum, "Job satisfaction, productivity and morale: a case study," *Occup. Psychol.*, 1952, 26, 1–14.

tween productivity, on the one hand, and job satisfaction and morale, on the other. Such findings, combined with those discussed above, focus attention upon an important practical problem which needs careful thought in considering the place of employee participation in decision-making in the industrial plant. In particular, the difference between the group perception of the situation and that of the superiors or "managers" of the laboratory suggests that conflicts can (and do) arise between *organizational goals* and *personal goals.*

As is suggested by those responsible for the naval research laboratory study, "a unit which has been striving to set a community-chest record may get its gratification through this type of success rather than through a spectacular showing in productivity" (25, p. 7). Similarly, individuals in a factory group may gain considerable satisfaction from participation in decision-making, and the level of group morale may rise to considerable heights. At the same time, productivity, considered an equally important goal by a management faced with the need of meeting the payroll and other business expenses, may remain unaffected.

In closer detail, consultation with a work group concerning the details of a job evaluation or incentive plan may result in decisions acceptable to the group which, however, run counter to the best judgment of the job-evaluation expert, the time-and-motion-study man, or of top supervision. As Whyte has suggested, "groupthink" can lead to mediocre as well as to superior solutions of organizational problems and of the broader problem of society (27). However, there are distinct indications that participation in decision-making can yield adequate solutions and that such participation tends to bring about a coincidence of formal (i.e. organizational) and personal goals (23, p. 414). Nevertheless, further study is needed to determine more exactly the "dynamic psychological conditions" under which "the incorporation of formal goals within the scope of the personal goals" occurs, and also as to the optimal limits of participation at individual and group levels (23). There are problems in the situation which must be faced and resolved, not by glib use of the concept of "democratic leadership," but by continued research which can yield greater insight into both the role and the limits of employee participation in decision-making, within a frame of reference which recognizes the necessity of increased industrial productivity, as well as of individual employee satisfaction and group morale, in achieving the objectives of a democratic society.

IMPLICATIONS FOR "JOINT CONSULTATION" IN INDUSTRY

Group decisions of the types involved in experiments described in this chapter are possible only in an organization which permits employee

participation in making decisions (1). According to the exponents of the group-dynamics approach, the benefits of group decisions are therefore to be obtained only within the framework of a *democratic group structure* in industry which, it is claimed, is the key to reduced labor conflict as well as to increased production. In this connection, there arises immediately a series of questions concerning the way in which such a democratic group structure can best be achieved (13, 14, 18, 19). Involved also is the question as to whether employee participation should (and can) be limited to decisions on production problems or should include a large variety of plant problems of concern to employees as well as to management (15, 17). This question merges into broader issues arising in *formal* systems of *joint consultation* through the agency of *labor-management* or *union-management* committees. Such issues, including that of *codetermination* (22), are discussed in Chapter 23, which includes a consideration of the role of formal systems of participation in the stimulation of motivation and morale in industry.

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10

The Work Group as an "Informal Social Organization"

IN A discussion of difficulties arising in collective bargaining, Selekman describes an incident which occurred in a men's clothing manufacturing plant (15). Five men joiners, who had worked together for years, carried through the complete process of sewing together the five sections of the coat. New methods were introduced by the management which required each man to sew only one section. Although they were all pieceworkers, with varying earning capacities, the five men arranged to pool their total earnings at the end of each week and to divide them into five equal parts. "They had always been friends, they explained, and so wanted to avoid any bad feelings different earnings might create among them." In this way, they resisted a program formulated by management which would serve to transform the close group into five competing individuals. Another group, including four women canvas basters, developed a comparable device for "defending their old work-group integrity against the erosion of the new methods." They, like the joiners, differed from one another in speed, accuracy and earning capacity under a piecework wage plan. When there was a shortage of work, none would work unless each had a garment to sew on. "Time and again," says Selekman, "they had held up production because 'friends like us' could not let management give too much work to the speedier or better basters. So strong was their cohesiveness that when an arbitrator expressed the desire for interviews to get to the bottom of complaints, they refused to meet him unless they were interviewed as a group. None would talk except in the presence of all" (15, p. 29).

Another illustration of the drive toward social cohesiveness is found in a study of attitudes of building operators conducted in Great Britain

in 1946, by the Building Research Unit of the Medical Research Council. This investigation showed that nearly 60 per cent of the men were, on the whole, opposed to wage-incentive plans, i.e. to "payment by results." Behind this, to a large extent, was the fear that this incentive would inhibit other strong and pleasurable motives for working, including the solidarity and good fellowship of the working groups to which the operators attached great importance (4).

WORK GROUPS AS SOCIAL ORGANIZATIONS

The incidents described above illustrate a fact which appears again and again in the studies described in earlier chapters, namely that "the people of an organization are not just a bunch of individuals huddled together in a mass. They form groups that are social unities" (5, p. 17). A most important outcome of experiments during the period starting with about 1930 has been to focus attention upon the influence of the *work group* upon productivity, motivation, and morale. Of particular significance is the recognition of the peculiar role of the *informal social organization*—the spontaneously-organized smaller work group existing within the broader formal structure of the industrial plant.

Historically, the emphasis upon social organization at the work group level, although anticipated in the social philosophy of Durkheim (6) and systematically developed in the work of Lewin and his associates (Chapter 6), is most directly derived from the early experiments of Elton Mayo (1, 2, 9, 10). The latter was largely responsible for undermining the philosophical and popular assumption that "mankind is an unorganized rabble" and for postulating in positive terms the viewpoint that in work, as in other activities, "man's desire to be continuously associated . . . with his fellows is a strong, if not the strongest human characteristic" (11). As elaborated in the publications of Whitehead (16, 17, 18), of Roethlisberger, and of the other members of what is commonly known as the Harvard Group (14), the perspectives of Mayo have led to an emphasis upon the significance of interactions among members of a working group and of the reactions of individuals conscious of their membership in one group to those representing another group (13, p. 59).

Studies in the Hawthorne Plant of the Western Electric Company

The nature of such (social) sentiments and feelings and of the routine patterns of interaction in the work group has been most extensively investigated in experiments conducted in the Hawthorne plant of the Western Electric Company (14, 18) during the years 1927–32. The series

of investigations in the Hawthorne plant started with a study of the relations of levels of illumination to levels of output. This showed that production rose as the amount of light was increased for an *experimental* group. However, the output of a *control* group also went up, even though no increase in the amount of illumination was provided. Furthermore, when the level of illumination provided to the *experimental* group was decreased to a level below that furnished for the *control* group, output continued to rise, as did also that of the *control* group.

Such findings suggested that modifications in illumination, with resulting changes in levels of "fatigue" experienced by the operators, were not responsible for the observed variations in production. As a result, research was extended to an examination of the effects of other conditions of work in an effort to identify the variables operating in this situation.

RELAY ASSEMBLY TEST GROUP

As a first step, five girls employed in assembling telephone relays were segregated from their regular department and formed into a *Relay Assembly Test Group* [1] for special study. The group was established by inviting two experienced operators who were known to be friendly to each other to take part in the study. They were then asked to choose the remaining members of the experimental group. Following their introduction to the test room, conditions of work were systematically varied, in accordance with the schedule shown in Table 15, with the view, originally, of examining the effects of variables such as the length of the work periods, rest pauses, etc., upon production and adjustment [2] (12).

Records of production were maintained by means of an electric device recording the completion of each relay as it passed out of a chute into which it was dropped by the operator. As a basis of comparison, a record of output for two weeks in her regular department was kept for each test operator (without her knowledge) before she was moved to the test room. After being moved to the test room no change in conditions of work was made for a period of five weeks, although a record of output was kept during this period.

The first innovation in conditions of work (*Period* 3) was a change

[1] The group actually consisted of six girls, including five engaged in the assembly operation and the sixth acting as a layout operator who assigned work and procured parts.

[2] In the course of the study, data were also collected on the amount of sleep, recreations, home conditions, and observations were also made of the workers in the plant. Pulse rate, blood pressure, blood condition readings, vascular skin reactions, and other physical examination records were obtained from time to time. Such data were considered in the evaluation and interpretation of changes in production records and in arriving at the conclusions discussed in this section.

in method of payment, the operators being placed on a group piece-rate base salary independent of the large group with which they had previously been identified. Following this, a series of changes in working conditions, consisting chiefly of variations in the length and position of rest pauses, as shown in Table 15, was introduced.

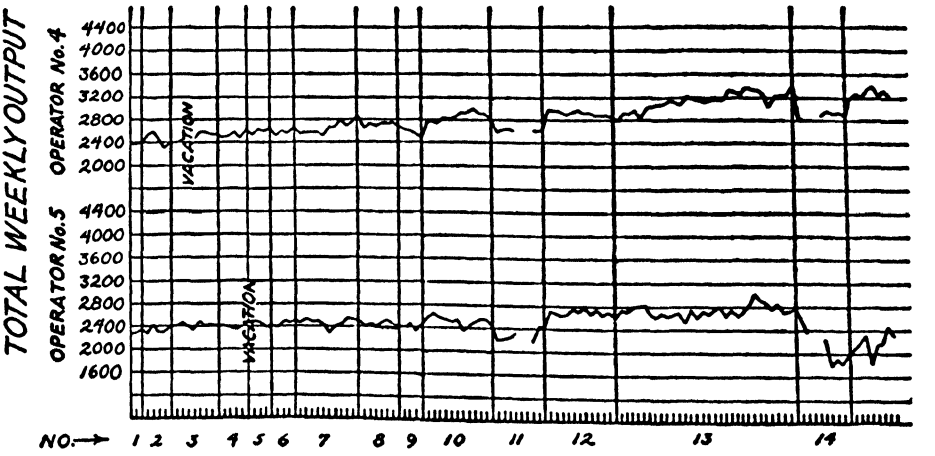


Figure 15. The Performance Curves for Two Operators in the Relay Assembly Test Group.* Periods of the test are separated by the vertical lines. The test conditions in each period are shown in Table 15.

In Figure 15 are presented the production records of two operators throughout the period of the experiment. It is evident from these data, which are representative of those obtained for the five subjects, that the *productivity of the test group tended to increase regardless of the nature of the changes in working conditions introduced,* the average increase attained by the end of the period being about 30 per cent. Moreover, this trend continued even during the *12 weeks of Period 12 when the conditions of work characterizing the regular relay assembly department were reintroduced,* namely, a full 48-hour workweek with no rest periods and no midmorning refreshments.[8] However, as can be seen from Figure 15, production rose to new and record heights in the subsequent 31-week period (*Period 13*), when rest pauses were again allowed.

In setting up the *Relay Assembly Test Group,* it had been hypothesized that changes in specific work conditions, such as the wage-payment plan, hours of work, the introduction of rest pauses, etc., would be accompanied by related changes in production such as had been reported

[8] Week of 5½ days; 8¾ hours for 5 days and 4½ hours on Saturday.

* By permission, from G. A. Pennock, "Industrial research at Hawthorne," *Pers. J.*, 1930, 8, 296–313.

TABLE 15. *Summary of Test Periods, Relay Assembly Group* (after Pennock)

Period number	*Period name*	*Dates included*	*Duration*	*Beginning of Rest Pauses* A. M.	P. M.
		1927			
			weeks		
1	In regular department	4–25 to 5–10	2 *	None	
2	Introduction to test room	5–10 to 6–11	5	None	
3	Special gang rate	6–13 to 8– 6	8	None	
4	Two 5-minute rests	8– 8 to 9–10	5	10:00	2:00
5	Two 10-minute rests	9–12 to 10– 8	4	10:00	2:00
6	Six 5-minute rests	10–10 to 11– 5	4	8:45, 10:00, 11:20	2:00, 3:15, 4:20
7	15-minute A. M. lunch 10-minute P. M. rest	11– 7 to 1–21–28	11	9:30	2:30
		1928			
8	Same as No. 7, but 4:30 stop	1–23 to 3–10	7	9:30	2:30
9	Same as No. 7, but 4:00 stop	3–12 to 4– 7	4	9:30	2:30
10	Same as No. 7 (check)	4– 9 to 6–30	12	9:30	2:30
11	Same as No. 7, but Saturday A. M. off	7– 2 to 9– 1	9	9:30	2:30
12	Same as No. 3 (no lunch or rests)	9– 3 to 11–24	12	None	
		1929			
13	Same as No. 7, but operators furnish own lunch. Company furnishes beverages	11–26–28 to 6–29	31	9:30	2:30
14	Same as No. 11	7–1 to 8–31	9	9:30	2:30
15	Same as No. 7, except operators furnish own lunch. Company furnishes beverages	9–2 to present		9:30	2:30

* Approximately.

in earlier studies on motivation, fatigue, and monotony at work. The consistent rise in output throughout the experiment—even when rest pauses were eliminated and hours of work lengthened—led the investigators "to change their ideas radically." As they reviewed the course of the experiment, they came to the "realization" that in the establishment of the test room almost all the practices common to the shop had been altered. In order to enlist co-operation in the experiment, the operators had been consulted about the changes to be made. Careful consideration had been given to their reactions to the changed conditions as ascertained in conferences which, at times, took place in the office of the

superintendent. Contrary to the practice in the department from which they were drawn, the girls were allowed to talk at work. The investigators had displayed concern for their health and well-being and interest in their opinions, their fears, their hopes and aspirations. Consideration of these facts, in relation to the consistently rising production record (particularly as seen in *Period 12*) led to what Roethlisberger has called the great *éclaircissement*—an enlightenment quite different from what had been expected (13, p. 13 f.). This change in orientation has been colorfully described by Stuart Chase in a review of the Hawthorne study

> "The staff swooned at their desks. They had thought they were returning the girls to original conditions but found that those original conditions were gone forever. Because of some mysterious X which had thrust itself into the experiment, the experiment had changed under them, and the group they now had was not the group they had started with.
>
> "This X wasn't in the production end of the factory. It was in the human end. It was an *attitude*, the way the girls felt about their work and their group. By asking their help and co-operation, the investigators had made the girls feel important. Their whole attitude had changed from that of separate cogs in a machine to that of a congenial group trying to help the company solve a problem. They had found stability, a place where they belonged, and work whose purpose they could clearly see. And so they worked faster and better than they ever had in their lives" (3, p. 17).

FURTHER STUDIES IN THE HAWTHORNE PLANT

This "éclaircissement" led to a new series of investigations, designed to check on certain details of the *Relay Assembly Room* study, and also to test the assumption that the observed production increase was a result of a change in the *social situation*—that employees did their best, not primarily because of wage incentives, reduced fatigue, or similar factors, but because the (new) social situation was conducive to maximum co-operation by the group in carrying on the work of the unit.

As employees in their regular department, the operators in the *Relay Assembly Test Group* had participated in the earnings of a group of approximately 100 employees. Since the group was large, the output of any worker was not directly reflected in her weekly wages. This group-payment plan was supplemented by an additional financial incentive in the form of a "bogey" system under which a rating of each worker's performance was used as a basis for determining the individual's hourly rate of pay.

In *Period 3* of the experiment the wage payment plan was altered in two respects: viz., (1) the workers in the test room were formed into a separate group for purposes of payment, and (2) the effect of the

"bogey" was nullified by telling the operators to work at a comfortable and natural pace. According to Roethlisberger and Dickson (14), it seemed possible that the "bogey" continued to function in that each operator still kept in mind a standard of what constituted a "good day's work." Moreover, the change from the large group to the small one resulted in an enhancement of the monetary incentive, since each operator's earnings became more directly related to her own production. This situation, together with the fact that the output of the *Relay Assembly Test Group* continued to rise regardless of the nature of other changes in working conditions, suggested the need for examining, among others, the hypothesis that the continued increase in output throughout the two-year period reflected the continued effect of the wage incentive, in other words, the hypothesis that the operators were primarily motivated by economic factors.

As a result, two additional studies were initiated. The aim of the first of these experiments was to reproduce the original test room situation only in respect to the one factor of method of payment. Underlying this was the thought that any observed changes in output could be reasonably related to this factor, since the modification of the wage plan would represent the only change from the usual conditions of work. In the second experiment, the test room situation was to be duplicated in all respects except for the change in the wage plan. In this case, it was postulated that an increase in output similar to that observed in the Relay Assembly Test Room would suggest that the enhancement of the wage incentive was not the dominant factor in the situation.

THE SECOND RELAY ASSEMBLY GROUP

The first of the supplementary experiments involved a group of operators known as the *Second Relay Assembly Group*, consisting of five experienced relay assemblers selected by the foreman of the regular department and formed into a special group to be paid separately from the rest of the department. Before the study began, the five operators had been scattered throughout the assembly group. For purposes of the study and to facilitate recording of output, they were moved to adjacent positions at a bench in the regular department. No other changes were made, supervision and general working environment remaining the same.

The study provided an opportunity for the comparison of output during three periods:

1. a *control* period of five weeks during which the wage plan of the regular department remained in effect; [4]

[4] In planning the experiment it had been the intention of the investigators to take as a base, against which subsequent output changes could be measured, the output

2. an *experimental* period of nine weeks during which the method of payment was altered to coincide with that introduced in the original test room in *Period 3*;

3. a *control* period of approximately seven weeks marked by a return to the original wage payment system.

Table 16 shows the average hourly output by weeks for each of the operators in the *Second Relay Assembly Group* during the three periods. The increase in output during the period when the wage incentive was in effect, followed by a production decrease with the elimination of the wage incentive, represents evidence ordinarily interpreted as indicative of the direct and favorable influence of financial incentives upon output, and of the operation of economic motives in the industrial situation. However, as appears on page 205, the investigators contend that conclusions concerning the efficaciousness of the wage incentive system would

TABLE 16. *Average Hourly Output in Each Period and Percentage Change in Average Hourly Output from Period to Period* * (after Roethlisberger and Dickson)

Second Relay Assembly Group

Operator	*Base period*		*Experimental period*		*After return to old method of payment*	
	Average Hourly Output	*Per cent*	*Average Hourly Output*	*Per cent*	*Average Hourly Output*	*Per cent*
R1	1,605	100.0	1,739	108.3	1,580	98.4
R2	1,477	100.0	1,703	115.3	1,617	109.4
R3	1,749	100.0	2,053	117.4	1,133	64.7
R4	1,595	100.0	1,810	113.5	1,795	112.5
R5	1,745	100.0	1,894	108.5	—	—

* The method of recording output in the Second Relay Assembly Group was different from that employed in the Relay Assembly Test Room. Instead of expressing the output in terms of the number of relays assembled, it was expressed in terms of the number of relay parts assembled. This method, although not so accurate as the method used in the test room, eliminated the difficulties encountered in attempting to convert the output figures to a common basis.

records for a period of one or two weeks immediately before the change in wage incentive. For various reasons, the base period record was selected from a period having similar overtime conditions; it covered five weeks from August 27 to September 29, 1928. In the case of Operator R_1 and Operator R_3, output records for only two weeks and one week respectively during this period were obtainable, as they were doing miscellaneous work at the time.

be entirely misleading without a consideration of the *social situation* characterizing the *Second Relay Assembly Group.*

THE MICA SPLITTING TEST GROUP

In the second supplementary experiment, involving a *Mica Splitting Test Group,* the objective was to create a test-room situation wherein changes in working conditions similar to those imposed in the original *Relay Assembly Test Room* could be introduced without changing the wage-incentive method. However, two secondary objectives were considered in planning the Mica Splitting Test Room. Since the short duration of each of the experimental periods had rendered an interpretation of the results in the Relay Assembly Test Room difficult, the periods in the Mica Splitting Test Room were to be lengthened to provide for "complete adjustment to the experimental change before a new condition was imposed" (14, p. 134). Furthermore, it was decided to study the effects of overtime.

Earnings on the mica-splitting job were relatively high and, in general, the job was considered one of the most desirable of those available for women in the Hawthorne plant. Five experienced mica splitters were selected from the regular department in accordance with the procedure used in selecting subjects for the original Relay Assembly Test Room. In order to furnish a base record with which subsequent changes could be compared, output data were collected for a period of eight weeks for each operator (*Period 1*), while the girls were still working in the regular department. The operators were then isolated from their regular work group and placed in a separate room where conditions, in general, duplicated those characterizing the original Relay Assembly Test Room experiment.

During the first five weeks in the test room, constituting *Period 2,* no changes were introduced, and overtime hours which had been in force for some time in the regular department were continued. This meant that the operators worked 55 hours per week, including 7¾ hours on Saturday.

In *Period 3,* which lasted 29 weeks, two ten-minute rest pauses were instituted, one at 9:30 A.M. and the other at 2:30 P.M. Overtime work was continued and on seven occasions Sunday work was added.

During *Period 4,* which extended for 48 weeks, overtime hours were discontinued and the operators were returned to the standard 48 hour working week of 5½ days, 8¾ hours on five days, with 4½ hours on Saturday, but the rest pauses were continued.

During *Period 5,* the final change in working conditions was made, not as an experiment but rather because of the general business depression. The length of the working day was reduced to eight hours, Saturday work was eliminated entirely, although the rest pauses were continued.

These conditions were in effect for 17 weeks, i.e. until the study was terminated on September 13, 1930, when the mica-splitting job was discontinued.

In general, the changes in each of the last three periods represent improvements in working conditions as compared with preceding periods. According to Roethlisberger and Dickson, in view of these successive improvements, it might be expected that average output would rise steadily. In fact, as shown in Figure 16, the introduction of rest pauses

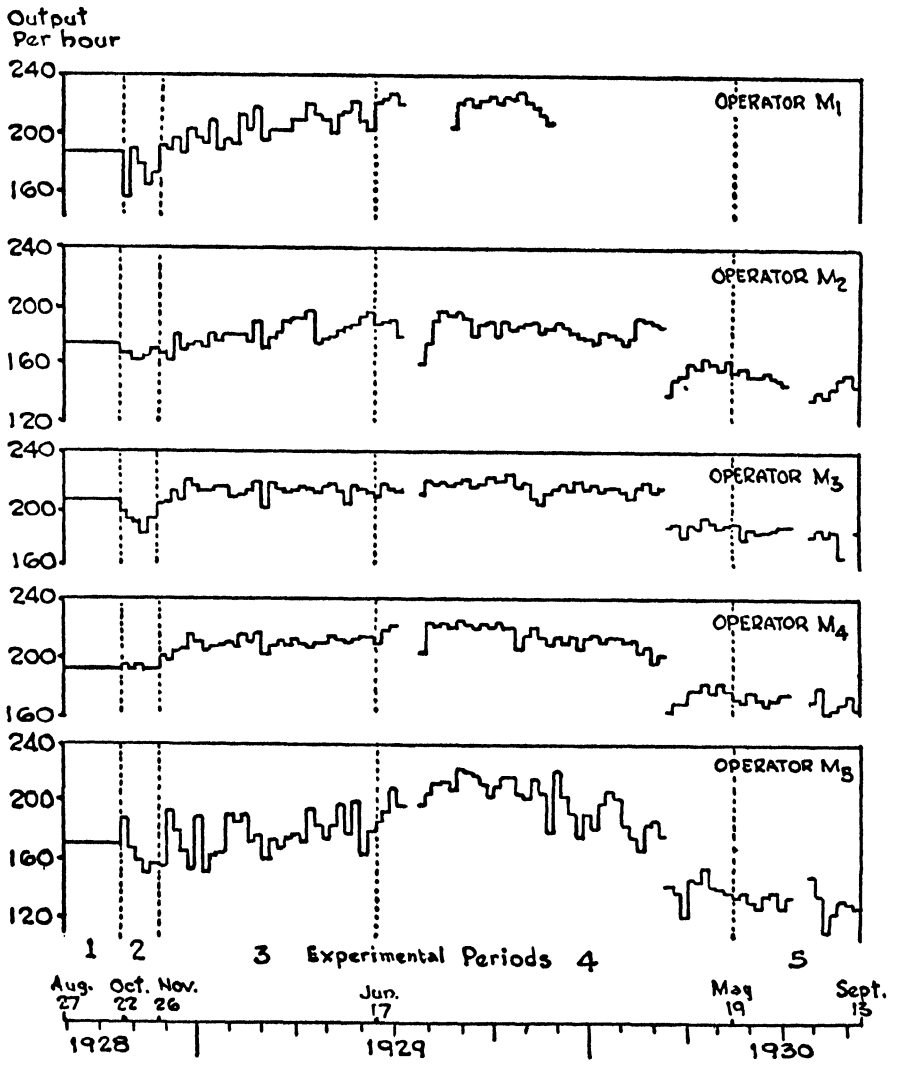


Figure 16. Average Hourly Output per Week, Mica-Splitting Test Room *

* By permission, from F. J. Roethlisberger and W. J. Dickson, *Management and the Worker*, Harvard University Press, 1939.

in *Period 3* was accompanied by an immediate and sustained rise in the weekly average hourly output for each operator, with Operator M-5 as a possible exception. This continued during the first few months of *Period 4* when, in addition to continuing the rest pauses, hours of work were reduced to the standard 8¾ hour day by the elimination of overtime. This increase in output, representing an average rise of 15 per cent in the first 14 months of the experiment, would ordinarily be accepted as evidence that the introduction of rest pauses and the shortening of the work day can in themselves result in increased output, even in the absence of changes in the way of enhancing the wage incentive.

While this possibility is suggested by those concerned with the interpretation of the Hawthorne data, emphasis is also placed on the decline in average hourly output which started after the first few months of *Period 4*, continued for the remainder of this period and also through *Period 5*, in spite of the reduction of the work week to 40 hours. According to the investigators, this decline, extending through approximately the second year of the experiment, can be more properly related to the workers' anxieties arising over the uncertain future of the mica-splitting job which started when all mica operators in the regular department were removed to a new location in the plant and transferred to a new department.

Such anxieties became more and more severe as other changes were made and came to a climax with the realization that "the dreaded depression had begun to affect them" when, on May 19, 1930, the hours of work were reduced and Saturday work eliminated. It is suggested that logically, in this situation, it might have been expected that the monetary incentive would be at the peak of its efficiency, that operators would have wanted to earn as much money as possible before being laid off. However, output dropped. Fears and anxieties completely overbalanced the experimentally introduced changes; in the face of such doubts the wage incentive had lost its power to motivate.

According to Roethlisberger and Dickson, although this unexpected factor had interrupted the experiment proper, it brought out certain points which were of value in showing the effect of interfering preoccupations on the attitudes of the operators and, in turn, on their output. This unanticipated condition, it is said, demonstrated that under certain conditions such preoccupations could become so acute as to nullify the effects of certain other factors influencing output and efficiency. It provided a further warning against drawing hasty conclusions based on only a partial acquaintance with the human situation under investigation (14, p. 154).

The fact that the danger of losing the job may lead to a decrease in

production, with the view of "stretching work," even in the face of strong wage incentives, particularly in the absence of pressure for production by plant management, has been established in the German Industrial Inquiry (7, 8) and other studies. For this, and other reasons, it is not difficult to accept the viewpoint that attitudes arising in the work situation affect the operation of financial incentives. However, the *rapporteurs* of the Hawthorne studies appear to neglect other conditions which need to be examined objectively in evaluating the significance of the financial incentive itself as a stimulus to response in the way of attitudes and behavior. So, for example, note is made of the particularly *marked decline* in output during the final six months of the *Mica Splitting Room* study which is evident from an examination of Figure 16. Attention is also drawn to the fact that during this period operators were working on mica of different specifications, necessitating a conversion of output to one standard type of mica. It is pointed out that both "the investigators and operators were of the opinion that the rates on the new piece parts were not high enough in comparison with the old." Nevertheless, scant consideration is given to the possibility that the discrepancy in the piece rates resulted in a weakening of the financial incentive; that a reduced appeal to economic motives could readily account in large part for the very severe drop in output observed during this final phase of the *Mica Splitting Room* experiment.

THE SIGNIFICANCE OF THE RELAY ASSEMBLY ROOMS AND MICA SPLITTING ROOM STUDIES

According to Roethlisberger and Dickson, although output had risen on the average 12 per cent in the *Second Relay Assembly Group* study, factors other than the change in wage incentive contributed to this increase. Since the operators were not segregated in a separate room but had remained in their regular department, it had been assumed that they were a "group" in name only. Actually, a new variable which had not been considered important in designing the experiment had entered into the situation. The operators had not been left in their original positions at different benches, but had been moved to a common bench in the regular department in order to facilitate record keeping. This move, it is claimed, had social significance in bringing into focus a competitive attitude with respect to the original *Relay Assembly Test Group* already existing in the department.

"There was some evidence," it is said, "to indicate that the operators in the Second Relay Assembly Group had seized upon this test as an opportunity to prove to everyone that they could do as well as the Relay Assembly Test Room operators. They were out to equal the latter's record.

In view of this, even the most liberal estimate would put the increase in output due to the change in payment alone at somewhat less than 12 per cent (14, p. 158). . . . "This experiment, designed to test the effect of a single variable, succeeded only in exposing a most complex social situation. Conclusions about the efficacy of a wage incentive drawn from it, unrelated to the basic social situation, would have been entirely misleading" (14, p. 577).

In the *Mica Splitting Test Room*, too, according to Roethlisberger and Dickson, there had been a similar failure to consider important variables representative of changes in "social atmosphere." The experimental changes imposed in the original *Relay Assembly Test Room* not only differed from those introduced in the Mica Splitting Test Room in character, duration, and frequency, but they functioned for the two groups in a different way. Those introduced in the original Relay Assembly Test Room were in the nature of special privileges while those introduced in the Mica Splitting Test Room, except for the rest pauses, were similar to changes in the regular Mica Splitting Department. Mica splitters, who were on a straight piecework rate, did not have a vital interest in one another's output around which to organize as a social group. It is further assumed that operators would tend to work closer to their maximum capacity under a straight piecework than under a group piecework rate.

On the basis of such considerations, the conclusion is reached that, apart from the wage factor, conditions in the Mica Splitting Test Room were not so conducive to an increase in output as they were in the Relay Assembly Test Room. Nevertheless, in spite of this, average output increased 15 per cent during the first 14 months of the Mica Splitting Test Room study, prior to the appearance of anxieties with respect to job security. If, according to Roethlisberger and Dickson, this is allowed as the minimum due to changes in working conditions and supervision, i.e. *all factors other than wage incentive*, then this amount subtracted from the percentage increase in output in the original Relay Assembly Test Room should leave the maximum amount to be attributed to the change in wage incentive. Since output rose an average of roughly 30 per cent in the original Relay Assembly Test Room, there remains 15 per cent which "might be attributed to the change in wage incentive." "This deduction," it is pointed out, "depended on so many assumptions which might or might not hold true" that it failed in any sense to be conclusive. With respect to over-all outcomes, Roethlisberger and Dickson take the position that at least two conclusions seemed to be warranted from the test room experiments

"1. There was absolutely no evidence in favor of the hypothesis that the continuous increase in output in the Relay Assembly Test Room during the first two years could be attributed to the wage incentive factor alone;

"2. the efficacy of a wage incentive was so dependent on its relation to other factors that it was impossible to consider it as a thing in itself having an independent effect on the individual. Only in connection with the interpersonal relations at work and the personal situations outside of work, to mention two important variables, could its effect on output be determined" (14, p. 160).

As has been suggested in the discussion of the two supplementary experiments, questions can be raised concerning the interpretation of findings. In particular, the experiments do *not* demonstrate that rest pauses and wages are without value as incentives to production. Furthermore, they do *not* justify the firm conclusion that these (or other conditions) fail to exercise independent effects upon the individual. Nevertheless, the experiments served an important purpose in calling attention to the fact that *interpersonal relations* and the character of the *social situation* can alter the effects of such specific incentives. The studies also point to the need for the detailed examination of the structure of the social situation at the level of the work group, and of the interrelationships among those specific factors—environmental and personal—which may determine the attitudes and behavior of the individual as a member of a work group. While questions of the type discussed in this section can be raised, it nevertheless seems clear that these early studies in the Hawthorne plant were highly significant (1) in *calling attention to the existence and importance of "social" motives in industry,* and (2) in *showing the need for intensive investigation of the pattern of group activity—of the functions and structure of the "team"*—as represented in studies of the type discussed in Chapter 11.

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11

Teamwork

"AN INSTITUTION," according to Drucker, "is like a tune: it is not constituted of individual sounds but by the relations between them" (7, p. 26). This comparison applies not alone to the large and formally structured organization, but also to the small and more spontaneously organized work group. At least, such is the conclusion which has been drawn from the study of interpersonal relations in the small work group and of the patterning of "teamwork" in industry.

Bank Wiring Observation Group—Hawthorne Branch of the Western Electric Company

The series of studies conducted in the Hawthorne plant of the Western Electric Company, described in Chapter 10, included a detailed study of a shop situation undertaken with the purpose, in part, of examining social interactions in work groups in relation to the operation of wage incentive plans. In studies conducted early in 1931, attention had been called to the fact that social groups in shop departments were capable of exercising very strong control over the work behavior of their individual members. Observations made in the course of an extended interviewing and counseling program, described in Chapter 13, suggested that the wage-incentive systems under which some of the groups worked had been rendered ineffectual by group pressure for *restriction of output*. Informal practices by means of which operators were placed under pressure were brought to light, as well as evidence of informal leadership on the part of some individuals who assumed the responsibility of seeing "that the members of a group clung together and protected themselves from representatives of other groups within the company who could interfere with their affairs" (22, p. 380).

Such observations led to the *Bank Wiring Observation Room* study.

This involved a group of 14 male operators who, in order to facilitate record keeping and observation by investigators, were placed in a separate room.[1] This group included nine *wiremen* arranged in three subgroups of three men each. Six of the wiremen, i.e. two subgroups, worked on "connector" equipment and the remaining three on "selector" equipment. One *solderman* was attached to each of these subgroups, constituting a soldering unit. Two inspectors passed on the work of these 12 men. In addition to the 14 operators, there was a supervisor in charge of this "small shop." The study lasted for a period of six and one-half months (November, 1931 to May, 1932), being terminated at the end of that time because of lack of work. No intentional changes were made in the situation once the group was so placed that observation was possible.

Contrary to the procedure followed in the earlier studies, in order to assess the effect of placing the group in a separate room, base-period studies were made before either the workers or their immediate supervisors knew anything about the study. It was decided nothing was to be said or done in selecting the group, in explaining the study to them, or removing the men from the department which might alter their status in any way (22, p. 388). In addition, in planning the study it was agreed that no records were to be taken which might tend to make the workers apprehensive or too consciously aware that they were being studied. Nevertheless, provisions were made for obtaining records on *quantity of output*, which were accumulated by the observer, for each of the nine wiremen, at noon and at night after the men had quit work.

Records on *quality of output* were also obtained daily, and the observer maintained a daily *record of observations*, including significant happenings in the observation room, conversations of the employees, and his own impressions. In addition, with the exception of the inspectors, each man in the group was interviewed before the study began, and all the men were interviewed two or more times during the study itself. In connection with certain analyses, use was made of *physical examination* records and of records of results on a battery of *mental and dexterity tests*, which were applied toward the close of the study.

Wages paid to the operators were based on a system of group piecework according to which the entire department was considered a unit for purposes of payment. Under this system the earnings of any one individual were affected by the output of every other member in the group, and the wages of an individual worker who turned out an unusually large amount

[1] The group of 14 men originally selected for the study did not remain intact very long, and substitutions were made from time to time in the case both of operators and of supervisory personnel.

of work, in comparison with the output of other workers, would be but slightly higher than if he had not increased his output at all. Conversely, the output of the other operators would serve to sustain at about their ordinary level the wages of a worker who was unusually low in output for a time. To help minimize inequities of this type, adjustments in *hourly rates* of the operators, which determined the "daywork value" of each operator's work, were based largely upon individual outputs, records being kept of each person's production, in terms of weekly average hourly output, for guidance in adjusting rates. Under this system of payment, differences in the earnings of different operators working the same number of hours depended entirely upon differences in individual hourly rates.

RESTRICTION OF OUTPUT BY GROUP MEMBERS

A major finding of the study, involving detailed analysis of the records on quantity and quality of output and of approximately 600 typed pages of observation and interview data, was that *each individual in the group was restricting his output.* The restriction of output was manifested first in the fact that *the group's standard of a day's work was lower than that of the "bogey"* set up in the wage-incentive plan, the group's standard serving to fix an upper limit of each operator's output. Restriction of output was also evidenced, according to the investigators, in the fact that each individual's output, as illustrated in sample records in Figure 17, remained fairly constant from week to week, producing departmental output curves which were devoid of individuality and approximated horizontal lines in shape. A comparison of average hourly output during morning and afternoon hours showed further that (1) the average morning rate of each operator exceeded the average afternoon rate and that (2) the difference between morning and afternoon rates was greater among faster than among slower operators. This, according to the investigators, represented further evidence of a concern with the maintenance of uniform output in the interests of output restriction.[2]

Although the group chief was supposed to make individual output counts at the end of each day, he actually depended upon an output report furnished by the operator, since making individual counts would have been "a laborious task and an almost impossible one considering his many duties." Output counts by the investigators showed, as appears in Figure 17, that no wireman reported exactly what he produced each day, but

[2] The possibility that fatigue or monotony might account for such variations between spells of work or variations between operators in work curves receives little consideration. Those concerned with the analyses of earlier studies are generally committed to the viewpoint that fatigue and monotony, as ordinarily conceived, play but a negligible (if any) role in accounting for output decrements on semiskilled repetitive jobs of the type involved in this study.

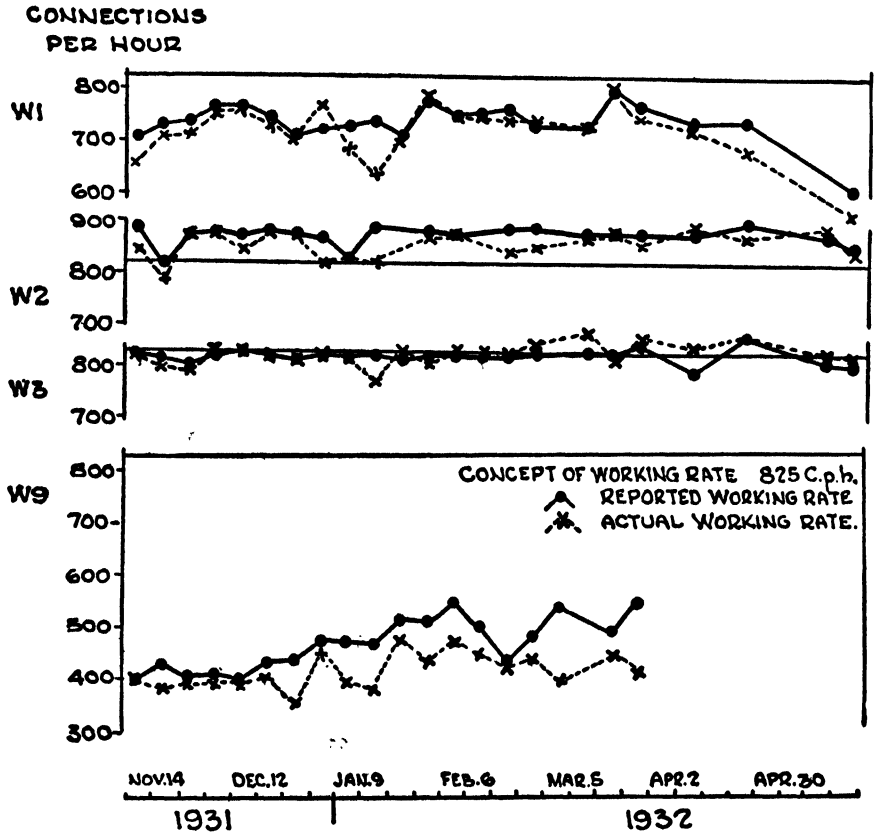


Figure 17. Actual vs. Reported Average Hourly Output per Week, Bank Wiring Observation Room *

reported more on some days and less on others. Such inaccuracies appeared to be associated with the preoccupation of operators with quantity of output, or, more specifically, with the limitation of output.

The department permitted employees to claim daywork for unusual stoppages beyond their control. Observation showed that most of the wiremen frequently claimed to have been prevented from working by stoppages beyond their control when there was little justification for their claims since (1) the stoppage was shorter than claimed; (2) it was brought about by the operators themselves; (3) there was, in fact, no delay, or (4) there was a real stoppage which could have been compensated for by working a little harder or more consistently.

Observations and interviews furnished additional evidence of limitation of output. Most of the operators stated that they could easily turn out more work than they did. The observer reported that all men stopped

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before quitting time and that those who ranked highest in output stopped first.

REASONS FOR THE RESTRICTION OF OUTPUT

Various possible interpretations have been postulated and explored by Roethlisberger and Dickson in an effort to explain the restriction of output and related phenomena in the Bank Wiring Observation Room. Hostility to management is considered to represent an untenable explanation since, according to the investigators, in employee interviews conducted in the plant in 1929, when over 40,000 complaints were voiced, "there was not one single unfavorable comment expressed about the company in general" (22, p. 536). Fear of rate cutting is discarded because it was the policy of the Western Electric Company not to change the piece rates except when there was a change in manufacturing processes. In this connection, it is to be noted that such fear may exist in spite of the fact that a company refrains from cutting rates as earnings increase. Furthermore, John Mills, a former member of the personnel staff of the Bell Telephone Company, has suggested that there were factors in the bank-wiring situation which were not observed by the investigators. According to Mills

> "Reward is supposed to be in direct proportion to production. Well, I remember the first time I ever got behind that fiction. I was visiting the Western Electric Company, which had a reputation of never cutting a piece rate. It never did; if some manufacturing process was found to pay more than seemed right for the class of labor employed on it—if, in other words, the rate-setters had misjudged—that particular part was referred back to the engineers for redesign, and then a new rate was set on the new part" (19, p. 93).

Involved here may be a question of opinion concerning Western Electric Company practices in the administration of wage-incentive systems. Nevertheless, an "outside" opinion deserves consideration, particularly in view of the possibility of errors in observation suggested in the astounding report by interviewers that no single worker in the Hawthorne plant had expressed an unfavorable opinion about the company in general. Of further interest is the fact that the study was conducted in the midst of a severe depression. The observers reported that in their daily conversations operators "speculated endlessly upon when the depression would end, whether they would be laid off, and what would happen to them if they were. All but one of them were in a very poor financial condition and if they were unemployed could not escape public support for long" (22, p. 531). As stated elsewhere, other studies have shown that attitudes unfavorable to output and a definite effort to "stretch work" may result

under such conditions, even in the presence of powerful wage incentives.[3] Nevertheless, it is reported that the interviewers had detected the problem of restriction in output even in 1929, the year in which the company reached its peak of activity, and the conclusion is reached (contrary to that following from the *Mica Splitting Room* study[4]) that it is doubtful that the restriction of output in the *Bank Wiring Observation Room* was related to the effects of the depression. Furthermore, since all operators were found to be physically fit, and no relations found between output and performance on mental and dexterity tests, it could not be assumed that the failure to meet production standards was related to lack of capacity.

The facts presented in reports on this study suggest the distinct possibility that the wage incentive plan itself and the manner in which it was administered were not conducive to optimal motivation. However, this possibility in the way of an interpretation receives scant consideration by the *rapporteurs* of the Hawthorne study. Other considerations are also laid aside in favor of the conclusion that restriction of output and similar problems in the *Bank Wiring Observation Room* arose from the existence of a patterned, informal and intricate *social organization* developed spontaneously and quite unconsciously in the group through the years with the function of resisting change (22, p. 548) or, more specifically "(1) to protect the group from internal indiscretions, and (2) to protect it from outside interference" (22, p. 523). The workers, according to Whitehead, "were dumbly fearful for their own way of life, and they were jealously guarding it from outside interference" (31, p. 78). From this viewpoint, to state the failure to meet production standards in terms of "restriction," or to state this and other industrial personnel problems as "faulty supervision," or "mismanagement," is to mistake symptoms for causes and to neglect the social factors involved.

ANALYSIS OF THE SOCIAL STRUCTURE OF THE WORK GROUP: A SOCIOMETRIC STUDY

The *Bank Wiring Observation Room* study included an analysis of the social structure of the group and the mechanisms used in enabling the informal social organization to fulfill its function. This involved an application of the "sociological-anthropological" approach inherent in the perspectives of Mayo and as represented in theories and research discussed in Chapter 5. The methods and findings of the study also have significant implications in terms of Lewin's field theory, discussed in Chapter 6, and in relation to the use of sociometric techniques for graphically portraying

[3] See page 191.
[4] See page 190.

and analyzing interpersonal relations found in the work of Moreno (20, 29).

Observation and interview materials were examined for evidence of social organizations, to answer the questions: "*Do we have here just so many 'individuals,' or are they related to one another in such a way that they form a group or configuration? If they do form a configuration, how are they differentiated from or integrated with other groups?*" (22, p. 493). In seeking answers to these questions each person entering into the study was considered separately with the view of discovering the degree and kind of his social participation in the Bank Wiring Observation Room. The material covering the operator was then examined to provide answers to the questions, "*To whom do this person's relations extend?*" and "*Does he enter a great deal or relatively little into social relations with the people with whom he associates?*"

Analysis of findings showed that members of the group were differentiated or integrated in terms of *participation in games*, one of the social activities observed and recorded in the course of the study. While there was no written rule to this effect, *helping one another* on the job was forbidden. However, operators in the Bank Wiring Observation Room did help one another even when technically there was no justification for doing so. Records kept of this activity showed that everyone [5] participated in helping and that, unlike participation in games, helping was not confined within smaller work groups. Helping one another seemed to integrate the whole group rather than parts of it (22, p. 506).

In addition to studying the direction and frequency of interemployee relations, an attempt was made to study the kind of participation manifested by each operator, whether he assumed a subordinate or superordinate role; whether he strove for leadership; and whether his moves in this direction were accepted or rejected by others. Finally each occurrence in which a person entered into association with another was examined to see whether the relation manifested expressed an antagonism, a friendship, or was merely neutral.

Conclusions have been drawn concerning the nature of the social organization in the Bank Wiring Observation Room; its significance as a motivating factor in relation to output, and the mechanisms through which social pressure was exerted upon individuals in the group for the maintenance of group standards and for the effective expression of group sentiments.

Examination of the findings showed, for example, that each job in the group carried its own social status or significance, that the members of the group could be differentialed into five gradations, ranging from high-

[5] Except inspectors, who were not involved in "helping" activities.

est to lowest in the following order: inspectors, connector-wiremen, selector-wiremen, soldermen, and truckers, in terms of social status of the job. Further analyses showed that in spite of such differences in job status, members of the group did not form occupational subgroups. Nevertheless, whether the investigators looked at games, job trading, quarrels over the windows, or friendships and antagonisms, two subgroups seemed to stand out, one located toward the front of the room, the other toward the back. "*The group in front*" and "*the group in back*" were common terms of designation among the workmen themselves.

The membership of each of these two subgroups or "*cliques*" is diagrammatically presented in Figure 18. The soldering units into which the

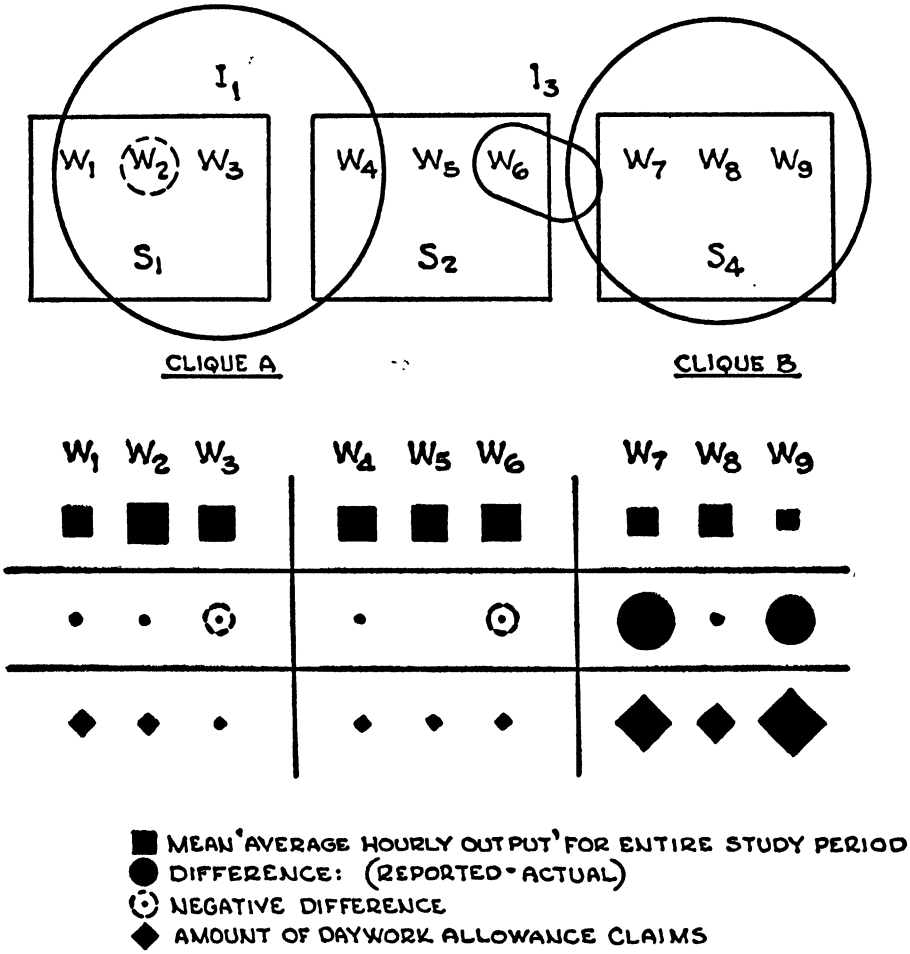


Figure 18. The Internal Organization of the Group and Output, Bank Wiring Observation Room *

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members of the group were divided are shown by the three rectangles, and the two large circles demarcate the two cliques, *A* and *B*. As indicated in the diagram, three individuals, I_3, W_5, and S_2, were clearly outside either clique. The line around W_6 intersects that of *Clique B* to show his partial participation in it, and the instability of W_2's position is indicated by the broken circle around his number.

There were differences in the activities of the two groups. Members of *Clique A* did not trade jobs nearly so much as *Clique B*, and on the whole they did not enter into the controversies about the windows. *Clique A* engaged in games of chance, while *Clique B* engaged more often in "binging." [6] Both groups purchased candy from the club store, but purchases were made separately and neither small clique shared with the other. *Clique A* argued more and indulged in less noise and "horseplay" than *Clique B*. The members of *Clique A* felt that their conversations were on a higher plane than those which went on in *Clique B;* as W_4 said, "*We talk about things of some importance*" (22, p. 510).

In general, the members of *Clique A* regarded themselves as superior to *Clique B*, and the latter occupied the lower position in the over-all social structure of the Bank Wiring Observation Room. With respect to output, the analysis showed, as appears in Figure 18, that the actual average hourly output rates of the members of *Clique B* were lower than those of *Clique A* and that overestimates of output and claims for daywork allowances were greater. In other words, there was a direct correspondence between degree of output and informal social standing of the groups. Members of *Clique A* were drawn from the two soldering units working on connector equipment, while members of *Clique B* were drawn from the soldering unit working on selector equipment. In the department, new men were generally started as selector wiremen and moved "forward" to connector work as their efficiency improved. Such increases in efficiency were usually rewarded by increases in the hourly rate. Increases in hourly rates resulted in increased earnings under the wage-incentive plan. While it is suggested that low output might actually have affected the position of the group, and that output and group social positions were in a relation of mutual dependence, the investigators nevertheless take the position that the low output of members of *Clique B* represented primarily a device for "getting back" at those who were displaying their superiority (22, p. 521).

The two cliques were found to be differentiated in other respects. Each,

[6] "Binging" refers to ways of expressing personal antagonisms, e.g. in controversies about opening or closing windows, through a "controlled" exchange of blows, etc. "Binging," according to Roethlisberger and Dickson, was used to help enforce the restriction of output.

for example, had its own leaders, and procedures for forcing supervisory personnel into acceptance of their codes of conduct. Nevertheless, there was at the same time considerable *solidarity between the two cliques*. The internal solidarity of the group of the Bank Wiring Observation Group as a whole found particular expression in sentiments connected with occupation, output, and supervision. These, according to Roethlisberger and Dickson, may be summarized as follows

> "1. *You should not turn out too much work. If you do, you are a 'ratebuster.'*
> "2. *You should not turn out too little work. If you do, you are a 'chiseler.'*
> "3. *You should not tell a supervisor anything that will react to the detriment of an associate. If you do, you are a 'squealer.'*
> "4. *You should not attempt to maintain social distance or act officious. If you are an inspector, for example, you should not act like one*" (22, p. 522).

Members of *Clique A*, that is, the people who held the most favored position in the Bank Wiring Observation Group, conformed to these rules of behavior in all respects. Members of *Clique B* conformed to rules 1, 3, and 4, and, it is reported, attached more importance to these rules than anyone else. Rule 2, however, was violated by *Clique B* which, it is claimed, indulged in extreme limitation of output as an expression of resentment against the social inferiority of the clique.

The significance for output of such sentiments, associated with the informal social organization of employees, has been underlined by Whitehead (31) in a comparison of the original *Relay Assembly Test Group* and the *Bank Wiring Observation Group*. Each group, he points out, was engaged in habitual routines performed in common. Each developed its own informal leadership. Both groups grew to have characters and styles of performance of their own, and individual standards of conduct were adjusted to conform to the group system of ethics. Routines developed first as a mere matter of technical convenience or passing pleasure, grew into stable customs, and became shot through with sentiments which clustered particularly around the economic purpose—around the fruits of labor as represented by the pay envelope. "Both groups," according to Whitehead, are "examples of the growth of stable human relations—the way people act together, the sentiments they share together, the system of ethics and codes of conduct that regulate these relationships" (31, p. 279).

There was, however, according to Whitehead, a significant difference between the two groups. In the case of the *Relay Assembly Test Group*, behavior and sentiments were so organized as to promote the economic

purposes of the plant, and this was a matter of real pride to each girl. In the case of the *Bank Wiring Observation Group*, this was not so. Instead of collaborating with management, the men were "disguising their activities" and were resisting control from above. They derived little pride or satisfaction from their work.

Both groups, adds Whitehead, illustrate the importance of social relationships built up in the course of day-to-day activities. The differences in sentiments and behavior of the two groups show, he contends, that *it is not sufficient for management to be active in promoting the economic efficiency and the economic welfare of employees; management must also guard and develop their social sentiments* (30, 31).

The Role of the Work Group as a Source of Employee Production, Satisfaction, and Morale

From the viewpoint of the problem of incentives in industry, a major outcome of the Hawthorne studies is the conclusion, stated by Roethlisberger and Dickson, that *"none of the results gave the slightest substantiation to the theory that the worker is primarily motivated by economic interest. The evidence indicated that the efficacy of a wage incentive is so dependent on its relation to other factors that it is impossible to separate it out as a thing in itself having an independent effect"* [7] (22, p. 575). Financial incentives are responded to only in so far as they minister to the individual's own social situation. When they are opposed to the trend of the stable social organization characterizing a group of workers, they lose their power to motivate. Social considerations, according to the Hawthorne investigators, also outweigh economic ones in determining workers' feelings and attitudes, and thereby in determining the nature of individual satisfactions and grievances in the working situation.

Objections can be raised to these generalizations, particularly to the implication that financial incentives cannot have a direct and independent influence upon output. As suggested earlier, data from the Hawthorne studies which are interpreted as revealing the effect of group sentiments can be interpreted as showing the immediate and definite influence of a change in the wage plan. Certainly, the findings of the Hawthorne studies cannot be accepted, as has apparently been done in some quarters, as demonstrating that the worker is not concerned with the size of his pay envelope except as an outer symbol of the social value of his job, and that he will ordinarily not respond directly with increased effort to an enhancement of the financial incentive.

[7] Not italicized in the original.

In his description of quota restriction and "goldbricking" in a machine shop, discussed in Chapter 3, Roy considers specifically the assumption that restriction in the bank-wiring group was due, as Mayo has suggested, to frustrations—and an ensuing "lower social code—resulting from a lack of understanding by workers of the economic logics of management" (18, p. 119). Roy takes issue with those who consider "economic man" as an entirely fallacious concept. "The operators in my shop," writes Roy, "made noises like economic men. Their talk indicated that they were canny calculators and that the dollar sign fluttered at the masthead of every machine" (23, p. 430). It could be, he adds, that the operators did not exceed their quota because of fear of rate cuts, in other words, precisely because they were alert to their economic interests.

In spite of such criticism, the Hawthorne series of studies do furnish evidence—as do also observations in the plant and other studies discussed in this volume—that financial rewards do not operate with the same strength in all circumstances and do not invariably lead to increased production or better morale. There is, unquestionably, much justification for the insistence upon the force of the social situation in determining both output and satisfaction at work, and in laying the groundwork for industrial peace or industrial conflict. There is also much merit in emphasizing the complexity of the situation, and of the difficulties and dangers involved in isolating the influence of specific factors, since it is seldom that separate or specific motives function in isolation (15).

Not alone the Hawthorne studies, but the work of Lewin and his associates have made it increasingly evident that the problems of productivity, satisfaction, and morale in industry are, at least in part, problems of group relationships. It is clear, from other studies described in this volume (and also from the Hawthorne studies) that economic motives cannot be neglected and that specific factors in the plant situation, such as work preference, quality of supervision, knowledge of results, etc., influence motivation and morale. It is equally clear, from the Hawthorne and other investigations that "it is far too primitive to consider only the economic motives of the factory hand . . . Good management has to consider the total culture and all aspects of group life" (16, p. 134).

INFORMAL OR FORMAL ORGANIZATION OF THE WORK GROUP OR "TEAM"?

Acceptance of this viewpoint focuses attention upon the need for the further study of work groups or "teams" with a view toward sketching more completely the varieties of such small social organizations; determining the factors which give rise to such groups and influence their atti-

tudes and behavior, and assessing their relation to the effectiveness of the larger, formal organization (29). In particular it is necessary to investigate in detail the elements in the situation which are conducive or detrimental to production, satisfaction, and morale. Of further great interest in planning such studies is the question of whether the organization of such groups should be "left to chance" (2) or whether management should take the lead in the structuring of the small work group as a necessary step in the accomplishment of the economic and social objectives of industry. The need for focusing attention upon this question is particularly apparent—at least from management's point of view—when consideration is given to the frequency with which the primary function of the spontaneously-organized small work group appears to be that of restricting output.

A STUDY OF FRIENDSHIP GROUPS AND THEIR IMPACT UPON OUTPUT

Conflicts which develop out of the difference between management's perception of the team and the work group's perception of its own organization and functions are illustrated in a study reported by French and Zander (11). The investigation was conducted in a large business office where work was of a routine nature and the morale of employees was known to be low. As a first step, a sociometric questionnaire, designed to reveal the friendship structure of the office and the forces at work toward making friends, was administered to all employees. Analysis of replies and of other data showed that (1) there were relatively few friendship groups in this office; (2) there were great differences in the level of production from one friendship group to another; (3) different friendship groups had their own group standards, some to work hard and some to take it easy; (4) some groups tended to identify themselves with management, and others to "aggress against management." Furthermore, the findings showed that *the most popular girls were rarely high producers*; the correlation of popularity in the office with productivity proving to be —.67.

As a result of the transfer of a number of girls to another office, it was necessary to break up some of the friendship groups and to change the seating of others. From the results of the first part of the study, it was predicted that in this reshuffling of the "informal social organization" employees with high production records would be rejected by low production groups, and that employees with low production would be acceptable as friends in any group. Comparisons actually showed a very high negative correlation of —.85, after transfer, between the level of productivity and the change in popularity. Almost every high-producing worker lost popu-

larity as a result of the shift whereas low-producing workers gained friends.[8] According to French and Zander, "it appeared that the small friendship groups developed group standards concerning their level of production, and they rejected from the group those employees who produced too much more than the group standards. The employee was faced with the unhappy choice between restricting her production to a low level and having many friends, on the one hand, and doing what management would call a good day's work and becoming a social isolate on the other" (11, p. 76).

A Study of Teamwork and Productivity in a Shoe Factory

The nature and significance of the conflict between "organization goals" and "personal goals" in the work of a team is further illustrated in a study by Horsfall and Arensberg (12) of teamwork and productivity in a shoe factory. This investigation was conducted in the Bottoming Room of the plant in which there were four seven-worker teams, each performing the same series of machine operations. The 28 employees constituted a single department group, all working in the same room. Each team included two trimmers, a pounder, a rougher, a shanker, and two cementers. Production for all workers (except those in training) was on a piecework basis. The piece rate unit was a "case" or "rack" of 36 pairs or 72 shoes. Earnings under this system were freely compared by workers and were common knowledge.

In addition to the operations peculiar to each specialized job, some members of the team handled the racks on which the shoes were pushed from one operation to the next. Observations in the Bottoming Room showed that this was actively related to the starting of work operations in a team. Specifically, this was a method of allocating racks in an order which was different from that in which they were received from the Lasting Room of the plant. Furthermore, for each type of shoe there was a corresponding object—a "coin" of a social economic system—which had come to serve as a symbol in an unofficial record-keeping and exchange in the workers' own routing of racks on a well-defined order of allocation of work by the four teams. Observation and interviews showed further that "the racks to be worked on had been routed among the teams in a manner to equalize pay for fast and slow teams alike, and assure that all the workers should score a uniform production of racks." Workers explained that this system, originally introduced by the roughers, prevented quarrels and

[8] Exploratory sociometric studies conducted by the Industrial Relations Center, University of Minnesota, have also yielded findings (characterized as tentative) which indicate that employees do not choose the best producers as their best friends (26).

provided assurance that no one team would get all the "hard" racks, although, according to the investigators, the "desire to equalize pay seemed here as sharp as desire to lighten work load."

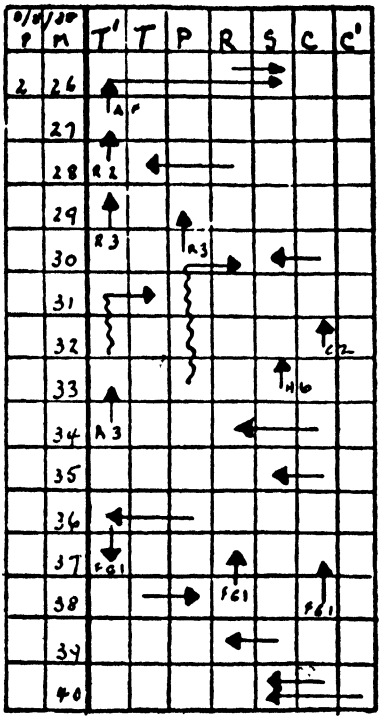
Such activity conventions, established by the work group, tended to reduce or even nullify the effectiveness of the wage-incentive system. The piece-rate system, instead of functioning as an incentive, served to stimulate the development of an "informal organization" for the allocation of racks and for the collective control of rate of production apparently better designed to meet their needs or wants. Horsfall and Arensberg point out this informal organization might be called "restrictive," in that it was outside management rules.

The discovery and description of the four teams and their informal organization is not based solely upon interviews with workers or uncontrolled observation. Findings of the type described above, and others discussed below, follow from the use of an objective method of recording and measuring factual, nonverbal observations as a check on the evidence furnished by interviews. This technique, growing out of the earlier work of Chapple and his coworkers (5,6),[9] resulted in a series of observation charts which provided (1) *identification of the individuals observed,* (2) *discrimination of the roles of interaction (stimulus and response) between them,* and (3) *timing.* Records of this kind were made for a total of 120 periods of 15 minutes each, 30 for each of the four teams. These were accumulated by an investigator suitably placed so that he could both observe the team and also hear most of the conversation which went on. However, the conversation was viewed as a supplement to the objective record of the interaction elements or "operations" as recorded on the chart.

In Figure 19 is presented a facsimile reproduction of a completed observation chart for a 15-minute period, together with a portion of the supplemental notes on the "content" of the interaction in terms of both actual activity and conversation. Although conversations were recorded in so far as possible, reliance is placed entirely on the objective recording of interactions to arrive at a description of the informal social organization of the group and of the "social" roles of its individual members. It is not feasible to present, in this volume, the detailed description of the formulae which would be necessary for the comprehension of the tables of findings presented by the investigators. According to Horsfall and Arensberg, the *quantification of interaction verifies current hypotheses about interworker social relationships.* The data, it is said, support the hypothesis that the clique-like groups represented by the four teams show a higher

[9] Further developments in the way of methods for studying social interactions as a process in small groups are found in the work of Bales (3).

Tuesday, August 8, 1938



#100. R makes a comment to S. The assistant foreman passes down the aisle and pushes an empty rack out of his way toward mid-floor, whereupon T' calls to S to get the rack back; S gets it. R2 from down the room shouts, "Hey, the bar," whereupon T' mimics him, repeating, "Hey, the bar." (R asks T a question,) R3 down the aisle, takes up R2's cry and T' then mimics him, R3 repeats, T' mimics again, this for several times. P is visibly annoyed by R3's shouting and finally shouts, "We got the box long ago," C leans over and shouts to S. The work is moving along at a good pace with R taking the shoes from P as he does them, no shoes having accumulated on R's bench.

Figure 19. Graphic Record of Social Interactions in a Bottoming Room * (*Note:* In the diagram the letters at the top represent the members of the team, i.e. T = Trimmer, P = Pounder, etc. A wiggly line represents the duration of an interaction extending over a minute, each horizontal line marking off 1 minute. The word "bar" refers to the object used in identifying types of shoes and in the allocation of racks.)

rate of interaction among their members than between their members and outsiders. Of particular importance is the finding that teams with the most active internal social activity were not the most productive in terms of meeting output standards per worker or per team. The objective study of interactions led to the identification of a small number of workers as informal leaders. The teams of which the informal leaders of the room were members showed *both* a slight excess of internal activity over external *and* a much higher activity of interaction with out-of-team, cross-team members of the room. In the phraseology of the foreman, the latter findings simply mean that "the teams that did the most talking and 'hors-

* By permission, from A. B. Horsfall and C. M. Arensberg, "Teamwork and productivity in a shoe factory," *Human Org.*, 1949. 8, 13–26.

ing around' did not get the most work done." One reason for this is that leadership, which necessarily involved "nonwork" activity, throws the informal leaders into enough extraclique, extrateam activity to make their teams score lower on "flow-of-work" activities in the immediate work group than do the teams who only respond in the room's own informal system of allocation and "controls."

Management's Role in the Development of Teamwork

According to Horsfall and Arensberg, such findings "give pause to current enthusiasm about encouraging 'teamwork.' " Certainly such concern is justified if the "team" is defined as a clique-like group of workers which spontaneously "comes into being in order effectively to oppose demands from higher authority and work counter to the purposes set by management" (8, p. 47).

The question may well be raised as to whether all such informal social organizations are or need necessarily be "subversive" of the purposes of the larger formal organization. Support for the view that this need not be the case is found in the conclusion by the Hawthorne investigators that in the original *Relay Assembly Test Group* behavior and sentiments were so organized as to promote the economic system of the plant (31). Investigations conducted in the Army during World War II also indicate the distinct possibility that the informal group can play a positive role in bolstering the formal or corporate organization (25).

STUDIES OF GROUPS IN METAL-WORKING PLANTS AND IN THE AIRCRAFT INDUSTRY

Studies in metal-working plants (9) and in the aircraft industry (17), under the direction of Mayo, have pointed to factors which need consideration in the striving for both spontaneous and organized teamwork productive of efficiency and morale.

In these studies, conducted during World War II, attention was focused on absenteeism and turnover as symptoms of unrest and insecurity, and as indices of high morale (17) or of involvement in achieving the objectives of the work group. As an outcome, in part, of these studies, Mayo and his associates have postulated the existence of *three* types of groups or work teams in industry, viz., *natural*, *family*, and *organized*.

The *natural* and *family* groups are alike in that they "achieve their integration, not by direct action of management, but spontaneously and where management establishes around the workers a 'climate' of technical and operating aspects of organization such that groups can grow" (17, p. 23).

The *natural* group is primarily a quite small group, varying from two or three to six or seven workers who are integrated into an informal social organization because of the "natural associative tendencies" of mankind, particularly if given any encouragement by management (24).

The *family* group is a larger group, characterized chiefly by a central core of "regulars" who, "if they have prestige, determine, almost by inadvertence" or by example, the performance of its members. Such groups, according to Mayo and Lombard, actually develop only when a "natural" group can be held together long enough—perhaps for a minimum of six months to a year—to provide a core for the larger group.

In contrast to such groups is the *organized* group which "comes into being only when someone in authority definitely works to create it. Management has a *direct* relationship to the growth of the "organized" group. It differs from the other groups in that someone "with the respect and confidence of the workers and with the support of management . . . *has set himself deliberately, with intelligence and skill, to achieve a group integrity of association,* and to order the relations of his own integral group with other departments in the plant" (17, p. 23).

A small department of 55 workers in an aircraft plant in Southern California furnishes an example of the "organized" group. This department had a good absenteeism record, and the efficiency ran 25 per cent above the average of the plant. Approximately 90 per cent of the employees in the group were "regulars." A large proportion of these had no absences at all. "This situation," it is pointed out, "had not occurred by chance. The persons directly responsible were the senior assistant foreman and a lead hand" (24). Both of these were particularly concerned with the human aspect of their administration and showed this interest in their day-to-day activities in dealing with their men. Both believed that *the achievement of group solidarity is of first importance in the plant and necessary for sustained production* and, with the approval of the foreman, pursued activities designed to weld their men into an effective team working toward the achievement of production and other management goals.

POSITIVE ACTION IN THE ORGANIZATION OF TEAMS

Consideration of studies discussed in this and other chapters indicates that management can help turn the attitudes and behavior of spontaneously formed work groups into constructive channels. *Management also has a positive responsibility for the direct organization of teamwork.* Investigations conducted under the direction of Mayo, and others described in Chapter 7, suggest that keeping the work group small contributes to

the organization of effective teamwork. Group (as contrasted with individual) incentive wage plans, may play a particular role in furthering the formation of teams characterized by constructive goals (17). According to Mayo and Lombard, the growth of teams oriented towards management's objectives can be facilitated by "building new work groups around common experiences and interests" and by the preservation of existing groups in the loan and transfer of workers (17, p. 3).

SOCIOMETRIC GROUPING OF WORK TEAMS

Underlying these approaches to the organization of teams is the view that positive effort in establishing "congenial groups of employees" can result in the improvement of output and morale (4). Evidence supporting this view is found in a series of studies by Van Zelst. Findings from one of these studies, designed to explore the relation between job satisfaction and how well a worker is liked by his fellow worker, showed that the worker who rates high in "interpersonal desirability" was more satisfied with his job, had a greater feeling of job security, had a more favorable attitude toward the company, etc. (27). In another study, comparisons during a three-month experimental period showed that sociometrically arranged work teams, i.e. groups combining individuals who are capable of harmonious interpersonal relationships, outperformed groups not so established and reported a higher degree of satisfaction with their jobs.

The possibility of using sociometric methods for increasing production has been further explored by Van Zelst in a study of two groups of carpenters and bricklayers in the construction industry (28). The members of these groups, numbering 38 and 36 respectively, had worked together on the same building project for an average of at least five months and were well acquainted with each other's personality and skill. They were all union members, and none was a supervisory employee, or had less than seven years of experience in the trade.

Prior to the experiment, each worker was asked to nominate three of his co-workers, in order of preference, as his choice of work partners. The workers were then regrouped on the basis of these choices, being first arranged into mutual choice teams of two. Because of the occasional need for larger work teams, patterns for the fusion of two teams into a single group on the basis of co-worker choices were also developed. Of the workers, 22 received their first choice as partners; 28 received their second choice, and 16 their third choice, 8 workers remained as isolates. At no time was it found necessary to cross skill levels and pair off a skilled worker with a relatively unskilled partner.

The self-selected teams were used in subsequent work assignments with-

out any change in the procedures for making duty assignments.[10] As a step in assessing the effectiveness of sociometric procedures in constituting work teams, the production record of the sociometrically grouped teams for a period of 11 months was compared with engineers' estimates of cost (made for the purpose of submitting a contractor's bid) and with production records for 9 months prior to the restructuring of the work teams. Since the firm involved felt it undesirable to release figures on actual estimates and costs, labor and material cost indices (per unit row of 8 houses) are used in reporting the findings.

Analysis of findings showed a *labor cost* index of 32.22 for the experimental period, as compared with 36.66 for the pre-experimental period of nine months and an engineers' estimate of 37.20. The *material cost* index proved to be 31.00 for the eleven months following the sociometric regrouping, as contrasted with 33.00 during the pre-experimental period and an engineers' estimate of 33.50. Differences between production records during the two periods proved to be statistically significant and amounted to a *5% savings in total production costs*. In addition there was a significant drop in labor turnover during the second period.

Preliminary comparisons showed that there had been no significant changes in the over-all skill levels of the total working group as a result of new hirings during the experiment. There were no changes in management practices in the course of the experiment and no differences between the experimental and pre-experimental periods in weather conditions. From these and other considerations the investigator concludes that the superior level of output during the experimental period is "traceable only to the successful application of sociometric procedures and their effect in the work situation" (28, p. 181).

In reporting the findings and conclusions of his investigation, Van Zelst notes that skill level was perhaps one of the standards used by the subjects in selecting work partners. It is therefore possible that the matching of skills in the sociometrically constituted work group may be an underlying factor in the improved productivity and reduced turnover. However, looking back at the findings of his series of studies, the investigator reaches the conclusion that "a careful employment of 'interpersonal relations' procedures increases the worker's sense of satisfaction and participation through an increase in his interest in and liking of his job, the removal of anxiety due to friction between work partners and the creation of a friendly, cooperative atmosphere" [11] (28, p. 184).

[10] Ten instances of change in the work-groups (4 voluntary and 6 for the incorporation of isolates and of newly hired workers) were made during the first two-month period of the study. No disrupting incident occurred during the course of the experiment.

[11] In this connection, further consideration might well be given to the fact that

SUPERVISION AND THE ORGANIZATION OF TEAMWORK

Van Zelst points out that the building trades with their "buddy-work-teams" are especially suited for a sociometric regrouping. Conversely, this technique may not be applicable or effective in other situations, particularly where changes in job duties, retraining, etc. would be involved. However, even in such situations—and universally throughout industry—other tools are available to management for the effective organization of teams designed to serve both company and individual goals.

Of particular significance, in this connection, is the accumulation of evidence which shows that the quality of supervision exercises a tremendous influence upon the behavior and attitudes of work groups, whether spontaneous in origin or organized under the direct influence of management. Thus, for example, preliminary interpretation of findings from the *Relay Assembly Test Group* experiment in the Hawthorne plant, discussed in Chapter 10, led to the conclusion that the *continued increase in production* of this "informal social organization" resulted from a change in "mental attitude" toward supervision and toward the over-all environment (21).

A more recent review of the Relay Assembly Test Group experiment by Arensberg again calls attention to the significance of this situational change. "If," it is pointed out, "we simply rearrange the evidence in the order of the occurrence . . . we see some new relationships. The five girls of the Relay Assembly Test Room developed their vaunted teamwork *after* they were segregated by management as an experimental group, *after* their segregation brought them into much more nearly exclusive contact with one another, *after* they came into contact, consultation, and even veto-power relation with their supervisors, *after*, as they testified themselves, 'we have no boss.' All this makes a continuous change away from impersonal and authoritarian supervision—a very sweeping shift in a basic relationship of modern industrial work—in the direction of greater 'participation.' . . . Teamwork did not come from the girls alone, whatever their sentiments. It came *after* and thus perhaps *from* a sweeping change in supervision" (1, p. 340).

Experiments and attitude surveys discussed elsewhere in this book support the conclusion that "the selection by management, through

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the subjects in the *Relay Assembly Test Room* in the Hawthorne series, where "social cohesion" most favorable to output was found, were selected on the basis of established friendliness to one another and because they were "willing, quick and cooperative" (22). By contrast, such criteria were not applied in the selection of the *Bank Wiring Observation Group* which, it is claimed, was characterized by a social organization unfavorable to output.

its acquaintance with its subordinates, of supervisors who can maintain effective communication with their workers" is one way of promoting the growth of teams (17, p. 3). According to Dubin, the "organized" group "is a product of the leadership exercised by the formally designated leader, the foreman" (8, p. 58). Such views find clear support in studies, described in earlier chapters, which show that the productivity and morale of the individual and of the group are functions of supervisory skill in tapping the worker's ego-motivation (14); in structuring the interactions of the members of his group (10); in providing opportunities for participation in setting goals and in other aspects of decision making, etc. Employee-attitude surveys described in Part IV of this volume reveal further the potent force of the quality of supervision upon the individual and upon the group. Studies by the Survey Research Center, described in Chapter 23, have shown that whether the worker is "union-minded" or "management-minded" is determined, in part, by the extent to which foremen involve workers in participation in decision-making (13).

In general, consideration of research findings suggests that management must look to the foreman and supervisor for integrating workers into an "organized" group characterized by high levels of motivation and morale. This means, that management must give close consideration to the selection of supervisory personnel and, most particularly, to the development of leadership qualities necessary for dealing effectively with human relations on the job. It means also, as indicated elsewhere,[12] that management must furnish a "leadership climate" which supports the activities of "employee-oriented" supervisors capable of achieving a team integration characterized by "willingness to co-operate" in achieving both the economic and social objectives of industry (8, p. 58).

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Part 4

EMPLOYEE-ATTITUDE SURVEYS

12

Employee-Attitude Surveys: Scope, Methods, and Guiding Principles

AMONG the major developments in industrial relations during the past quarter century is the growing awareness on the part of executives that the ordinary channels of communication in industry fail to provide a clear or accurate picture of what is on the worker's mind. As a result, an increasing number of executives have turned to the employee-attitude survey to supplement and complement other channels of communication for "tapping employees' thinking" (39). This is because they have found that such a survey can provide a systematic and comprehensive picture of workers' feelings, and reveal many specific relations which do not come to light through ordinary channels. "It is," as Kornhauser has suggested "like a thorough physical examination of the individual as contrasted with fragmentary information picked up casually concerning the state of his health" (61, p. 129).

EXTENT OF USE OF EMPLOYEE-ATTITUDE SURVEYS BY INDUSTRY

Evidence of accelerated use of employee-attitude surveys, especially since approximately the middle 1940's, is found in a series of investigations conducted over a period of years by the National Industrial Conference Board. In a study of personnel activities made in 1939, involving 2,700 companies, experience with attitude surveys was so limited that no question was even asked about them. In 1944, the Conference Board had difficulty in finding 50 companies which had conducted such surveys. By

1947, a total of 245, or approximately seven per cent of 3,500 companies which were contacted reported that they had used one type of attitude survey or another. In a later study, published in 1951, the Conference Board found 223 companies which have had experience with attitude surveys (39). Of these, 111 companies which furnished detailed data reported that they had conducted a total of 201 employee-attitude surveys. However, only three of the companies involved had conducted surveys prior to 1940, and almost 86 per cent of the total number of surveys had been made subsequent to 1943.

PRACTICAL IMPLICATIONS OF EMPLOYEE-ATTITUDE SURVEYS

Consideration of the reasons given for conducting the surveys by the 111 companies co-operating in the National Industrial Conference Board investigation shows that the vast majority undertook the surveys with definite goals in mind. More than a third "wanted to know how the people on the payroll regard one another, what they think about their jobs, their bosses, and about the company and the way it is run" (39, p. 9). Others were interested in detecting training needs, and in using survey results for the evaluation of training. In some instances, there was a desire to discover what employees needed or wanted to know about the company, its operation, and other aspects of the business. In some cases, there were highly specific reasons, such as discovering the causes of high turnover, whether employees like the company magazine, etc.

An interest in checking on morale conditions and finding ways to improve employee morale and relations within the company finds expression in reasons given for undertaking attitude surveys. Many companies expressed a desire to learn about the minor troublesome situations so that measures could be taken to prevent their growing into major ones. In general, statements made by the companies show clearly an expectation that the attitude survey would provide management with a measure of its own success or failure in personnel matters and, at the same time, locate unsatisfactory feelings and sources of irritation requiring remedial action (61).

RESEARCH IMPLICATIONS OF EMPLOYEE-ATTITUDE SURVEYS

It is apparent that employee-attitude surveys are viewed by management as a practical tool which can be used to help uncover and solve plant personnel problems. Attitude-survey techniques are of additional interest to the psychologist as a tool for obtaining deeper insight into the nature and interrelationships of basic motives and allied psychological processes. As used in this connection, particularly as adjuncts to field experimentation, employee-attitude surveys are intended to yield broad principles

bearing upon the problems of productivity, satisfaction, and morale, and generalizations which have significance in terms of motivational theory, rather than a series of facts which are of interest only in relation to the immediate needs of a particular company.

As Katz has pointed out, surveys conducted for the latter purpose may have as their by-product some contribution to the psychology of the worker (57). However, such surveys may contribute little to a science either of industrial psychology or of industrial relations because, as is frequently the case, they do not employ a research design adapted to a systematic analysis of the variables involved and to establishing the relationships—especially the causal relationships—among these variables. Another deficiency of many investigations, from the viewpoint of the broader implications of research in the social sciences, is the failure to design and conduct the surveys within a context determined by sound theory.

Studies described in Part III, such as those conducted by the University of Michigan Survey Research Center, illustrate the use of employee-attitude surveys as a methodological tool in such a context. Of special interest in such studies, as compared with the typical management-sponsored survey, is the increasing effort to use survey techniques to throw further light upon the *group process*—"the motivation for, as well as the direction of the behavior stemming from the group, and taking place within an institutional context" (71). In general, the survey method, most frequently used as a *practical* tool, has wide applicability as a *research* tool, especially when used in a "well-designed research plan" (58).

Employee-Attitude-Survey Methods

The techniques employed and the theoretical and practical problems involved in surveying attitudes and opinions have been discussed by Thurstone and Chave (109), Likert (68), Doob (35), Cantril (18), Parten (84), Stouffer *et al.* (107), Blankenship (8, 9), Day (30), McNemar (72), Guttman (44, 45), Churchman, Ackoff and Wax (25), Jahoda, Deutsch, and Cook (52), and others (17, 21, 26, 36, 40, 99, 117). A practical guide for use in preparing and administering an employee-attitude survey, and in analyzing results, is found in a National Industrial Conference Board report on company experiences with such surveys (39). Critical issues in the use of survey techniques for practical and research purposes have been summarized by the author (113) and also by Kornhauser (61), Deming (31), Katz (57), Ackoff and Pritzker (1), and Worthy (121).

It is not within the scope of this volume to present a detailed discussion of how to conduct an employee-attitude survey. However, it seems desirable, as a preliminary to the discussion of survey findings, to outline (1)

the techniques used in ascertaining employee attitudes and (2) *considerations which should be borne in mind in evaluating employee attitude survey findings.*

COMMONLY USED METHODS: QUESTIONNAIRES AND INTERVIEWS

Procedures most frequently used (either separately or in combination) in ascertaining employee attitudes can be summarized, following Kornhauser (61), as including

1. *Printed Questionnaires:* In most instances employee-attitude surveys have made use of a series of questions or items presented in writing and requiring written responses by the participants. These, as illustrated in sample questions on page 225, generally include "*yes-no*," "*true-false*" items, "*check-lists*" and also, in many instances, provide opportunity for written-in *comments* related to a particular question, or to items not covered in the form, or both. A special form of the printed questionnaire is found in the *attitude scale*, constructed through the use of specialized calibration techniques to provide a list of items of varying degrees of favorableness regarding the matter in question. A portion of such a scale is reproduced on page 273, in connection with the discussion of the survey reported by Uhrbrock.

2. *Interviewing Techniques:* Many employee-attitude surveys have involved the use of interviewing techniques. In an increasing number of cases, even when the main body of data are obtained by means of questionnaires, interviews with a sample of employees are used both to check on questionnaire findings and to elicit additional information (in depth) with respect to attitudes.

Interviews are of both the guided (*directive*) and unguided (*nondirective*) type. Various degrees of patterning have been employed in guided interviews, ranging from rigid adherence to formalized questions to a minimum degree of control. In some cases, direction extends to the point of patterning the interview around a series of formal interview questions with simple choice responses, similar to those included in printed questionnaires, which are answered orally instead of in writing. Generally, a moderately formal interview schedule is followed and, even in such instances, the participant may be encouraged both directly and through follow-up questions to volunteer his own ideas and to express his feelings on whatever matters in whatever way he prefers.

In contrast with a complete or modified directive approach is the *unguided interview*, in which the employee is encouraged to talk about whatever is on his mind. Here, the function of the interviewer is to listen and to encourage the participant to talk, but without asking specific questions.

Sample Attitude Survey Questionnaire Items: Caterpillar Tractor Company (from *Survey Research Center Study*, after National Industrial Conference Board, 1951).

B. ABOUT WORKING CONDITIONS

16. How much are you bothered on your job by each of the things listed below? (*Check each item*)

	Bothered a lot	Bothered some	Not bothered at all
Noise [1]	☐	☐	☐
Dirt, oil, or grease [2]	☐	☐	☐
Lighting [3]	☐	☐	☐
Dust or fumes [4]	☐	☐	☐
Heat or cold [5]	☐	☐	☐
Condition of wash room [6]	☐	☐	☐

Comments:

.....

.....

.....

.....

17. What shift do you work on? (*Check one*)
- ☐ 1st shift [1]
- ☐ 2nd shift [2]
- ☐ 3rd shift [3]

18. How do you like working on this shift? (*Check one*)
- ☐ I like this shift best [1]
- ☐ It makes no difference to me [2]
- ☐ I would rather work some other shift [3]
- ☐ I would much rather work some other shift [4]

20. Do you usually buy your lunch in the cafeteria? (*Check one*)

☐ Yes [1] ☐ No [2]

(Please answer questions 21 and 22 as well as you can whether you eat in the cafeteria or not.)

21. Company cafeterias are run on a non-profit basis. Considering this, how do you feel about meal prices in the cafeterias? (*Check one*)
- ☐ Prices are much too high [1]
- ☐ Prices are somewhat too high [2]
- ☐ Prices are about right [3]
- ☐ Prices are fairly low [4]
- ☐ Prices are very low [5]

22. What do you think of the food in the cafeteria? (*Check one*)
- ☐ The food is much better than you can get other places for the same money [1]
- ☐ The food is somewhat better than you can get other places for the same money [2]
- ☐ The food is about the same as you can get other places for the same money [3]
- ☐ The food is not quite as good as you can get other places for the same money [4]
- ☐ The food is not nearly as good as you can get other places for the same money [5]

This procedure is illustrated by the employee interviews in the Hawthorne studies, referred to on pages 254–258.

The methods described above, with the exception of the free-response and highly nondirective interview, are essentially structured in character. Moreover, all of them are inherently *overt*, or "*nondisguised*" methods of attitude surveying. In the same general category, at least in the sense of overtness, are the *sociometric techniques*, developed by Moreno (24, 42, 70a, 74, 75, 76) which have been applied in studying "the evolution and organization of groups" (75) and analyzing sentiments and attitudes relating to social groupings and social interactions. The basic approach here is to ask each member of the group to express an attitude toward

his fellow members, although there are many variants of this procedure, including graphic plots of the relationships within the group [1] (53, 53a). Likewise, the intent of the *letter-writing technique*, used in the General Motors Corporation's *My Job Contest* (64), described in Chapter 13, is easily recognized, and the technique also appears to be quite highly structured, in spite of the apparent freedom allowed to respondents.

INDIRECT METHODS FOR THE MEASUREMENT OF ATTITUDES

Such methods have been supplemented by a series of "*disguised-nonstructured*" methods for the measurement of attitudes. Underlying such indirect approaches in attitude surveying is the viewpoint that the overt, formal and rigid structuring of conventional survey techniques tends to obscure true employee attitudes (38). As Weschler has pointed out, the purpose of indirect methods of attitude measurement is to "get at those 'deeper level' attitudes which a person may be interiorizing and unwilling to reveal. These indirect devices" he adds, "conceal from the individual the intent of the measurement and allow him to produce responses which would not be freely forthcoming if he were fearful of becoming personally involved" (116, p. 133).

Indirect procedures for the measurement of attitudes have been used to a very limited extent in industrial surveys, and will therefore not be described in any detail in this volume. The methods employed have been described in an extensive review by Campbell (17) and, more recently, by Weschler and Bernberg (117). Among "*disguised-nonstructured methods*" are *projective techniques* (6, 41), which include the use of *picture interpretation* (78), as illustrated in research of interest to industry by Proshansky (86), Haire and Gottsdanker (47), Ehle (37), and Sanford (94, 95, 96). Among projective techniques, *play and dramatic materials*, as employed for example in a study by Dubin (34), have been described as offering interesting possibilities as indirect means of eliciting social attitudes (117).

Projective techniques include a series of devices involving the use of *written and verbal materials* in the measurement of attitudes. The *word-association*, the *sentence-completion*, the *short-story completion tests* are among such devices, as are also "a series of projective methods which allow the subject to call upon his literary imagination and to project his feelings and attitudes into the completion of arguments, the invention of story plots, or the writing of autobiographical materials" (117, p. 221). An interesting example of the use of the argument completion technique (77) is found in a study by Jones and his coworkers of the social system in a factory town (55).

[1] See pages 200–205; 207–208; 213–214.

Projective methods for testing attitudes both disguise the purposes of the test and are nonstructured in character. There are, in addition, a number of *techniques* for measuring attitudes *which disguise the purpose of the test but make use of relatively structured situations.* In general, these involve "an attempt to diagnose attitudes from systematic bias in the performance of an objective task" (17, p. 19). Such an approach in attitude testing is found in the "error-choice" method, originally developed by Hammond (46). This undertakes "to relate the permanence of error in perception to the measurement of attitudes by provoking the subject to sift pseudo-facts from memory and measuring the 'direction' of the error" (117, p. 222). As indicated on page 336, Weschler (115) has adapted this technique to the measurement of attitudes toward labor and management. More recently, Bernberg (7) has used a further adaptation of this technique, designated as the "direction of perception" method, in the measurement of the morale of employees in an aircraft manufacturing plant.

Developments in this area of attitude surveying include a number of tests employing *attitudinal bias in perception and memory,* based on systematic studies of such bias in "objective" perceptual and learning tasks (2, 67, 100, 98, 51). A large number of methods for the disguised measurement of attitudes by means of *"objective tests"* as well as by tests involving perception and memory distortion have been developed and tried out by Cattell and his associates (20, 22, 23). Among disguised, structured and nonvoluntary methods for assessments listed by Campbell in his extensive review of indirect methods are estimations of group opinions and social norms, and tests involving ability to judge character.

It is apparent that a variety of indirect methods have been explored in the effort to develop techniques which will avoid dependence upon "voluntary self-description" and tap the "deeper levels" of attitudes. Nevertheless, indirect methods have not yet attained the applicability of the conventional methods, or (in spite of the many inadequacies of the latter) achieved the same status in the methodological terms of reliability, validity (17) and, as McNemar would require, unidimensionality (72). As Weschler and Bernberg have pointed out, "Indirect methods of attitude measurement have established themselves as useful and provocative research tools, but their future status and development depend upon the type of research which will stress methodology rather than originality, and scientific technique rather than ingenuity of design" (117, p. 225).

Problems in the Evaluation of Survey Data

Surveys using the techniques described above, and occasionally others, have yielded a vast amount of data concerning employee attitudes. Un-

fortunately, the evaluation of such data is a much more difficult matter than their collection. As will appear in later chapters, there are many instances of factual discrepancies among the findings of different surveys. There are also differences in the meanings attached to such findings which reflect, to some extent, varying frames of reference in the interpretation of data.

In general, in dealing with individual studies, an effort has been made to identify the sources of discrepancies and to discuss problems of interpretation. However, it seems desirable to outline systematically and in some detail, the factors which should be borne in mind in evaluating survey findings.[2] This is intended primarily as a guide for those who are not survey specialists, but who have a professional or scholastic interest in the methods and problems of surveying attitudes. There is also the possibility that this section may be of service in plotting, for the executive, the shoals and reefs in the sea of apparent contradictions in which he at times finds himself floundering when he undertakes to use survey findings in steering a course toward the goals of high productivity, satisfied employees, and harmonious labor relations.

QUESTIONNAIRE CONSTRUCTION

Discrepancies in survey findings (which necessarily affect conclusions drawn from the surveys) arise, in part, from the *varieties of questionnaires and items* used in such study (10, 114). Surveys which, like that described on pages 258 ff., call only for ranking a list of "morale factors" may well produce different results from those which make use of multiple-choice items calling for an expression of feelings with respect to specific plant conditions, policies or practices.

This situation is further complicated when there are *imperfections in the design of questionnaires.* Among such imperfections, as listed by Deming (31), are lack of clarity in definition and ambiguities in the phrasing of questions (81, 85). Questionnaires may produce errors in surveys because various meanings are attached to the same word by different groups of people, and because of replies which are liable to misinterpretation. The omission of questions which would be illuminating constitutes another source of difficulty. Involved also are emotionally toned words, leading questions, and the influence of the rigid patterning of responses (29).

An illustration of the influence of question phrasing is found in a market survey conducted on behalf of a national publication. One of the questions asked was: "*Do you subscribe to* —— —— ——?" Internal inconsistencies in the findings raised some doubts concerning the meaning

[2] In the development of this section the author has drawn particularly from articles by Kornhauser (61), Katz (57), and Deming (31).

attached to this question by respondents. The use of another sample, in the same geographical area, showed clearly that to some people the sentence "*Do you subscribe to* —— —— ——?" meant "*Do you accept the editorial policies of* —— —— ——?" and not, as intended, "*Do you take* —— —— —— *regularly through the mail?*"

The possible biasing effect of the question can also be illustrated from an employee-attitude survey, reported by *Factory* (118). One of the questions used read as follows: "*Here's another idea. There are probably some men in your plant who loaf a little bit. Now suppose nobody loafed and everybody turned out just as much work as he reasonably could—would this help or hurt the workers?*" It is apparent that the answer given to this question may well depend on the respondent's interpretation of the phrase "*loaf a little bit*" and that the final conclusion that "*All types of employees frown, however, on loafing*" may be suspect because of the biasing effect of the term "little bit."

Survey specialists are naturally aware of these hazards in questionnaire construction. Nevertheless, as will appear from the discussion of individual studies, imperfections do creep in and are at times overlooked in the interpretation of findings. Moreover, a failure to formulate the theoretical context of the investigation, or unfamiliarity with the details of a situation, or even technical difficulties (such as arise, for example, in dealing with the effects of the "group" on individual attitudes) may result in the omission of items which are crucial to an adequate portrayal of sentiments, feelings and attitudes.

THE INTERVIEWER AS A SOURCE OF VARIABILITY AND BIAS

The problem of questionnaire items arises not only when printed forms are completed in writing, but also in interview surveys when questions are formulated for use in highly patterned form (105). In less patterned interviews, variation in findings (both within a survey and between surveys) can result from the *bias of the interviewer* as derived from both the personal characteristics and beliefs of different interviewers (11, 40a, 56, 79, 97, 106, 110, 119).

This situation is well illustrated in the classic investigation by Rice (89), who analyzed the records of interviews by 12 investigators of 2,000 homeless men, applicants for lodging, and discovered evidence of a contagious transfer of each investigator's individual bias to the applicants with whom he talked, and a corresponding distortion in their replies to scheduled questions. One of these interviewers was an ardent prohibitionist. He found the downfall of 62 per cent of the applicants to be due chiefly to liquor, while only 7 per cent had been seriously affected by industrial conditions. Another interviewer, a Socialist, found that only

22 per cent owed their plight primarily to liquor, and that 39 per cent had been affected chiefly by industrial causes. Moreover, the prohibitionist reported that 34 per cent of the applicants themselves gave liquor as the cause, and 42.5 per cent industrial conditions, but the Socialist quoted only 11 per cent as blaming liquor and 60 per cent as blaming industrial conditions. Each interviewer was a trained and conscientious investigator, but his personal bias affected his interpretation and report, and even modified the statements made to him by the men he questioned.

Such bias has been described by Woodworth (120) as the "preconception controlling the interpretation" of facts. Involved here is the whole process of "social perception"—the tendency to "read meaning or significance into people or situations with which we have had no prior experience in terms of the assumptions we have built up that are apparently most relevant in terms of our own purposes" [8] (19, p. 140).

As Deming has pointed out, variations attributable to the interviewer can arise from the political, social, and other beliefs of the interviewer, from his educational and economic status, and from his environmental background. Variations attributable to the interviewer can also arise from differences in the degrees of rapport established by interviewers. The personality and approach of the interviewer may affect the moods and behavior of respondents, i.e. "the interviewer may make the respondent gay or despairing, garrulous or clammish . . . cause respondents to take sides with them, some against them" (31, p. 363).

Lack of knowledge or understanding of the content and purpose of the survey can constitute a source of bias and variability arising from the interviewer. In the absence of such understanding, the interviewer may not be able properly to record the respondent's statement or evaluate the situation. Conversely, highly trained interviewers, thoroughly indoctrinated with respect to the purpose of the survey, may unintentionally be swayed in recording and evaluating responses by the interests to be served by the investigation. A number of studies reported in this volume, such as the Hawthorne studies, need close examination in terms of the latter possibility. Involved here, in part, is an effect of the "bias of auspices," discussed on pages 232–235.

THE PROBLEM OF SAMPLING

One difficulty in the evaluation—especially the comparative evaluation—of survey data arises from *limitations in the samplings* of people in such studies (32, 72, 84). This is generally no problem in surveys conducted in individual industrial plants which include all employees who complete questionnaires on company time, under the supervision of an

[8] See pages 93–96.

employee committee or of an outside organization. Serious questions, nevertheless, can arise when mailed "ballots" are used; when the co-operation of employees is sought on an "invitational" basis; where the administrative conditions are such as to lead a substantial portion of the group to refrain from completing the forms; and under other conditions (15, 88, 101, 103, 108). Furthermore, there appear to be at least a few instances in which selective techniques have been employed to yield far from a representative sampling of employees in the industrial plant.

The problem becomes more complex in studies calling for a representative sampling of industrial situations. It is entirely possible, for example, that plants which *agree* to co-operate in large-scale surveys, such as those conducted by the National Industrial Conference Board, represent a different "universe" than those who *decline* to co-operate. Similarly, union plants may well yield different findings than do non-union plants. In most instances, the latter factor has been given close consideration in studies involving nation-wide samplings of workers and supervisory personnel, such as those conducted by the Opinion Research Corporation and under the auspices of *Factory*, *Fortune* and similar publications.

Such nation-wide surveys, nevertheless, raise additional problems in the way of the possibility of biased samplings. For example, as Deming points out, an interviewer who has been told to talk to ten people in a particular socio-economic or other group may choose to talk to ten people close to his home who will respond to his questions. As a result, the interviewer, in filling his quota, introduces a "respondent bias" that may take on considerable magnitude (31). Investigators are thoroughly aware of this danger but this, nevertheless, represents one of the considerations which must be kept in mind in evaluating samplings in employee-attitude surveys (73, 12).

SITUATIONAL BIAS

Closely related to the general problem of sampling discussed above is the selective *bias of situations*. This occurs in employee-attitude surveys from the fact that "by the nature of the case, most of the inquiries have been conducted in companies with enlightened and progressive managements, and ones where conditions of morale are reasonably satisfactory. Managements which are sitting on a powder keg," writes Kornhauser, "do not conduct employee attitude studies" (61).

Neither a union leader nor management, according to Katz, welcomes surveys when they are deadlocked in a struggle (57). As a result, much valuable data concerning unfavorable attitudes during particularly critical situations may be missing from available reports. Conversely, some companies may inadvertently or otherwise conduct a survey immediately fol-

lowing a wage increase or under otherwise favorable circumstances which distort the findings in terms of the long-range situation. Such hazards are most frequently avoided in nation-wide surveys, which include samplings of employees from many plants, but this potential must nevertheless be seriously considered in evaluating attitude-survey findings.

THE TIME FACTOR

As suggested above, there are influences derived from the *period in which a survey is conducted.* A survey of household purchases in the weeks before Christmas cannot provide a true assessment of the year-around market for "luxury" or possibly other products, although indicating trends for the holiday season. A survey of employee attitudes during the height of a depression or the peak of a war emergency situation can provide data applicable to the period under consideration and for comparisons with other periods. However, care must be exercised in formulating broad generalizations without confirmatory evidence accumulated during periods varying in social, economic, and other conditions.

Consideration of the factors discussed above underlines the need for careful description by investigators of the situation within which trends or relationships have been observed. It also indicates the continuing need for the multiplication of studies in situations characterized by varying conditions, as a basis for extending the scope and degree of generalization of conclusions.

BIAS OF THE AUSPICES

Another problem which arises in attitude surveying involves a possible *bias of the auspices.* For example, according to Deming (31), it is commonly supposed that replies concerning such objective facts as income and work status are different, on the whole, when elicited by a relief agency than when information is sought by a government agency, such as the Census Bureau. Recognition of the possible import of bias of auspices is found, to some extent, in the frequency with which industry makes use of outside agencies in conducting employee-attitude surveys, although the primary emphasis here is generally that of giving employees assurance of anonymity of responses and of complete objectivity in analyzing the data. However, the fact that the vast majority of employee attitude surveys are management-sponsored has led some union leaders and some social scientists to question both the findings and conclusions from such surveys.

Differences in evaluation associated with sponsorship are strikingly illustrated in comparisons of executives' and union leaders' assessments

of the frankness and honesty of opinion expressed by employees in attitude surveys. According to a National Industrial Conference Board survey, as reported in 1951, four out of five of the company co-operators felt that employees gave frank and honest opinions with few or no exceptions. By contrast, nearly all of the 43 union leaders who were questioned "state or imply that what employees say in a survey will doubtless be affected by the answer to the question *'Who's behind this survey?'* " (39, p. 45). Furthermore, about 85 per cent expressed the opinion that surveys should be conducted by "the union *and* the company."

The bias of auspices, it has been suggested, may be reflected both in the choice and phrasing of questionnaire items or interview queries. For example, in the union-sponsored survey (91) described on pages 346–352, workers were asked: *"Since you are a member of a union, do you feel that your boss can't push you around as much as he might want to?"* The implication that the boss *wants to push workers around,* may well produce a "one-sided focussing" of attention which—rather than a critical weighing of pros and cons of the issue—will determine the replies (29). This issue, particularly as it affects the measurement of attitudes toward labor, has been considered by Kornhauser (59) and also, in more general terms, by Crespi (29). The latter draws upon Kornhauser for an illustration pertinent to this discussion.

> "Suppose a ballot sought to ascertain people's attitudes toward the labor movement, with most of the questions being similar to the following:
>
> *"Westbrook Pegler, the newspaper writer, claims that many labor union leaders are racketeers. Do you agree or disagree with him?"*
>
> *"To make more jobs, some unions require employers to hire more persons than are actually needed to do the work. Would you favor or oppose having a law passed which would stop this practice?"*
>
> *"Do you think that soldiers, when they come home, should have to join a union in order to get or hold a job?"* (59).

With a preponderance of questions of this type, according to Crespi, the respondent is forced to preoccupy himself with the demerits of organized labor. "This dwelling upon negative and disapproved features," he adds, "can hardly fail to influence the respondents' attitudes in a negative direction" (29, p. 105). This situation can be remedied, according to Kornhauser, by consistently maintaining an "equitable balance" in surveys, e.g., by matching any question which refers to the faults of labor with a question bearing upon the good points of labor. This position has been questioned by Link and Freiberg (69). It has also been suggested that this problem might be solved by the more frequent use of neutral ques-

tions. Involved in this issue, according to Crespi, is not alone the objective of obtaining measures of true attitudes, but of refraining from using a survey as a propaganda device in itself.

Differences in theoretical context or in frames of reference, reflecting in some instances the auspices under which a study is designed, can seriously affect the findings and generally influence the interpretation of results. This possibility is well illustrated in surveys of employee attitudes toward the Taft-Hartley Law, discussed in Chapter 19. This problem will be referred to again below under the discussion of the interpretation of survey findings.

One other issue remains to be mentioned under this discussion of the bias of auspices. Reference has been made to the fact that, except for some government or foundation-supported research, employee-attitude surveys in industrial plants have generally been sponsored by management and used for management purposes. According to some observers, as represented by McConnell, "this is unfortunate because the problems to which attitude surveys have been applied have been dictated by management needs" (71, p. 224). According to Barkin, Director of Research, Textile Workers Union of America, CIO, "Whatever value it might have in simple areas of opinion, the self-reporting technique on attitudes and opinions in the field of industrial relations, as currently used, is dangerous and reinforces anti-union employer philosophies" (5, p. 80).

Associated with queries concerning the management sponsorship of employee-attitude surveys is the tacit or stated assumption that union sponsorship, or the assignment of responsibility for conducting surveys to socially-minded scientists, would somehow or other bring about a more exact determination and satisfaction of employee wants and needs (60). There is no question that unions, if they were willing, could use survey techniques to advantage in determining the attitudes of their members more accurately than is frequently done by union leaders. Certainly, problems of organization, leadership, and morale in the unions provide a fertile field for the use of survey techniques in the interest of more effective service to members, as has been demonstrated in the study of the attitudes of union members by Rose (91). Furthermore, benefits might be achieved by joint, i.e. management-union sponsorship of surveys in unionized plants (41a, p. 11). There can be no disagreement with the need for the design and administration of surveys by independent research groups, in a social frame of reference and a theoretical context which will enhance the usefulness of the social sciences in dealing with the problems of industrial strife as a broad social issue.

The fact also remains that employee-attitude surveys sponsored and

supported by management are serving a broad social purpose, as well as the interests of the individual plant and of its workers. In fact, the bias of auspices in this case may well be viewed as simply another indication of the growing effort on the part of management to arrive at a better understanding of employees' wants and needs, in part because of growing conviction that the satisfaction of such needs is essential to the accomplishment of broad economic and social objectives as well as the immediate aims of the business enterprise.

In other words, the position of this author is that the mere fact that a survey is supported by management and is frankly intended to serve "management's needs" does not *in itself* constitute a reason for questioning the outcome, either in terms of benefits to the workers in the plant, or in terms of consideration of the data—together with those from other surveys—in arriving at generalizations on motivation and morale in industry. There seems reason for questioning the view, held by some, that *only* the social scientist, working outside of the realm of problems of immediate interest to management and other groups, "has a job to do *for* democratic thought and practice" (66). Nevertheless, the principle of inquiring into the auspices—whether they be management, union, or presumably impartial socially minded investigators—represents one step in a comprehensive and sound approach to the evaluation of survey findings.

TABULATING AND ANALYZING DATA

Differences and deficiencies in criteria and methods used in *tabulating and analyzing* data introduce variations which require serious consideration in the evaluation of survey findings. Such variations arise, in part, from the failure to perceive which tabulations and methods of analysis will be most significant (72).

As suggested below, what will be available for tabulation and analysis depends, in part, upon the research design and the theoretical context of the investigation. In fact, as Deming points out, the tabulation program should precede the construction of questionnaires, etc., although this order is seldom followed. However, even where the basic data are relatively adequate, tabulations and methods of analysis may not be appropriate for revealing the complete picture. For example, a difference may be found in the level of morale of two work groups engaged in the same kind of work in the same plant, but under two different supervisors. It *might* immediately be concluded that the difference in supervisors accounts for the observed variation in morale level. The two groups may, however, differ also in age, amount of education, length of service, and in other respects. The investigator may be led astray in formulating con-

clusions unless tabulations of age and similar factual data are available and are considered along with the analysis of questionnaire or interview data. Similarly, comparisons of the morale of short-service and long-service employees, such as are considered in Chapter 14, may be suspect when there is no assurance that older employees with longer years of service are holding the same kinds of jobs as the younger, less experienced employees with whom they are compared.

Involved here is the problem of controlling or eliminating the effects of "extraneous" variables which plagues the experimenter as well as the attitude-survey specialist. In this connection, Kornhauser has called attention to the prevalent use of simple correlational techniques in situations where the techniques of partial correlation are required to reveal the exact nature and extent of relationships (61). Equally basic is a tendency to rely on counting procedures, e.g., on determining the percentage of workers who like the retirement plan, who have confidence in top management, etc., in instances where the full needs of the situation can be made clear only by an analysis of relationships (57).

An extension of the analysis to include treatment not warranted by the available data represents another source of error in the evaluation of attitude survey findings. Instances of this are noted in the discussion of individual studies in later chapters. Furthermore, the identification of factors related to morale presents special problems in the analysis of survey results. These are discussed in Chapter 14.

RELIABILITY AND VALIDITY

In attitude surveying, as in other activities involving measurement, it is necessary to determine the *reliability* of the measures. Reliability bears upon the question of whether the attitudes or morale score obtained by the individual would be the same if the same questionnaire or interview were repeated under the *same* set of known conditions (43, p. 411). It refers essentially to the *consistency* of the measure and may be defined in terms of "the degree of error involved in assigning an individual to a class or in establishing his rank-order position" (72, p. 294). The import of reliability in opinion and attitude surveying has been well stated by McNemar in the question: "*If an opinion or attitude is such a momentary thing that individual reliability or consistency is lacking, how can one expect the opinion in question to correlate with stable sociological or psychological characteristics of the individual?*" [4] (72, p. 295).

Reliability: Reliability is ordinarily expressed in the form of the conventional coefficient of reliability obtained by correlating alternate forms or sets of measures derived from a single scale or from interview data.

[4] Not italicized in the original.

The use of test-retest correlation—even more than in the case of test construction—presents difficulties because of the possible effects of intervening experience upon attitudes.[5] Involved is a basic problem which cannot be discussed in detail here, although the discussion of methods for changing attitudes, in Chapter 22, has some bearing upon this "dilemma."

In his extensive review of opinion-attitude methodology, McNemar has noted many instances of scales with low reliability (72). This situation appears to exist also in employee-attitude surveying. Examination of studies in this field further reveals many instances in which no data on the reliability of obtained measures are given. Such omissions introduce difficulties in the interpretation of findings. However, there is an increasing recognition of the need for adequate reliability and also, as appears in later chapters, many cases in which acceptable reliability of employee-attitude measures and morale scores are reported in the literature.

Validity in Predicting Behavior: Many complex problems exist in assessing the *validity* of attitude measures. In general, it is necessary to distinguish between validity in terms of *prediction from survey data,* and validity in terms of *interpretation of attitude survey data* (83).

The object in aptitude-, interest-, and similar test-construction programs is that of developing a measure from which some other kind of behavior, such as academic success, job performance, turnover, etc., can be predicted. Similarly, in opinion and attitude surveying, the validity of a measure can be viewed in terms of the extent to which the measure will predict some kind of behavior on the part of the individual (70). So, for example, opinion polls have been conducted on the assumption that, from the measurement of attitudes toward candidates or issues, predictions can be made as to voting behavior. Similarly, in industry, the problem of validity has been approached from the viewpoint of the usefulness of attitude measures and morale scores in predicting production, turnover, occurrence of conflict situations, etc.

The tendency in earlier days of employee-attitude surveying was to *take it for granted* that behavior could, in fact, be predicted from the findings of employee-attitude surveys. Here, as in public opinion surveying, there was rather general acceptance of the categorical point of view that behavior was closely related to observed attitudes. Behind this view is, as indicated on pages 73–75, the theoretical conception of attitudes as "integrations mediating between the fundamental psychological processes and actions" (62, p. 31). However, a one-to-one relationship between attitude and action has failed to appear in a number of studies,

[5] The possible effects of cyclical changes in feeling-tone, as observed in experiments by Johnson (54) and Hersey (48, 49), also need consideration in this connection.

as exemplified in those conducted by Corey (28), La Piere (63), and Bray (12a). In more recent years, particularly as a result of a number of outstanding failures of polls in predicting presidential elections, the viewpoint that attitude measures necessarily predict behavior has been subjected to critical inquiry (16, 58a, 87). For example, according to Pace, "Many attitude tests are descriptive but not predictive, and their meaning and interpretation is limited by this fact. Definitions of attitude as a tendency to act may need to be reconsidered; acceptance of the definition implies that behavior is the criterion of validity" (82).

As indicated in studies described in this section, and also in Chapter 4, the possibility of predicting behavior from attitude measures has not been discarded by either the survey specialist or by the social scientist. It is recognized that the difficulty may be in the failure of attitude-surveying techniques to *structure the situation* in such a way as to tap those attitudes which are, in fact, indicative of the tendency to respond or perform in a particular way (90). Involved also is the distinct possibility of differences between the expressions of attitudes by the individual "in public" and those which appear in a more intimate and "private" situation. Such considerations have led to a centering of attention upon (a) the analysis of factors which can tend to make people's opinions and attitudes an adequate basis for predicting their behavior and (b) formulating steps which may be taken to improve the validity of opinion and attitudes as predictors of performance (32a, 33). In addition, *experimental studies,* of the type described in earlier chapters, are helping to define the conditions under which, and the boundaries within which, behavior in industry can be predicted from attitude measures.

Validity as a Matter of Interpretation: While prediction is of utmost importance, and is generally conceived as the major purpose of possibly most attitude surveys, the *matter of interpretation* may be construed as a criterion of validity in itself, particularly when prediction of behavior is not the prime purpose of a survey. In this sense, the problem of validity involves the query as to whether a question or series of questions elicit a response which reflects the individual's *true opinion* or *attitude* toward an issue in question, or is a reflection of his opinion or attitude on some other issue.

As suggested by McNemar, this problem "boils down to whether a person's opinion or attitude can be safely inferred from what he says. Or, to state the problem differently, it can be said that validity is a matter of interpretation. Suppose a soldier says he would like to go overseas soon, and that this is interpreted as indicating a desire to get into active combat. At once the question of validity faces us. Does his statement really indicate high fighting morale, or does it merely indicate a desire for change

or for adventure?" (72, p. 315). In other words, the matter of interpretation can influence prediction, in that an error in the interpretation of response will lead to error in predicting desired or anticipated performance. Specifically, in the illustration cited by McNemar, an investigator may err in predicting combat performance from the question under consideration, while he *might* be able to predict some form of social behavior on shipboard.

Whether or not opinion or attitude is related to behavior, there is still the fact that opinion or attitude can have "separate validity of its own" (83). The significance of this type of validity appears, for example, in studies concerned with the measurement of "job satisfaction." As Kornhauser points out, "the proportion of the working population classified as dissatisfied will depend in a large measure upon the arbitrary method of defining what the term dissatisfaction refers to in the given case" (61, p. 132). This possibility is well illustrated in investigations conducted in Holland by the Netherlands Institute of Public Opinion. The percentage of Dutch women and men replying "*yes*" to the question "*Do you find satisfaction in the work you do?*" was found to be approximately the same as in the case of Hoppock's investigation in the United States (50). However, further analyses of findings have led to the conclusion that "the concept of job satisfaction, as used to date, is a very confusing one. Our own feelings," states Stapel, "are . . . that we are measuring something in our respondents which is not necessarily related to the job they happen to have" (104). As appears in the section which follows, and also in Chapter 14, the *matter of interpretation* as a criterion of validity is also a highly significant issue in the case of studies of employee morale.

In discussing the problem of validity of conventional opinion-attitude measures, in 1946, McNemar called attention to the pressing need for supplying evidence that "the device used measures or classifies the attitude or opinion that it was designed to measure" and also evidence that "verbal or symbolic" responses can be depended upon to indicate an "individual's action tendency" (72, p. 296). Similarly, examination of studies in the specific area of employee-attitude surveying, described in later chapters, shows that, in spite of some notable exceptions, the problem of validity continues to be a major one in the evaluation of outcomes with respect both to the *matter of interpretation* and the *prediction of behavior.*

RESEARCH DESIGN AND ITS THEORETICAL CONTEXT

According to Katz, the most common weakness of attitude surveys, on the *technical* side, is a lack of adequate *research design* (57). Lack of

adequate research design is particularly disadvantageous from the viewpoints of building up a field of knowledge and of arriving at generalizations concerning the sources of motivation and morale. By survey design, according to Katz, "is meant the attempt to establish a relationship between two factors" and most especially to reveal causal relationships among factors. Failure to do this is illustrated in the tendency, referred to earlier, of depending solely upon counting procedures where provisions should be made for the study of interrelationships. Neglect of careful planning of almost any feature of the survey can eliminate or at least limit the possibility of accomplishing this result. This can happen, for instance, when the survey is confined to the verbal responses of one sample of respondents when multiple samplings are needed for a complete assessment of the situation. Thus an investigation which undertakes to survey supervisory attitudes should properly include provisions for obtaining information on the relation of such attitudes to differences among supervisors with respect to employee attitudes, on the one hand, and management behavior, on the other. A more limited approach can provide answers as to how supervisors feel, but fails to provide clues which have practical value, even at the applied level, as to the source of such feelings. Furthermore, according to Katz, good survey practice calls for extensive and searching use of experiential questions and for the collection of outside (objective) criteria of satisfaction and morale. "A study will be definitely enriched if these background, factual items can be supplemented with information about additional criteria . . . Significant progress can be made if we give more attention to this factor of establishing relations between measures which are *independently obtained*" (57, p. 214).

The need for adequate research design is widely recognized, even in the case of surveys conducted at the applied level. Less attention has been given to the need for *using survey designs in a theoretical context.* In a critical review of opinion-attitude methodology, McNemar has pointed out that "the 'hypothesis' step in scientific reasoning and research seems to be all too frequently ignored" in opinion and attitude surveys (72). As indicated on page 223, the need for rationale, or theoretical context, is particularly crucial in surveys which are intended to yield broad principles and generalizations in the area of motivation and morale, rather than a series of facts which are of interest only in relation to the immediate needs of a particular company (57).

The need for theoretical context is illustrated by the variety of senses in which the term "morale" is used in employee-attitude surveys.[6] Treatment of this highly important concept varies from acceptance of the view-

[6] See Chapter 14.

point that "morale" is what employees believe it to be to *a posteriori* definitions in terms of whatever the survey may show about the feelings, sentiments, and attitudes of employees. It is apparent that not alone the survey used as a research tool but also the practically oriented survey can bring firmer outcomes if it starts with an operational or conceptual definition of morale (71). Specific advantages are achieved if, as in the case of the definition given on page 284, this is derived from pertinent personality and social theory (102).

As suggested earlier, the need for theoretical context becomes particularly apparent when attention is focused upon attitudes and behavior reflecting the influence of the group. The survey method elicits individual responses from individuals acting alone (71); it makes the individual the unit of measurement (57). However, it has become increasingly apparent that behavior is frequently a group process and that motivation is frequently a phenomenon of social interactions within the group. This points to the need for adapting survey methods to the study of group attitudes. To do this involves consideration of concepts of group structure—to be derived from emerging psychological theory—which yield fruitful hypotheses for research and point to the variables that need to be studied (57, p. 221).

INTERPRETATION OF SURVEY FINDINGS

Perhaps the most treacherous shoals encountered in threading a course through employee-attitude-survey findings are in the interpretation of results (57). Errors in interpretation arise, in part, from failure to consider and weigh *technical deficiencies* of the kind discussed in earlier sections of this chapter. In addition, there are the less tangible—but at least equally important—*errors of inference* which help account for the often wide differences in the interpretation of survey data.

Overgeneralization: Such errors of inference arise frequently from the *tendency to overgeneralize* the findings of employee-attitude surveys. This appears particularly in the frequency with which investigators have generalized the results obtained in a single survey, conducted in a particular situation, into broad conclusions concerning the significance of particular factors in industry at large. Hazards also exist in arriving at generalizations based upon a consideration of accumulated findings from independent studies in so far as these differ in objectives, methodology, content, and other respects. Furthermore, the not infrequent appearance of contradictory findings in such studies places further limitations on the freedom with which generalizations may be made.

A not uncommon error in the way of overgeneralization takes the form of conclusions concerning courses of action. For example, as Kornhauser

(61) points out, the fact that 75 per cent of employees in a plant express dissatisfaction with lockers, and only 25 per cent are dissatisfied with wage rates, does not warrant the conclusion, at times formulated from such data, that management is justified in giving attention only to the former and ignoring the latter. Kornhauser furnishes another instance of overgeneralization by reference to a study (27) in which the employees were asked whether they had seen a statement of the company's financial situation and, at the same time, asked how much more money the company should pay them per week (61). A comparison showed that the average wage increase desired by those who had seen the company's financial statement was $3.07; by those who had stated that they had not seen the statement, $5.53. These findings are quite unjustifiably interpreted as meaning that the "desired wage increase can be reduced almost by half by showing the company's financial statement to employees."

The danger of overgeneralization appears not only in conclusions bearing upon courses of action, but also in dealing with inferences concerning basic motives as derived from attitude surveys. For example, the fact that a large number of employees rate wages high in importance, or otherwise express attitudes indicative of the desire for higher wages, has been alternatively interpreted as revealing a basic need for subsistence (food, clothing, etc.); a drive toward security; the desire for social status, or as reflecting the social motives of the work group.

The psychologist is, unfortunately, faced with the necessity of making inferences concerning such motives because they cannot be observed directly. Any or all of the inferences referred to above may be justified, particularly when theoretical conceptions and related studies furnish the framework for interpretation and for the formulation of general conclusions. However, a minimum requirement—in the present state of limited knowledge concerning the basic mechanisms of human behavior—is at least to suggest alternative interpretations, rather than to limit generalizations to particular frames of reference or values which have the greatest appeal to the investigator. This is a problem which is perhaps of no great concern from the viewpoint of immediate application. It is, nevertheless, of tremendous consequence for increasing knowledge and building sound theory in the fields of industrial and social psychology, and in constructing a science of industrial relations.

Oversimplification: Closely related to and at times overlapping the problem of overgeneralization is the *tendency to oversimplify* the situation in interpreting survey findings. In fact, the practice of relating specific attitudes to specific motives, discussed above, might be viewed as oversimplification rather than overgeneralization. A more specific (and per-

haps more acceptable) illustration of oversimplification is found in the process of verbal identification whereby a study becomes an investigation of a particular kind simply through the literary equivalent of a "christening" ceremony. So, the 1947 National Industrial Conference Board survey, described in Chapter 13, which actually measured only the relative importance attached by employees to specific factors, becomes identified as—and therefore presumably is in fact—a study of "factors affecting employee morale," although no external criterion of morale whatsoever was used in the investigation.

Significance of the Industrial and Social Background: Of greater consequence—and also more frequent—is the tendency referred to in earlier pages of treating single variables as though they were actually operating with complete independence, and the related practice of treating obtained relationships as though they were causal in character. Such forms of oversimplified interpretation reflect, in part, deficiencies in experimental and statistical design. Of additional significance is the question of whether the influence of any incentive or determinant of morale, or the origin of any attitude and the nature of basic motives, can be fully assessed without reference to the *broader industrial and social background* within which employee attitude surveys are conducted. According to Kornhauser, "It seems clear that balanced judgments about the influences that are important in each particular industrial situation, while they may well make use of whatever evidence is available from experiments and statistical analyses, need to go far beyond these. They must utilize a wide range of information about the specific company, the working group, and the history of industrial relations in that concern . . . Further, however, the investigator can understand and interpret the local morale picture only if he is fully alive to the vastly significant influences which lie entirely outside the company—social and economic conditions in the community and in the world at large" (61, p. 142).

Professional and Personal Biases: There can be no serious quarrel with the viewpoint that the psychologist concerned with the application of findings from both experiments and surveys cannot operate outside of the "social-historical setting." Quantitative findings from employee-attitude surveys (and also from experimental studies) have little practical value when considered *in vacuo*. They acquire usefulness in dealing with the realistic problems of production, satisfaction, and morale only when projected against the background of broader economic and social developments characterizing a situation or an era. This necessity, however, introduces the distinct possibility of errors in interpretation which are derived from the *professional* and *personal bias* of the investigator (31). The influence of such bias, or of what might be described as differences in

the *social perspectives* of research personnel, is illustrated in the following citation from Buckingham

> "Two men—let us call them curriculum experts—are given the results, in full statistical detail and reliable to the last degree, of the survey of a school district in a mill town. Each of these men is asked to lay out the offerings, or at least to lay down principles, for the work of the schools in that district. Will these men agree in their findings? By no means. One of them may be a realist, who will say in substance, 'The information at my disposal is that 70% of these boys and girls are going into the mills and factories of this town. It is clear that they are going to need the things used in these occupations. Accordingly, let us teach them these very things. Let their English be industrial English. Let their mathematics be the mathematics of the forge and factory. Provide shops like those in which they will serve and cooperative part-time arrangements with the industries whose operatives they will become.'
>
> "The other curriculum expert may be a humanist. He may say 'These boys and girls are going to lead narrow lives unless we can give them inner resources. They will have enough of forge and factory. Let us give them in the schools before it is too late glimpses of wider horizons. Let them paint and draw and make music. Let them go adventuring into the past and into far countries. In English let us bring them in contact with beauty of form and nobility of thought and let us encourage them in self-expression. In short, in a fine humanistic sense, let us give them culture.'
>
> "These two curriculum experts are miles apart. Each was supplied with the same statistical facts, and neither of them questioned the truth of these facts. Moreover, neither of them brought to bear upon the problem any additional statistical facts. Yet the curriculums which they recommend are quite different. Evidently, these men have interpreted the statistics each in his own way; and evidently too, the interpretations are powerful factors, for although resting upon the same grounds they have led to opposite conclusions . . ." (13, p. 382).

It is evident that underlying this difference in interpretation is a difference in "educational philosophy"—a difference in social perspective concerning the place and the role of a public-school system in a highly industrialized community. Another striking illustration of such effects upon interpretation of survey data is found in the reconsideration, by Ansbacher (3), of an investigation designed to examine the attitudes of foreign workers—so-called "slave labor"—in wartime Germany (112). A comparison of responses given by French, Italian, and Russian workers led to the conclusion that the Russians were most anti-German. But, according to Ansbacher, the same data may be interpreted as showing that the Russians were actually more favorable to the Germans than were the other groups. This reinterpretation is arrived at, in part, by a re-examination of the data which leads Ansbacher to conclude that some of the judgments made by the investigators were "forced and unconvincing."

More important still, the reinterpretation is based upon consultation with German psychologists and personnel men who had close contact with foreign workers during the war (4), and upon alterations in certain of the premises upon which interpretation is based.

Ansbacher considers in some detail, and with commendable frankness, the question—which constitutes a serious basic problem for social psychology—of why the scientists of the Bombing Survey saw one meaning in data in which he later perceived an entirely different meaning. In doing so, he follows the theoretical formulations of Krech and Crutchfield (62), derived from research in the area of "social perception" discussed in Chapter 5.

From a reconstruction of the "cognitive structure of the Bombing Survey psychologists" and of the "views which were widely held at the time they made their interpretation," Ansbacher reaches the conclusion that, in the reinterpretation of findings, ". . . we have a truly striking example that assimilation of new facts to existing beliefs 'is not a fault found among the prejudiced few. It is to be found universally and is due to the very nature of our perceptual and cognitive processes' (62). Even in the case of social psychologists, new perceptions will be 'distorted' and influenced by the nature of the major cognitive structures" (3, p. 135).

Reduced to simple essentials, this analysis of sources of professional and personal bias simply points to the fact that the outlook of even the social scientist—as reflected in his interpretation of research data—is influenced by his education, experience, environment, and established point of view. The possible influence of "cognitive structures" has been noted in the discussion of the Hawthorne studies, of investigations conducted in the plant of the Harwood Manufacturing Co., and of other experiments discussed in earlier chapters. Similar references will be found in the discussion of the findings of attitude surveys in later chapters.

In a review of a volume on Communications Research (65), Sandage calls attention to the fact that "the psychological and sociological attributes of the researcher at times color conclusions" (93, p. 239). For the professional psychologist, acquainted with the points of view and conceptual preferences of his colleagues, making allowances for *professional* biases in interpretation is not too difficult a matter. For the lay reader and others who are unfamiliar with the theoretical context favored by a particular investigator, the situation presents greater hazards. Even more troublesome is the problem of making allowances for the *personal biases* (as contrasted with bias in terms of theory and methods) which sometimes, in spite of the best intentions of the investigator, creep into the interpretation of findings. Perhaps each report in an area so complex as that of motivation and morale, conducted in an era of rapid

economic and social change, and involving broad social issues, should carry a brief biography of the author and some statement of his social point of view. In this connection, it is probably very apparent that the personal preference of the present author is for a continuation of the "free enterprise" system, and that he looks primarily to enlightened management for conscientious efforts and effective outcomes in applying the findings of research with the view of increasing production, individual satisfaction and morale in industry. Perhaps the author has failed to compensate sufficiently for his own personal bias to produce an altogether objective evaluation of studies in the field of motivation and morale. If such should appear to be the case it does not result, at least, from a failure to make a constant effort to do so.

General Outcomes of Employee-Attitude Surveys

The above discussion reveals a formidable list of considerations which need to be borne in mind in the evaluation of survey data. Fortunately it is seldom that any single study is characterized by all, or an extended multiplicity of, sources of variation and error to which reference has been made. Moreover, as Deming has pointed out, the errors in a survey are not always additive. "It should not be inferred," he adds, "that there are grounds for discouragement or that the situation is entirely hopeless with regard to the attainment of useful accuracy" (31, p. 369). In spite of one or another defect in individual studies, employee-attitude surveys have yielded a vast amount of useful information about employee attitudes and have provided a basis for provocative inferences concerning the psychological foundations of motivation and morale in industry (14). Specifically

1. Employee-attitude surveys have thrown light on the wide variety of factors in the plant situation with which employees are concerned. They have provided at least a rough measure of the relative importance attached by employees to different aspects of the work situation and of work relationships.
2. Employee-attitude surveys have made it possible to assess with some degree of accuracy the level of employee satisfaction and morale. They have helped to provide management with "a clear impression as to whether the mental health of the organization as a whole is reasonably good or shows disturbing weaknesses" (61, p. 130). Through comparison of various plants, departments, occupational and other groups, management is placed in a position to take action in those units which require special attention.
3. Employee-attitude surveys have contributed to the identification of the factors which have particular significance as incentives and as determinants of employee satisfaction and morale.

4. The measurement of employee attitudes provides useful methods for checking inferences concerning the basic motives underlying performance and adjustment at work. In general, the survey method—especially as used in investigations designed in sound theoretical context and in connection with field experimentation (58)—represents a useful tool in the extension of motivational theory and in the enhancement of the social sciences.

In industry, as shown in Chapter 21, attitude surveys have brought important results in the way of improved working conditions; in strengthening training programs for employees and supervisors; in putting supervision "on its toes"; in promoting better understanding between management and the unions, and in other ways (92). Incidental to such achievements, attitude surveys help relieve tensions by letting workers unburden themselves and improve morale by showing that management is really interested in the people on the job (61).

In general, studies described in later chapters fully support the opinion, as stated by Kornhauser, that "findings almost always add substantially to management's previous information about its employees and very often contain startling surprises. Perhaps the greatest accomplishments have been in the way management is shocked out of its complacency with respect to employee satisfaction. Even where the results at first seem dubious to managers, further detailed inquiry into the situation usually reveals some genuine basis for the feelings expressed in the survey—a basis either in the objective conditions or in the subjective meanings these situations have been permitted to assume" (61, p. 130).

At the same time, perhaps the most important need in initiating and conducting a survey is an honest determination on the part of management to do something with the findings. Industrial relations may deteriorate, rather than improve, if management conducts a survey and fails to do everything in its power to take positive action for eliminating the sources of dissatisfaction and low morale uncovered by a survey. As is pointed out by the National Industrial Conference Board, "this does not imply that a company must commit itself to grant every wish or make every change indicated in an attitude survey's results . . . Some employee requests and suggestions simply cannot be and should not be fulfilled. But in that case, the company does have the clear-cut responsibility to explain fully and frankly the reasons for not taking action." Furthermore, according to the Conference Board, *employee-attitude surveys cannot be used as "substitutes for good, direct, face-to-face contacts between management and the worker*[†] . . . They supplement personal contacts. They can never take their place" (39, p. 14).

[†] Not italicized in the original.

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13

The Employee "Looks Over" the Plant Situation

ONE MAJOR outcome of employee-attitude surveys has been to reveal the large variety of features of the plant situation with which employees are concerned. Surveys have also provided at least a rough measure of the relative importance attached by employees to different aspects of the work situation and of work relationships (6).

The Hawthorne Plant Survey

The fact that employee attitudes relate to many varied features in the plant situation, and the differences in values attached to individual items such as pay, working conditions, etc., can be seen by reference to three large-scale investigations. Among these is a survey of employee attitudes conducted in the Hawthorne Plant of the Western Electric Company. Observations made in the course of the original *Relay Assembly Room Study*, described in Chapter 10, suggested that one possible way of improving workers' attitudes and morale throughout the plant was by asking employees to express their opinions on the conditions in their working environment which they might like or dislike (12, 13, 19).

Such a study was undertaken in 1928, in connection with the development of a training course for supervisors which was being conducted in the plant at that time. The approach was first tried experimentally in the Inspection Organization, including about 1,600 skilled and unskilled employees in shops and offices. Upon the completion of the preliminary investigation in 1929, it was extended to other units of the plant to the point where by 1931, when the program was temporarily discontinued because of the economic depression, over 21,000 employees, representing about half the work force, had been personally interviewed (11).

In conducting the interviews used in the survey, each worker was approached individually and asked to express his views. The employee was assured that he was invited and not ordered to express himself, for it was felt that voluntary comments would be the most reliable. It was also made clear that the content of the interview would remain entirely confidential, that neither names nor reference numbers were to be attached to the interviews, and that identifying statements which might reveal the employee or his location were not to be recorded.

During the first part of the study, interviewers started with a set of questions which they expected to have answered by every one. These were not in the nature of a formal questionnaire, but the questions patterned the general field of approach to what the interviewer thought important. Following several modifications in interviewing techniques, the plan was finally adopted of permitting the employee, after an explanation of the program, to choose his own topic for discussion. This method, identified as the *conversational* or *indirect approach*, and currently known as the *nondirective* approach (14, 15), has the advantage, according to the investigators, of stimulating the feeling of confidence, of giving the employee the benefits of emotional release, and of *fixing attention upon that which the employee considers important.*

An analysis and classification was prepared of comments voluntarily made by workers. At first only unfavorable comments were sorted out, but later both favorable and unfavorable comments were compiled for analysis. A classification of the content of interviews conducted in the Operating Branch, in 1929, presented in Figure 20, illustrates the variety of features of the plant situation to which employees *voluntarily* referred in the nondirective interviews, and the frequency of mention of each topic.

Data of the type given in Figure 20 are ordinarily interpreted as providing an indication of the degree of favorableness or unfavorableness of attitude toward specific objects, policies and other plant features. Applying this approach, it would seem necessary to draw the conclusion that employees in the Operating Branch of the Western Electric Company were (in 1929) much concerned with wages and were generally dissatisfied with payments received for their work. This method of analysis was, indeed, applied to the comments on supervision which, as shown in Figure 20, included 2,770 *unfavorable* references in a total of 4,662 voluntary comments concerning supervision. In fact, in a preliminary report on the Hawthorne study, the conclusion was reached that *"the relationship between first-line supervisors and the individual workers is of more importance in determining the attitude, morale, general happiness, and efficiency of the employee than any other factor"* (12, p. 325). However,

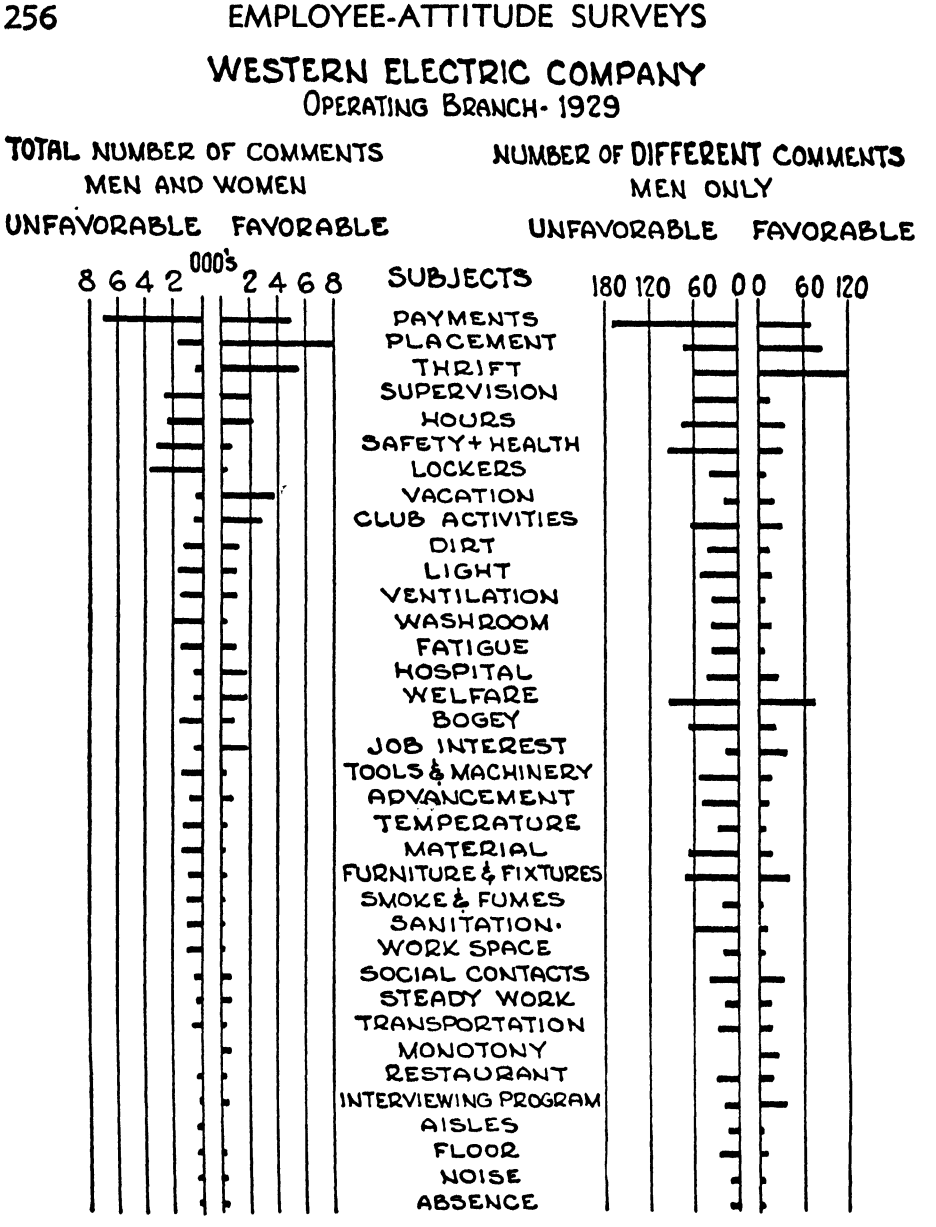


Figure 20. Classification of the Content of Interviews *

this type of analysis was discarded in favor of the more "subtle"—certainly more subjective—form of analysis and interpretation which has generally characterized interpretation of the Hawthorne data by the Harvard group. Thus, in referring to Figure 20, Mayo says

* By permission, from E. Mayo, *The Human Problems of an Industrial Civilization.* Harvard Business School, Division of Research, 1946. (First printed by The Macmillan Co., 1933).

"Interesting as this chart is, it cannot, however, be regarded as more than a gallant attempt to analyze. According to those who were engaged upon the work, they could cull fragments only from each continuous interview; the continuity itself, the personal and more interesting part, eluded their grasp and escaped. I included the diagram here not merely for its own interest which is considerable, but also because it gives point to my claim that the interviewing group was beginning to realize that the interview experiment, like the test room, had stumbled upon a group of facts most important for industry, but facts exceedingly difficult to define. Interviewers were uneasily aware that in some indefinable way all was not well with the human situation in the Works.

"The situation at first disclosed itself somewhat after this fashion. It was found that comments on material conditions of work had a higher validity than comments on persons. In certain instances a number of persons working in the same vicinity complained of smoke and fumes, or of cold, or of insufficient locker space, or of some other source of irritation. Many of these complaints were found to be just and the specified condition was corrected. But complaints about persons, or for that matter about supervision, in the great majority of instances had to be disregarded. Such complaints served indeed to draw attention to something of interest in the personal history and present attitude of the person being interviewed; but the validity of the external reference was minimal" (11, p. 95).

Such considerations led Mayo to discard the earlier conclusion concerning the prime importance of supervision and to conclude instead: "The interviewing programs showed that the major difficulty was no mere simple error of supervision, no easily alterable set of working conditions; it was something more intimately human, more remote. 'Supervision,' indeed, had shown itself to be another word which meant so many things that it meant nothing. In every department there was a human situation, these situations were never identical—and in every different situation the supervisor played a different part" (11, p. 97). The general conclusion reached by the Hawthorne investigators from an analysis of the survey findings is that interview data—specifically complaints voiced during interviews—cannot properly be *"treated as facts in themselves but as symptoms or indications of personal or social situations which need to be explored"* (13, p. 267). Thus, for example,

"Suppose a worker, B, complains that the piece rates on his job are too low. In the interview it is revealed that his wife is in the hospital and that he is worried about the doctor's bill he has incurred. In this case, the latent content of the complaint consists of the fact that B's earnings, due to his wife's illness, are insufficient to meet his current financial obligations. This source of his dissatisfaction can be expressed in many different ways, one of which is to grumble about the piece rates" (13, p. 267).

According to Roethlisberger and Dickson, the above case illustrates the necessity of differentiating between the *manifest* or the *material content* of the complaint, as contrasted with the *latent content* or the *psychological* form of the complaint. Emphasis upon the latent meanings led directly to the program of employee counseling initiated in the Western Electric Company in 1936 (13, 3, 20) and to the adoption of similar programs by other industrial organizations and in government service (1, 7, 16, 2). There is no question that interviews, used for this purpose, have therapeutic value "in relieving emotional strains and conflicts" (10). However, the usefulness of interviews for this purpose provides no basis for the neglect of data such as those cited in Figure 20 as indicators of attitudes toward specific factors in the plant situation.

National Industrial Conference Board 1947 Survey of Six Plants and "My Job Contest"

Studies conducted more recently by the National Industrial Conference Board (5) and by the General Motors Corporation (4) furnish further striking evidence that employee attitudes and sentiments relate to a large variety of features of the work situation. In a survey conducted in 1947 by the National Industrial Conference Board, each employee in six manufacturing plants was asked to go through the list of 71 morale factors reproduced in Table 17 and to select and check the one that he felt was most important to him. He was then instructed to go through the list again and select the second most important factor. This process was repeated until the employee had made five selections. The form was then sent unsigned to the National Industrial Conference Board in a self-addressed stamped envelope supplied by the Board. The frequency with which employees in the six co-operating companies [1] rated each factor as *first in importance* is shown in Table 17. In Table 18 is shown the frequency with which each factor was placed by employees among the *top five factors.*

GENERAL MOTORS CORPORATION "MY JOB CONTEST"

The survey conducted by the National Industrial Conference Board was highly directive in character, in as much as the employees were limited to the rating of factors in a list prepared in advance by the investigators. The procedure employed by the General Motors Corpora-

[1] The number of nonsupervisory employees ranged from 190 in the smallest plant to 2,300 in the largest. The percentage of returned questionnaires varied from 11.7 to 53.2. Employees in five of the plants were represented by collective bargaining agreements.

tion, involving letters written by employees in a competition for prizes known as *My Job Contest*, was designed to be less directive in character, providing an opportunity for employees to project their attitudes, sentiments and feelings with respect to their jobs and surrounding conditions. According to those responsible for the General Motors Corporation study, "survey techniques using specific questions limit sharply the factors which the respondent is to consider." They direct attention to specific aspects of the work situation, whereas the worker really may be more concerned with others. They tend also, it is claimed, to center attention on unsatisfactory job conditions and on workers' "gripes." They "invite an airing of these gripes rather than provide evidence of the worker's attitude toward the complete work situation" (4, p. 2).

Such shortcomings in the conventional questionnaire techniques for surveying employee attitudes, combined with the desire to integrate such a survey with a long-term communication program, led to the decision, in 1947, to use a letter-writing contest as a means for discovering *what's on the worker's mind* in the widely scattered plants of the General Motors Corporation. The subject finally selected for the contest, from which supervisory and management employees were excluded, was *My Job and Why I Like It.* Incentives towards participating and towards effective effort in writing letters were provided in the form of 5,145 prizes, valued at $150,000, including a Cadillac, Series 62, Convertible Coupe as a first prize, 49 other automobiles, 25 electric ranges, 50 automatic washers, 100 portable radios, 750 pairs of guide spot lights, etc.

An important provision of the contest was that employees would be free to discuss any or all *favorable* aspects of their jobs. Although the statement of the topic (*My Job and Why I Like It*) limited responses to the positive aspects of the job, it was felt by the investigators that important negative aspects would become conspicuous through the lack of mention given them. Moreover, an opportunity was furnished for employees to include constructive criticism on a *Post Script* which would not be considered in contest judging. Underlying this approach was the desire to focus the employee's attention upon the positive aspects of his job, this being, in fact, the first of the following four major objectives of the contest, which was envisaged as a step in a total communication project, rather than only as a means of finding out what employees were thinking in specific areas of work satisfaction:

"1. To encourage more constructive attitudes in the mind of employees by directing their attention to the positive aspects of their jobs.

"2. To place certain educational bulletins in the hands of employees that would indicate some of the benefits derived from employment with General Motors.

TABLE 17. *Morale Factors: National Industrial Conference Board Survey—Percentage of Employees Rating Each Factor as First in Importance* (after *Factors Affecting Employee Morale*, Studies in Personnel Policy No. 85, 1947)

[Absence of per cent figure signifies less than .1 per cent]

Factor No.	Factor	Per cent selecting factor as first in importance
1.	Vacation and holiday practices	3.3
2.	Leave of absence practices (non-military)	.5
3.	Job security—employment stabilization	30.6
4.	Employee merit or performance rating (an organized and systematic method of appraising your performance)	2.5
5.	Practice of informing you of your job status (both of your success and failures)	3.1
6.	Personnel counselling	.8
7.	Compensation (base pay)	8.7
8.	Formal plans for determining basic rates of pay (job evaluation programs)	1.0
9.	Extra compensation plans (all types of bonuses)	.5
10.	Profit-sharing plans (excluding employee savings plans)	3.8
11.	Employee savings and thrift plans	1.0
12.	Training of wage earners (rank-and-file employees)	.4
13.	Training of supervisors and foremen	.8
14.	Training of executives	.2
15.	Induction training (including orientation)	.1
16.	Company medical and health programs	1.3
16a.	Accident prevention activities	.5
17.	Employee feeding facilities (restaurants, lunch rooms, cafeterias, canteens, mobile kitchens)	1.1
18.	Total hours worked per day per week	1.1
19.	Shifts (time starting and finishing work)	.9
20.	Transportation facilities (to and from work)	.5
21.	Housing facilities	
22.	Smoking privileges	.2
23.	Physical working conditions (on-the-job)	3.1
24.	Physical condition of recreation rooms, lavatories and other personal facilities	.2
25.	General outside physical appearance of plant	
26.	Rest periods	.4
27.	Length of lunch period	.9
28.	Frequency of paying wages	.3
29.	Employee financial benefits, such as group life insurance, sickness insurance, and pensions	1.1
31.	Social and recreational activities	.1
33.	Termination allowances (dismissal compensation)	.1
34.	Labor unions	.9
35.	Type of union leadership	.3
36.	Employment records—accuracy and completeness of employee's history with the company	.1
37.	Music on the job	.2
38.	Employment of mixed nationalities	
39.	Employment of mixed races	.2
40.	Labor turnover rate (its effect on morale of employees)	.2
41.	Opportunities in the company for advancement	4.7
42.	Practice of hiring outsiders for responsible jobs vs. "promotion from within"	1.1
43.	Type of company's product (its social importance) DURING WAR	1.8
43a.	Type of company's product (its social importance) DURING PEACETIME	.8
44.	Knowledge of company's products	.4

Factor No.	Factor	Per cent selecting factor as first in importance
45.	Knowledge of competitors' products	
46.	Knowledge of company's customers	
47.	Company's reputation with the public	1.0
48.	Company's reputation with its customers	.2
49.	Your knowledge of company's finances	
50.	Type and condition of tools and equipment	.2
51.	Employee suggestion systems	
52.	Methods of handling grievances	.1
53.	Contact with executives (opportunity to see them occasionally)	.5
54.	Your burden of state and federal taxes	
55.	Marital status (single or married)	.2
56.	Domestic relations and home conditions	.6
57.	Employment methods, including selection, interviewing and placement	.7
58.	Laws affecting relations between employers and employees	.1
59.	Policies and practices regarding discharge of employees	
60.	Policy with respect to wearing uniforms (or regulating working attire)	
61.	Production drives:	
	(a) Based upon cooperative effort of management and employees (WARTIME)	.3
	(b) Incentive ideas stimulated by company (PEACETIME)	.1
62.	Location of plant (on "right" or "wrong" side of "the tracks")	.1
63.	Your own temperament—ability to get along with others	1.5
64.	Your confidence in yourself	1.0
65.	Your family's attitude toward your company and job	
66.	Company's attitude toward employees (its interpretation of policies—whether liberal or conservative)	2.3
68.	Supervisors' temperament and personality	3.5
69.	Bulletin boards, house organs and other methods of disseminating information to employees	.1
70.	Quality of supervision	1.3
71.	Type of work	7.2

"3. To collect material for the enlightenment and education of supervisory and management groups.

"4. To obtain a body of data for the analysis of employee-attitudes." (4, p. 4)

Official entry blanks were obtained by employees from their immediate foremen or supervisors who played an important role in stimulating employee participation. They also gave contestants all the help they could, including copies of the rules, a broadside picturing the prizes, and three "thought-starter booklets." One of these, *Getting Started*, provided helpful suggestions for "breaking-the-ice" and getting over the hurdle of writing an entry. Another outlined the *Six Point Objectives of General Motors* as stated by C. E. Wilson, President, in pointing out the job ahead for General Motors in the post-war period. The third, entitled

U.S., The Road to Better Living, presented a broad statement about the advantages of life under the American System.

Entry blanks were all numbered in series. Each contestant signed his name only on a detachable coupon identifying himself by General Motors plant, unit, department, badge number, home address, city. No identification other than serial number appeared on the contest letter itself, which was mailed to a Chicago Post Office box belonging to the firm retained to do the preliminary judging.

Of the 297,401 eligible employees in some 49 cities throughout the United States, a total of 174,854 entered letters during the six-week contest period, which closed on October 31, 1947. Analysis of entries showed that they represented 55.4 per cent of hourly and 82.3 per cent of salaried employees, totaling 58.8 per cent of eligible General Motors employees. Supplementary studies conducted by the Opinion Research Corporation, involving three divisions, led to the conclusion that "there were no essential differences between the employees who participated in *MJC* [My Job Contest] and those who had not" (4, p. 32). The survey also indicated that (1) the contest was even more popular with employees than the unusually high returns might indicate; (2) upwards of three-quarters of the employees in the three plants studied ascribed good motives to the company in holding the contest, only one-tenth subscribing to the "erroneous idea" that it was conducted "just to advertise General Motors Products"; though job morale had considerable effect on the individual's decision to enter the contest, the high percentage of entries could be largely attributed to promotion of the contest.

All letters were read and evaluated by a staff of specifically trained readers under the direction of Lloyd Herold, of the Lloyd Herold Co., with the advice of several leading university specialists and a Board of Honorary Judges. On the basis of three *MJC* standards—sincerity, originality, and subject matter—5,145 prize winners were selected. In addition, the two hundred letters rated as best were ranked by a Board of Honorary Judges, including a noted author and economist (Peter Drucker); a poet and newspaperman (Edgar A. Guest); a businessman and dean of a university school of commerce (James A. McCarthy); an educator noted for his achievement in labor relations (George W. Taylor), and the U.S. Commissioner of Education (John W. Studebaker).

ANALYSIS OF MJC LETTERS

With the completion of the contest and the award of the prizes, attention was turned to the analysis of the data. Such analysis was undertaken by Evans and Laseau with the purpose of achieving the third and fourth objectives of *MJC*, viz., (1) to collect material for the enlightenment

and education of supervisory and management groups and (2) to obtain a body of data for the analysis of employee attitudes. Underlying the analysis was the premise that "*a human and personal document, such as employees submitted in MJC, is a record of a person's thoughts, when his mind is at liberty to discuss subject matter of interest or importance to himself*" (4, p. 33).

According to the investigators, while it is reasonable to assume that the typical contestant gave attention to aspects of his experiences which might influence the judges to consider his entry favorably, he also retained a high degree of mental freedom regarding what he would write about. "This," it is said, "is one of the most important aspects of *MJC* as a technique, for it produces a state of mind that is open and undirected. The technique elicits for consideration all sorts of ideas, experiences, and theories on the part of the individual. In this unconfined state, concepts of importance or interest tend to float to the surface . . ." (4, p. 16).

According to Evans and Laseau, like the techniques of psychoanalysis and nondirective counseling, *MJC* established a climate in which the individual was free to express his unconscious desires and reveal his inner personality. As a result, it could be assumed that an effective analysis of the *MJC* entries would provide highly reliable indications of the most important thoughts of General Motors' employees regarding their jobs and related experiences resulting from their association with General Motors.

Methods of Content Analysis: Information concerning "employee thinking" was obtained by means of a content analysis of the letters in terms of themes discussed by the entrants. A preliminary list of themes was derived from 1,000 letters, representing every tenth entry from the first 10,000 letters. Copies of the 1,000 sample entries were read by five independent groups. Each submitted a list of themes to be coded as a basis for letter-content analysis. This yielded a total of over 150 topics or coding categories. Examination of the list, with particular reference to frequency of recurrence in the sample, made it possible to reduce the number of coding categories (thematic codes) by approximately one half. Further analysis suggested that not all of these were sufficiently sensitive to be useful in reporting results, and the number of themes employed in analyzing and reporting findings was reduced to 58. Both the character of the letters written by employees and the nature of the thematic coding structure are illustrated in the sample entry with annotated theme mentions reproduced on page 265.

Responsibility for analyzing and coding the letters was assigned to trained coding readers supplied with a carefully prepared manual embody-

ing detailed definitions of themes and illustrative materials drawn from the entries. Checks were made throughout the coding process to insure accuracy and consistency of coding. According to the investigators, "subsequent re-checks have indicated that the coding error is practically negligible" (4, p. 26) but no quantitative data on reliability of coding are presented. Although all entries were analyzed and coded, provisions were made for isolating a random sample of entries for detailed "pilot studies" by identifying every tenth entry as the letters went through the coding process. Correlations of .98 between total entries and the 10 per cent sample in the case of both *theme mention* and *plant participation* led the investigators to conclude that the sample is adequately representative of the entire population.

In the treatment of *MJC* entries, frequency of theme incident or mention has been accepted as providing a quantitative index of employee thinking about the job and working conditions, or at least as representing the "things that were talked about by employees" in their letters. The *percentage distribution* of theme mention [2] for all divisions of the General Motors Corporation is shown in Table 18, which presents data from the studies conducted independently by the National Industrial Conference Board and the General Motors Corporation. In order to facilitate detailed comparison of the two studies, findings have been classified by the author under general headings which appear to describe the items grouped thereunder.

It is apparent that the two investigations, involving the use of quite different procedures for surveying employee attitudes, yield findings which are, in the main, similar in terms of the relative emphasis placed by employees upon various aspects of the work situation. In this connection, it can, of course, be contended that the two methods were less different than was thought to be the case by the General Motors investigators. In particular, there seems reason to question the claim that *MJC* represented a *nondirective* approach to the survey of employee attitudes. The advice given by foremen who promoted the contest, the booklets distributed to entrants, and the requirement that letters deal only with favorable aspects of the job can properly be construed as very definite guidance not actually designed "to produce a state of mind that is open and undirected" or a climate in which the individual was free to express his unconscious desires and reveal his inner personality. On the other hand, the absence of formal questions or fixed rating categories undoubtedly introduces a greater degree of freedom for the respondent than is present in the more conventional employee-attitude studies.

Differences in the detailed findings of such studies, as well as the possi-

[2] The coding plan provided for only single coding of the themes mentioned, i.e., multiple mentions of a specific theme in any entry were treated as a single mention.

ble influence of the methods used and of other factors are discussed in other chapters. Of interest at the moment is the fact that three studies, conducted in different plants, at different times, and using three varieties of survey methods, yield consistent results in demonstrating that many objects and situations in the working environment promote or interfere with the satisfaction of personal needs and wants. In particular, the findings of employee-attitude surveys confirm the results of experimental studies in showing that motivation, as expressed through attitudes and sentiments, is far from being solely (or even primarily) a function of basic wages or of wage incentives. These large-scale attitude surveys strikingly underline the necessity, referred to in earlier chapters, of focussing attention upon the satisfaction of a large variety of needs and wants in a planned program for maximizing motivation and achieving optimum levels of satisfaction and morale in industry.

General Motors Corporation
My Job Contest
Letter Illustrating Coding Procedure
Entry No. 56-0994

	Theme Mention
My Job with General Motor's has given me what every man wants—*Security* for his family—I have been with General Motor's only five years, a short while compared to thousands of other employees. I consider it one of the luckiest days of my life when I was hired as a timekeeper at the _____ Division of General Motors. *In less than a month I was getting top rate. Since then I have been promoted to superviser's clerk and stand an excellent chance of becoming a salaried employee in the near future.* Knowing that a *chance for advancement* is possible is the best incentive I know of for doing a good job. I know from my own experience and from others that ability and ambition are recognized. More often than not a promotion is given to those who have shown that they have the ability and the ambition for a bigger and better job with the Corporation. A Key position with General Motor's is my goal. by starting at the bottom and being able to work yourself to a top position is the main reason I like my job with General Motors.	*Security* *Success Theme* *Opportunity for Advancement*

(From C. E. Evans and La V. N. Laseau, *My Job Contest* (Personnel Psychology Monograph No. 1). Personnel Psychology Inc. 1950.)

TABLE 18. *Findings of Two Employee-Attitude Surveys*

NATIONAL INDUSTRIAL CONFERENCE BOARD— *Five Most Important Factors* *	*Per cent rating by employees of 6 companies*	GENERAL MOTORS CORPORATION— *My Job Contest* †	*Per cent mention of 58 themes*
WAGES (INCLUDING SUPPLEMENTARY PAYMENTS AND DEDUCTIONS)			
Compensation (base pay)	27.9	Wages	40.9
Profit-sharing plans (excluding employee savings plans)	15.7	Benefits from wages	21.5
Extra-compensation plans (all types of bonuses)	7.6		
Your burden of state and federal taxes	2.5		
SECURITY			
Job security—employment stabilization	44.7	Security	22.8
Labor turnover rate (its effect on morale of employees)	2.2	Pride in stability of company	21.5
		Steady work	16.3
		Pride in years of service	7.1
SUPERVISION			
Supervisor's temperament and personality	16.3	Supervision	47.9
Quality of supervision	10.4	Management	31.3
Contact with executives	7.0	Teamwork	21.4
Training of supervisors and foremen	4.5	Fair treatment	15.7
Training of executives	1.3		
OPPORTUNITY FOR ADVANCEMENT			
Opportunity in the company for advancement	30.7	Opportunity for advancement	25.6
Practice of hiring outsiders for responsible jobs vs. "promotion from within"	11.1		
TRAINING FACILITIES			
Training of wage earners (rank-and-file employees)	4.4	Training, education, experience	28.7
Induction training (including orientation)	0.8		

* Adapted from *Factors Affecting Employee Morale* (Studies in Personnel Policy No. 85), National Industrial Conference Board, 1947.

† Adapted from *Personnel Psychology Monograph* No. 1, Personnel Psychology Inc., 1950.

NICB—*Most Important Factors*	*Per cent rating by employees of 6 companies*	GMC—*My Job Contest*	*Per cent mention of 58 themes*
		JOB STATUS	
Type of work	18.5	Work type	33.7
		Pride in important job	20.2
		Pride in building good product	1.8
		BENEFIT PLANS (HEALTH, INSURANCE AND RETIREMENT)	
Employee financial benefits (group life insurance, sickness insurance, pensions)	24.4	Insurance	23.7
		Medical facilities	11.5
		Hospital plan	8.9
Company medical and health programs	10.4	Savings plan	7.9
		Pension plans	4.6
Employees savings and thrift plans	5.4		
		HOLIDAYS AND VACATIONS	
Vacation and holiday practices	16.4	Paid vacation	15.1
		Paid holidays	2.5
Leave-of-absence practices (nonmilitary)	3.3	Leave of absence	1.8
		EMPLOYEE ACTIVITIES AND SERVICES	
Employee feeding facilities (restaurants, cafeterias, canteens, mobile kitchen)	11.2	Recreation	14.0
		Suggestion plan	10.5
		Parties and picnics	6.6
Employee suggestion systems	4.1	Cafeteria	5.9
		Parking facilities	2.4
Social and recreational activities	3.3		
		PERSONNEL POLICIES	
Practice of informing you of your job status (both of your success and failures)	19.2	Nondiscrimination	14.3
		Job descriptions	10.1
		Personal history	7.2
Employee merit or performance rating (an organized or systematic method of appraising your performance)	10.1	Suitable placement	6.2
		Personnel policies	5.4
		Personnel department	3.4
		Information services	3.2
		Seniority	1.3
Formal plans for determining basic rates of pay (job evaluation programs)	6.1		
Personnel counselling	3.8		
Frequency and method of paying wages	3.3		
Employment of mixed races	3.3		

Continued on next page

TABLE 18 (*continued*)

NICB—*Most Important Factors*	*Per cent rating by employees of 6 companies*	GMC—*My Job Contest*	*Per cent mention of 58 themes*
Employment methods, including selection, interviewing and placement	2.9		
Employment record—accuracy and completeness of employees' history with company	2.6		
Termination allowances	1.8		
Bulletin boards, house organs and other methods of disseminating information to employees	1.5		
Policies and practices regarding discharge of employees	1.1		
Employment of mixed nationalities	0.9		
Single or married	0.9		
Production drives—incentive ideas stimulated by company	0.2		
MANAGEMENT-LABOR RELATIONS			
Company's attitude towards employee (its interpretation of policies—whether liberal or conservative)	13.6	Employee relations	5.8
Labor unions	5.8		
Methods of handling grievances	3.5		
Laws affecting relations between employers and employees	2.6		
Type of union leadership	1.6		
Production drives—based upon cooperative effort of management and employees	1.0		
WORKING CONDITIONS			
Physical working conditions (on the job)	14.4	Tools, methods and equipment	16.6
Total hours worked per day per week	11.7	Cleanliness	11.1
Rest periods	7.2	Working hours	8.5
Types and conditions of tools and equipment	6.2	Air and temperature	6.0
Shifts (time starting and finishing work)	5.4	Lighting	5.4
Music on the job	5.2	Modern plant	3.5
		Washrooms	3.2
		Locker rooms	1.1
		Rest periods	0.8

NICB—*Most Important Factors*	*Per cent rating by employees of 6 companies*	GMC—*My Job Contest*	*Per cent mention of 58 themes*
Physical conditions of recreation rooms, lavatories, and other personal facilities	4.5		
Length of lunch period	3.6		
Smoking privileges	2.9		
Policy with respect to uniforms (or regulating working attire)	1.6		
SAFETY			
Accident-prevention activities	5.7	Safety	18.8
THE COMPANY (ITS PRODUCTS, REPUTATION AND STATUS)			
Company's reputation with public	7.4	Pride in company	32.2
Type of company product (its social importance during war)	6.2	Pride in product	22.8
Knowledge of company's products	4.9	Comparison with other companies	9.4
Type of company product (its social importance during peacetime)	4.5	Company and America	8.7
Company's reputation with its customers	3.6	Free enterprise	8.0
Knowledge of competitors' products	1.0	Pride in community relations	2.6
General outside physical appearance of plant	1.0	Open house	0.3
Location of plant ("right or wrong side of tracks")	0.9		
Your knowledge of company's finances	0.5		
Knowledge of company's customers	0.3		
PERSONAL ACHIEVEMENT			
Your own temperament—ability to get along with others	9.2	Comparison—other jobs	7.5
Your confidence in yourself	7.6	Success theme	3.1
ASSOCIATES			
Friendly attitude of all employees toward each other	0.1	Associates	41.2

Continued on next page

TABLE 18 (*continued*)

NICB—*Most Important Factors*	*Per cent rating by employees of 6 companies*	GMC—*My Job Contest*	*Per cent mention of 58 themes*
CONDITIONS EXTERNAL TO PLANT AND JOB			
Transportation facilities (to and from work)	3.9	Plant location and transportation	3.5
Domestic relations and home conditions	1.9		
Housing facilities	1.5		
Your family's attitude toward your company and job	0.1		

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14

The Assessment of Employee Morale

COMPANIES which conduct employee-attitude surveys are almost invariably interested in obtaining some kind of an over-all score which gives an impression of the employee's general "attitude toward the company, its policies, and its treatment of its personnel" (13).

The Computation of a Morale Index from an Interview Survey and Its Use in Departmental Comparisons of Morale

A frequent practice in industry has been to arrive at such an over-all score, generally known as a *morale index*, from either all or some of the questions included in the survey or from special scales used in conjunction with questionnaires (23a). An investigation by Houser, a pioneer in employee-attitude surveying, illustrates the use of data from a highly patterned interview in arriving at an over-all morale score and in comparing levels of employee morale in various departments of a company (21). In this study, conducted in the 1920's, nineteen features of the work situation, subsumed under the captions of (1) *Adjustment to the Job;* (2) *Supervision;* (3) *Incentives;* (4) *Participation-Expression;* and (5) *General Working Conditions and Facilities,* were selected as representing the most important elements in determining the relationship between employees and the organization.

A random sample of employees in the organization was then interviewed individually by a skilled interviewer—an outsider without knowledge or preconceived ideas about the organization. The interview was conducted, in this case, by means of carefully standardized questions, put always in the same way with the same inflections. The following ques-

tions, asked in connection with "adding to ability," considered to be one aspect of *Incentives*, are characteristic of the type used in this investigation. "*Are you learning things on your job that will be of use to you later on, either on this job or on a higher one? Are you getting a chance to learn and study some other job? How much do you feel that you are growing on the job?*" (21, p. 177).

The employee's answer was graded by comparison with a rating scale consisting of five "type" responses, separated by approximately equal intervals from the viewpoint of degree of feeling. This scale had been memorized by the interviewer so that there was no need of referring to it in the course of the conference. The following "type" responses, used in grading the answers to the questions on "adding to ability," give an indication of the nature of the scoring criteria.

"5. *The company certainly does encourage me and offers me every opportunity to develop and make progress. I'm sure I am being given every chance I could be.*

"4. *Yes, there are a number of pretty good chances ahead. I believe I'm getting some new knowledge and ability every day. It could be a little better, perhaps, but the company takes an interest and that's an encouragement.*

"3. *The chance for learning here is all right, I guess—about average —no kick as far as I can see.*

"2. *You've got to pick most of it up for yourself. The job doesn't give you much chance. I've learned about all I can. I feel that more interest should be shown along this line.*

"1. *Don't think I'm getting along at all! I'm in a fierce rut! No chance to learn! There's no encouragement at all to try to learn or go ahead*" (21, p. 178).

Each response was assigned a numerical value ranging from "1," lowest possible score indicating unqualified hostility, through "3," the middle point, indicating neutrality or indifference, to "5," the highest possible score indicating unqualified enthusiasm or favor. The average of the scores on responses to all the questions was taken to represent the over-all level of morale of the individual employee. By averaging the scores for employees in individual departments it becomes possible, as shown in Figure 21, to compare the over-all levels of morale characterizing groups of employees in different departments.

It is apparent, from Figure 21, that there can be wide differences in morale among different departments of the same company. In fact, as shown in a study of four organizations reported by Hull (23), variations in the level of employee morale from department to department within

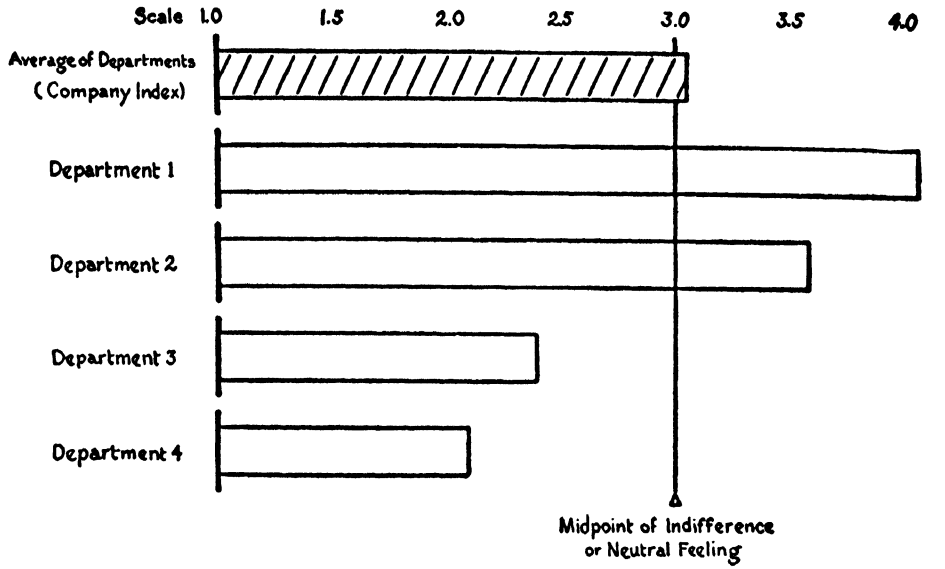


Figure 21. Departmental Variations in Employee Morale *

a single company can be far greater than the differences in average morale scores among the companies. *Determination of the sources of such differences lays the foundation for constructive action directed towards the improvement of the personnel situation in departments characterized by low morale scores, as well as in the company as a whole.*

Computation of a Morale Index from an Attitude Scale and Its Use in Comparing Occupational Groups

Morale scores may be used not only for the comparison of levels of morale in various departments and companies, but to investigate the morale of various segments of the employee population. Uhrbrock (49) furnishes a classic example of utilization of an employee-attitude survey for this purpose. In this case, use was made of an *attitude scale* constructed in accordance with principles formulated by Thurstone (46, 47) to obtain the basic data for appraising employee morale. Fifty statements with scale values from 0.6 to 10.5, including items pertaining to varied company policies and practices, were included in the final employee attitude scale which, upon analysis, was shown to have a reliability (odd-even) of .891 ± .007 (corrected by the Spearman-Brown prophecy formula for length). The following illustrate both the types of statements used and their scale values

* By permission, from J. D. Houser, *What the Employer Thinks*, Harvard University Press, 1927.

Scale value

10.4 *I think this company treats its employees better than any other company does.*

8.9 *A man can get ahead in this company if he tries.*

8.5 *The company is sincere in wanting to know what its employees think about it.*

5.4 *I believe accidents will happen no matter what you do about them.*

5.1 *The workers put as much over on the company as the company puts over on them.*

4.1 *Soldiering on the job is increasing.*

3.2 *I believe many good suggestions are killed by the bosses.*

2.5 *I think the company goes outside to fill good jobs instead of promoting men who are there.*

1.5 *In the long run this company will "put it over" on you.*

The attitude scale, with the statements arranged in random order in so far as scale values are concerned, was presented to 3,934 factory employees, 96 clerical workers and 400 foremen in various plants of the company, with appropriate instructions, including the request that the blanks be returned without signatures.

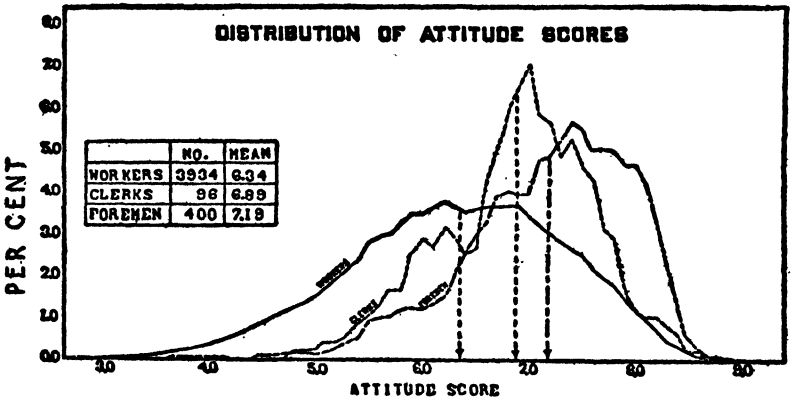


Figure 22. Morale Scores of Factory Workers, Clerical Workers, and Foremen *

The average scores of each of the three groups of employees and the total distribution of scores are shown in Figure 22. Differences among the average scores of the three groups are statistically significant. It is apparent that the average score of factory workers (6.34) is approximately at the midpoint of the scale (6.0) and that the distribution is approximately normal. In contrast, the average score of clerical workers (6.89)

* By permission, from R. S. Uhrbrock, "Attitudes of 4,430 employees," *J. Soc. Psychol.*, 1934, 5, 365–77.

and the skewed distribution of measures shows a considerably more favorable attitude towards the plant than exists among factory workers. Even more favorable is the attitude of foremen with an average score of 7.19 with few scores below 5, and a considerable number of scores at the higher end of the scale. Further analyses also showed slight, although in some instances statistically significant, differences among the various factories operated by the company, with average morale scores for factory worker groups ranging from 5.97 to 6.76, and in the case of foremen from 6.49 to 7.59.

The Relation between Specific Factors and the Morale Index

The study by Houser (21), described on pages 271–273, provides an illustration of a morale index computed from responses given to questions asked during an interview. There are also many instances where the morale index is computed by totaling scores on all or a selection of items in a written questionnaire. One example of this is to be found in the Florida Power and Light Company survey (43), described on pages 325–326. Another illustration appears in surveys conducted by Arthur Kolstad Associates, in which a morale score is computed separately for each employee on the basis of answers to ten general attitude questions included, with others, in the survey questionnaire. In this approach, the employee who has a morale score of 100—the maximum on this scale—is one who

"1. *Believes his company to be one of the very best of all companies as a place to work.*

"2. *Thinks the management of his company care more about the welfare of its employees than does the management of any other company.*

"3. *Knows of no other company where he would rather work if he could get an equally good job elsewhere.*

"4. *Blames himself and not the company for any dissatisfaction he may have experienced on the job.*

"5. *Thinks the company does much more than one might expect to promote good working relationships between himself and the people with whom he works.*

"6. *Feels that he is really regarded as a part of the organization.*

"7. *Thinks the management always fair with people in jobs such as his.*

"8. *Thinks the people just above him are always fair with him.*

"9. *Knows of no other company that treats its employees as well as his does.*

"10. *Believes that he can be sure of his job as long as he does good work*" (23).

In some instances, simultaneous use is made of a number of survey tools, including frequently an *attitude scale*, such as described on page 273, a *questionnaire*, and a *data sheet* for obtaining information on the

employee's age, sex, length of service, department, job status, etc. In such cases, the morale index is generally derived from the attitude scale, which may also be broken down to furnish a distribution of responses to specific items included in the scale. The *questionnaire* provides data on employee attitude toward specific factors in the plant situation, particular aspects of the industrial-relations program, etc. Illustrative analyses of questionnaire items, taken from a report by Bergen, are presented in Table 19. Through such analyses, according to Bergen, "the efficacy of various practices is established and the need for revision in present practices or installation of new practices determined" (6, p. 55). The *factual data* are employed in stratifying the working force in relation to department, job, age, sex, etc., for investigating differences in morale and in attitudes toward specific policies and practices.

The use of multiple devices—most particularly where the measure of morale and factual data are obtained as independent criteria—provide an opportunity for a series of significant comparisons. In particular, it becomes possible to relate the degree of satisfaction or dissatisfaction with specific conditions and policies to morale. In general, although a variety of statistical methods have been used, this involves a determina-

TABLE 19. *Results of a Multiple-Choice Questionnaire* (after Bergen)

HOURLY WORKERS

Question: "*When business gets really bad, which of the following steps do you think the company should take?* (Check the *one* you think should be *done* first.)"

	Per cent
Cut working hours and spread the work to everybody	69.7
Lay off some people and thus give more hours to those who remain	6.8
Reduce salaries and wages	0.6
No answer	22.9
Total	100.0

SALARIED WORKERS

Question: "*When business gets really bad, which of the following steps do you think the company should take?* (Check the order in which you believe the steps should be taken—1, 2, 3, 4, 5, 6.)"

	Average position
1. Reduce or cut out dividends	1.30
2. Cut advertising and sales promotion expense	3.15
3. Reduce salaries	3.29
4. Reduce factory workers' wages	3.66
5. Reduce forces	3.92
6. Take losses and risk going out of business	5.25

tion of the percentage of employees with *high* and *low* morale, respectively, who express satisfaction or dissatisfaction with specific factors in the plant situation covered in the questionnaire. It thus "becomes possible to rank the specific factors in the company's personnel program in the order of their significance as determinants of general morale" (6, p. 56). As indicated in later sections of this chapter, caution must be exercised in the evaluation of such relationships. Nevertheless, as will also appear in later chapters, information of considerable value in the assessment of over-all attitudes has been derived from such comparisons.

EMPLOYEE MORALE IN RELATION TO AGE AND LENGTH OF SERVICE

The analysis of employees' attitudes and morale frequently includes breakdowns with respect to age and length of service. In fact, a survey conducted by the National Industrial Conference Board (13), in 1951, shows that such breakdowns are second in frequency only to breakdowns by departments. Illustrative of the analysis of age and length of service in relation to morale is a study by Benge and Coppell (5). In this, a questionnaire, designated an "opinion ballot," was used to obtain the reactions of 722 employees in five widely scattered plants of a confectionary manufacturing company (a) towards 28 items pertaining to the employee's job and (b) towards 20 topics relating to company policies, activities and personnel services. Replies to the 28 items were used in the computation of morale indices, weighted in accordance with the number of responses to each item.

Such indices were calculated for each of the 28 items when employees were classified by *age* and *length of service* as well as on the basis of departments, shifts, etc. Indices for each of these classifications were then combined to obtain composite attitudes *toward job, toward boss, toward company*. Finally, over-all or average *morale indices* were computed and comparison made between age groups, length-of-service groups, departments, plants, etc.

As appears in Figure 23, the comparison of *age* groups showed that, in the five plants under consideration, employees under 20 years of age had relatively high morale; those between 20 and 29 years of age, relatively low morale, and that morale rises again with each successive grouping beyond 30 years of age. Similar results appeared in the comparison of *length-of-service* groups. As shown in Figure 24, morale was found to be highest among employees with less than two years of service; the level of morale fell consistently with increasing length of service, with a slight upturn occurring among employees with ten and more years of service.

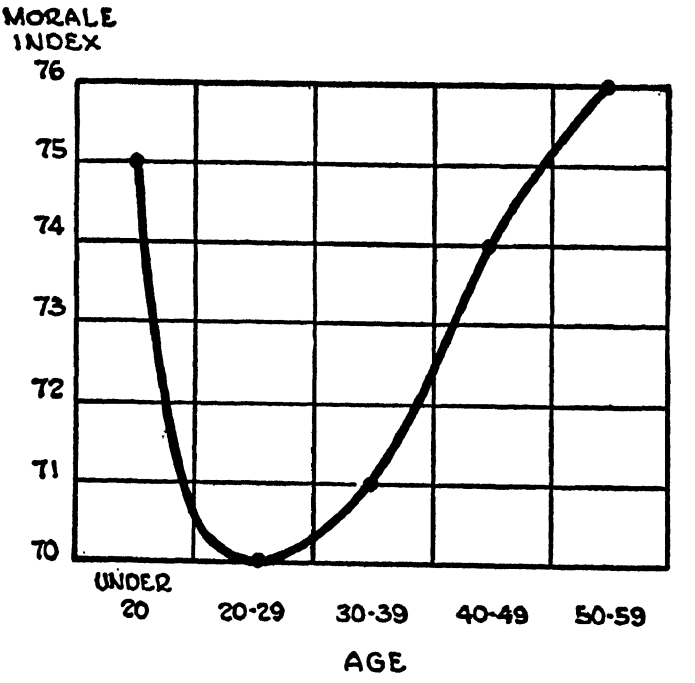


Figure 23. Morale According to Age *

Progressive deterioration in employee morale following the first few years of service has also been observed in other surveys. In a study in a manufacturing company, by Bergen, male employees with two to seven years of service were found to have lower average morale scores than those with shorter or longer service (6). Findings from plant-wide samplings of rank-and-file manufacturing employees, conducted by the Industrial Relations Center, University of Minnesota, showed a statistically significant relationship between length of service and over-all attitudes toward the company, in that employees on a job five years or more have higher average attitude scores than those on a job from one to four years (48). These findings may appear to be inconsistent with those cited above, but data are not broken down in a manner to make possible exact comparison with other studies. In the same investigation, employees 45 years of age and over were found to have higher average attitude scores than did employees 30–44, and 20–29 years of age, respectively.

Hull has suggested that the decrease in morale following the first few years of service "is probably a process of disillusionment involved in the average worker's adjustment to the job." According to this explanation, the worker is filled with enthusiasm at first, the job is more interesting

* By permission, from E. J. Benge and D. F. Copell, "Employee morale survey," *Modern Mgmt.*, (January) 1947, 7, 19–22.

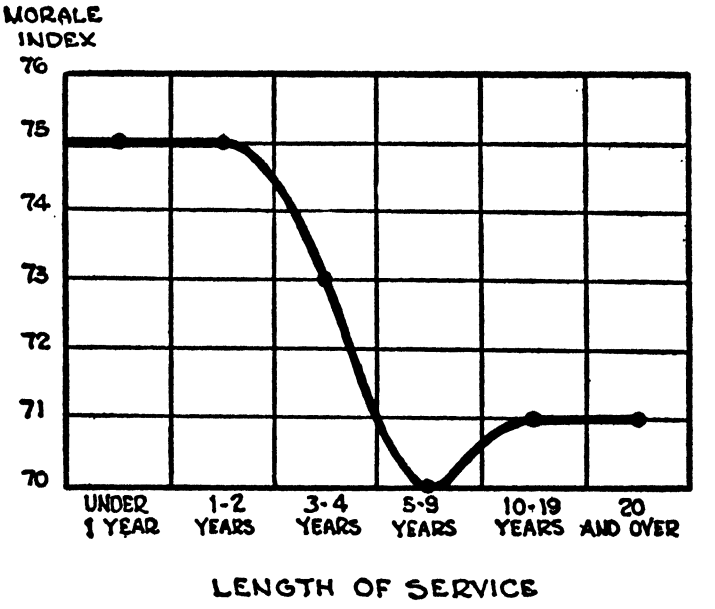


Figure 24. Morale According to Length of Service *

because it is new and his hopes may be high. "Perhaps this sense of achievement is lessened after the early period of easy progress is past; certainly there is no opportunity for all ambitious or hopeful newcomers to get ahead as fast as they may at first hope." On the other hand, according to Hull, "employees who remain on the payroll for more than five or ten years are a selected group, having survived the constant process of elimination through dismissal or resignation. If they are of outstanding ability that ability may have been recognized. Those who have not advanced have accepted the fact that there is not room at the top for all and have perhaps resigned themselves to their fate, a fate which does not seem so bad after all" (23, p. 168).

Support for this viewpoint is suggested in the fact that in the six-plant 1947 National Industrial Conference Board survey (14), described in Chapter 13, "opportunity for advancement" was rated as the *most important* factor by very few employees with less than six months of service and by not a single one of the 20-year-and-over employees. Similarly, this factor appeared very infrequently among the *five most important* factors as rated by newly hired and longer-service employees.

As suggested on page 236, comparisons between age and length of service groups suffer from the fact that consideration is generally not given to possible differences among the jobs held by the various subgroups.

* By permission, from E. J. Benge and D. F. Copell, "Employee morale survey," *Modern Mgmt.*, (January) 1947, 7, 19–22.

Furthermore, in most instances, no attempt is made to determine the *relative* influence of age and length of service upon morale. Since employees grow older with increasing length of service, it is to be expected that the same trends will appear with increasing age as are observed with increasing length of service. Comparison of Figures 23 and 24 suggests that age is a more potent factor than length of service in producing the increment of morale which has been observed among workers with considerable length of service. This possibility appears particularly in findings reported by Hull which show, as indicated in Figure 25, that in spite of the deterioration of over-all morale with increasing length of service, average morale scores moved upward with age within separate length-of-service brackets (23).

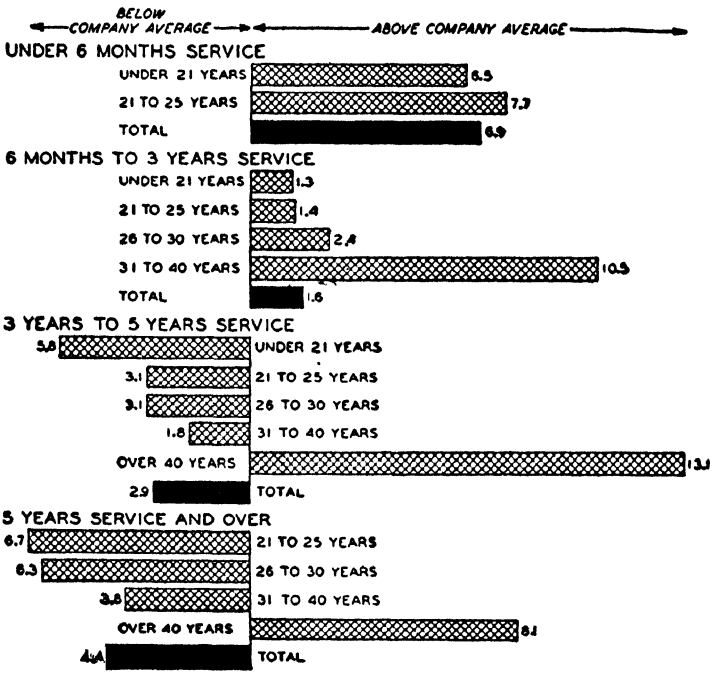


Figure 25. Morale Scores by Age Groups with Length of Service Held Constant *

Such findings may be of particular significance in considering the employment of older people, since they suggest that older applicants do not present problems in so far as attitudes towards the company and the job are concerned. On the other hand, the data bearing on the relation be-

* By permission, from R. L. Hull, "Measuring employee attitudes—a proving ground for personnel policy and practices," *Conference Board Mgmt. Record,* (November) 1939, 165–72.

tween length of service and morale suggest that management cannot necessarily depend upon the satisfaction and loyalty of employees with long years of service in itself to carry the plant through periods of potential or actual labor strife. Of interest in the latter connection is the fact that of three age groups subjected to analysis in the 1947 National Industrial Conference Board study (14), a significantly larger percentage of oldest employees (50-years-and-over group) indicated a conviction that labor unions have an important effect on their attitudes towards their job and company, in spite of the further fact that less than one per cent of all employees in the six companies studied gave this factor top ranking (Table 17).

Problems in the Interpretation and Evaluation of Morale Indices

From the studies described in earlier sections, it is apparent that a well conceived index can serve useful purposes in giving an impression of over-all morale and in making meaningful comparisons within the plant. Such an over-all score also furnishes a practical medium for arriving at broader generalizations concerning employee morale in American industry when a standard method for computing the morale index is used in a sufficiently large number of companies. However, in the treatment of morale indices, as of other aspects of attitude surveying, there are instances of oversimplification and overgeneralization, and of other weaknesses and deficiencies in dealing with the data. These appear particularly in analyses of relationships between the morale index, on the one hand, and specific attitudes, on the other.

THE ANALYSIS OF FACTORS RELATED TO MORALE

As noted earlier, the purpose of such comparisons is to identify the favorable and unfavorable attitudes with respect to the work situation which account for *high* and *low* morale, respectively. The usual assumption in such analyses is that a specific factor is a significant influence in determining low morale when employees with *low* morale scores more frequently express unfavorable attitudes toward the factor in question than do workers with *high* morale scores. Similarly, it is assumed that a specific factor is a determinant of *high* morale if a large proportion of workers with *high* morale scores exhibit favorable attitudes toward the factor. If the difference in percentages between such workers in attitudes toward the factor is slight, it is looked upon as having little or no influence as a determinant of morale level (23, 37).

The use of this method without reference to other figures can introduce serious errors into the evaluation of the morale situation in a plant.

The character of such errors is illustrated by Kornhauser with reference to an investigation, by Houser (22), in which it was reported that 93 per cent of employee responses revealed a feeling in favor of higher pay. However, *in ranking* the relative importance of job factors, pay appeared almost at the foot of a long list of such factors since, when the "method of differential comparison" described above was applied, employees with high morale scores were almost as frequently in favor of higher pay as those with low morale scores. "Clearly," states Kornhauser, "all that this last conclusion can mean is that differences in attitude about pay were not important in accounting for differences of morale *within that company*. But what of morale in that company compared with other companies? Surely management is led to a disastrously complacent conclusion when it is told that even though 93 per cent of its employees think that they should have more pay this is a relatively unimportant influence upon their morale. The procedure is in danger of arriving at similarly misleading conclusions wherever it is employed" (37, p. 138).

Other considerations, of the kind discussed in Chapter 12, enter into the evaluation of conclusions from survey findings concerning morale and its determinants. Here, as in other comparisons, there is a tendency to ascribe causal relations to a factor without considering the highly intricate interrelationships among all the factors which are identified as having significance in determining the level of morale. Also, in some instances, employees are asked to give direct ratings concerning the relative significance of a list of work characteristics as a means of arriving, among other things, at the importance of each in determining over-all attitudes. As pointed out in the discussion of the 1947 National Industrial Conference Board survey described in Chapter 13, employees are in such cases required to make many implicit assumptions in defining the characteristics and also concerning the range of variation within any of the items which are being ranked. Interpretation of findings must take into account the influence of differences in such assumptions upon the ranking of factors (37). Nevertheless, in spite of these and other hazards of interpretation, comparisons within the company can be very valuable. Furthermore, comparison of results bearing upon morale obtained from a variety of company surveys represents a useful step in arriving at generalizations concerning the potency of particular incentives and determinants of morale, and in formulating inferences concerning motives underlying behavior in industry.

Conceptual and Operational Definitions of Morale

As indicated on page 240, a disturbing factor in arriving at broad generalizations concerning morale is the almost consistent failure of surveys

(and also of experimental studies) to deal with the problem within an appropriate context of theory. As noted, the most usual tendency has been to define the dimensions of morale in terms of what is revealed by the investigation. Another trend has been to leave the interpretation of this term to the subjects of the investigation. In general, there has been considerable neglect of the dictum, as expressed by McNemar, that "two jobs need to be done: *the determination of the dimensions of morale and the construction and validation of scales for measuring these dimensions*" (39a, p. 365). In only relatively few instances, as in studies by the Survey Research Center (29, 30), has the design of the study been developed around clearly stated operational or conceptual definitions of morale. There appears to be urgent need for the wider use of sound theoretical concepts in planning investigations of morale and of its determinants.

The nature of available *conceptual* definitions, as derived from personality theory and social theory in psychology, is illustrated in three definitions, which take "cognizance of three different realms of discourse," resulting from a Conference on Psychological Factors in Morale held, in 1940, under the auspices of the Division of Anthropology and Psychology, National Research Council. These, described by Child as useful guides to further work, are as follows

> "1. (The individual-organic emphasis). The term *morale* refers to a condition of physical and emotional well-being in the individual that makes it possible for him to work and live hopefully and effectively, feeling that he shares the basic purposes of the groups of which he is a member; and that makes it possible for him to perform his tasks with energy, enthusiasm, and self-discipline, sustained by a conviction that, in spite of obstacles and conflict, his personal and social ideals are worth pursuing.
>
> "2. (The group emphasis). *Morale* refers to the condition of a group where there are clear and fixed group goals (purposes) that are felt to be important and integrated with individual goals; where there is confidence in the attainment of these goals; and subordinately, confidence in the means of attainment, in the leader, associates, and finally in oneself; where group actions are integrated and cooperative; and where aggression and hostility are expressed against the forces frustrating the group rather than toward other individuals within the group.
>
> "3. (Emphasis on individual-within-the-group on any specific occasion). Given a certain task to be accomplished by the group, *morale* pertains to all factors in the individual's life that bring about a hopeful and energetic participation on his part so that his efforts enhance the effectiveness of the group in accomplishing the task in hand" (12, p. 393).

Similar conceptualizations of morale are found in definitions formulated by other psychologists, including Allport (1, p. 4), Watson (50, p. 275, 51), Lippitt (38, p. 120), and others. These are generally derived

from realms of discourse considered by the ten psychologists involved in the National Research Council conference on morale and, in general, there is considerable overlap among the definitions. Other definitions are more specifically oriented from the *operational* point of view (7, 19). So, according to Blankenship,

> "As the term morale is used ordinarily by the employer, laborer, and psychologist alike, it refers to a feeling of 'togetherness.' There is a sense of identification with and interest in the elements of one's job, working conditions, fellow workers, supervisors, employers, and the company. The more a worker possesses such feelings, the higher his morale" (7, p. 299).

There are common threads in the definitions of morale presented by various social scientists. Included in a number is the concept of striving toward the attainment of future, as contrasted with immediate goals. Reference is found to release from tension, or the attainment of physical and mental well-being, but again with respect to long-term rather than to immediate adjustment. Most common to both conceptual and operational definitions is the emphasis upon *group* aspirations and the integration of individual goals with those characterizing the *group*. This characterization of morale has been well summarized by French in the statement that "The abundant literature on morale contains many and varied definitions of the term, but in those definitions which imply any operations for observing morale (and the number of such is considerably less than the total) there seems to be tacit agreement that the term denotes aspects of group behavior indicative of group effectiveness . . . If it can be shown that groups which achieve their goals efficiently exhibit a high degree of cohesiveness, think well of their leaders, do not fight much among themselves, agree on their objectives, have confidence in their equipment, and so on, then these manifestations represent high morale; but only if a relationship to goal attainment can be shown" (16, p. 465).

Such emphasis upon the group is found also in the succinct definition given in Chapter 1, viz.: "*Morale is an attitude of satisfaction with, desire to continue in, and willingness to strive for the goals of a particular group or organization*" (44, p. 1). Acceptance of this viewpoint leads immediately to a highly significant problem in research, namely that of identifying *the group* (from the many in the industrial plant with which the individual is associated) which may exercise the most potent influence in the development of high morale levels (3, 8, 9, 17). Thus, studies of the American soldier during World War II, reported by Stouffer *et al.* (45), appear to indicate that in the case of the combat soldier, identification and loyalty to the Army as a whole was far overshadowed by his identification and loyalty to his own *primary group*, i.e. to the smaller unit of the Army to which he was attached. There is

considerable evidence from studies cited in other chapters of this volume that in the industrial scene morale may be directed toward the small work group characterized by goals which can be in conflict with those of the larger social organization, the company. This problem has been considered in earlier chapters [1] and is also dealt with further in Chapter 23.

As is apparent from the consideration of definitions of morale in preceding pages, diverse theoretical positions may nevertheless be taken in undertaking research on morale. The important need, in the design of studies, is for some commitment in the way of "psychological formulations which will serve to organize thought and inquiry" and provide guideposts for broad generalizations concerning the determinants and significance of morale. In this, as in other areas of attitude surveying, "the development and improvement of these interpretative constructions, through industrial studies as well as by all other means, may prove to be a most valuable contribution psychologists can make in this field" (37, p. 143).

PERFORMANCE OR "BEHAVIORAL" INDICES OF EMPLOYEE MORALE

In the investigations discussed above and in many others, as illustrated in the work of Kolstad (36), Kerr (31, 34), Harris (20), Katz (25), and others, interview, questionnaire, or attitude-scale items have been combined to yield a single over-all index of employee morale. Attention has also been directed towards the possibility of using elements of individual work performance or plant behavior to provide an *objective index of employee morale.*

Turnover and Absenteeism: According to French, evidence of a dynamic sort concerning morale might be obtained by observing group reactions in *standardized situations* (16). Suggestive possibilities here, he adds, are false news announcements (40) and various situations of a more conventional type such as intergroup competitions, standard group problems, etc. Among objective indices which have received considerable attention are *absenteeism* [2] and *turnover.* For example, investigations by Mayo and his associates in metal-working plants and in the aircraft industry, described in Chapter 11, were based on the assumption that absenteeism and turnover rates represent indices of involvement in achiev-

[1] See particularly pages 176–178; 206–216.

[2] Evidence that absenteeism may be a form of group behavior is found in a study, by Walker, which showed that a distribution of absences in industry assumes the form anticipated from the application of Allport's J-curve hypothesis of conforming behavior. Sec K. F. Walker, "The application of the J-curve hypothesis of conforming behavior to industrial absenteeism," *J. Soc. Psychol.*, 1947, 25, 207–16. F. H. Allport, "The J-curve hypothesis of conforming behavior," *J. Soc. Psychol.*, 1934, 5, 141–83.

ing the objectives of the work group (15, 39). Consideration of findings from studies in industry has led Young to conclude that absenteeism and turnover are "symptoms of and causes of unsatisfactory working conditions, poor supervisory-employee relations and relations between employees" (52). According to Baldamus and Behrens, comparison of absenteeism for different days of the week can yield an objective measure of employee morale. The underlying assumption here is that "owing to cumulative fatigue, the number of absentees in a factory should be expected to increase from Monday to Friday; if in reality the opposite happens, factors other than fatigue or working conditions (which do not change from day to day) must be involved, notably morale" (4, p. 831).

Both absenteeism and turnover have advantages as potential indices of morale because of the objectivity and accuracy with which such events can be recorded. Furthermore, studies conducted in South Africa, by the National Institute for Personnel Research, present the interesting possibility of identifying "absent prone" individuals and of predicting from a year's record who will be the "absence offenders" in the succeeding years (2). This would furnish the possibility of taking preventive action with respect to the individual worker which, *under the assumptions stated above,* would constitute action toward the improvement of morale. However, studies by Kerr (32, 33, 35) have suggested that different types of absenteeism, e.g., total, excused, unexcused, vacation, are unrelated and that absenteeism is far from being a unitary trait. This conclusion is derived from intercorrelations of diverse variables, such as departmental average job satisfaction; number of employees in department; various types of absenteeism; degree of incentive work; labor turnover, etc. Furthermore, "triple audit" techniques employed by the Industrial Relations Center, University of Minnesota, have shown, in a small number of manufacturing plants, that while "employees with no absenteeism in the past 6 weeks have higher average attitude scores than those absent 3 or more times," the relationship is not statistically significant (48, p. 46). Furthermore, findings from the South African study, referred to above, have suggested that the tendency toward frequent absences, i.e. "absence proneness," is, at least in part, "person-centered" (2). In other words, the indications are that absenteeism is a function of health, aptitude for the job and social background rather than exclusively (or perhaps even in large part) an index of morale.

Efficiency as an Index of Morale: Such facts suggest that much more is needed in the way of research before an objective record of absenteeism can be substituted for morale indices derived from interview, questionnaire and attitude-scale items. Another approach to the prediction

of employee morale from objective data is to be found in the work of Giese and Ruter (18). Underlying this is the viewpoint that although the use of correctly designed questionnaires has produced valuable (and even startling) results, the questionnaire method is "cumbersome, costly, and slow" and fails to produce findings which are cost accountable. A combination of six objective performance measures, including *per cent productive efficiency, per cent error efficiency* NOT *affecting customers, per cent errors efficiency affecting customers, per cent turnover, per cent late, and per cent absent* yielded a correlation of .71 with departmental morale scores obtained *through the use* of a conventional questionnaire in a retailing organization. From such data, the conclusion is drawn that the use of such objective factors for morale measurement "is not only practical, but meaningful to executives in business and industry."

It is to be noted that (a) this approach involved the use of a "morale questionnaire" as the criterion; (b) it orients the problem of morale as being primarily associated with the objective of reducing costs; (c) both the factors and relative weightings are probably specific to the particular business. Nevertheless, the study suggests possibilities in the use of work performance factors for the assessment of morale.

FACTOR ANALYSES OF MORALE

During recent years, investigators have undertaken the investigation of the dimensions of morale through the use of factor analysis techniques. This approach has been taken in both military (44) and industrial situations (24, 26). Preliminary reports of such research by the Survey Research Center, University of Michigan, have suggested that at least four factors are necessary to account for observed interrelations among morale items, namely, *job satisfaction; mobility or progress; supervision,* and *satisfaction with the company* (28, 42). These factors were selected by factor-analyzing a morale questionnaire using the *multiple group method.* However, according to Schooler, if the criteria for rotation be altered, "it is conceivable that the total configuration could be explained by factors that have meaningful labels and are not the same as those already discussed" (42). Schooler also notes that when the *centroid method* is applied to the same questionnaire data, changes occur in the factors extracted. In particular, the mobility factor does not appear. Nevertheless, the results show that one factor alone does not sufficiently account for the correlational matrix. Findings from this study do not support the view that there is a unitary or general "morale factor" and suggest, on the contrary, that morale "is in fact a complex of several kinds of attitudes."

Research, involving the application of factor analysis methods by the

Employee Attitude Research Group of the Industrial Relations Center at the University of Chicago has also suggested ". . . that employee attitudes and morale are a complex—a configuration of many forces and variables" (10). Such research, associated with the development of the SRA Employee Inventory, has led to the tentative identification of seven independent factors or dimensions of morale, viz., (1) *Personal Rewards;* (2) *Immediate Supervision;* (3) *Company Operations;* (4) *Psycho-physical Conditions of Work;* (5) *Job Satisfaction;* (6) *Work Relations;* and (7) *Integration in the Organization.*

In discussing progress in the factorial analysis of the dimensions of morale, Burns carefully notes the tentative character of such classifications and the need for further research in this area. Similarly, much is still needed in the way of additional research on "experiential" (11) and other objective or "behavioral indices" of morale (41, 44). In particular, considerable work remains to be done in establishing the *reliability* and *validity* of both these and more commonly used morale measures. In general, although studies of more objective measures are under way, the fact remains that the combination of specific items embodied in questionnaires and attitude-scales, and data derived from interviews, of the types cited in this chapter, have so far yielded the most productive information concerning levels of employee morale in industry and business.

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15

The Pay Envelope

FROM a review of problems in industrial relations, the conclusion is reached by one observer that "*the attitudes of too many companies toward human relations all too often seem to boil down to a non-expressed formula of 'give 'em a decent paycheck; that's all employees are interested in'*" (22). This fundamental generalization of traditional economics has been questioned by an increasing number of social scientists (4, 13, 18). The viewpoint of the latter finds striking expression in the conclusion, by Whitehead, that the basic psychological generalization of economics, which makes wages the major source of motivation and satisfaction in industry "has exhausted much of its usefulness at the present time" and "has become a positive danger to our social and economic structure . . ." (28, p. 273).

ATTITUDES OF EXECUTIVES AND OF LABOR UNION LEADERS

Conflicting opinions of the type cited above, in the face of wide-spread use of the wage incentive, underline the need for considering specifically *what attitude surveys show concerning the potency of the pay envelope* as an incentive to production and as a determinant of satisfaction and morale. In earlier chapters, reference has been made to the fact that both management executives and union leaders are inclined to the view that "higher wages" represents the prime, if not the sole, incentive to production. Thus, a survey conducted by the Opinion Research Corporation in 1947, cited in Chapter 2, showed that 36, or 72 per cent of 50 manufacturing plant executives held either the opinion that (1) "*money alone is the answer*" or that (2) "*money is by far the chief thing*" in stimulating workers to increased productivity (19).

The possibility that executives tend to assign a degree of emphasis to compensation which large numbers of employees do not recognize is illustrated in an investigation, reported by S. J. Fosdick to the 1939 Con-

vention of the National Retail Dry Goods Association (27). In this study, several hundred employers and 3,000 employees, representing a nation-wide sample, were asked to rank eight "morale" factors. Credit for all work done, ranked *first* in importance by the employees, is *seventh* in the employers' list of rankings. Job security, rated as *second* in importance by employers, is identified as the *least* important factor by employees. Management's tendency to consider *pay* as of prime (if not sole) importance is revealed in the selection of this as the *most* important factor by employers, as contrasted with the fact that employees rank this as *third* in importance.

The fact that labor-union leaders as well as executives can and do err in their judgments as to what workers want is evidenced in the 1947 study conducted by the National Industrial Conference Board (11), described in Chapter 13. Copies of a rating sheet for use in assessing the importance of 71 morale factors were forwarded to employees in six manufacturing plants and were also sent to the top policy-making executives in the co-operating companies. Each of the latter group was asked to predict the rankings that would be assigned by the employees in his company. Similar rankings were obtained from 42 labor leaders to show what they believed represented the relative importance of the 71 factors to their union members.

Comparison of rankings made by the three groups showed that executives and labor leaders agreed in giving top ranking to *Compensation—base pay* while *Job security—employment stabilization* was given this position by the employees. In general, an overwhelming number of executives and labor leaders placed great emphasis on compensation while relatively few of the co-operating employees did so. In fact, approximately 75 per cent of both executives and labor leaders included compensation (base pay) among their first 5 predictions while fewer than 30 per cent of employees included this among the five most *important factors.*

THE VIEWS OF SOME GROUPS OF WORKERS

In a number of instances, pay has been assigned a relatively low position in *employee* ratings of factors associated with morale. Thus, as stated above, pay was rated *third* among eight morale factors listed in the study reported by the National Retail Dry Goods Association in 1939 (27). Findings from a series of surveys conducted by Sears, Roebuck and Company over a 12-year period show that *pay,* as related to other jobs in the same unit, ranked *eighth* in place among the elements related to high morale. Rates of pay, as such, ranked in *fourteenth* place. Such findings are not interpreted by the investigators involved as meaning

that rates of pay and proper job differentials are not important, since they loom up more importantly in employee thinking wherever local management is guilty of any serious shortcomings in these matters. However, the position is taken that pay, as other material things, such as hours of work, are not enough in themselves; they are only the beginning. "If," according to Worthy, "the only basis management can conceive for employee loyalty and cooperation is the pay envelope and the short work-week, there can never be enough money or short enough hours to do the job" (33, p. 65).

The study of turnover and morale conducted by the Michigan Bell Telephone Company, described in Chapter 9, yields information concerning the attitudes of female operators and service representatives toward wages (30). An analysis of replies to the question "*How (do) did you feel about the wages you receive(d)?*" showed that the service representatives seemed less well pleased with their wages than the operators. Apart from this difference, however, according to Wickert, "*there seems to have been some trend for the girls who left, whether they were operators or service representatives, to feel better about their wages than those who stayed on!*" [1] (30, p. 195).

The view that money is not a powerful incentive in comparison with other features of the work situation is also taken as a result of an extensive survey of the attitudes of building operatives conducted in England and Scotland in 1946. Complaints about the inadequacy of wages, it was found, were widespread. Nearly half the men said that they could "just manage," and approximately another one-third said that they "could not manage on their earnings" (6). Nevertheless, opposition to a system of payment by results was also widespread. Findings of interviews with 400 workers, of a total of 2,300 employed on 14 sites, showed that nearly 60 per cent of the men were, on the whole, opposed to this system of payment and only 20 per cent expressed definite or conditional approval. According to Davis, the main arguments against a wage-incentive plan "were based on psychological grounds—on the fear that this incentive would inhibit other strong and pleasurable motives for working, such as the pleasure of working for its own sake and the solidarity and good fellowship of the working group" (6, p. 59).

THE VIEWS OF OTHER GROUPS OF WORKERS

Contradictions Among Survey Findings: As is suggested in the discussion of factors to be considered in the interpretation of employee-attitude surveys, the significance of pay as an incentive has, at times, been concealed in the method used in the analysis of survey results (14). This,

[1] Not italicized in the original.

according to Wilkins, may account for the present tendency of some industrial psychologists and sociologists toward an undervaluation of the importance of pay as an incentive. "Perhaps," he writes, "this is because they have relied too much on simple analysis and questioning. Whatever the cause, it would seem from any analysis of labor disputes and strikes, that rates of payment are very important in the workers' estimates, even when wage levels are above the subsistence margin" (31, p. 550).

The fact that pay is very much on the worker's mind can be made apparent from a consideration of survey findings discussed in Chapter 13. As shown in Figure 20, the number of unfavorable comments and the variety of unfavorable comments concerning pay were greater among employees of the Operating Branch, Western Electric Co., than for any other class of comments (17). When extra compensation plans (*Factor* 9) and profit-sharing plans (*Factor* 10) are considered along with *Factor* 7, i.e. compensation (base pay), it is found that approximately 52 per cent of employees in the six companies surveyed by the National Industrial Conference Board place wages among the *five most important* morale factors (11). Approximately 41 per cent of employees participating in the General Motors Corporation's *My Job Contest* spontaneously referred to wages as a source of satisfaction from the job and there was, in addition, approximately 22-per-cent mention of benefits from wages (9).

Indications that level of pay exercises a significant influence on *job satisfaction* are found in a study, by Walker and Guest (25a), of 180 workers employed on an automobile assembly line, representing a "stratified and substantial sample" of all productive workers in *Plant X*. Interviews, covering all phases of their life on "the line," were conducted in the workers' homes, starting in the summer of 1949. Through the use of a 52-item rating scale, comparative ratings were obtained of *likes* and *dislikes* pertaining to various elements of the total job situation. *Economic factors*, including *pay* and *security*, were given top rating in the *like* column of the rating scale. Of the 180 workers interviewed, 126 gave "good pay" as the primary reason for liking their job, and another 21 rated "steady work" as first in importance. Furthermore, 81 rated "poor pay" or "work not steady" as the chief reason for disliking their previous jobs. The significance of these findings is increased by other data which showed that nearly 90 per cent of the men came to *Plant X* from jobs which were not machine-paced, a feature of the immediate job experience in *Plant X* which was most frequently checked in the *dislike* column of the rating scale.

Evidence that workers believe that *production* can be stimulated by enlarging the "pay packet" is found in a survey (8) reported by the Opin-

ion Research Corporation in 1951. Findings are based on a national sample of 1,245 employees of manufacturing companies, including manual and white-collar workers. As appears in Table 20, "*more pay*" is the answer most frequently given to the question "*What should the company do to make the workers feel like turning out more work?*" In addition, there is frequent reference to "*incentive pay; bonuses.*" The data presented in Table 20 are interpreted by the Opinion Research Corporation as indicating that "*Higher pay tied to higher output is the most direct and obvious proof that higher productivity pays off.*[2] But other types of rewards, even though less tangible, are clearly valued" (8, p. 52).

The importance attached to monetary returns by the worker is also clearly demonstrated in the study by Rose (20), described in some detail in Chapter 18, involving a survey of a representative sampling ($N = 392$) of members of Local 688, International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, AFL (1), reported in 1952. As shown in Table 33, 75.3 per cent of the workers interviewed

TABLE 20. *Workers' Opinion on Incentivation* (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1951)

Answers to Question: "*What should the company do to make the workers feel like turning out more work?*"

Chief categories	*Per cent*	*Chief categories*	*Per cent*
More pay	26	Longer hours	3
Incentive pay; bonuses	21	Improved benefits	3
Better employee relations	22	Encourage worker initiative	2
Working conditions	14	Provide steady work	2
Keep employees informed	7	Better recreation	2
Better supervision	4	Rest periods	2
Improved equipment	3		

mentioned "*get specific economic benefits*" (higher wages) as a purpose of the union. This is approximately two and one-half times the number of "mentions" of any other purpose. The results clearly typify the workers' concept of the economic role of the union and the importance of accomplishment in this direction as a contribution to union solidarity.

RELATION BETWEEN "DESIRED INCOME" AND ACTUAL INCOME

The fact that workers want "more pay"—at least in the same sense as they want more of whatever contributes to the gratification of wants —appears in significant form in the findings of a survey made by the Office of Public Opinion Research (3). Each of 1,239 individuals, representing a cross-sample of the national population, was asked to in-

[2] Not italicized in the original.

dicate the average weekly income group to which his immediate family belonged. Each was also asked, "*About how much more money than that do you think your family would need to have the things that might make your family happier or more comfortable than it is now?*"

The relationships among *actual income, income satisfaction, income aspiration* are shown in Table 21. Of particular interest in this table are the indications that

1. Over one-half of the population is dissatisfied with its present income.
2. A large increase in income—on the average, an 86 per cent increase over present income—is desired by those who are dissatisfied and state how much more they want.
3. The higher a person's income is, the more likely he is to be satisfied with it and the smaller is the *proportion* of present income desired in way of an increase.[3]
4. For those persons who are dissatisfied, it is generally true that the *more money a person has, the more money he wants.*

TABLE 21. *Income Satisfaction and Income Aspiration in Relation to Present Income* (after Centers and Cantril, 1946)

Weekly income	*Cases*	*Percentage*			*No. specifying amount more wanted*	*"Increase wanted"*	
		Dissatisfied	*Satisfied*	*No opinion*		*Percentages*	*Dollars* *
National	*1165*	56	32	12	*581*	86	
Under $20	*163*	68	16	16	*100*	162	$16.20
$20–$29.99	*170*	72	19	9	*116*	97	24.25
$30–$39.99	*207*	67	20	13	*129*	66	23.10
$40–$59.99	*310*	54	35	11	*147*	59	29.50
$60–$99.99	*191*	43	49	8	*73*	52	41.60
$100 and over	*124*	20	66	14	*16*	100	100.00

* The dollars-and-cents "increase wanted" is a translation based on the percentage indicated—the mid-point of the income group concerned was used to construct this estimate. Ten dollars is used as the mid-point for the "under $20" group, while for the "$100 and over" group, no mid-point could be assigned, and thus $100 was used as the basis for calculation.

The latter finding is of special significance in suggesting that an individual's present earnings provides him with a frame of reference for judg-

[3] An exception is noted in the case of the higher income brackets. According to the investigators, the data suggest that this occurs because at this level professional people are competing for social status with persons far above them in income. The relatively large increases desired are interpreted as representing a wish to strengthen an obviously high social status with a correspondingly high income status. Findings from studies by Wallace, Williams and Cantril (26) and by Smith (23) are cited in support of this view.

ing his needs and for establishing his level of aspiration and goals. *Proportionate* to their present earnings, individuals in the lowest income brackets want a great deal more (increase wanted in percentages), but in comparison to the sums wanted by those in higher income brackets, increases wanted in dollars are smaller.

WHY PEOPLE WANT MORE MONEY

The observation, in this study of adults, that expressed needs for amount of income is related to socio-economic station is supported by findings from a later study of high school students reported by Dittmer and Payne (7). Such studies perhaps merely confirm the widely held opinion that people—at whatever level of income they may be—want more money. A recent tendency has been to rationalize this want as representing not a direct motivational drive, but an urge toward the gratification of motives associated with status, recognition, and other ego-involved needs. This tendency appears not only in the consideration of direct wages as an incentive, but in current discussions of other economic benefits. For example, Sears, Roebuck and Company has a broad program of *employee benefits*, including group insurance, illness allowances, severance pay, and other benefits voluntarily provided by company policy. This program, together with all the items customarily included under the heading of "nonwage payments" involved an expenditure in excess of 84 million dollars in 1948. Survey findings show that this framework of employee benefits has had a definite influence on employee morale. However, according to Worthy, "Important as the economic aspects of the benefits may be, their chief significance as regards employee morale is the fact that they are tangible evidence to the organization of management's concern for the welfare of its employees . . . Our studies show clearly that employees respond primarily to the evidence of management's concern and only secondarily to the economic values as such" (33, p. 66).

Included among benefits available to Sears, Roebuck and Company employees is a profit-sharing plan (10) which, in continuous operation since 1916, is open to all employees with a year or more of service. Each member of the plan deposits 5 per cent of his earnings (up to a maximum deposit of $250 per year) in the profit-sharing fund. At the end of the year the company contributes to the fund between 5 and 9 per cent (determined according to a fixed scale) of its net profits before taxes and dividends, representing in 1948 a contribution of $22,817,079, credited to the accounts of employees on a dual basis of length of service and amount of individual deposit. In 1950, it was reported that the profit-sharing fund held in trust for its members represented approximately 19

per cent of the company's outstanding capital stock, making Sears employees as a group by far the largest stockholders in the company.

According to Worthy, what has been said above concerning employee benefits applies particularly to the company's profit-sharing plan. "Over the years the profit sharing plan has gradually assumed a role which transcends its function as tangible evidence of management's concern for the welfare of its employees. In a sense, profit sharing has become a 'unifying principle' that serves as a symbol around which the entire organization revolves . . . Here again," adds Worthy, "the influence on employee attitudes is primarily symbolic rather than direct. The actual holdings of individual employees are not nearly so important as the fact that the huge holdings of the profit sharing fund symbolize to them that they and the company are one, that they are in effect 'working for themselves' . . ." (33, p. 67).

In this respect, the view expressed by Worthy coincides with that taken by the president of the Lincoln Electric Co., who reports that the chief effect of its *incentive-management* plan, which includes profit sharing, has been to change "workers from people who are working at a job at so much an hour into people who feel their success is tied definitely, completely and proportionately into the success of the company itself" (25). The fundamental effect of this plan, it is said, "is the development of the individual through *his* desire to rise in *his* usefulness in industry and through *his* desire to work together with *his* co-workers from top to bottom to produce better products more efficiently" [4] (15, p. 11).

In the light both of studies reported in this volume and of everyday experiences, there can be no disagreement with the position, early stated by Whiting Williams, that *"it is impossible . . . to judge the effect of either wages or other conditions of work apart from the relationships the work permits with other persons"* (32, p. 62) both in the plant and the community at large. It would be shortsighted to disregard the significance of earnings as a symbol of status. However, recognition of what Williams has called the "social handles of the pay-cup" should not lead to an underestimation of the potential of the financial reward in itself as an incentive to production.

ENERGIZING THE WAGE INCENTIVE

As shown in earlier pages of this volume, particularly in Chapter 2, day-to-day experience in industry, as well as investigations bearing upon wage-incentive plans, show that the pay incentive can serve to increase earnings, raise production, and reduce costs in spite of adverse employee

[4] No italics in the original.

ittitudes and even of widespread opposition to the use of such plans (16, p. 277). While good results can be attributed to wage-incentive plans, there is also reason for the opinion that much remains to be done to insure the optimal utilization of the pay envelope as an incentive to production (5) and in building employee morale. The basic problem of what constitutes a "fair day's pay" (24) is still far from complete solution, in spite of the best efforts of the economists on the one hand and of those concerned with job evaluation and wage structures for individual plants on the other. While there has been considerable improvement in recent years in the construction and administration of wage incentive plans, technical problems in this area are far from solved.

More important still, as Whyte has pointed out, is the need for recognizing that "financial incentives are both a technical engineering and a human relations problem." Thus, according to Whyte,

> "Many people are arguing the question today: Which is more important to workers, economic incentives or human relations? In that form the question is meaningless and unanswerable. Men are interested in money. They are also concerned about their relations with other men. Offer them a financial reward for behavior that damages their relations with other men, and you can hardly expect them to respond with enthusiasm" (29, p. 73).

The issue, Whyte goes on to say, is nevertheless not one of choosing between economic incentives and human relations. "The problem is to fit economic incentives and human relations together, to integrate them" (29, p. 73). Methods for achieving such integration are suggested, in part, in studies described in Chapter 9, which show that employee participation in setting goals heightens the effectiveness of a wage-incentive system. In general, it has become evident that the effective use of the wage incentive requires a thorough understanding of the attitudes both of small informal work groups and of formal employee organizations (1, 12). Much depends also upon the spirit with which wage incentives are approached, the "climate" within which wage incentive plans are installed (16). Harmonious human relations—reflected, in part, through the formal employee and labor relations programs of the plant—constitutes a basic ingredient of a "climate" suitable for increasing the "pulling power of the money reward" (29). However, the necessity for meeting such requirements does not call for the belittlement of the pay envelope, but rather for systematic action designed to enhance its value as an incentive to production and as a fruitful medium for the satisfaction of workers' wants and needs.

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16

The Need for Security

THE HISTORY of the Industrial Revolution is replete with instances of destructive attacks by workers on machines which—they felt—would deprive them of their jobs (56). Today, while seldom destroying the machines, workers take other steps, ranging from "slowdowns" to actual sabotage to prevent or hinder the introduction of technological and other changes in industry. According to Barkin, a spokesman for organized labor, the current mood of labor, as contrasted with the prevailing climate of the 1930's, is one which is comparatively favorable to change (6, 8). Nevertheless, in a review of the outlooks of both the owners and employees toward technological change, Barkin adds that no group in American society is free of opposition to changes which will affect its members adversely and, to protect their modes of life, all groups can be expected to devise special defenses and show resistance to innovation (6).

In recent years there has been an increasing tendency on the part of social scientists to explain such attitudes and conduct largely on the ground that *resistance to change* is deeply ingrained in the human race (43). While ingrained habits undoubtedly contribute to resistance to change, there seems no question that such resistance on the part of workers also has its roots in basic anxieties aroused by conditions of the work situation. One prime cause of such anxiety is the *fear of losing* the job in the face of a deep-seated need for security in terms both of the *immediate* situation and of outlooks for the *future* (44).

ATTITUDES TOWARD JOB SECURITY

Many attitude surveys have shown that need for security is widespread and deep-seated. As indicated in Table 17, approximately 31 per cent of employees in the six plants surveyed by the National Industrial Conference Board in 1947 ranked "Job security-employment stabilization" as

first in importance among 71 morale factors. This percentage is three times as high as that applying to "Compensation-base pay" (8.7 per cent) which was second in frequency of choice as the *most important* factor (23). Reference to Table 18 shows that about 50 per cent of the employees involved selected factors related to *Security* as being among the *five most important factors.* There is also considerable evidence from other attitude surveys to support the view that *economic security, as represented in steady work and regular compensation, is a basic need of the worker.*

Attitudes of High School Children: That this need appears early in the life of the individual is suggested in a study conducted in 1949 by the Social Research Service, Michigan State College, involving 6,789 tenth- and twelfth-grade students from 56 Michigan public and private high schools. Data presented in Figure 26 lead to the conclusion that "high school students reflect the experience of many American workers" in their unwillingness "to accept an insecure position for the sake of high income" (61, p. 11).

Attitudes of Applicants for Employment: Confirmatory evidence with respect to attitudes of young people toward steady work and regular compensation is found in an investigation by Jurgensen (31) who, in 1945–46, asked 1,189 male applicants for employment by the Minneapolis Gas Company to rank ten factors in order of importance with respect to "*Job Preferences (What makes a job good or bad?).*" Items which were rated included (1) *Advancement;* (2) *Benefits;* (3) *Company;* (4) *Co-Workers;* (5) *Hours;* (6) *Pay;* (7) *Security;* (8) *Supervisor;* (9) *Type of Work,* and (10) *Working Conditions.*

Security, with a mean rank of 3.1, proved to be the most preferred job characteristic, followed closely by advancement (mean rank 3.4) and type of work (mean rank 3.7). Pay is sixth in the list (mean rank 6.3) with working conditions and benefits (mean rank 7.3) matched for last place. A later analysis of replies by nearly 3,345 male applicants (32) yielded similar findings, with security, opportunity for advancement, and type of work again heading the list of preferences, in the order named.

A Nation-Wide Sample of Workers: A survey conducted in 1947 by the Opinion Research Corporation, involving a nation-wide survey of employed workers, shows, as indicated in Figure 27, that the latter agree with high-school students and applicants for employment in rating security high as a source of satisfaction on the job. The results of the study lead to the suggestion that in so far as "job satisfaction is partly a function of interpretation or how the job is sold to employees, it follows that management can stimulate job satisfaction by showing what it is doing to make jobs more secure" (16).

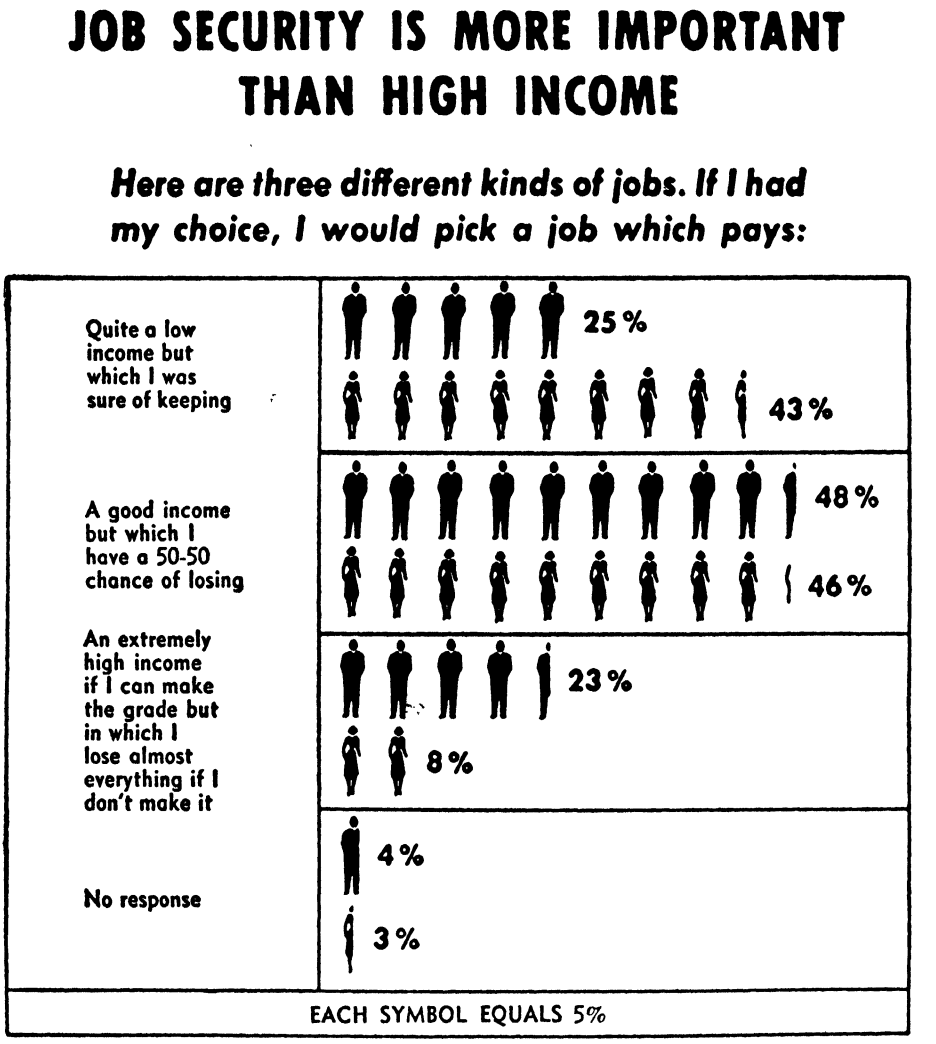


Figure 26. Attitudes of High-School Students toward Security and Income *

A Study in a New England Manufacturing Town: An analysis of factors affecting choice of jobs was included in a survey of two samples of manual workers, totalling about 800 individuals, in a medium-sized New England manufacturing town (47). When asked to express a preference between a "wage increase" or a "guarantee of steady employment," 73 per cent chose the latter.

Department-Store Employees: The *Jurgensen Job Preference Blank* has been used by Hardin, Reif and Heneman in an investigation, in 1949,

* By permission, from *Youth and the World of Work*, Michigan State College, 1949.

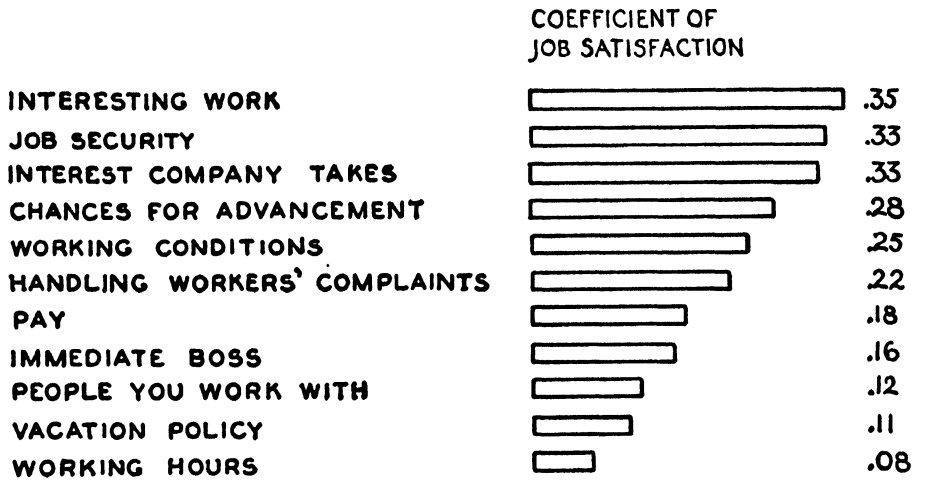


Figure 27. What Do Men Value in Their Jobs? *

of the job preferences of employees in two midwestern department stores (28). As in the case of applicants for employment by the public-utility company, security (with a mean rank of 3.3) proved to be the most preferred job characteristic, again followed by advancement (mean rank 3.8) in rankings by male employees ($N = 63$). Security was also given the first position by women ($N = 139$) with type of work (mean rank 3.8) following in second place. Pay was given fourth place by men and third place by women. An interesting additional outcome of the study was the finding that test-retest reliability for mean rankings was high (0.98), although *individual* preference factors showed more inconsistency than did group factors.

Building-Trade Workers in Great Britain: Further evidence concerning the importance attached to security is found in the British survey of building-trade workers, referred to in Chapter 15. The survey was conducted in a period (1946) when fear of unemployment was less acute than in earlier years. Nevertheless, according to the investigator, "vivid memories of the past and uneasy scepticism about the future made the assurance of greater security and a guaranteed week seem a matter of urgent importance to the operatives" (18, p. 57). The theme of security, it is reported, recurred throughout the interviews, and 16 per cent of those interviewed reported that they felt "definitely insecure," while another 24.3 per cent were "doubtful."

Union Members: Of union members surveyed by Rose (49) in the study described in Chapter 18, 31.1 per cent mentioned "get job security"

* By permission, from *Public Opinion Index for Industry*, Opinion Research Corporation, 1947.

(including seniority) as a purpose of the union. In order of frequency of mention, this item stands second in a list of eight stated purposes, and is accorded twice as many mentions as the next most frequent item on the list, viz., "gain rights" (e.g., welfare, free speech, fair deal). This may be taken as further evidence that workers feel a deep-seated need for security.

EFFECTS OF JOB INSECURITY

The Morale of Unemployed Persons: A number of studies have shown that insecurity, characteristic of unemployment, severely affects the attitudes of workers (55). Evidence of this kind is found in a study conducted by Hall (26) during the severe economic depression of the mid-1930's in the United States. Subjects of the study were employed and unemployed engineers. A morale score was obtained for each of these by scoring five items on a questionnaire of the Likert type. Corrected coefficients for split-half reliability were found to vary from .69 to .84 and

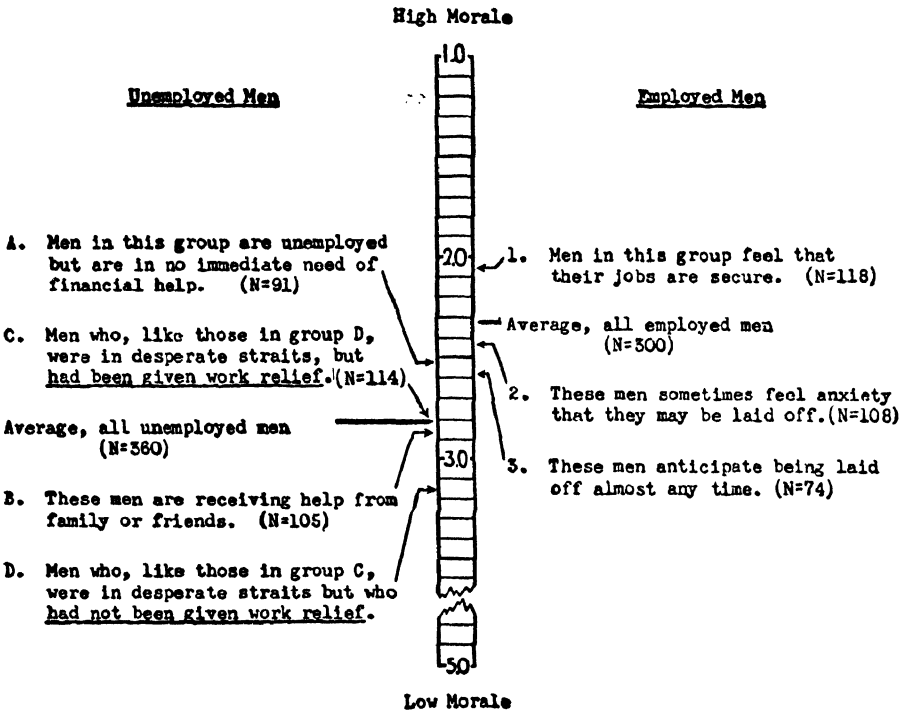


Figure 28. Average Occupational Morale Scores of Groups at Various Levels of Security *

* By permission, from O. M. Hall, "Attitudes and unemployment," *Archiv. Psychol.*, No. 165, 1934.

retest after 30 days yielded a correlation of .63 with original scores. As shown in Figure 28, morale deterioration increases with increasing anxiety about having a job and with increasing economic insecurity. Studies by Bakke (3, 4), Rundquist and Sletto (50), Zawadski and Lazarsfeld (62), and by others have also revealed changes in attitudes, morale and personality with continued unemployment which, when carried into the career of the individual subsequent to unemployment, can be detrimental from the viewpoints of production and adjustment at work, and in terms of the wider problem of industrial strife.

The Effects of Anticipated Loss of the Job: A more recent investigation by Grove and Kerr has shown further that a feeling of insecurity, resulting from anticipated loss of employment can produce an "inverse halo" effect which apparently causes employees "to express discontent with their actually superior pay and working conditions as well as 'lower than normal expectancy' attitudes toward even their work associates and immediate supervisors" (25).

Evidence for this conclusion is found in a study in which the *Tear Ballot for Industry, General Opinion* (35), providing measures on ten employee morale variables, was administered to 18 female office workers in an office which had entered receivership six months previously. During the six-month period surviving employees saw fellow workers being laid off each week and economy measures adopted. At the same time, pay, working conditions, etc., in the plant remained superior to those generally found in the area. The same questionnaire was applied to a control group of 58 female office workers in a neighboring plant with a financially sound outlook, where no significant layoffs had taken place, and where both salaries and working conditions were average.

In Table 22 are shown the percentage of workers in each of the two groups reporting the two "most favorable" of the five possible levels of satisfaction on each of the ten job morale items. All percentage differences between the "insecure" and "normal" groups are statistically significant at the 5-per-cent level or better. The largest difference in the proportion giving favorable responses is found in the case of "job security," but it is evident that markedly lower morale in the insecure group is reflected in all of the items. Analysis of findings leads to the conclusion that, beyond reasonable doubt, some kind of reverse halo effect is operating and that the generator of this is *job insecurity*. According to Grove and Kerr, "Apparently, in these 18 cases, the job insecurity experience has, in time, so permeated employee feeling tone toward the entire job situation that the fear-shock has seeped like a toxic inhibitor into all job-related attitudes—with, perhaps, the original cause of the fear being manipulated stiffly in thought merely as a logic-tight symbol" (25, p. 169).

TABLE 22. *Per Cent Favorable Response of Female Office Workers in a Bankrupt Firm Compared with Responses of a "Normal" Group of Female Office Workers* (after Grove and Kerr)

	Normal	*Insecure*
Job security	88	17
Welfare interest	78	22
Ability of superior	50	28
Working conditions	47	11
Associates	98	72
Wages	21	12
Open-door management	67	23
Management good intent	81	28
Management good sense	71	17
Personal happiness	66	6

DISCREPANCIES AMONG SURVEY FINDINGS

The studies cited above, conducted during the 1940's and later, yield findings in agreement with those resulting from investigations made in the 1930's by Chant in the United States, and by Wyatt and Langdon in England, in which steady work was rated high and considerably above high pay among 12 factors by 100 department store workers, 150 miscellaneous workers (13) and 325 factory workers (60). However, other *studies conducted during the same periods yield results which appear to contradict those cited above.* For example as can be seen from Figure 20, the frequency of comments on steady work is extremely low in the case of employees of the Operating Branch, Western Electric Company, interviewed in 1929. Job security ranks lowest in importance among eight morale factors rated by 3,000 retail-store employees surveyed by Fosdick in 1939, although their employers rank job security as second in importance (54). Information supplied to the National Industrial Conference Board (1947) by Stech Associates, based on the opinions of several thousand employees in 13 organizations, gives "*job security—compared with elsewhere*" a rank of 20 in a list of 32 morale factors (23).

In 1945, Centers (12) asked 1,071 men, constituting a representative cross-section of the adult white male population (including the complete occupational stratification), "*Are you satisfied or dissatisfied with your present job?*" Of this group, 85 per cent were classified as *satisfied* and 15 per cent as *dissatisfied* on the basis of their replies. The former were asked "*What is it that you like about the job?*" "*Security, steady work*" was mentioned by only 6.6 per cent of the respondents, and this factor is 6th in a list of replies which was topped by such items as "*freedom, independence*" (25.5 per cent); "*interesting and varying activities*" (20.6 per cent); "*pay*" (8.9 per cent). On the other hand, the responses of *dis-*

satisfied individuals to the question "*What is it that you don't like about the job?*" placed the reply "*uncertainty, insecurity*" second in a list (13.3 per cent) preceded, however, by the reply "*low pay, poor profits*" given by 21.5 per cent of those interviewed.

Of additional interest, in considering the role of the steady job and regular pay in moulding employee attitudes and in gratifying motives are findings from the General Motor Corporation's *My Job Contest* (22). If all themes mentioned which, in the opinion of this author, can logically be subsumed under a heading of security are considered, it is found that the per-cent mention of such themes is 67.3 (Table 18). However, for purposes of *MJC* coding only comments which mentioned security as such, or attributed a feeling of security as a result of some specific factor, were classified under the heading of "security." Examples of such classifications include the statements "*I can always count on that check when I need it*" and "*the life insurance policy partly paid by the company gives me a feeling of security.*" Applying this standard, the investigators found that only 21.5 per cent of *MJC* participants mentioned "security" as a theme. Comparison of findings in the various divisions of the company suggested further that "security" was not particularly sensitive as a theme for differentiating among divisions with respect to their performance in the area of employee relations. The conclusion is drawn that "identification with General Motors in itself gave some a feeling of security."

FACTORS AFFECTING THE NEED FOR SECURITY

It is apparent, from the above illustration, that discrepancies with respect to the importance attached to security may reflect difference in the "frames of reference" employed in the interpretation of results (34, 37, 52). Other factors, of the type discussed in Chapter 12, may be involved. For example, some of the surveys described above were made in the late 1930's, during a period of depression; others were conducted in the mid-1940's during a period of prosperity in the United States. It may be postulated that differences in general economic conditions between such periods may help account for the discrepancies in findings—that "steady work" would move upward in an order of preference ranking during a period of depression (20). However, an examination of the data does not appear to support this assumption.

The Influence of Socio-Economic Status: Differences among the populations covered by the separate investigations may account for the differences in findings. Data presented by a number of investigators show, in fact, that various segments of both the adult working population and of high-school students respond differently to questions pertaining to

the need or desire for economic security. For example, in a study by Kornhauser (36), made in 1936, 350 male subjects in Chicago were classified into four income groups viz., wealthy, upper, middle, and lower. Results showed that security and independence were most strongly desired by the lower and middle income groups. In the survey conducted by the Social Research Service, Michigan State College in 1949, the percentage emphasizing security, as contrasted with size of income on a job, is higher among students whose fathers are unskilled or semiskilled workers than among those who are the children of parents engaged in professional or proprietary occupations (61). Similarly, Centers (12) found that 14.5 per cent of unskilled workers and 9.2 per cent of semiskilled workers interviewed by the staff of the Office of Public Opinion Research in 1945 replied *"Security, steady work"* to the query *"What is that you like about your job?"* as contrasted with 1.7 per cent of professional workers and 5.9 per cent of skilled workers.

In one phase of the study by Centers, each of the individuals interviewed was handed a card containing the statements shown below and asked *"If you had a choice of one of these kinds of jobs, which would you choose? Just call out the letter."*

A. *A job where you could be a leader.*
B. *A very interesting job.*
C. *A job where you would be looked upon very highly by your fellow men.*
D. *A job where you could be boss.*
E. *A job which you were absolutely sure of keeping.*
F. *A job where you could express your feelings, ideas, talent, or skill.*
G. *A very highly paid job.*
H. *A job where you could make a name for yourself—or become famous.*

When the first two choices were combined to give an index of value, the percentage of all *manual* workers choosing security proved to be 37.7 per cent;[1] of all *unskilled* workers 47.2 per cent; of all *business, professional and white collar workers,* 16.6 per cent. The findings, as discussed further on pages 381–382, showed fairly consistent tendencies for the desire for security to increase as first choice as lower and lower occupational levels were scrutinized. According to Centers, "people in the lower strata of society appear dominated by the simple problems of existence as expressed in the desire for security, that is, for a job they could be absolutely sure of keeping, but the higher occupational groups seem relatively free of such a basic need . . ." (12, p. 214).

The Influence of Intelligence: The possibility that differences in *intel-*

[1] Maximum possible value equals 200 per cent, since each person included chose two situations.

ligence, as well as in occupational levels, affect attitudes towards economic security and the role of steady work as an incentive, is suggested in studies by Wilkins (57, 58) involving 300 men, between the ages of 18 and 19, interviewed at Army Reception Centres throughout Great Britain. Correlations between ranks assigned to eight factors, designated as "incentives" by the investigators, were subjected to factor analysis by the centroid method. When thus analyzed, the 8 factors divide into two equal groups as shown in Table 23.

TABLE 23. *Classification of Incentives by Factorial Analyses* (after Wilkins)

Group A	*Group B*
Prospects	Workmates
Security	Hours
Variety	Pay
Efficient organization	Leave

According to Wilkins, the following arbitrary labels may be applied to these divisions

A—*Factors of long-term appeal, associated with the job itself.*
B—*Factors incidental to the job itself, and of shorter-term appeal.*

Comparisons of groups classified by intelligence showed further that higher intelligence groups are more interested in the items classified under "A" above; they want to know about the "job itself" and not the "compensations for doing it." According to Wilkins, "in general, the higher intelligence groups seek long-term incentives closely associated with the job itself, and the lower intelligence groups seek shorter-term incentives and tend to look more to compensations for doing the job, or to social incentives" (58, p. 560).

Providing Security for Employees

Consideration of the varied and sometimes contradictory findings does not justify the conclusion that economic or job security is *the* prime need of all workers or that "job security is the heart of the labor relations problem" (23, p. 19). The findings also fail to support the viewpoint, implied in some treatments of the problem, that the need for job security is an artifact growing out of seniority regulations, featherbedding, labor-relations laws and political directives (16). The outcomes of employee attitude surveys support the conclusion that *economic security, as represented in steady work and regular compensation, is a basic need of the worker* which must be considered in the formulation of personnel policies and practices in industry and business. Findings further indicate

quite clearly that the need for economic security is particularly strong among employees in lower level occupations and suggest that the failure to satisfy this need can become a major source of dissatisfaction at these levels.

SATISFYING THE NEED FOR JOB SECURITY

It would appear that, in the case particularly of such groups, steps taken by industry to provide reasonably *steady work* and *regular income* can produce significant returns in the way of improved morale and motivation. It may even be that, as suggested in the report of the 1947 National Industrial Conference Board survey, "nothing that a company can do furnishes stronger and more tangible evidence of genuine concern for the welfare of its employees than an exhaustive attempt to provide a steady income for as many of its workers as possible" (23, p. 19).

The Viewpoints of Union Leaders: The central importance of job security is being increasingly stressed by union leaders (29, 49). Thus, according to Barbash, "If there is one overriding consideration which motivates the unions' attitudes with respect to the terms of the collective agreement it is fear—fear of there not being enough jobs to go around, fear of unjust discharge, and fear of unequal treatment—in short, insecurity . . ." (9, p. 99). According to Barkin, a spokesman for organized labor, one function of "deliberative procedure in collective bargaining" is to help workers accommodate themselves to change, as one means of preventing the worker's displacement as a result of technological and other changes (6). Barkin also insists (5, 7) on full presentation of data by management and a complete review of proposed changes by the union so that the union can obtain "maximum protection for their members in the light of their own concepts of negotiable limits . . ." Among the objectives of such review and negotiation, it is said, will be the *retention of the older skills* and job patterns in so far as possible; *guarantees against displacement of employees; reduction of new hirings until regular employment is assured displaced employees; preferences for displaced employees to all new jobs, etc.* (6, p. 124).

Action taken in the Fall of 1951 by CIO leaders in preparing for negotiations with "Big Steel" and "Little Steel" shows clearly the growing importance attached by union leaders to the satisfaction of the need for economic security. It seems likely that demands for the "year-around pay system" is to become a major item in union policy (30). Thus, in 1952, Walter Reuther unequivocally stated: "Our next basic demand will be for guaranteed annual wages. You could have the highest hourly wages in the world, but if you are not working they are of little value. People who get paid by the year have what we consider a very convenient ar-

rangement. They eat by the year and get paid by the year; but a worker who gets paid by the hour and eats by the year has a problem. We shall seek an arrangement for a guaranteed annual wage, a practical tool by which we may achieve a balance between our ability to create wealth and our ability to consume the wealth we know how to create" (48, p. 93).[2]

Management Viewpoints and Responsibilities: According to the National Industrial Conference Board: "Trends in recent years on the political front indicate that the challenge to provide security can neither be evaded nor refused. In fact, there is increasing acceptance of the tenet that if private business fails to meet the challenge it will yield its leadership to some group that can. The question no longer appears to be, 'Shall the worker's sense of security be increased?' but rather, 'From what source will it emanate?' " (23, p. 19).

Increases during recent years in the number of *stabilized employment plans,* in the way of *guaranteed annual wages* or in other forms, indicate growing recognition of the problem of economic security on the part of industry.[3] Progressive management has, in fact, taken the position that this is one of the prime responsibilities. Thus, according to the president of the Lincoln Manufacturing Co., "It is management's duty to make the worker secure in his job . . . The fact that the usual management will fire the worker when he runs out of work has had more to do with production limitation than any other circumstance. No man will willingly work to throw himself out of his job, nor should he" (39, p. 170).

There are many reasons—apart from fear of increased union influence and government interference in business—for management interest and action in dealing with the problem of security. As shown on earlier pages, a feeling of insecurity results in job dissatisfaction and lowered employee morale. Job insecurity contributes to job inefficiency, since the desire for continued employment helps to account for organized and unorganized employee resistance to increased productivity and technological progress (19, 40, 41, 42). Furthermore, according to the National Industrial Conference Board, employees who lack security will tend to spend working time in "jockeying for position" for the purpose of gaining a strategic position favorable to security. Rumors, bickering, conflicts with fellow workers, an increased number of grievances are associated

[2] At a UAW convention held in March, 1953, a huge sign stretched across the meeting hall read NEXT STEP FORWARD—GUARANTEED ANNUAL WAGE. Walter Reuther is quoted as announcing: "We say to the employers: 'We are not going to sign new [contracts] until you put into them guaranteed annual wages for the workers in our basic industries' " (*Time,* April 6, 1953, 98).

[3] For references on stabilized employment and guaranteed annual wages see Feldman (24), Chernick (14), Chernick and Hellickson (15), Pigou (46), Kaplan (33), Thompson (53), Snider (51), and others (1, 2, 21, 21a).

with the struggle for security. "Where," according to the National Industrial Conference Board, "the chief executive has failed to recognize insecurity as the basic cause, his attempts to achieve the degree of efficiency of which the organization is capable has aggravated the situation rather than improved it." On the other hand, "where security is achieved and the employee is stimulated by effective leadership, efficiency increases through the willing application of the worker to the job" (23, p. 20).

THE DRIVE FOR LONG-RANGE SECURITY

Emphasis in the preceding discussion has been primarily upon *job* or *immediate* security. Concern for *long-range security* is revealed in current union demands for *pensions* and for *benefits for employees* during temporary unemployment because of illness or for other reasons. Such demands—particularly in the case of pensions—appear to be consistent with the expressed desires of workers (Table 18).

Evidence of this is found in a survey reported by *Modern Industry* in 1950. This showed that there is widespread recognition among wage earners that government Social Security alone will not provide enough for self-support during old age. Most workers also indicated that they had been unable to "tuck away" savings for retirement purposes from their earnings. Those interviewed were asked "*As you see it, whose responsibility is it for making up the difference between Social Security and what you will need in addition?*" According to 25 per cent of those interviewed, this is the sole responsibility of the company for which they work. An effort was made in the survey to obtain workers' evaluation of pensions in companies with other benefits by asking "*If you had to choose between a pension at 65 or any one of the following benefits which would you rather have?*" As can be seen from Table 24, when workers are asked to choose between pensions at 65 and a number of other benefits, "pensions have a clear lead over any one other benefit." From these and other findings, *Modern Industry* concludes that "the urge for security and the desire for company pensions is deep-seated and here to stay. Individual companies, whether their workers are organized or not, had better figure on facing up to this demand soon—and either beat the gun or be ready for it when it comes." However, the suggestion is also made that "American workers have a wide streak of essential fairness. Most of them can be sold on a pension plan tied to company profits. And it's only a short second step to tie these profits upon which their pensions depend to heightened production" (59, p. 38).

Progressive management has long recognized the importance of satisfying workers' needs for security during old age, as is evident from the number of retirement plans voluntarily undertaken and supported by manage-

TABLE 24. *Attitudes Toward Pensions in Relation to Other Benefits* (after *Modern Industry*, 1950)

Question: *"If you had to choose between a pension at 65 or any one of the following benefits which would you rather have?"*

	Prefer other benefit, per cent	*Prefer pension at 65, per cent*	*Consider both equally important, per cent*
Vacations with pay	25.0	42.2	32.8
Sick leave with pay	26.5	38.8	34.7
Life insurance	19.0	43.8	37.2
Accident or health insurance	24.2	37.5	38.3
Higher pay right now	31.8	37.0	31.2

ment long before such plans became a major issue in union negotiations (11, 27, 38, 45). The interest of union leaders is attested to by the successful drives for pension plans in collective-bargaining negotiations or through the medium of strikes during recent years. Many issues remain to be resolved in the establishment and administration of pension plans, including that of the extent of employee contributions and the question of joint administration of pension plans (10, 17). Nevertheless, the increasing prevalence of pension plans shows an increasing recognition of the worker's need for long-range security. Simultaneously, such plans provide the medium for the satisfaction of this need. It may well be, as suggested by Becker, that "we are . . . on the threshold of a new era in the development of a full measure of security for the workers of America and for their families" (17, p. 126) and that, in the years to come, we will have happier and more productive people because of steps taken to solve the problems of immediate and long-range security.

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17

Status, Recognition, and the Role of Supervision

"WHAT EVERY *worker knows is this: that sooner or later the final joy of his work is settled, not by him or by his employer, but by the social standing awarded him by his fellow citizens*" (51, p. 62). In this sentence Whiting Williams summarizes a highly significant conclusion growing out of his experience as a worker on the railroads, in the mines and in the factories of this country and Europe (49, 50, 52).

Status and Recognition

As indicated in earlier chapters, in considering the sources of motivation at work, Williams clearly recognized that the *pay envelope* and *security* are fundamental factors in determining the worker's attitude toward his job. The worker who walks to and from work for a week because his child has unexpectedly worn out an extra pair of shoes, cannot help but be governed by the immediate compelling importance of regular and adequate pay. Living on the margin of bare subsistence, anything which will affect his earning capacity, either immediately or in the future, brings a rapid and certain response in the defense of the continuity of his job. The narrowness of the "blanket" separating him from three meals a day and shelter and dependence goes far, writes Williams, in explaining the wary defense against anything which means curtailed rates or curtailed employment. It explains the lack of reality to the marginal worker of a bonus system which provides payment in the future instead of an immediate addition to salary; of any participation in management which does not favorably affect his pocketbook or help to regularize employment.

However, as compelling as is this pressure for the Saturday night's

earnings, this, according to Williams, constitutes only a prologue to the play of motives in industrial life. "If this mere first act were only the whole of the play, then the scientist could surely hope some day to discover a satisfactory formula for wage revision" (51, p. 27). What makes this unlikely is that the pay check's ability to buy material things, particularly when this is beyond the margin of the hunger minimum, is overshadowed by the ability of the job and the check to buy an intangible something of equal importance and of vastly greater intricacy—viz., his standing among his fellow workers. Chief among the sources of motives-in-work, writes Williams, is "*the suprising vastness of the gap which everywhere among the workers separates the holder of a 'swell' job from the holder of a 'bum' job, and most of all divides the possessor of* ANY *job at all from the luckless vagrant who possesses none and knows not where to find one*" (51, p. 3).

Throughout industry, according to Williams, there is found a system of caste based on *work* corresponding roughly to the more familiar hierarchy of caste based on *property*. The laborer transferred to the millwright gang, receiving only an additional two cents per hour, benefits from an immediate transformation in social status reflected not only in the congratulations of his fellow-workers but in the acceptance of his wife and family by those who had hitherto looked upon them as somewhat lower in the social level (51, p. 56). *Everywhere among the workers, the nature of his job and not solely the earning power determines the social standing awarded the worker by his fellow-citizens.*

THE PRESTIGE VALUES OF REPRESENTATIVE OCCUPATIONS

Attitude surveys have confirmed Williams' observations and have further shown that levels of job satisfaction and morale are related to the worker's perception of his *status* and *role* in the social microcosm of industry and in society at large. Studies involving both young people and adults have shown that there is a wide range in the prestige values attached to various jobs.[1]

Illustrative findings from such surveys are presented in Table 25 which summarizes ratings of an identical list of 25 jobs obtained in studies conducted by Counts (7) in 1925, by Deeg and Paterson (9) in 1946 and by Welch (47) in 1948. The list used in the original study by Counts included 45 occupations. These were reduced to 25 in number in the follow-up study by Deeg and Paterson by deleting every other occupa-

[1] Representative investigations of occupational status, supplementary to those referred to in this chapter, are described by Anderson (1), Baulder and Paterson (2), Byers (5), Duncan and Duncan (10), Form (13a), Hall (17), Hall and Jones (17a), Hyman (23), Lehman and Witty (30), Menger (32), Osgood and Stagner (34), Smith (39), Stevens (40), Stone and Paterson (41), Super (43), and Wilkinson (48).

tion as ranked by Counts, and then adding three of the original occupations at widely separated points in the rank order of presentation. The follow-up study was undertaken because of the opinion, expressed by a school counselor, that the depression of the 1930's and World War II had "upset traditional irrational prestige values" as represented in the classification of jobs on the basis of social status.

As is apparent from Table 25, rankings made by 475 subjects, including undergraduate and graduate students at the University of Minnesota and seniors attending high schools in Minneapolis and St. Paul, revealed extremely high consistency in the social ranking of occupations in spite of the lapse of 21 years and of the intervening economic and social changes in the United States. According to Deeg and Paterson, "the multitude of social, economic, and psychological factors determining the relative prestige of occupations has combined to operate in a consistent pattern" (9, p. 207). The uniformity of patterns in ranking occupations is further revealed in the study by Welch (47), involving 500 students of Indiana State College who ranked the same occupations in 1948 (Table 25).

THE INFLUENCE OF SOCIO-ECONOMIC FACTORS

The mechanisms through which such values are established are undoubtedly complex. Among those involved are *social perception, social norms,* and variables contributing to the development of the *ego,* to the individual's perception of his *status,* and to *role behavior,* discussed in Chapter 5. Findings from a number of investigations, in particular by Counts (7), Nietz (33), Kay (27), Hartmann (18), and Super (42), support the view that the social prestige values attached to different occupations reflect the predominant socio-economic conditions and standards prevailing in a nation (9). Further evidence of this is found in a study by Davis (8) who, in 1927, investigated the attitudes towards occupations of 112 public school children in the U.S.S.R. Occupations rated high in Counts' original list of 45 jobs included peasant, aviator and doctor, whereas banker, business man and minister were at the bottom of the list. Such findings, which place technical and manual jobs among the highly preferred occupations (also reported in studies by Russian investigators) are interpreted by Russian observers, following Stalin, as "a radical change in man's attitude toward labor, transforming labor from the shameful and heavy burden it was once considered to be into a thing of honor and glory." Observations made in the U.S.S.R. in 1935 by the author show that political indoctrination in the school system and in the vocational-guidance program was used extensively to increase the prestige value of occupations in which workers are needed,

TABLE 25. *Comparison of Social Status Ranks of Twenty-five Occupations Obtained in 1925, 1946, and 1949* (after Welch)

Occupations	Median rank orders		
	1 *Counts 1925*	2 *Deeg and Paterson 1946*	3 *Welch 1948*
Banker	1	2.5	1
Physician	2	1	2
Lawyer	3	2.5	3
Superintendent of schools	4	4	4
Civil engineer	5	5	5
Army captain	6	6	8
Foreign missionary	7	7	6
Elementary-school teacher	8	8	7
Farmer	9	12	10
Machinist	10	9	12
Traveling salesman	11	16	14
Grocer	12	13	11
Electrician	13	11	13
Insurance agent	14	10	9
Mail carrier	15	14	15
Carpenter	16	15	16
Soldier	17	19	19
Plumber	18	17	17
Motorman	19	18	20
Barber	20	20	18
Truck driver	21	21.5	21
Coal miner	22	21.5	22
Janitor	23	23	23
Hod carrier	24	24	24
Ditch digger	25	25	25

Note: Rho 1 and 2 = 0.97. Rho 2 and 3 = 0.98.

and to turn young people from entering other occupations (28). Although similar forces may be operating in the United States, in the form of parental direction and pressure, it is nevertheless important to note that the absence of legal restrictions to job mobility such as exist in the U.S.S.R. and relative freedom in the operation of social forces in the United States add a quality of "honest opinion" to the social values attached to occupations by American children which does not appear to exist in parallel data applying to the population of the U.S.S.R. (28).

A STUDY OF HIGH-SCHOOL STUDENTS

Evidence that the social status accorded to the job helps determine the choice of occupations by young people is found in the study con-

ducted in 1948 by the Social Research Service, Michigan State College (53). Students in the tenth and twelfth grades of Michigan high schools were asked to compare the occupations of *teacher, farmer, telephone operator, foreman and supervisor,* and *assembly worker in a factory* with others. In each case, the comparisons involved judgments as to the prestige value of the job in relation to ten others with which it is in competition in selecting careers or with which it is often associated. For example, the students were asked to select one alternative in the statement: "I think that the social standing or prestige of a *telephone operator* is higher than, equal to, or lower than that of a file clerk."

For purposes of analysis, the proportion of students rating a job, e.g. telephone operator, "higher" than another in the list, was given an arbitrary weight of 1; the proportion rating it "equal to" a weight of 2; and the proportion saying "lower" a weight of 3. Applying this method, as can be seen from Table 26, the prestige value of telephone operator among girls is found to be very slightly higher than that of file clerk. Such jobs as receptionist, stenographer, and bookkeeper are ranked above telephone operator, while lower prestige values are assigned to the jobs of sales clerk in a department store, elevator operator, etc. Other comparisons of the same sort lead to the conclusion that which of two or more jobs young people will accept depends a great deal on the relative prestige of these jobs.

FINDINGS FROM EMPLOYEE-ATTITUDE SURVEYS

Employee-attitude surveys in industry also yield data on attitudes related to job status from which inferences can be drawn concerning such motives as the needs for pride, prestige, social position, recognition, etc. Reference to Table 18 shows, for example, a relatively high *per-cent mention* for "work type" and "pride in important job" in letters submitted by General Motors Corporation employees in *My Job Contest* (12). Similarly, 18.5 per cent of employees in the six plants surveyed by the National Industrial Conference Board (13) in 1947 place "type of work" (*Factor 71*) among the *five most important* factors, and "type of work" is third in the list of factors when these are rated as *first in importance* (Table 18). If, as seems reasonable, *opportunity for advancement* (*Factor 41*) is viewed as bearing upon the satisfaction of prestige needs (remote as well as immediate), the data in Tables 17 and 18 can be interpreted as supporting the viewpoint that job characteristics or those company policies which enhance the standing of the job contribute to the satisfaction of basic needs. Among policies which are particularly pertinent in this connection are those applying to transfer and promotion, since although many employees may not be either capable or desir-

TABLE 26. *Prestige Level of Telephone Operator* (from *Youth and the World of Work, Michigan State College,* 1949)

	Rank score
Receptionist for a doctor	2.4
Stenographer	2.3
Bookkeeper	2.2
Typist in an office	2.1
TELEPHONE OPERATOR	2.0
File clerk	1.9
	1.8
	1.7
Sales girl in department store	1.6
Clerk in grocery store	1.6
House-to-house salesman	1.6
Waitress in restaurant	1.5
Elevator operator	1.5

ous of moving on to another job, every employee likes to feel that he has the *chance* to "get ahead" (12).

Further evidence concerning the role of job status is found in the surveys conducted by the Survey Research Center, University of Michigan, described in Chapter 8. Among the dimensions of morale examined in the case of office employees of the Prudential Life Insurance Company (26) was *intrinsic job satisfaction,* characterized as the degree of satisfaction obtained by the individual employee from performing those tasks which constitute the content of the job. Questions used in obtaining an over-all index of intrinsic job satisfaction included

(1) *"How well do you like the sort of work you are doing?"*
(2) *"Does your job give you a chance to do the things you feel that you do best?"*
(3) *"Do you get any feeling of accomplishment from the work you are doing?"*
(4) *"How do you feel about your work, does it rate as an important job with you?"*

The findings of the study showed that employees who were doing work of a more varied sort, or work requiring greater skill, had higher intrinsic job satisfaction than those working on less skilled jobs (24). However, in contrast to the results of earlier investigations by Katz and Hyman (25), and in conformity with those of Kornhauser and Sharp (29), the workers with higher intrinsic job satisfaction were not found to be the more productive workers. Moreover, they were not necessarily more identified with the company or more satisfied with the general policies of the organization.

These and other findings of the study under discussion show that there is an intricate enmeshing of specific attitudes and specific motives. They also show, however, as do other investigations referred to in this section, that *the status of the job itself—its potential in arousing feelings of pride, worth and recognition—is an important element in moulding attitudes and in gratifying psychological needs.*

The Role of Supervision

Experimental studies described in earlier chapters clearly indicate that the quality of supervision exercises a significant influence upon employee production, satisfaction and morale. Employee attitude surveys provide additional evidence that *job satisfaction and morale are dependent upon the extent to which supervisors take into consideration employees' needs for recognition and status.*

Supervision and Morale: Data supporting this view are found in a study conducted during 1940 by the Florida Power and Light Company (38). Wide variations in morale from department to department in the company were revealed by the survey. Figure 29 presents the analysis of the morale situation in one of the departments of this company. The results show clearly that the morale problems of this department were not centered around wages although, as the investigator points out, many people in the company assumed that "money tells the whole story of employee morale." *Questions* 23, 24, and 25 refer to wages. The attitudes of employees in this department towards wages are all "in the black," that is above the corresponding company averages by the amounts 10.6, 12.6, and 6.5, respectively. The largest deviation, in terms of *unfavorable* attitude, is with respect to *Question* 18, "Criticism in Public"; the value in this case is 18.2 points below the company average. Evidently the well-known principle of refraining from criticising employees in the presence of others had been violated flagrantly in this department.

Question 13, "Consideration and Courtesy Shown to Subordinates," reveals another source of unfavorable attitudes among employees in this department. In general, the survey revealed that in this department and, to some extent, in the company as a whole, the *workers wanted more consideration, better treatment by the supervisory force.* Such dissatisfaction as existed was not with the wage plan, but with the failure of the department head and his subordinates to recognize the workers' worth as human beings—with the failure to satisfy the workers' *needs for recognition, self-esteem* and similar motives.

Similar effects, bearing on *absenteeism,* have been noted in a study conducted in a large public utility by the Survey Research Center, University of Michigan (25a). Of male office workers who had an average

Explanation of Numbered Bars. The starred (*) items are the ones most subject to the leadership influence. *Help and Cooperation:* 1. Efficiency of equipment. *2. Efficiency of planning. *3. Teaching best methods. 4. Physical working conditions. *Inspiration and Encouragement:* *5. Giving interesting information. *6. Encouraging safety methods. *7. Encouragement of initiative. *8. Opportunity for learning. 9. Broader knowledge of company. 10. How interesting is your work? *11. Check on self-improvement. *12. Getting clear-cut decisions. *13. Consideration and courtesy. *14. Freedom and favoritism. *15. Understanding and appreciation. *16. Counsel from superior. *17. Freedom from other counsel. *18. Criticism in public. 19. Congeniality of associates. *Rewards:* 20. Opportunity for transfer. 21. Merit to govern promotion. 22. Opportunities for advancement. 23. Equal pay for equal work. 24. Pay compared to city. 25. Fairness of pay. 26. Time outside of business. *27. Full credit for all services. *28. Job security for good work. 29. Security compared to elsewhere.

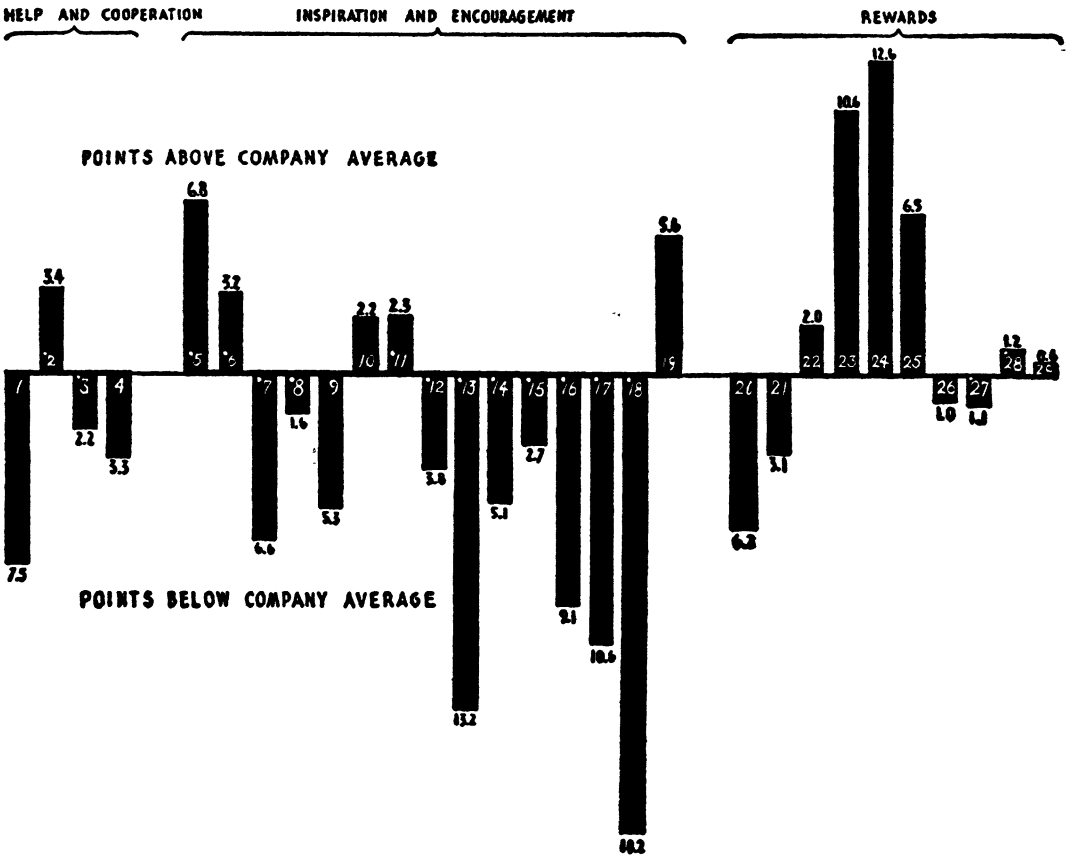


Figure 29. Morale Profile of a Single Department, Florida Power and Light Company †

† By permission, from McG. Smith, "Mending our weakest links," *Adv. Mgmt.*, 1942, 7, 77–83.

absence rate of *1 day in 6 months*, 69 per cent stated "*I feel free to discuss important things about my job with my supervisor.*" The proportion giving the same reply among those with an average absence of *4 or more days in 6 months* was 29 per cent. Although, as stressed by the investigators, many aspects of the social organization of the plant must be considered in evaluating such findings, the facts cited above serve to illustrate again the important role of the supervisor in promoting attitudes associated with desired behavior on the part of employees.

Illustrations from Other Surveys: The findings of many employee-attitude surveys agree in showing that *the quality of supervision constitutes a major factor in determining the level of employee morale.* According to Houser (20), the differences in departmental average morale scores shown in Figure 21 reflect primarily differences among sub-executives in "winning the favor of employees."

A study by Kornhauser and Sharp (29), conducted in the Badger-Globe Mill of the Kimberly-Clark Corporation, showed "favorable" attitudes in the case of 29 per cent of employees in Department A. In Department B, engaged in the same kind of work and characterized by similar working conditions, 71 per cent of the employees had "favorable" attitudes. An intimate study of the attitudes and conditions of the two groups left no doubt that the one outstanding causal influence was the unfortunate nature of supervision in Department A.

Further evidence of the influence of supervision in determining morale and in tapping motives is found in the work of Bergen (3) who used a questionnaire involving a combination of an attitude scale with questions of the multiple-choice type in measuring both over-all morale and reactions to particular policies of 1,000 employees from selected offices and factory departments of a manufacturing company. Results showed a range in average departmental morale scores from 45.9 to 69.4 with an average of 57.1 for all employees. A further analysis revealed that these variations in morale, although also influenced by other factors, were due largely to differences in supervision and leadership.

Quality of Supervision and Job Satisfaction: Supervisory attitudes and conduct are determinants of *job satisfaction* as well as of morale. Evidence of this is found in investigations (35, 36) by the Survey Research Center, involving 8,000 nonsupervisory employees and 750 of their immediate supervisors in a large public utility. Relationships were found between employees' satisfactions and such supervisory variables as degree to which supervisor is concerned with employees as individuals; type of recognition given by supervisor for good work; extent of supervisory encouragement of employee participation in decision-making; degree to which supervisor takes sides with employee or with management in conflicts between

them, etc. According to Elliott (11), when an employee describes the "kind of boss" he wants, he emphasizes the need for frequent praise and constructive criticism, personal interest, listening to ideas about the job, telling about changes before making them, and personal faith and confidence in the worker. Such findings confirm the conclusion, reached earlier by Hoppock (19), from an investigation of *job satisfaction*, that the employee wants a fair-minded boss who makes an effort to understand his problems, to answer his questions, to give consideration to his needs.

Additional support for this view is found in a study of work adjustment in relation to family background by Friend and Haggard. One conclusion from this investigation is that job satisfaction, "derived from certain subtle rewards which dovetailed with the individual's personal needs, can be traced back to attitudes of supervisors . . . which fostered the individual's need of worthwhileness" (14, p. 12). This and similar effects occur, in part, because of the dependence of the employee upon his supervisor. Throughout industry, as Gardner points out, ". . . everyone seems to be looking upward with his attention focused upon the people above him and especially upon his boss . . . *Each subordinate is concerned over just how his boss feels about him.*[2] He wonders if his work is satisfactory, if he makes a good appearance, if his boss thinks he talks too much or not enough, or if he knows just what his boss does expect" (15, p. 9).

WORK STATUS AND COMMUNITY STATUS

Studies described above show clearly that the worker looks to his supervisor for the satisfaction of his desires for approval and recognition; of the need for self-respect, and of other ego-involved needs. His status in the plant, as *he* sees it, and as others see it, appears to be in considerable part a function of the quality of supervision. The importance of work status—achieved through recognition of human needs by supervision and in other ways—is enhanced by the universal connection between a man's work status and his community standing. According to Williams

> ". . . this it is that constitutes by far the most important as well as the most elusive of all the 'conditions' of work. This is what enlarges enormously the boundaries of a man's job. This is what provides those 'social handles' of the pay-cup—that 'social fringe' which makes a man's work infinitely more than that combination of mud, shovel, and arms which so fills the eye of the observer. Away out beyond these extends the thought of the doer of the task. Constantly he pictures the reward which is to follow. Of that reward only a part is put into the pay envelope. The rest of it spills over into satisfactions astonishingly intricate and im-

[2] Not italicized in the original.

ponderable—and indispensable. Among these, however, the assignment of a gratifying social status is only the final capstone set upon a whole series of lesser but ascending rewards" (51, p. 58).

A practical fact that cannot be overlooked is the difficulty of enlarging the status of workers employed in the many relatively unskilled or repetitive jobs which characterize work in the "big factory." One source of difficulty here arises from *social norms* [3] existing in the community outside of the plant. Thus, as is pointed out by the president of the Lincoln Manufacturing Company, certain kinds of work, e.g. housework, are held to be "degrading" if done for pay; highly respected, if done by ourselves in our own homes. Driving one's own car is a source of prestige; acting as a chauffeur for pay may be looked upon as a menial task. A "white collar" job carries prestige in the community as well as in the plant. By contrast, manual work—particularly unskilled labor—is accorded little if any social recognition (31, p. 93).

THE WORKER AND HIS ROLE BEHAVIOR

Such views create difficulties in satisfying the feeling among workers, noted in a British study, that "a job should have a significance beyond satisfying immediate needs;" the feeling that the job is both an essential part of the factory work and "important to the country and to the consumer" (46a, p. 191). Nevertheless, while it is true that low job status is, in part, a problem arising from the "views" of society at large, there is still much that can be done by industry to enhance the *status* and enrich the *role* of workers on even the lower rated jobs. Thus, job enlargement and job rotation on respective tasks may not only serve to reduce the feeling of boredom (37, 44, 45, 46) but simultaneously raise the status of the worker "in his own eyes," in those of his fellow workers, and in the opinion of his friends and associates, his home community. A prime effect of the opportunity for participation in decision-making may well be to raise the *status* of the worker as *he* sees it and as it is viewed by other people in the plant.[4] The worker, as do people in other situations, wants to be in the role of an "important person." He seeks to enjoy this feeling of worth—the recognition and respect of others. As has been suggested by Burns (4), the worker's point of view implies that a railwayman, an engineer, a machinist, an oiler, is bound, just as "intellectual" workers, by the honor of a calling. There is pride in it—pride in the work one does and in its necessity. To "count," to be considered worthwhile, because of his job, represents a basic need of the industrial worker. To understand

[3] See pages 93–98.
[4] See pages 98–103.

the strength of this motive, the force of its interplay with encouraging approvals and opposing disapprovals, is one road toward a fuller appreciation of the manifold sources of motivation and morale in industry.

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18

Attitudes toward the Union

ACCORDING to estimates based on union membership reports and claims, union membership in the United States has increased, as shown in Figure 30, from approximately 3 million in 1930 to between 14 and 16 million in 1950. Union membership in the latter year included approximately one-fourth of the total labor force (32, p. 113).

The rise of unionism in the United States has been ascribed to the success of labor organizations in satisfying workers' needs. According to Golden and Ruttenberg, spokesmen for organized labor, unions have contributed to the satisfaction of three major categories of human needs, viz.

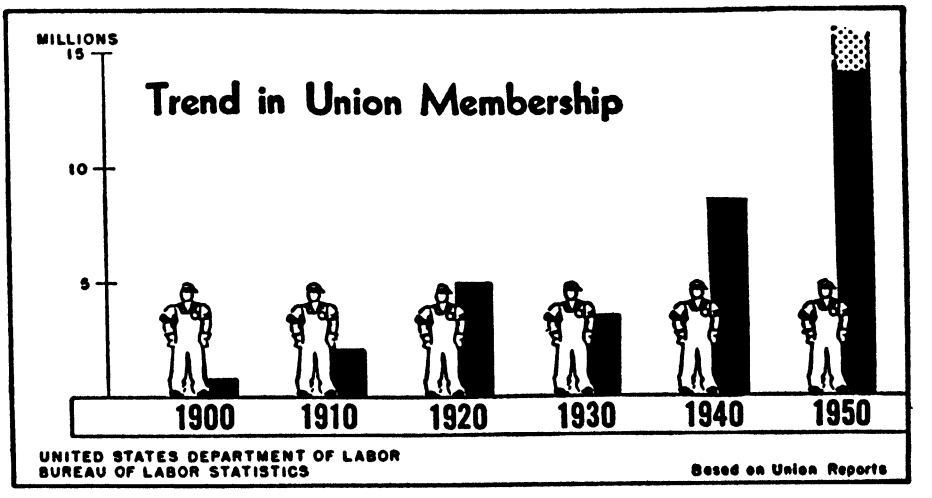


*Figure 30.**

* From *50 Years' Progress of American Labor*, Monthly Labor Review—The 35th Anniversary Issue, (July) 1950, 71, No. 1.

"1. *Economic—an adequate plane of living and necessary amount of wage and job protection;*
"2. *Psychological—the personality needs of freedom of action, self-expression and creative outlets;*
"3. *Social—the ties and bonds of group relations and community life*" (13, p. 7).

In a discussion of UAW and Walter Reuther, such claims have been enlarged into the assertion that "It [the Union] alone has brought a sense of human worth into an area dominated by robots, pistons, and dollars —and that, more than anything else is the measure of its triumph" (16, p. 44).

Consideration of union functions have led a number of social scientists to the even broader conclusion that the union represents the prime medium for furnishing "substitute" satisfactions for employee needs and demands which are frustrated by the job conditions under which people work in modern industry (24). Thus, according to Krech and Crutchfield

> "While it is true that the individual worker may find substitute satisfactions in many different kinds of social organizations—in fraternal, religious, or other types—it is highly probable that he will seek many of them in labor unions. There are various reasons for this. Under present conditions almost every worker is familiar with labor unions, comes into contact with them, and sometimes is even forced to join them. On the other hand, the opportunity and compulsion to become acquainted with or join other types of social organizations is not so great. Second, *the labor union, by and large, can better meet most of the worker's needs and demands than can other organizations.*[1] As we have seen . . . most social organizations will generally reflect the major needs of its members, and labor unions will therefore be more 'tailored' to the needs of workers than will religious organizations or other less homogeneously composed social organizations" (19, p. 547).

Reasons cited by Krech and Crutchfield for such efforts (representing also reasons other than the "economic" drive for joining unions) are as follows

> "1. Labor unions frequently provide the individuals with a *sense of participation* in deciding vital issues . . .
> "2. Labor unions frequently provide the individual with an opportunity to *express himself in speech and action with much more freedom from fear of reprisal than is possible on a job.* . . .
> "3. Labor organizations provide the worker with *opportunities to achieve positions of leadership and authority*—opportunities that are denied him on the job" (19, p. 548).

Unions, it is added, counteract tensions and frustrations produced by job conditions and help satisfy needs and wants by sponsoring many other

[1] Not italicized in the original.

activities. A sense of economic security is provided through the establishment of credit unions and banks. Other needs are satisfied through educational, recreational, and cultural programs which "can enrich a life made monotonous by the assembly line." The desire for self-expression is presumably better achieved because, "through the political programs of many unions, he [the worker] can participate in local, state, and national politics in a more personal and genuine sense than would otherwise be possible. The modern labor union," write Krech and Crutchfield, "like the modern drugstore, caters to almost every need of the public" (19, p. 549).

The viewpoint that the worker looks to the union for the satisfaction of such needs has been challenged by management representatives. During the intensive drive toward unionism in the late 1930's and early 1940's many executives contended that "workers don't want to join unions, but they are being forced into them by racketeering labor agitators supported by self-seeking politicians" (5, p. 118). More recently, many have accepted the view that management's abuse of its power, particularly during a period of lowered job mobility in the depression of the 1930's, contributed to the growth of unionism in the United States (14). However, there are still many sincere and thoughtful observers who question the position that the increases in union membership represent a spontaneous expression of solidarity on the part of a universally exploited and deeply dissatisfied class of the population (31), and also the further view that the union is required to overcome the frustrations induced by the "big factory" and the Machine Age. There is also a disagreement with the view that management, because it has the "attitudes, habits, and values of middle-class groups" cannot understand what the worker wants (6) and must turn to the union and its representatives for enlightenment.

The existence of such diverse views, reflecting perhaps the varying *social norms* of the interested groups (22), points to the need for a consideration of such objective data on workers' attitudes toward unions as are available from studies in this field. An examination of attitude surveys from this point of view can also provide further clues as to the basic motives which require particular consideration in dealing with problems of motivation and morale in industry.

THE VIEWS OF HIGH-SCHOOL AND COLLEGE STUDENTS ON UNION MEMBERSHIP AND ON "LABOR"

Data bearing on the question as to whether youth wants to belong to labor unions is found in the study conducted by the Social Research Service, Michigan State College, in 1948. As shown in Table 27, the great majority of Michigan High School students feel that they should have

TABLE 27. *The Attitudes of Young People Toward Union Membership* (from *Youth and the World of Work*, Michigan State College, 1949)

I would prefer a job with a concern where the workers:

	Per cent preference
Must be members of a labor union	9
Can join a labor union if they want to	59
Have no labor union	17
Don't know which I would prefer	12
No response	3
Total	100

an opportunity to join a union if they so desire. However, less than 10 per cent want compulsory membership, and 17 per cent want nothing to do with unions. On the other hand, as shown in Figure 31, "children of *manual* workers, who are more likely to have had actual experience with unions, more often favor compulsory union membership or the union shop." Conversely, "children of proprietors, managers, officials, professional and clerical workers more often want jobs where there is no union" (33, p. 13).

The Influence of Socio-economic Status: Further data showing the effect of socio-economic status and union affiliations of parents upon attitudes of younger people are found in studies by Weschler (27) who used an "error-choice" method (15) in evaluating college students' attitudes toward labor and management. Results showed that, in a college population, the subject's income provided a significant clue to his attitudes toward labor or management, since those in economically poorer brackets tended to score significantly higher on a "pro-labor" continuum (Average Score, 16.00) than did individuals in higher income brackets (Average Score, 13.44).[2] Furthermore, those individuals whose parents belonged to labor unions scored higher (Average Score, 16.36) on the same continuum than did those whose parents belonged to management groups (Average Score, 13.00).

Striking evidence of the influences of socio-economic status and parental affiliation with a union on the attitudes of young people toward "labor" is found in a study by Centers (3). Subjects were approximately 1,000 students, representing the entire high-school population of a town of 30,000 people situated approximately 35 miles from the Manhattan section of New York City. During a single day near the end of the semester these students at the school were asked by their teachers to

[2] Difference between average scores significant at or below the 5 per cent level.

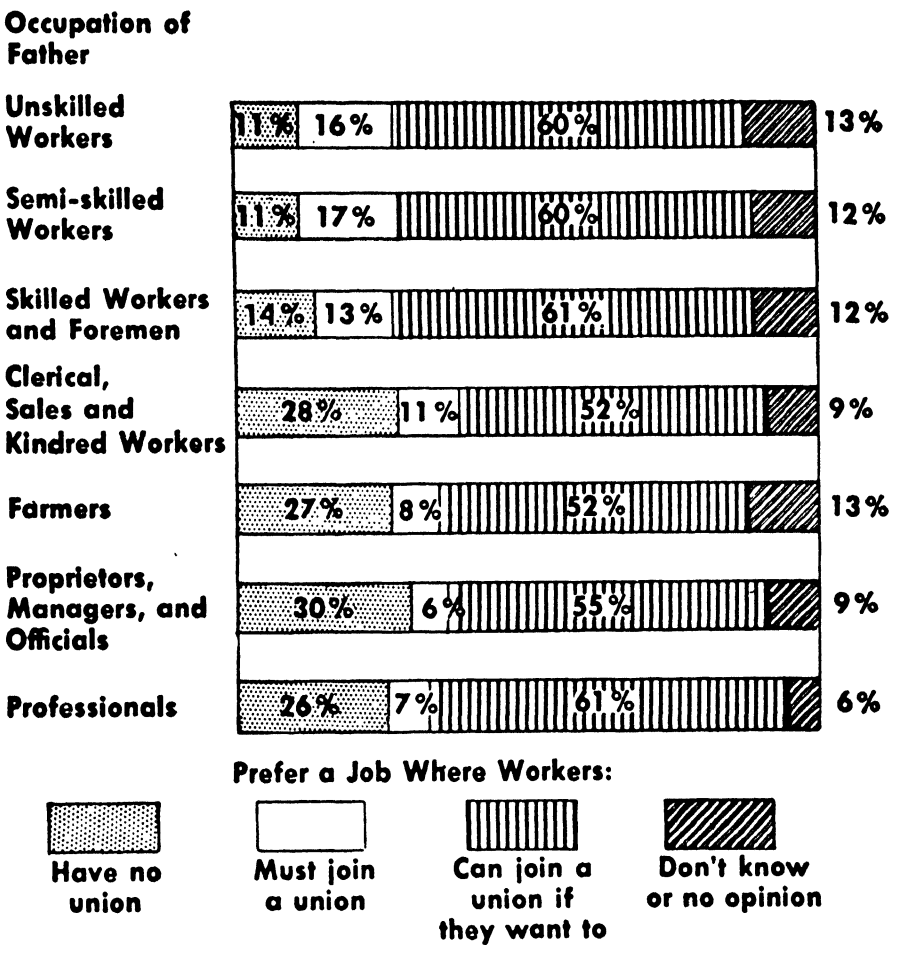


Figure 31. Boys' Opinions about Union Membership, by Occupation of Father *

answer anonymously a brief questionnaire labeled *A Survey of Student Opinions on Some Public Issues and Policies*, which included eight questions relating to "labor."

Test-retest *reliability* of the labor scale proved to be .98. The scale proved to have a substantial degree of *validity* in the sense that responses clearly differentiated members of a Socialist Club, on the one hand, and members of the Society for the Advancement of Management, on the other. In fact, all members of the Socialist Club ($N = 25$) were rated as *Very Pro-labor* on the scale; none of the members of the Society for the Advancement of Management ($N = 20$) fell into this category, and all but six were rated as *Very Anti-labor*.

* By permission, from *Youth and the World of Work*, Michigan State College, 1949.

As can be seen from Table 28, which represents findings from the administration of the scale to the high-school population, the frequency of "pro-labor" attitudes is high among the children of semiskilled and skilled manual workers and low among the children of executives and professional people. Conversely, "anti-labor" attitudes are infrequent among the children of the "working" population. Systematic breakdowns of the data showed that at the intermediate occupational strata, i.e. white collar and skilled manual workers, differences in attitudes were associated with labor-union membership on the part of the parents. However, according to Centers, "these responses, although influenced by certain . . . other variables to some degree, were more strongly related to parental occupation than to any of these others" (3, p. 322).

TABLE 28. *Labor Attitudes of Adolescents* (after Centers)

Parental occupation	*N*	*Per cent*					*For "very antilabor," differences are significant between*
		Very pro-labor	*Pro-labor*	*Indeterminate*	*Anti-labor*	*Very anti-labor*	
1. Business executive	19	—	—	11	17	72	*
2. Professional	57	13	9	7	19	52	2 & 3, 4, 5, 6
3. Small business	137	27	14	18	12	29	3 & 2, 6
4. White collar	141	31	18	11	15	25	4 & 2, 6
5. Skilled manual	320	40	13	13	15	19	5 & 2, 6
6. Semiskilled manual	220	49	22	10	11	8	6 & 2, 3, 4, 5
7. Unskilled manual	36	60	13	8	12	7	*

* Differences not tested for significance because of the very small number of cases in the samples.

EMPLOYEE ATTITUDES TOWARD UNION MEMBERSHIP

N.I.C.B. 1947 Survey: Facts concerning the measured attitudes of *employed workers* toward unions are available from a number of studies. The large-scale surveys described in Chapter 13 provide data from which indirect inferences might be drawn concerning the importance attached to union membership by workers. Thus, reference to Table 17 shows that only .9 per cent of employees in the six plants surveyed by the National Industrial Conference Board in 1947 referred to "labor unions" (*Factor 34*) as *first in importance* among 71 morale factors, and this factor was rated among the *five most important factors* (Table 18) by only 5.8 per cent of the employees involved (11). The factor "labor union" occupies approximately the 25th position in a percentage ranking of factors selected

as first in importance by employees. It is of interest to note, in passing, that "labor unions" does not appear at all in the list of factors predicted by employers to be *first in importance* in the opinion of their employees. On the other hand, "labor unions" occupies the third position in a ranking of the 71 factors by 42 labor-union leaders as representing what they believed to be *first in importance* in the opinion of union members.

GMC My Job Contest: Of further interest in considering this possibility is the fact that the investigators responsible for coding letters written for *My Job Contest*, by employees in the highly unionized General Motors Corporation plants, found it unnecessary to use "labor unions" in analyzing and presenting the findings of this survey. The final list of 58 themes shown in Table 18 was derived from an original list of 77 themes, from which were eliminated those which proved to lack "sensitivity" in reporting results. Originally, five items had been introduced experimentally into the coding structure to reflect the entrants' comments about the union. References to these items totaled to less than one-per-cent mention, and they were not treated as separate themes in the final tabulations.

The General Motors Corporation contest also provided an opportunity for contestants to write in comments under a large "PS" on the reverse side of the *MJC* entry blank. Approximately 7.2 per cent of the entrants made "PS Comments." Of the total comments entered, only 1.4 per cent referred to unions in comparison, for example, with 22.8 per cent referring to "methods, tools, upkeep"; 13.3 per cent to "working conditions"; 6.8 per cent to "training and education," etc. However, the paucity of references to unions by *MJC* contestants is interpreted by Evans and Laseau as "establishing the point clearly that a management sponsored survey should not be expected to elicit comments about the union, especially in the light of the free-response condition under which the entrant was operating" (9, p. 44).

Job Satisfaction of Railroad Workers: The role of the union as a source of satisfaction on the job has been investigated by Stagner in a study of railroad workers (26a), conducted with the co-operation of both management and union officials. This included a sample of 715 drawn from a total of about 22,000 employees, not including maintenance-of-way gangs. A *job satisfaction score* was computed for 100 respondents, chosen at random, by weighting 15 items of the questionnaire used in the survey. Of these 15 items, that pertaining to "union-management relations" was found to be the most discriminating in differentiating between the 50 *more satisfied* and the 50 *less satisfied* members of this group. According to Stagner, this finding, and the further fact that "grievance handling" is the second most discriminating item, seems "plausible in a highly unionized industry" (26a, p. 298).

Why Workers Join or Refrain from Joining Labor Unions

The surveys reported so far deal only with over-all attitudes toward unions and labor. A number of surveys have concerned themselves with the question of *why workers join or fail to join labor unions.*

A STUDY OF TEXTILE MILL EMPLOYEES

Illustrative of investigations bearing upon reasons for joining unions is a study by Chamberlin (5) who, in 1935, interviewed 200 men employed in textile mills in Massachusetts, including 100 union members and 100 nonunion workers. Their answer to his inquiries indicated that 90 per cent of union members and only 38 per cent of nonunion employees believed that the unions get results. To a request for reasons for which they would join the union, nonunion employees gave the following in the order noted: (1) *because fellow workers had joined;* (2) *a feeling of greater security;* (3) *because a union is the only way that the working man can get results;* (4) *a liking for such organizations.* The principal objection of nonunion men to unions was the union's *failure to get results* (45 per cent), with *the type of leader* running a close second (41 per cent).

A STUDY IN AN AUTOMOBILE PLANT

Data on the relationship between attitudes toward the union and *job satisfaction* are found in the study of the "man on the assembly line," by Walker and Guest (40), described on page 294. In the course of interviews, workers were asked to tell what they thought about the union and why. An evaluation of responses by the investigators showed that 66 per cent were *generally favorable* to the union, which had been organized shortly after plant operations began, in 1949. From these findings, and a further consideration of the nature of the qualitative remarks, it is concluded that "a majority of the men favored the union, and that its role at *Plant* X was an important one" (40, p. 132). However, in an analysis of the *relative* importance of the union in comparison with other job conditions rated by employees, it was found that only 2 in the sample of 180 employees gave the "union" as their *first* reason for liking their job at *Plant* X, in contrast with the large number who gave "good pay" or "steady work" as the "most important reason for liking the job." Nevertheless, the investigators' examination of the "usual reasons" why workers join or continue to support a union leads to the opinion that wages, job security, hours, etc. are not applicable explanations at *Plant* X. Instead, it is suggested that the union served to counterbalance a lack of personal satisfaction with immediate work experience—that "the

union met in part the psychological and social needs which work in the plant had created." The union, it is added, represents an "emotional as well as economic dimension in the workers' attitudes . . . a kind of psychological bulwark against pace and boredom and against the bigness and impersonality of management" (40, p. 133).

STUDIES OF NATIONAL SAMPLINGS

Questions pertaining to reasons for joining or not joining the union were included in a survey sponsored by the National Association of Manufacturers and conducted by Cherrington and Roper. This involved interviews with approximately 6,000 employees representing a cross-section of the working population of the United States. Replies to the question "*Why do you think most union members join a union?*" are summarized in Table 29. While showing that "more money," "benefits" and "bargaining power" are impelling forces in attracting employees to unions, the findings are also interpreted as showing that a very small proportion of workers join unions primarily for job security and that "they evidently look to management for job security" (30, p. 8). Answers to the question "*Why do you think most nonunion men do not join a union?*," also summarized in Table 29, give prominence to "fear" of the employer as a reason for refraining from joining unions. However, the combination of a proportion giving the answers "satisfied with conditions," "don't believe in unions," and "mistrust unions and union leaders" shows, according to the National Association of Manufacturers, that "the reasons for not joining [unions] are considerably more on the side of what the unions don't offer than of the fear complex many have about the employer" (30, p. 9).

TABLE 29. *Reasons for Joining or Not Joining Unions—National Association of Manufacturers Survey* (Undated)

Question: *Why Do You Think Most Union Members Join a Union?*

Reasons	*Per cent*
More money	27.5
Benefits they get	24.9
Bargaining power	18.9
Job security	3.0

Question: *Why Do You Think Most Nonunion Men Do Not Join a Union?*

Reasons	*Per cent*
Fear employer	25.7
Satisfied with conditions	19.7
Don't believe in unions	16.7
Distrust unions or union leaders	12.9

In a survey conducted by the Opinion Research Corporation (20), in 1946, a cross-section of the general public ($N = 3{,}320$) and of manual workers composed of workers from the general public plus a supplementary sample of 882 cases ($N = 1{,}801$), was asked "*When a man joins a union, is it more often because he wants to, or because the union compels him to?*" To this question 63 per cent of the general public, 55 per cent of nonunion manual workers, and 41 per cent of union manual workers replied "union compelled." Only 47 per cent of union manual workers replied "wants to," and the percentage of nonunion manual workers giving this reply, like that of the general public, was found to be in the neighborhood of 25 per cent.

More detailed data on reasons for joining or not joining unions are found in a study of workers' reactions to industrial problems in a war economy conducted, in 1942, by Link (23). This involved interviews with a nation-wide sampling of a thousand individuals, consisting mainly of industrial workers and their wives. Of the interviews conducted, 70 per cent were in homes of industrial workers and 30 per cent in "white-collar" homes of comparable economic status. The distribution of union membership in these homes is shown in Table 30. Half of the interviews were with men and the other half with women, mostly the wives of workers.

Among the questions asked were (1) "*Do you think it would be a good thing if* ALL WORKERS *were required to join or belong to a union?*" and (2) "*Do you think that workers should be forced to* STAY IN *a union if they want to resign or get out?*" Of individuals *with* union backgrounds 61 per cent believed that all workers should be *required to join a union.* Of individuals *without* union backgrounds in the home 61 per cent believed that all workers should *not be required to join a union.* At the same time, a large proportion of *all* industrial workers and their wives were opposed to *compulsory maintenance of union membership,* as evidenced in the fact that 84 per cent of those *without* union backgrounds and also 72 per cent *with* union backgrounds answered "No" to the question "*Should workers be forced to stay in a union?*"

Table 31 shows the reasons given by 387 individuals in the nation-wide sampling who said that all workers *should* be required to join a union and of 495 who said they *should not.* The reason most frequently given for

TABLE 30. *Frequency of Union Membership in Homes Surveyed in Link's Study* (Per Cent) (after Link, 1942)

	Industrial homes	*Other homes*	*Totals*
Union members, per cent	33.0	3.5	36.5
Nonunion, per cent	36.5	27.0	63.5
Total numbers	695	305	1000

compulsory maintenance of membership—by 26 individuals of 132 favoring union maintenance—was "*It would weaken the union if they got out.*" By contrast, 381 individuals in the sample of 1,000 objected to compulsory maintenance of membership on the grounds that the worker

TABLE 31. *Opinions as to Why Workers Should or Should Not Join a Union, Per cent (see note)* (after Link, 1942)

Part 1: Reasons Why All Workers Should Be Required to Join or Belong to a Union

		By membership	
	Total	*Union homes*	*Nonunion*
Secure better working conditions, get better wages or hours	9.4	13	7
One man can't bargain for himself (collective bargaining)	8.4	14	5
Increases efficiency, better co-operation with management, men can work better	4.8	8	3
Protects worker's job, gives him security	2.8	4	2
Saves disputes, avoids disagreements, would be no more strikes	2.8	4	2
Helps the workers	2.4	4	2
If the unions are good ones (qualified answer)	2.4	3	2
Miscellaneous	7.4	11	5
Don't know	1.0	2	*

Part 2: Reasons Why All Workers Should Not Be Required to Join or Belong to a Union

		By membership	
	Total	*Union homes*	*Nonunion*
Should let worker decide for himself, leave it to the individual	13.2	10	15
Places too much power in hands of union, unions are a racket	10.3	5	13
It's not the American way, this is a free country	7.5	2	10
Would cause a lot of trouble, lead to disagreements	5.0	3	6
Just don't approve of unions	2.4	1	3
Would depend on the union (qualified answer)	1.8	2	2
Takes away incentive to do better work, some men have better ability than others	1.5	1	2
Miscellaneous	8.0	6	9
Don't know	1.8	*	3

* Less than .5%.

Note: Percentages are based on the *total sample* of 1,000 people.

"should be free to do as he wants, every worker should decide for himself, a right to do as he pleases." Such a reply was given with the same frequency by individuals *with* as by those *without* union backgrounds. Another 255 individuals objected to compulsory maintenance of membership on the grounds that *"it's un-American, this is supposed to be a free country, this isn't a Dictatorship, against American principles"* (23).

FACTORY 1952 SURVEY

The study described above was made in 1942 and reflects the attitudes of both union and nonunion workers and their wives. In Factory's 12th Survey of Workers Opinion, made in 1952, and involving a nation-wide survey limited to *manufacturing wage-earners,* the question was asked *"Would you like to have a union shop (a rule that requires everyone to belong to the union) where you work?"* Of workers in plants with union but without union shop, 43 per cent replied *"Yes,"* and 42 per cent *"No."* When asked *"Would you be willing to go on strike to force your employer to agree to a union shop?"* 41 per cent replied *"Yes"* and 38 per cent *"No."* According to Factory's summary, "there are still enough workers who are strongly pro-union shop to make a lot of strike trouble on this issue" (36, p. 86).

UNION SURVEYS OF THE ATTITUDES OF MEMBERS TOWARD UNIONS

As has been indicated in various parts of this volume—most particularly under the discussion of *bias of auspices* in Chapter 12—the findings of management-sponsored attitude surveys are questioned by many union leaders. On the other hand, there seems to be considerable hesitancy on the part of union leaders to conduct surveys of their own unions, although, as indicated in a study by Davis and St. Germain (6a), such surveys can be useful in assessing policies and practices of the local union. One outcome of such reluctance, according to French, Kornhauser, and Marrow, is a tendency for "the higher officials to become remote from the feelings of the rank and file . . . Top union leaders," it is added "are likely to emphasize strictly *economic* aims and to assume that the membership (even where this includes large numbers of workers entirely new to unionism) retains the same attitudes as those that prevailed during their own earlier days in the union" (12, p. 10).

A "Pilot" Study of a Steelworkers' Union: The fact that there are few surveys which have been sponsored by unions adds interest to those which have been conducted in a union frame of reference providing information on why workers join unions. Among these is a "pilot study," by Seidman, London, and Karsh (25), included in research conducted by the Indus-

trial Relations Center of the University of Chicago. Subjects of the study were members and officers of a midwest local of the United Steelworkers of America. Interviews were conducted with three groups; viz., a *leadership group*, an *active rank-and-file group*, and an *inactive rank-and-file group*. In addition, observations were made of all types of formal and informal meetings and other union activities. In the *leadership group*, 28 out of 36 men who satisfied the criterion for "belongingness" in this group (holding a union office, being a grievance man, a committee chairman, or being a past president of the local) were interviewed. Of the *active members*, 24 out of 43 were interviewed, an active member being defined as one who had attended between 4 and 7 union meetings in the past year. Finally a one-per-cent random sample was drawn from *inactive union members*, represented by those who had not attended any meetings in the year preceding the survey. Interviews were conducted with 62 out of 128 members constituting this sample.[3] In all, 114 interviews were conducted in the course of the survey.

According to the investigators, the findings showed that the overwhelming majority in all three groups had joined their union with some "degree of conviction." In the *leadership group*, the percentage was 86 per cent; in the *active* members group, 83 per cent; in the *inactive group*, the percentage who had joined with some "degree of conviction" was 63 per cent. Most frequently mentioned reasons for joining were family background, earlier work- or union-experience, and personal experiences within the plant. Further analysis of the interviews revealed that the reasons given above were more influential in causing the *active* members to join than they were in causing the *inactive* members to join. Some members indicated that informal group pressures played a large role in their decision to join the union. Investigators state that available evidence suggests the hypothesis that membership in the union is in many instances a matter of social expediency, rather than the outcome of a logical analysis of the situation.

Approximately 95 per cent of the workers in the plants from which the subjects were drawn are union members. Those interviewed were asked what they thought were the reasons which kept the remaining 5 per cent of workers from joining the union. With respect to the question of whether these nonunion workers should be forced to join the union, 96 per cent of the *leadership* group, 75 per cent of the *active* members, and 54 per cent of the *inactive* group favored compulsory membership. Findings are interpreted as revealing that union members resent their non-

[3] Since the authors were primarily concerned with a qualitative analysis of the problem being studied, they stopped interviewing when patterns of responses became repetitive.

union fellow employees and believe themselves justified in bringing pressure to bear on these nonconformists.

A general conclusion drawn from this "pilot" study by the investigators is that reasons for joining unions are numerous and frequently without a logical basis. However, as for those who claim that workers join unions for economic reasons alone, *the investigators report that not one of the 114 members interviewed said that he joined the union in order to get higher wages!* The latter finding, which is in complete contradiction with results of other studies conducted under a variety of auspices, naturally leads to speculation concerning the possibility that biasing influences, of the type discussed in Chapter 12, may have affected both the interview findings and the interpretation of results.[4]

A Comprehensive Survey of Members of an AFL Union: A comprehensive survey of members' attitudes toward their union is found in a study conducted, in 1949, under the auspices of the Warehouse and Distribution Workers, Local 688, International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, AFL, in St. Louis, Mo., with the union paying half the costs (24).

The study involved interviews patterned by a questionnaire which included 129 questions on a 13-page mimeographed schedule. Questions were "pretested" for *reliability* (understandability and unambiguity) and *validity* (relevance to the issue up for study) on small groups of union members, and two major revisions in the entire schedule were made as a result of the pretest. However, no statistical data as to reliability and validity are presented.

A sample of the 4,100 members whose shops had been organized for at least seven years (of a total union membership of approximately 8,500) was accumulated by drawing every ninth name and address from an alphabetical file of union members' names and addresses, with the omission of a small proportion of the members who lived in Illinois.[5] In general, a large number of the workers involved were in jobs classified as semiskilled. In all, 475 names were drawn and questionnaires were completed in the case of 392 of these in interviews conducted in the workers' homes. According to Rose, there was insignificant bias in the sample as a result of the withdrawal of the names of men who had been fired, and probably more bias in the case of those who refused to be interviewed. Nevertheless, the sample is considered by the investigator to be generally representative

[4] One of the authors was at one time a member of the Amalgamated Lithographers of America and a past president of Local 6, UAW, CIO. Another had union experience with the UAW, CIO and with the new IUE, CIO.

[5] Although only shops which had been organized for seven years were canvassed for the sample, approximately 60 per cent of the sample could not date membership back for seven years. The study, according to the investigator, should "not be thought of as one of 'old union members.' "

of union members in shops which had been organized for at least seven years.

In addition to the chief investigator, interviewers included 50 undergraduate interviewers from Washington University who received a minimum of two hours training and followed a carefully outlined program in approaching union members. In articles carried in union newspapers before and during the study, the workers were told that the study was being conducted in their interests, had full union sanction, and that their responses would be treated anonymously by disinterested scientists and students. Each interviewer carried a copy of the union newspaper (*Midwest Labor World*) which contained a write-up of the study plus an introductory letter signed by the union director.

Of particular interest, for purposes of this section, are findings of the survey dealing with the question of why the workers joined the union. Replies to the question "*Why did you join the union?*" are given in Table 32. According to Rose, "*apparently almost one-half of the members (those giving reasons 1 and 8) think of themselves as having joined the union involuntarily*" • (24, p. 60).

TABLE 32. *Reason for Joining the Union* (392 *Members*) (after Rose, 1952) *

Reason given	*Percentage of members* †
1. "Had to—I work in a union shop"	45.9
2. "For my own benefit" (general, but personal)	20.9
3. "It is a good cause" (general, but impersonal)	16.3
4. "For higher wages"	7.7
5. "For better working conditions"	6.6
6. "For security"	4.3
7. "There is strength in numbers"	3.3
8. "The majority wanted it"	2.8
9. No answer	1.3

* This and subsequent tables from the study by Rose are reproduced, with permission, from *Union Solidarity*, The University of Minnesota Press, (Copyright) 1952.

† The figures add up to more than 100 per cent because a person could give more than one answer.

A number of the items in the questionnaire dealt with the question of what the workers expected from the union, i.e. *what they considered to be its major purposes.* Included among such items was the question "*What do you consider to be the purposes of your union? (What is a union for?)*" This was treated as a free-answer question and interviewers did not prompt the respondents but allowed them to answer just as they pleased. In striking contrast with the findings reported in the case of the steelworkers union is the fact, shown in Table 33, that 75.3 per cent of

• Not italicized in the original.

TABLE 33. *Opinions of Union Members on the Purposes of the Union* (after Rose, 1952)

Purpose mentioned	*Percentage of members mentioning* *
"Get specific economic benefits" (higher wages)	75.3
"Get job security" (including seniority)	31.1
"Gain rights" (e.g., "welfare," free speech, fair deal)	16.6
"Get benefits off the job" (recreational, medical, legal)	10.7
"Organize labor; get solidarity for bargaining"	9.4
"Raise the standard of living"	7.9
"Make labor and management more co-operative"	5.1
"Increase fellowship among workers"	3.8
Miscellaneous; "Don't know"; no answer	2.6

* The figures in this column add up to more than 100 per cent because a person could give more than one answer.

a representative sampling of members of Local 688 consider the purpose of the union to be that of "*get specific economic benefits*" in the form of "*higher wages.*" An appreciably high percentage (31.1) also refers to the functions of the union in obtaining "*job security,*" including seniority. By contrast, "*make labor and management more co-operative,*" and "*increase fellowship among workers*" are viewed as purposes of this union by an extremely small percentage of the members.

In the course of the interview, the question was asked "*What do you think are the main things your union should work for right now, either through collective bargaining, or through social action in the community?*" According to Rose, from an examination of replies to this question, as shown in Table 34, "*there can be little doubt that most of the members see the main function of the union to be the traditional activity of collective bargaining to gain higher wages and better working conditions*" [7] (24, p. 151).

As is apparent from Table 34, a certain proportion of respondents—characterized by Rose as a "significant minority"—emphasized "*recent supplementary functions of the union*" in the way of securing security and health benefits, engaging in political action, etc. Attitudes towards these "extra" services were explored by another question: "*Do you think that the union should put more time and money into getting higher wages from the employers or should it put more into a health plan, social and recreational activities, an insurance plan, and other things of that kind?*" A comparison of Tables 34 and 35 shows inconsistencies in members' answers in that in reply to the second question the greater emphasis is

[7] Not italicized in the original.

upon "other things" rather than upon wages. According to Rose, the simplest explanation of this inconsistency appears to be that the spontaneous replies in Table 34 are based partly on the traditional functions of the union which might naturally come to mind first in answering a question about the main purposes of a trade union. The weight assigned to supplementary functions when these are compared with traditional functions, such as getting higher wages, shorter hours, etc., "suggests that the members of this union feel a greater need" for the supplementary functions "but have not been fully educated to think in terms other than the traditional ones" (24, p. 143). In a footnote to this explanation, Rose points out that "another factor to be considered is that many workers feel that their wages are as high as they can get now, but that they *can* get the supplementary benefits by union activity now" (24, p. 143). Consideration of the over-all situation at the time the study was made, and comparison with findings from other studies, distinctly suggest the possibility that this is the *prime* rather than an alternative explanation of the facts presented by Rose. Involved here again are problems in the interpretation of survey data which have been discussed at some length in Chapter 12.

TABLE 34. *Attitudes of Union Members Regarding the Union's Main Functions* (392 *Members*) (after Rose, 1952)

Question: "*What do you think are the main things your union should work for right now, either through collective bargaining or through social action in the community?*"

Answer	*Percentage of members* *
Higher wages and/or collective bargaining	33.7
Better working conditions in the shop	18.4
Benefits outside the shop, such as LHI †	9.4
Job security and seniority	8.4
Political action	5.4
Organizing the unorganized	5.1
Better employer-employee relationships	3.8
General and community welfare	3.1
Miscellaneous	6.1
Nothing	4.9
"Don't know"	19.1
No answer	7.7

* The percentages total more than 100 because some people gave more than one answer.

† LHI is the Labor Health Institute, the free medical service organization which the union secured for most of its members through collective bargaining with the employers.

TABLE 35. *Relative Support among Union Members for "Extra" Union Services* (392 *Members*) (after Rose, 1952)

Question: "*Do you think the union should put more time and money into getting higher wages from the employers or should it put more into a health plan, social and recreational activities, an insurance plan, and other things of that kind?*"

Answer	*Percentage of members*
"More into higher wages"	24.3
"More into other things"	38.1
"About same amount"	35.7
"Don't know"; no answer	1.9
Total	100.0

Sources of "Union Solidarity": The detailed report of the extensive survey of Teamsters Local 688 presents many findings bearing upon the sources of "union solidarity." Following is a summary of a few facts and conclusions which are of particular interest in appraising the statements about the role of the union cited in the introductory section of this chapter.

1. The fact that 93.4 per cent of the members replied "*need a union*" to the question "*Do you think you need a union to buck the employer for you, or could you do as well by yourself?*" leads to the conclusion that all but a small percentage of members of Local 688 are convinced that a union is necessary, including those who joined the union "involuntarily." According to Rose, "being forced to join the union because the company has a union shop is not a major deterrent to union solidarity" (24, p. 185).

2. A number of questions asked in the survey, and also other data cited by Rose, have a bearing on the view, cited on page 334, that the union represents the prime medium for the "substitute" satisfaction of "psychological" and "social needs" of self-expression (4); the "ties and bonds of group relationships" (13); "understanding the forces and factors at work in their world"; "integrity" (1), etc. Following are sample findings in this area

(a) The "average" member attends about one-half of the total number of monthly meetings held during the year. Only a small minority speak up at union meetings.[8]

(b) On the question of "democracy" in the union, 65.6 per cent believe that important matters affecting the union should be decided by the "rank and file." Simultaneously, approximately 60 per cent are of

[8] The important problems of extent of member participation in union activities, factors affecting participation, and also the influence of strongly organized minority groups are discussed by Goldstein (14a), Sayles (24a), and Strauss and Sayles (26c).

the opinion that such matters are actually decided either by the union's director or the stewards' council. "Those whose desire for democracy is frustrated, because they believe that major union policies are set by the director or the stewards' council rather than by the rank and file, are relatively the poorest attenders at union meetings" (24, p. 70).

(c) Attitudes toward supplementary union activities in the way of educational and social activities provide a clue in the evaluation of the attitudes of members toward the union as a substitute for other social organizations. When asked "*Would you like to take an education course now?*", only 9.2 per cent answered "*yes.*" When asked "*In addition to having regular business taken up at the union meetings, would you like to have discussions, outside speakers, labor and political movies, or singing?*", approximately 43 per cent of respondents answered "*nothing extra.*" Of the remaining 57 per cent, who wanted additional activities, the preference was for "discussions" and "outside speakers." The total percentage wanting parties, dances, entertainment, prayers, etc., was 3.1. According to Rose, "it cannot be said that union leaders have been successful in convincing the members that workers' education is an important thing for them" (24, p. 102). A similar conviction appears to be lacking as to the role of this union as a focus of social relationships.

(d) According to Krech and Crutchfield, one reason for the superior status of the union in furnishing "substitute" satisfactions is that "labor organizations provide the worker with *opportunities to achieve positions of leadership and authority* . . . opportunities that are denied him on the job" (19, p. 548). When members of Teamsters Local 688 were asked "*What chance do you think you have for getting ahead and becoming a foreman or shop owner yourself some day?*" 48.7 per cent answered "*No chance at all*"; 17.4 per cent said "*Fair chance,*" and 3.8 per cent, "*Good chance.*" When asked "*Have you ever thought of trying to become a union officer or staff member?*" 83.3 per cent answered "*No, never*"; 10.4 per cent, "*Yes, occasionally,*" and 5.3 per cent "*Yes, often.*" A detailed analysis of such findings leads Rose to conclude that "The great majority of the members see the union as an instrument for achieving common goals. Only a few think of it as an avenue to leadership or personal promotion" (24, p. 150). The analysis also shows that those who think of trying to become union officials are also the ones who are more likely to think that they have opportunities for promotion in the shop. Motivation here appears to have an internal source—in the individual's belief in his own capacity—rather than in the nature of the social organization.

(e) No differences were found between churchgoers and non-churchgoers with respect to attendance at union meetings and loyalty to the union. According to Rose, this means "that there is no conflict between these two institutions in the minds of their common members. . . . Rather, they seem to consider each demand on their time and loyalty in terms of its intrinsic merits" (24, p. 192).

3. The survey of Teamsters Local 688 also considered the question of "whether a high degree of union solidarity is associated with antagonism toward the employer"—whether, in other words, there is "a 'class struggle'

in the minds of the workers so that the large number of pro-union workers are anti-employer" (24, p. 65).

(a) In reply to the question *"Do you think your foreman is fair to the workers?"* 72.2 per cent of all members answered *"Very fair most of the time,"* and 21.9 per cent *"Sometimes fair, sometimes not fair."*

(b) In reply to the question *"Do you think the top officials and bosses of the company are fair to the workers?"* 50 per cent of all members replied *"Very fair most of the time"*; 27.8 per cent, *"Sometimes fair, sometimes not fair"*; only 4.8 per cent replied *"Hardly ever fair."*

(c) Members did not anticipate that the union will always be able to get wage increases. Furthermore, no relationship was found between expectation as to wage increases and whether or not the workers think that the employer is fair.

(d) Consideration of the findings summarized above leads Rose to conclude that "The evidence which arises from this study seems to suggest that there is no inflexible antagonism toward employers on the part of the large majority of workers. If anything, the evidence supports the opposite contention that the union movement is a buttress for the free enterprise system" (24, p. 66).

Consideration of the theoretical implication of findings bearing upon attitudes of union members toward employers leads Rose to the further generalization that: *"People can have loyalty to two (or more) groups or two sets of values, even when these groups or values are in conflict. In concrete terms, loyalty to the union does not mean disloyalty to the employer.*[9] In this study," it is added, "we have not examined the concrete psychological mechanisms by means of which this dual loyalty can occur, but this would be a worth-while subject for further research" (24, p. 189).

Motives for Joining Unions—an Evaluation

A comparison of the studies described in preceding pages shows that findings and conclusions bearing upon reasons for joining unions, and upon members' perception of the unions' goals, are far from uniform. Here again, as in the evaluation of attitudes toward pay, security, job status, etc., variations in survey methods, in periods during which the surveys were conducted, biases of various kinds (including those of interpretation), etc., contribute to the differences cited above. Nevertheless, it appears possible to point to the following as *trends* characterizing the findings of representative surveys bearing upon the attitudes of employees toward unions:

1. It is clearly apparent that *economic needs*—expressed in the desire for higher wages, job security, and fringe benefits—play a highly significant role in leading workers to join unions. A major conclusion from the

[9] Not italicized in the original.

study of Teamsters Local 688, that "the strong loyalty to the union is closely associated with . . . the success that the union has in achieving its goal of increasing the workers' income (and) security" [10] (24, p. 183) appears to have very wide, if not universal application. There seems no question, as suggested by Tripp, that "the psychology of insecurity, awareness of job scarcity, provides a basic drive in the formation of unions and in their subsequent activities to protect and advance job interests" (27, p. 95).

2. The fact that a large proportion of members describe their membership as "involuntary" or refer to "compulsion" indicates that fear has been a factor in the increase of union membership. It is evident that there are social forces at work in the growth of union membership, but survey data suggest that these are as much the social forces of group pressures and intimidation, as social motives seeking gratification in the "ties and bonds of group relations and community life" (13, p. 7).

3. As is apparent from the surveys of younger people, social forces are also operating through the family group, as indicated by the fact that approval of the union and pro-labor attitudes are more common among children of parents who belong to unions than among other children. Of great significance are *social norms* associated with socio-economic status. It cannot be assumed, however, that inherent in the operation of such norms is the perception of the union as a prime medium for self-expression, for the gratification of the needs of self-respect, creativity, etc. In fact, the frequent reference, in a number of surveys, to distrust of union leaders and to nondemocratic practices in union administration may well be interpreted as indicating that such needs act as a deterrent to voluntary union membership. On the other hand, survey findings indicate that fear —listed above as a cause for joining unions—may also operate against voluntary membership by employees who, in spite of the protective cloak of labor legislation, are still afraid of reprisals on the part of their employers.

Reference to trends noted above is not included to suggest that they can invariably be generalized to any particular situation. The clamor for gratification of the needs for self-expression and a variety of social needs may loom large in the organization of a union in a small town dominated by a powerful single industrial corporation which has provided little or nothing in the way of social and recreational facilities. Similar needs may prove to play a minor role in leading workers to join unions in larger cities

[10] This quotation is abstracted from a summary of "practical conclusions" by Rose who writes: "The strong loyalty to the union is closely associated with two variables: (a) the success that the union has in achieving its goals of increasing the workers' income, security, and job satisfaction; (b) the amount of participation in union activities the rank and file members engage in" (24, p. 183).

with diversified industries and a variety of cultural and recreational facilities even though, having joined, the worker will respond to the influence of the group and develop bonds of companionship which can have an important bearing upon future attitudes and behavior.

It may generally be true, as Rose suggests in the discussion of Teamsters Local 688, that members develop a sense of solidarity as a result of experience with the union (24, p. 61). However, again, the conclusion with respect to Teamsters Local 688, that "members went in without knowing much about the union and having relatively neutral attitudes toward it" (24, p. 61) appears to have wide application to workers in general.

To state this generalization is not to deny that in many instances "worker solidarity . . . has come to mean more than advantages to be exacted from the employer" (24, p. 4); that for some workers it has come to mean co-ordinated social action in a broad range of activities, including political action. The delineation of trends covering motives in joining unions is not intended to deny that, in some instances, unions are viewed by individual workers as a means of gaining recognition and status and a behavior role which cannot be achieved in the plant. There is no intimation that unions need to be or are necessarily always so organized as to make impossible the very kind of participation which is needed for the gratification of those "psychological" and "social" needs which, it is claimed, it is the union's goal to satisfy. The description of activities in the business quarters of the newly formed UAW, CIO local of the Ford plant, in 1941, provides concrete evidence that the office of a *particular union* can be "the friendliest place" a worker may know to visit for obtaining advice on all kinds of problems (29) and that unions can and perhaps do in some instances "perform the same kind of function that the political ward bosses did a generation ago" (24, p. 11). It may also well be, as Knickerbocker has suggested, that as collective bargaining becomes an increasingly accepted process, this function of the union will be de-emphasized, and what are now regarded by members as supplementary or secondary functions will be recognized as primary functions of the union (18).

Recognition of this possibility—immediate or remote as it may be—does not, however, necessitate the view that unions do all of these things referred to above better than does the individual industrial plant or than industry collectively. In particular, exception can be taken to the view taken by Krech and Crutchfield that the union can better satisfy the needs for participation, for self-expression, for self-respect, for status, etc., than do other types of social organizations. Moreover, whatever may be the outlook for the future, many unions fail to provide opportunities of the type referred to above—fail to "offer to their members an exultant

sense of progress toward an increasing share in controlling their conditions of work" (19, p. 549). As Krech and Crutchfield suggest, some unions can be and are dictatorial in their procedures and "are not adverse to using violence and 'goon squads' to silence their members who would participate in free speech" (19, p. 549); others operate as a tight bureaucracy, with opportunity for leadership restricted to the self-selected few; the policies and practices of still others reflect the drive for continued power by their leaders, rather than an urge to render services and opportunities of the types described above.

Such considerations make it difficult to accept the point of view that "most unions offer the individual worker roundabout, constructive, healthy solutions to the blockage of many needs—blockages that he can trace either directly or indirectly to his job" (19, p. 5 f.) to a greater extent than do religious or other types of organization, including the progressive company with an extended program of employee activities. Under any circumstances, there is the fact, evident from the discussion of attitude surveys on earlier pages of this text, that when provided with an opportunity to tell what is important to them, workers refer to the union only infrequently. Young people and employees alike fail to show an overwhelming desire to join unions, or to be forced to stay in them, although they want the freedom to join.

On the other hand—as the record shows—workers in the United States have joined unions in increasing numbers. Certainly government support of the union movement—directly through labor legislation and indirectly through other means—has contributed to this increase in union membership (34, 35). As indicated earlier, management abuses of its power have contributed to this development as has also energetic leadership within the union movement. Other forces—including perhaps those implied in Lewin's concept of the "marginal man" whose "span of free movement" is limited as a nonunion employee in a union shop (21)—cannot be overlooked in considering the growth of unionism in the United States. Whatever the reasons for joining unions, the fact remains that when faced with the direct issue in the form of a vote, large proportions of the workers in many plants have voted for the union. Thus, in a survey of elections held under the auspices of the National Labor Relations Board in the area of Buffalo, New York, Sheldon found that "in only two of the 127 elections studied did a majority of the eligible votes fail to authorize a union shop. Over 96 per cent of the workers who voted in the election cast 'yes' ballots. More than 91 per cent of those who were eligible to participate did vote" (26, p. 37). In the case of Teamsters Local 688, Rose reports that "the proportions in favor of the union in NLRB elections ranged from 94 to 98 per cent for the various shops" (24, p. 60).

Not all surveys show such predominating support of the union in NLRB elections. Thus, according to a survey reported by Fisher, Rudge and Neblett, Inc., in 1952, "employers won a third of the elections held during the second quarter of 1952—the employees choosing a union in 1,365, or 67 per cent of the 2,020 contests in that period, as compared with an average of 69.9 per cent in the previous quarter and 74 per cent for the fiscal year 1951. Moreover, in the quarter referred to, 23 of the 34 decertification elections held resulted in upsetting of the union" (37, p. 4). An interesting sidelight in the evaluation of these data is found in the fact that the percentage of workers voting in such elections has grown from 52 per cent in 1948 to 86.6 per cent in the April–June period of 1952.

In spite of variations in trends noted above, and of reports showing a "levelling-off" of union membership (26b, 38, 39), the fact that approximately one-fourth of the labor forces of the United States is unionized, calls for a continued and objective analysis (1) of the role of the union in day-to-day *management-labor relations* and (2) of techniques for enlisting the full co-operation of unionized employees in achieving production and other goals. Such problems will be considered in Chapters 19 and 23.

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Employee and Labor Relations

THE QUALITY of the industrial-relations program is widely viewed as a decisive factor in motivating workers and in achieving high levels of employee morale. "Given a real interest in its employees on the part of management," writes Hill, "the solution of basic employee wants (and the resultant achievement of sound employee relations) can largely be attained by the establishment of sound employee policies, and by the building of an appropriate organization to assist and report on the operation of those policies in practice" (14, p. 2).

Attitudes Toward Industrial-Relations Policies and their Application

As shown in Table 20, 22 per cent of the national sample of manual and white-collar workers interviewed by the Opinion Research Corporation in 1951 replied "*better employee relations*" in answer to the question "*What should the company do to make the workers feel like turning out more work?*" (10). The frequency of this reply was lower only to that of "*Pay.*"

An examination of Table 17, listing the percentage of workers in six plants who ranked each of 71 morale factors as *first in importance* in the 1947 Conference Board survey (12), would suggest, however, that no *single* policy of the conventional industrial-relations program, such as leave of absence policy, personnel counselling, profit sharing plans, terminational allowances, employee-suggestions systems, etc., plays an important role, *in itself*, in gratifying employee wants and needs. This conclusion is likewise suggested from an examination of the frequencies with which such factors are listed among the *five most important factors* by the same employees (Table 18) or mentioned in letters written by General Motors Corporation employees in *My Job Contest* (11).

On the other hand, consideration of all entries under the headings of *Benefit Plans, Holiday and Vacations, Employee Activities and Services, Personnel Policies,* and *Management-Labor Relations* in Table 18 suggests that although no employee, or at least very few, may be deeply concerned with all the policies listed under these categories, the over-all pattern of employee relations, and to a lesser extent of management-labor relations, is very much on "the worker's mind."

ATTITUDES TOWARD LAYOFF POLICIES AND THEIR ADMINISTRATION

Employees of a New England Manufacturing Plant: Evidence concerning employee reaction to *specific* industrial relations policies and toward responsibility for their administration is found in a few studies, including an investigation by McGregor (21) who, in 1938, toward the close of an extended era of economic depression, studied the *attitudes towards layoff* of employees of a New England manufacturing concern. Between October, 1937, and October, 1938, this company laid off approximately 30 per cent of its hourly employees. The policy involved therefore possessed considerably more than an academic interest for the workers involved. A questionnaire resulting from several "test tube" investigations was sent to 2,500 workers, representing every third name in an alphabetical list of union members, the union having 90 per cent of the hourly employees on its rolls. The union gave full support to the survey and the questionnaire was signed by officers of the union. Returns were received from 550 workers, representing approximately 22 per cent of those to whom the questionnaires were sent.

Among items included in the questionnaire was a series so phrased as to reveal workers' opinion as to the degree to which *seniority* (the length of time the individual has been continuously employed by the company), *need* (the financial status of the individual, the number of dependents in the family, etc.), and *skill and ability* should be considered in choosing employees for layoffs. The analysis of replies was designed, in part, to answer two important questions, viz., (1) "*What does the worker consider to be the ideal method for selecting those to be laid off when a layoff is necessary?*" and (2) "*What is his attitude toward the existent layoff policy of the company?*" In addition, the data were analyzed to determine whether differences in opinion were related to differences in seniority, number of dependents, etc.

In Figure 32 are presented data bearing on the first of the questions listed above. It shows, for example, that approximately 4 per cent of the group felt that seniority should have more than 90 per cent of the total weight in the selection of those to be laid off, while less than 2 per cent

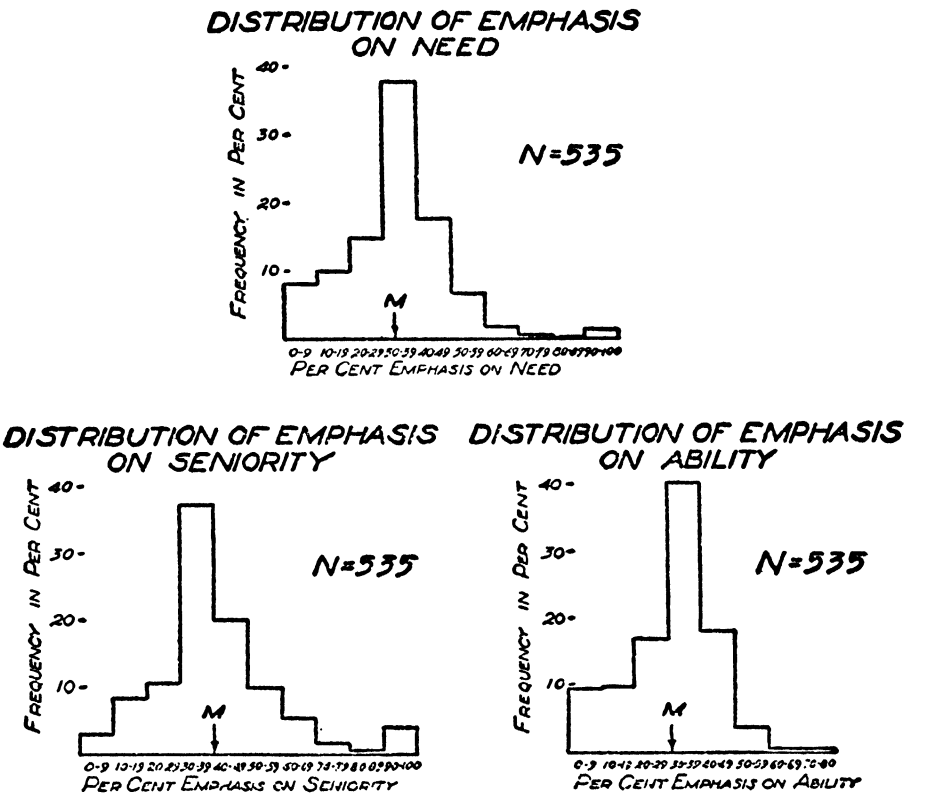


Figure 32. Distribution of Opinion Concerning the Relative Importance Which Should Be Given to Seniority, Need, and Ability Under an Ideal Layoff Policy *

felt that ability should be weighted more than 60 per cent in the series of factors to be considered in layoff. However, in general, the replies showed little agreement among the members of the group concerning the "ideal" method of selecting those to be laid off when a layoff is necessary. As a matter of fact, eight different policies were favored by groups ranging from 5 per cent to 25 per cent of the respondents, and a number of other policies were favored by from 5 to 20 individuals. Furthermore, *an analysis of the findings revealed a tendency for workers to consider as ideal that form of policy which would best protect their own interests,* since those with considerable seniority tended to favor a policy stressing seniority; those with many dependents tended to favor a policy stressing need.

The question "*Do you agree in general with the company layoff policy?*" was included in the questionnaire as a means of assessing employee attitudes towards the existent company layoff policy. In view of

* By permission, from D. McGregor, "The attitudes of workers toward layoff policy," *J. Abnorm. Soc. Psychol.*, 1939, 34, 179–99.

the great lack of agreement concerning an "ideal" layoff policy, it might be anticipated that relatively few workers favored the policy of the company with respect to layoff, *whatever its nature*. On the contrary, however, 65 per cent of the group stated that they agreed in general with the company policy. These findings are of particular interest because "the circumstances surrounding the layoff policy of the company presented an extremely vague and ambiguous situation to these workers." A stated company policy on layoff existed, and this was made available in writing to each worker upon employment. The written policy placed primary emphasis on need and ability, and relegated seniority to a distinctly secondary position. In practice, however, the layoff policy differed somewhat from department to department and a process of trial and error aimed at reducing the number of grievances had resulted, generally, in a practice which gave primary emphasis to seniority and emphasized need or ability only in exceptional cases.

According to McGregor, as a result of such ambiguity the worker, when asked whether he agrees with the company policy, is faced with the problem of deciding what that policy is. If he happens to interpret it as similar to that which he favors, he will agree with it. If he interprets it as different from his ideal policy, he will disagree with it. "The worker's own predispositions," it is added, "are probably the major determinants of his attitude toward the existent company layoff policy. If he is well disposed toward the company in general, if he is on good terms with his superiors, if his experience in working for the company has on the whole been pleasant, it is probable that he will interpret the layoff policy of the company as one which is similar to his own ideal. Conversely, if any of these things have aroused an antagonism in him toward the company, he is likely to make an unfavorable interpretation of the layoff policy" (21, p. 190).

Attitudes Toward Layoff of a National Sampling of Workers: Attitudes toward layoff and methods of handling layoffs have been considered also in a survey conducted by the Opinion Research Corporation in 1949—at a time when, although the over-all economic pattern was one of "prosperity," there had been a considerable number of layoffs in American industry (19). This included interviews (a) with approximately 250 manual workers laid off during the previous six-month period by eight companies in three industrial areas, and (b) with approximately 250 workers employed by the same companies without layoff experience during the same period. Worker samplings were obtained by a randomized block-sampling technique.

Of those who experienced layoff, 58 per cent considered that layoffs were necessary, and 65 per cent were of the opinion that they were given

a "square deal" in being selected for layoffs. Attitudes towards specific layoff policies and their administration are summarized in Table 36. According to the investigators, *a major factor in determining employee reactions to layoffs is not so much the policy, particularly since major policies*

TABLE 36. *Employee Reactions to Layoff Policies and Their Execution* (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1949)

What laid off workers say their company did	*Per cent rating handling "good"*	*Per cent difference*
Followed seniority plan	54	
Did not	14	40
Tried to place men	71	
Did not	47	24
Held exit interview	62	
Did not	43	19
Explained reason	54	
Did not	37	17
Gave three days or more notice	54	
Gave less	39	15
Explained unemployment compensation	55	
Did not	42	13

on layoff are "fairly standardized" among the various companies, as the execution of the policy—the way in which it is carried out. Furthermore, the survey evidence is interpreted as indicating that "good or bad employee relations over the years condition worker reactions to layoff experience" (19, p. 10).

Management-Labor Relations

The evidence presented in preceding pages supports the opinion that the attainment of good employer-employee relations is a necessary prerequisite to the creation of attitudes which lead workers both to look to management for the gratification of their wants and needs, and to evaluate properly management's efforts in this direction (14, p. 26).

UNION PARTICIPATION IN THE FORMULATION AND ADMINISTRATION OF POLICY

In the achievement of these objectives, however, management is currently faced by increasing difficulty in dealing with employees directly; by the necessity of handling individual problems arising in the administration of industrial relations policies through the steward or some other representative of organized labor. Involved here is the basic issue of shar-

ing with the union the responsibility for industrial-relations policies and practices having a bearing on the production, morale, and welfare of the employee.

Data bearing upon the worker's position in this issue are found in the study of attitudes toward layoff conducted in a New England manufacturing plant by McGregor (21), described on pages 360–362. In this investigation, workers were asked "*If a certain number of employees are to be laid off, should the union or the company decide which ones will be laid off?*" As indicated earlier, all of the employees involved were members of a CIO union which co-operated in the design of the questionnaire and in the conduct of the study. Nevertheless, only 30 per cent of the respondents favored union administration of the layoff policy. Approximately one-third of the group were of the opinion that the company should decide which workers to lay off, and the remaining third stated that the company and the union should co-operate in administering layoffs. From such findings McGregor concludes that "there does not appear to be a strong desire to have the union usurp what is normally considered to be a prerogative of management: the administration of the layoff policy," at least in the situation covered by the survey. On the contrary, "there seemed to be a widespread belief that the union should function merely as a watchdog in the prevention of favoritism" (21, p. 192). These findings, as they apply to the sharing of prerogatives, are in general agreement with those of a study by Chamberlin (3), made in 1935, who asked members of textile unions in Massachusetts "*Would you trust union leaders to handle all your labor problems?*" Only 32 per cent of the group answered "*Yes*" to this question.

The studies by McGregor and Chamberlin *might* be taken as evidence that union members (if not union leaders) view the formulation and administration of personnel policy as solely a function of management. However, both of these studies were made in the 1930's before the upward surge in union membership shown in Figure 30. The fact that an increasing number of workers are joining unions may be viewed as evidence of a changed orientation toward this issue. Of greater importance is the tendency—frequently noted by management—for workers in unionized plants to turn to their steward rather than to the supervisor in seeking decisions which affect their welfare. Furthermore, union leaders appear to be seeking an enlarged role for the union not alone in the formulation and administration of policies, through some form of *union-management co-operation*, but also in sharing other management functions. Thus *co-determination* (7, 34)—the sharing by unions of decision-making with respect to prices, location and size of plant, production levels, capital investment, technological changes—has been announced as a

CO-OPERATION AND CONFLICT IN MANAGEMENT-LABOR RELATIONS

As shown in Chapter 18, attitude surveys fail to reveal an overwhelming yearning on the part of workers to join unions. Whatever the actual motives for joining unions may be, the fact remains, as shown in Figure 30, that one-fourth of the total labor force in the United States, including a far larger proportion of manual workers, are union members. In the course of approximately 20 years, the role of organized labor in this country has taken on an altogether new dimension. The increase in union membership represents only one aspect of an almost startling transformation. Of equal significance is the readjustment in the thinking of many segments of the American population, which finds expression in the conclusion that "unions are here to stay" (8, 34). Support for this view is found in a series of studies conducted by the Opinion Research Corporation, which concluded, in 1946, that in the United States "unions are now regarded as part of the American system of checks and balances. They will be here, no doubt, a long time" (16). Results from subsequent studies, presented in Figure 33, are interpreted as evidence of continuing faith on the part of Americans in the collective bargaining principle as implemented through labor unions (17). According to the Public Opinion Index for Industry of the Opinion Research Corporation, "the background of the public thinking today [1952] is a firm belief in the principle of labor unions . . ." (24, p. 4). Although attention is drawn to growing apprehension on the part of the public with respect to the monopoly power

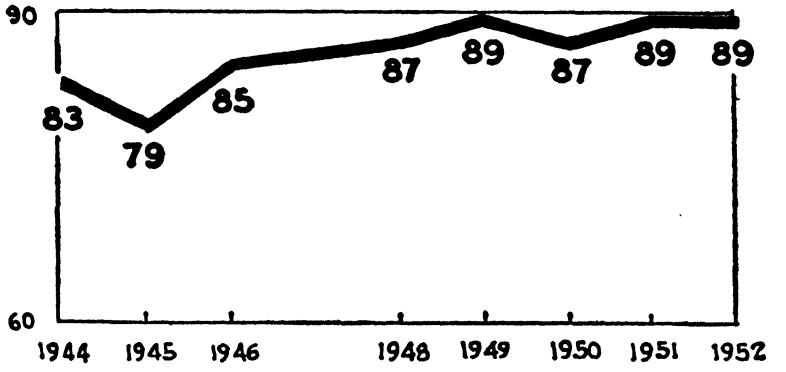


Figure 33. Percentage of General Public Favoring Law to Guarantee Workers the Right to Form Unions and to Bargain with Their Employers *

* By permission, from *Public Opinion Index for Industry*, Opinion Research Corporation, 1952.

of great unions, there is nevertheless the firm conclusion that the public is *not* against unions as such, and acceptance of the idea that industry must become increasingly accustomed to dealing with unions in a manner designed to avoid industrial conflict and industrial instability. The conclusion that "unions are here to stay," accepted by both the general public and many industrial executives (22a), as well as by workers, must lead to a consideration of broader issues in management-labor relations bearing upon motivation and morale. Involved here particularly are questions bearing upon the *division of responsibility between management and labor in formulating and administering personnel and other policies* and upon the *sources of conflict in relations between management and labor.* "It would seem," writes Katz, "that employee morale bears some relationship to the ability of labor and management to work out amicable arrangements and that, therefore, even surveys of employee morale would have some relevance to this problem" (15, p. 63). If, it is added, surveys are to make a contribution to labor-management relations, they must move in new directions with the view of achieving three general objectives

1. The first is to assess the perceptions and attitudes of workers toward the structures in which the workers have dual membership, the company and the union. It is necessary to know the degree of employee's involvement in each . . . "his perception of the goals of union and management and his perception of their compatability" (15, p. 63).
2. Another objective in such research is to explore the worker's reactions toward the representatives of management with whom he comes into contact—specifically the foremen under whom he works—and "his attitudes and perceptions" toward the union counterpart of the foreman, namely the steward.
3. A third area requiring study is "the specific content of labor-management negotiation and conflict, both past and present." Data required here include answers to such queries as, "In terms of present problems, how does he [the employee] feel about the issues coming up for negotiations? How do these issues relate to his present needs and frustrations?" Exploration of the second two areas according to Katz, "gives specific definition to the general context of degree of acceptance of union and management goals suggested as the first set of objectives" (15, p. 63).

A STUDY IN AN AUTOMOBILE PLANT

Illustrative of investigations involving the measurement of attitudes in day-to-day management-labor relations, bearing upon such questions is a study in an automobile plant, conducted by the University of Michigan Survey Research Center (15). This involved three surveys, (1) of a cross-section of the rank-and-file workers in the production departments;

(2) of all foremen in the same production department, and (3) of all union stewards. In addition, levels of management above foremen were interviewed. Interviews with rank-and-file employees included questions designed to provide measures of the degree of acceptance of union and management goals, of the perception of compatibility of union and management objectives, of the expectations of possible changes in the pattern of union-management relations, in addition to covering the usual dimensions of worker satisfaction. The foremen were asked the same types of questions and also a number intended to reveal their management philosophy, practices in dealing with workers, and their attitudes and practices relating to union stewards. Union stewards were queried along similar lines.

Preliminary analysis of replies to questions asked during the interviews showed that 90 per cent of the rank-and-file workers were of the opinion that union and management in the plant get along *fairly well* or *very well*. It was found that employees tend to give credit both to management and the union for this kind of relationship. In fact, only approximately 20 per cent were of the opinion that "union and management are not usually pulling together for the same kind of things," and only approximately the same proportion saw management as being primarily wrong and the union as primarily right in their relationships with one another. These and other findings showed that "the great majority of the workers in the plant see no fundamental conflict between the aims of the company and those of the union" and that the "men in the plant show little of the ideology of class conflict in the traditional sense."

Such belief in the essential compatibility of company and union goals (found also in the survey of union members [26] discussed on pages 346–352) and perception of the interdependence of company and union provide a background which permits the peaceful settlement of differences between company and union. At the same time, the workers who accepted the possibility of peaceful settlement of disputes remained strong union supporters, seeing in the union a medium for "sticking together to improve their position and to guarantee fair play." Over-all coding of the interview responses showed, in fact, that about 58 per cent of the men were likely to take the union's side in a controversy and that only about 30 per cent seemed inclined to make an independent decision based upon what was right. According to Katz, "favorable attitudinal background, therefore, does not mean that there will be peace at any price in this plant in the future. The dual loyalty to company and to the union can lose its dual character and the men will consider themselves primarily as union members, if the company should appear to take a position which seems to them to run counter to union goals and worker needs" (15, p. 68).

Analysis of responses by foremen and stewards showed attitudes somewhat similar to those of the employees in the way of belief in interdependence of company and union and the perception of communality of goals of the two groups. Foremen were of the opinion that the company was concerned with union welfare, but a sizable minority (35 per cent) held the belief that the union is not concerned with the welfare of the company. Moreover, 42 per cent of the foremen perceived the views of the union as opposed to company goals, although a majority nevertheless felt that the two could get along through negotiation and compromise.

On the basic issue of who is "right" and who is "wrong" in conflict situations, 61 per cent of the foremen saw management as being completely or primarily right and the union wrong, as against 41 per cent of the stewards who viewed management as being primarily or completely wrong and the union as right. Survey results showed further that both foremen and stewards were much more pessimistic about future relations than were the workers. The opinion that union-management relationships at the plant were getting worse was expressed by 26 per cent of the foremen, and 9 per cent anticipated improvement. On the other hand, 41 per cent of the stewards expressed the opinion that the status of union-management relations was changing for the worse, and only 5 per cent anticipated improvement in this respect.

As has been pointed out earlier in this volume, there is considerable evidence that the quality of supervision exercises a considerable influence on both employee production and morale. Analysis of materials from the studies conducted in the automobile plant under discussion showed again that the attitudes of employees are related to the leadership practices of their foremen and, furthermore, that the relation extends also to the leadership practices of union stewards. So, for example, *attitudes toward the company* were more favorable in departments where stewards and men report that their foremen consult them about decisions than in those departments where foremen do not use such participation practices. Similarly, *attitudes toward the union* were found to be more favorable in departments where stewards and men report that stewards consult men about decisions than where stewards fail to follow this practice.

STUDYING UNION-MANAGEMENT RELATIONS AT THE COMMUNITY LEVEL

The investigation of union-management relations in an automobile plant discussed in preceding pages furnishes an illustration, of interest to both company executives and union leaders, as to what can be accomplished through the use of attitude-survey techniques in arriving at a better understanding of the sources of co-operation and conflict in indus-

try. However, this investigation was restricted in scope, and furnishes limited (and provisional) findings and conclusions applying only to a local plant situation. There is urgent necessity for the elaboration and the extension of such studies with the view of widely achieving the economic and social benefits accruing from a highly productive, satisfied, well-adjusted labor force working in an atmosphere of harmonious management-labor relations.

The need for such a program has received considerable attention during recent years, leading to the formulation of plans and to a number of pilot studies which indicate the promising possibility of research on problems of labor-management relations at the *community* level as contrasted with the single-plant or single-industry levels. An illustration of such research is found in a project undertaken by the Institute of Labor and Industrial Relations of the University of Illinois (4, 5, 9, 22, 27). This calls for a study of the process of "accommodation" through which management and the union "act to achieve their needs and goals," conducted in eight establishments in five major industries of the community. Basic to the study is an *inter-disciplinary* approach which provides for the planning and execution of research by a group of social scientists from diverse fields including, in this instance, psychologists, economists, and sociologists.[1] Specific objectives to be achieved in the investigation are

1. to describe and, where possible, measure the *significant aspects* of the process of accommodation between management and union in the selected community establishments.
2. to analyze and, where possible, measure the *impact of the major determinants* of the process of accommodation between management and union in these establishments and industries.

In the development of the project attention has been centered particularly upon three dimensions or common characteristics of labor-management relations, including *conflict-co-operation attitudes, economic status,* and *extent of union influence.* At the time of writing, the project is still in a preliminary stage and has produced only a few tentative findings from pilot and pretest studies. However, this brief description of research plans serves to illustrate both the increasing attention which is being given to the study of union-management relationships and the methods to be used for this purpose. Underlying this broad and interdisciplinary approach is the explicit assumption that emphasis on the union-management relationship is required because "the dynamic forces

[1] Underlying the interdisciplinary approach is the view that no one of the social disciplines or sciences has enough of the concepts or techniques necessary for the complete investigation of all aspects of the process of "accommodation" in union-management relations.

of society lie in this area more than in individual employee-management relationships" (4, p. 291). This assumption, of course, requires testing in itself, through the use of methods outlined for the conduct of the project described above. Whether or not this assumption is justified, existing uncertainty and confusion in the understanding of union-management relations underlies the need for studies on a regional and national as well as community basis, designed to provide objective data which can reveal the essential nature and sources of *good* and *bad* labor relations in local plants, in regional areas, and throughout American industry. This is of particular importance because, on the one hand, the union-management relationship in a single plant is a part of a number of larger institutional patterns and forces and, on the other, these wider forces and institutions are likewise significantly conditioned by the relationships in the individual plants (4, p. 291).

Attitudes toward Labor Legislation—the Case of the Taft-Hartley Law

Management-labor relations in the United States are currently being conducted within a framework of governmental regulations growing out of legislation applying to collective bargaining, wage and salary administration, social security, employee safety and welfare, etc. Complete understanding of the sources of motivation at work involves a consideration of the extent to which laws affecting employees satisfy or fail to satisfy basic needs or wants, and contribute or fail to contribute to improved production, to better relations between management and labor, and to the achievement of other desirable objectives in industry.

RELATION BETWEEN INFORMATION ABOUT AND ATTITUDES TOWARD THE TAFT-HARTLEY LAW

Investigations of workers' attitudes toward labor legislation are illustrated in a series bearing upon the Taft-Hartley Law. Among the major features of the Taft-Hartley Law (absent from the National Labor Relations Act of 1935) are the abolition of the closed shops; a 60-day cooling off period before strikes; freedom for employers to sue unions which violate strike agreements; the right of the employer to express an opinion on union activities, and others shown in Table 37. The bill which later became the Taft-Hartley Law was passed in the face of considerable opposition by union leaders.

Immediately after the Taft-Hartley Law was passed over the President's veto, in 1947, a survey was conducted by the Opinion Research Corporation to assess the attitudes of workers toward the proposed law (29). Over 85 per cent of workers in a sampling drawn from the East and industrial

TABLE 37. *Employee Attitudes on Detailed Features of the Taft-Hartley Law* (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1947)

Favor law to	*Per cent of all employees*	*Per cent of union members*
Require 60-day cooling-off period	78	70
Allow companies to sue unions	77	70
Allow freedom of speech for employers	69	61
Require union financial reports	86	85
Prohibit Communist union leaders	76	77
Prohibit union political contributions	56	50
Allow checkoff only with worker's consent	68	74
Allow union shop only with majority vote	79	77
Outlaw closed shop	60	48
Delay strikes in public service industries	78	70

Midwest stated that they had read or heard about the law. Of all the workers interviewed, 54 per cent and 64 per cent of union members in this sample, said that Congress *should not have passed* this law. The same workers were asked how they, as congressmen, would vote on specific provisions without being told that these were actually embodied in the Taft-Hartley Bill. Notwithstanding their disapproval of the Taft-Hartley Law as a whole, a large majority of all workers interviewed, as indicated in Table 37, favored most of the provisions of the law put to test, and an almost equally large majority of union members favored the same features. Such findings led to the conclusion that workers' failure to support the Taft-Hartley Law *as a whole* resulted from misunderstanding of the bill and from fear. According to Robinson, "What people don't understand, they fear. Ignorance goes a long way toward explaining the prevailing suspicion and distrust [of the Taft-Hartley Law]" (25). A systematic program of employee education with respect to the provisions of the law was recommended by the Opinion Research Corporation as a means of enlisting workers' support of this legislation.

Data accumulated by the American Federation of Labor are not in agreement with those of the Opinion Research Corporation. According to AFL's Weekly News Service, a cross section poll of AFL membership, reported in 1948, showed that 69,072, or 93 per cent of 73,536 "ballots" returned by union members voiced opposition to the Taft-Hartley Law (23). Exception has also been taken to the position that attitudes toward the law were influenced by knowledge of its provisions. The latter conclusion is reached by Gleason (13), as a result of a later survey involving questionnaires returned by 1,088 of 8,450 production workers (nearly all

union members) in 101 plants scattered throughout the United States.[2]

The question "*How do you feel about the Taft-Hartley Law?*" was used to determine the attitudes of these employees toward the law as a whole. In addition, 13 questions were used to test their information on the provisions of the law. Each questionnaire was given a grade based upon the number of correct answers checked, thus providing a maximum score of 13 and a minimum score of 0 on the Taft-Hartley Law Information Test. In Table 38 is presented a distribution of such scores in comparison with expressed attitudes toward the Taft-Hartley Law. The comparison shows that those production workers who favored the law did not differ

TABLE 38. *Relationship between Knowledge of Taft-Hartley Provisions and Attitude toward the Law* (after Gleason)

Score on information test	*Attitude toward the Law*						
	Favor		*Oppose*		*No opinion* *		
	No.	*Per cent*	*No.*	*Per cent*	*No.*	*Per cent*	*Total, No.*
10–13	93	29	137	30	53	17	283
7–9	155	48	198	44	126	40	479
2–6	75	23	118	26	133	43	326
Total	323	100	453	100	312	100	1088

* According to Gleason, "the reason for the 'no opinion' group being significantly low in knowledge of the law is not entirely clear. A partial explanation may be that the group contains a large number of people who had not previously heard of the law."

in knowledge of the law's provisions from those who opposed it, although the "no opinion" group was significantly lower in its knowledge of the law than the two groups holding definite opinions.

Review of the survey findings lead Gleason to conclude: "there is no evidence in the survey . . . that additional facts about the Taft-Hartley Law would shift the opinion of the workers in favor of the law." It appears, he states, that "the 'Taft-Hartley' is an emotional symbol" to the workers, representative of a strong belief, reflecting faith in union leadership not likely to be influenced by knowledge or facts. Such findings, it is added, might be anticipated from theories concerning the essential lack of relationship between belief and knowledge formulated by Young (32) and Lund (20). According to the latter, "Beliefs, once formed, are not willingly relinquished, especially in the event of open commitment on a

[2] The returns numbered 1,368, but 280 were omitted from the analysis because of incompleteness of questionnaire replies

subject. Such unwillingness to give up one's original position, is definitely related, if not responsible for the fact that the side of the question first presented to us, and the first influences brought to bear on us, are most effective in determining our beliefs, so much so as to suggest the presence of a law of primacy in persuasion" (20, p. 195). According to Gleason, the findings of the survey of industrial employees seem to bear out the applicability of such theories to the industrial scene. "When the Taft-Hartley Law was passed," he writes, "the first group to react vocally was union leadership. They claimed the law was a 'slave labor bill,' that it was designed to break unions, and on and on in that vein. Union leadership is generally looked up to and respected. So, the first impression that many employees received was that the law was just as their leaders had labeled it. It was anti-labor, pro-management, and designed to smash their organizations. For many workers, this formed their attitude toward the law. The gradual spread of information to the workers on the law's provisions appears to have had little influence on their attitude toward the law" (13, p. 298).

There seems no reason for doubting that the unfavorable attitude of workers toward the Taft-Hartley Law as a whole reflects to some extent the influence of propaganda by labor leaders who took a firm and authoritative position with respect to this new legislation. The prestige attached to leadership—both management and union—is unquestionably a factor in determining workers' opinions and attitudes toward issues which arise in day-to-day relations between management and the union. However, investigations in industry and elsewhere do not unequivocally support the viewpoint, implied in Gleason's discussion, that attitudes and opinions fail to shift under the impact of additional knowledge of principles and of facts as obtained through education, experience, reading and other sources of information. On the contrary, in spite of real and apparent contradictions in the findings of various studies, there is evidence, as is clear from the discussion in Chapter 22, that knowledge influences attitudes, opinions, and beliefs and that, as Bogardus has pointed out, "he who has a large fund of organized experience and facts to draw upon is armored against irrational suggestions" (2, p. 295).

Evidence of such influences on attitudes toward the Taft-Hartley Law is found in the study of the effects of an employee training program reported on page 422. Data on the effect of "living with" the Taft-Hartley Law are found in the findings of a series of surveys conducted by the Opinion Research Corporation, summarized in a report (24) published in 1952. During the years following the adoption of the law, samplings of the general public and of workers were asked "*Should Congress have passed the Taft-Hartley Law?*" Of the general public, *42 per cent* replied

"*Yes*" in 1948; 35 *per cent* in 1949; 46 *per cent* in 1950; 47 *per cent* in 1951; and 47 *per cent* in 1952. In answer to the same query, 19 *per cent* of union members replied "*Yes*" in 1948; 17 *per cent* in 1949; 28 *per cent* in 1950; 32 *per cent* in 1951; and 32 *per cent* in 1952. According to a summary formulated in 1950, "what seems to be happening is that people are coming to accept the Taft-Hartley Law as they learn to live with it" (17, p. 2).

Analysis of findings bearing upon the Taft-Hartley Law in 1952 leads to the conclusion that "interest in the Taft-Hartley controversy is at a low ebb" (24, p. 43). Nevertheless, it is also pointed out that "union members are about three to two against" it. Additional evidence of continued opposition by union members is found in *Factory*'s 1952 survey of what factory workers think (30), which shows that 40 per cent of employees in unionized manufacturing plants want the law repealed, as contrasted with 12 per cent in nonunionized plants. According to *Factory*, "as far as management's efforts to sway workers in favor of Taft-Hartley (rather than its individual provisions) are concerned: It's a standoff with the counter effort by unions to whip up even more feeling against the law. But," it is added, "the lack of progress is certainly not a signal for management to cease its efforts . . ." (30, p. 89).

IMPLICATIONS FOR THE FUTURE OF MANAGEMENT-LABOR RELATIONS

Out of the current wilderness of industrial strife grows a crying need for industrial peace. This is required not alone from the viewpoint of the welfare of the industrial plant, but because continued strife threatens the very security of the system under which workers and management alike have enjoyed material and spiritual benefits unmatched elsewhere in the world. According to a report by Stuart Chase, studies conducted under the leadership of Golden, by the Committee on the Causes of Industrial Peace under Collective Bargaining, of the National Planning Association have shown that "it seems to be impossible to have stable labor-management relations under collective bargaining unless: (1) *The union accepts unreservedly the importance of the company's earning a profit.* And unless: (2) *Management accepts unreservedly the fact that the union has come to stay*" (6, p. 16).

Acceptance of the view that "the union has come to stay" does not obligate management of nonunionized plants to the support of unionization as a necessity to the satisfaction of employees' wants and needs, and for the achievement of industrial harmony. It does not necessitate uncritical commitment to the position of labor leaders that collective bargaining is a prerequisite to a positive job relationship. Such management (and also

executives in unionized plants) can—with considerable justification—continue to question the assertions by a labor leader that collective bargaining "creates as a minimum a definite worker interest in performing the jobs without the restraints and stinting spirit characteristic of the disgruntled"; that collective bargaining engenders "a positive willingness to aid the production process to insure fulfillment of schedules, conformance with standards of quality and tolerances, compliance with all instructions and more adequate coordination of production, workers, materials, handlers, inspectors and other specialists in the production process" (1, p. 121).

There is good reason for skepticism in dealing with such assertions. There is also a sincere conviction on the part of many employers that the advancing industrial-relations program of the forward-looking industrial plant, including provisions for informal consultation between management and employees, provides for the satisfaction of employee wants and needs and adequate safeguards for employee welfare, free from the complications which arise in collective bargaining. The failure of aggressive unionizing efforts in such plants suggests that at least some employees share this conviction. However, there is also the fact that approximately 16 million workers are organized and working under collective-bargaining relationships. This fact, in itself, underlines the need for making every possible effort to maximize such potentials as do exist for enlisting the full co-operation of employees who are also union members—both as individual employees and as members of organized groups.

There is evidence in the industrial scene of increasing recognition of the need for dealing realistically with the problem of "competing loyalties" in unionized plants—for dealing with the views of workers, as cited by Williams, "*We want to be good union men. But we also hate like hell to be bad company men. Can you give us the answer?*" (31a, p. 91). It is suggested by Williams that the answer is to be found, in part, in giving increasing attention to the "art and science" of getting along with union members, rather than with union leaders. Implied here is the assumption, succinctly stated by French, Kornhauser, and Marrow, that "*In the competition between employers and unions to win the loyalty and support of working people, whichever side achieves a more accurate and deeper understanding of the motivations involved to that extent improves its ability to accomplish its own purposes*" [3] (8, p. 10).

A prime purpose of this book is to provide management and others with a basis for the more complete understanding of the sources of employee motivation and morale. With this, the need also exists for concerted effort on the part of both management and labor leaders to establish a

[3] Not italicized in the original.

pattern of relations which will promote the maximum utilization and adjustment of human resources within the framework of collective bargaining relationships. That this can be done is illustrated in a survey of unionized plants, reported by the Opinion Research Corporation in 1952, which leads to the conclusion that the "forward edge of industrial relations is moving toward . . . reducing union friction by making unions feel that they are accepted, giving them tasks within their proper sphere of responsibility, and working to get good leadership" (14, p. 24).

There are other indications that many industrial leaders have come to look upon dealings with unions as primarily a business procedure (14b) and as one that is possibly an alternative to increased regulatory legislation. As one industrial relations specialist, viewing the situation during the middle 1940's, has said

> "There is no 'pie in the sky' future in labor relations. There is only the big job of adjusting ourselves to a new type of employer-employee relationship; of supplying the type of leadership which will retain the confidence and trust of employees, whether organized or not . . . Collective bargaining must be made a worthwhile industrial instrument for providing a healthy channel of communication and of a feeling of mutual dependency. To continue distrust and strife is to promote destruction. This is not alarmist thinking—it is rational and factual thinking. We in management have a heavy role to play . . . And it is our role; we should strive to fill it with little aid or interference from government" (33, p. 71).

This point of view assumes that the maintenance of good relations with organized labor is merely one aspect of the industrial-relations program of modern industry. It does not require that the foreman be supplanted by the steward in dealing with the employee. Good labor relations do not involve a transfer from management to union representatives of authority over discipline, promotions, work schedules and processes, the introduction of new tools and related matters (35, p. 33). There is no inherent requirement for an abdication by management—for turning over to the union the prerogatives of management or its responsibilities for satisfying workers' needs and wants. However, progress in the achievement of good labor relations and of industrial peace calls for a more tolerant and truer perception of the over-all situation (18, 28); for a better understanding of effective patterns of interaction in union-management relations (30a, 31). It calls for considerably more research, of the type described in this chapter, on factors involved in the establishment of a "working harmony"—a psychological atmosphere where management and the union in the organized plant "can get on with the job" of producing more goods, building job satisfaction and morale, creating and maintaining industrial stability.

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Part 5
GUIDEPOSTS FOR MANAGEMENT

20

What Is on the Worker's Mind: A Summary

ATTITUDE surveys and experimental studies discussed in preceding pages demonstrate clearly that many objects and situations in the working environment promote or interfere with the satisfaction of wants and needs. Investigations of motivation and morale in industry also support the conclusion that *there is no single want or need which can be described as predominant for all workers in the whole of industry,* so long as the basic needs for shelter, food, and for similar fundamentals of living are satisfied. Motivation and morale in American industry appear to be the end effects of a large variety of factors which operate with differing weights in a multiplicity of patterns in separate companies, in different individuals, and in various segments of the population.

THE "PREPOTENCY" OF SPECIFIC MOTIVES

Studies described in earlier chapters show that occupational levels and accompanying differences in income influence the *importance attached to specific wants and needs.* For example, Kornhauser has shown that, in a sampling of the Chicago male population, *security* and *independence* were most strongly desired by lower and middle income groups, while *social approval* was most valued by people in the higher income brackets (27). Analysis, by Centers (6), of the data obtained from a representative cross-sample of the American adult white male population (covering the complete occupational stratification) showed that people in the business, professional, and white-collar strata want *self-expression, independence,* and *interesting experiences* more frequently, while those in the lower occupational groups more frequently desire *security* and *independence,* with the need for *self-expression* third in importance.

The findings of this study are interpreted as being in "striking harmony" with the theory of motivation advanced by Maslow, referred to on page 72, which postulates motives in the individual as being organized into a *hierarchy of prepotency*. According to this theory, "when a need is fairly well satisfied, the next prepotent (higher) need emerges, in turn to dominate the conscious life and to serve as the center of organization of behavior; since gratified needs are not active motivators" (32, p. 394). So, for example, the need for air does not ordinarily operate as a strong motivator, but to a group of men facing suffocation in a damaged submarine it can become the strongest of all drives (33). An unskilled worker may quit his job in spite of a strong and immediate need for security, in order to satisfy an even stronger need for self-respect where this is denied to him on the job.

The frequency with which individuals in successively lower occupational groups indicate their desire for security, and the increasing frequency with which people in successively higher social strata indicate a desire for self-expression, illustrate shifts in the "prepotency" of specific motives. However, many factors other than socio-economic levels contribute to variations in the strength of specific motives operating at a given time in a given situation. There is evidence, particularly from studies conducted in the Hawthorne Plant of the Western Electric Company and in the Rowntree Works in England, that attitudes (from which inferences concerning motives are generally derived) may shift within even a short period of time (14, 37). It is possible, as has been suggested in studies by Johnson (21) and Hersey (16) that cyclical changes in feeling tones may momentarily affect the potency of various motives for the individual. The special demands made by a worker of his job—at a particular moment, as well as throughout his life career—may, to some extent, be a function of the family group. Thus, an investigation of work adjustment in relation to family background has shown that "how much he [the worker] prizes and accentuates special appreciation as a reward varies inversely with the degree of unity in his early family group . . ." (9). Conditions of living and transportation facilities in the community affect attitudes and the worker's assessment of his needs on the job (23). Furthermore, even slight changes in the plant conditions may produce unexpectedly large effects upon the "prepotency" of specific motives. Thus, McGregor and Knickerbocker (33) report that the installation of blue-green lighting resulted in increased production and a reduction in number of complaints on the part of *male* workers. Simultaneously, the output of *women* in the same department fell off, the number of absences rose, and there was a noticeable increase in complaints and other evidence of dissatisfaction. Present in the case of women, and not in the case of men, was a need or desire to look as attractive as possible—a desire

which was frustrated by lighting which, it was felt, made them look "simply ghastly." A change in supervision may enhance the attractiveness of the job or, conversely, arouse dissatisfaction directed toward wages or other features of the job. Rumor of an impending layoff may strengthen the feeling of need for security in a group of workers even when there is no foundation for the rumor.

Such factors, and also others discussed in Chapters 12 and 14, increase the difficulty—even the possibility—of arriving at generalizations or in formulating laws which can be held as universally applicable to the entire industrial structure, in spite of the urgent need for some general laws dealing with the dynamics of the industrial organization (29). In general, as Kornhauser (28) has also pointed out, there appears little ground for drawing any *unqualified* conclusions concerning the predominance or even the relative importance of specific wants and needs or of factors influencing motivation and morale in industry. In spite of such reservations, it nevertheless seems possible to formulate a number of *guiding principles* which can be useful to management in planning the program to maximize the return from financial and nonfinancial incentives.

The Role of Financial Incentives

A major outcome of investigations in the area of morale and motivation is the clear demonstration that the *financial incentive* is not sufficient, in itself, to achieve optimal results in the way of production, morale, and harmonious labor relations. The statement that there are *limitations to the financial incentive should not, however, be interpreted as meaning that the amount of money in the pay envelope is an unimportant item in satisfying the worker's wants and needs,* or that it is consistently of less importance than nonfinancial incentives which appeal to less tangible wants and needs.

The trend toward such an interpretation of survey findings appears in a number of reports. For example, according to a National Industrial Conference Board report, published in 1939, "generally speaking, the purely material considerations such as wages . . . are of less importance to employee morale than are intangibles such as quality of supervision," etc. (20). Also, according to Juran, in 1951, "the lesson of these recent researches is that money, as an incentive for productivity, is no longer the paramount incentive, even granting that it might have been so in other years, or that it may be so today in other countries" (22, p. 82).

Such statements cited out of context may, it is true, give a different impression than that intended by any of the authors cited. Nevertheless, such conclusions have generally been treated in a way to create the impression that employee-attitude surveys show that pay—in other words,

the financial incentive—has largely lost its potency in stimulating increased production, satisfying employees, and reducing industrial conflict. Actually, studies described in preceding pages confirm the widely held opinion that people—at whatever level of income they may be—want more money. Day-to-day experience in industry, as well as investigations bearing upon wage-incentive plans show that the pay incentive can serve to increase production in spite of adverse employee attitudes and even widespread opposition to the use of such plans.

In general, there appears little justification for the philosophical position adopted by Whitehead, apparent also in the orientation of Roethlisberger (36) and of Dickson (37), that the basic generalization of economics, as applied in industry, "has exhausted much of its usefulness at the present time" and "has become a positive danger to our social and economic structure" (44, p. 273). On the contrary, there appears to be considerable merit in the conclusion of a British observer that, "however much we approve of discarding the whip of economic pressure, it would be foolish to shut our eyes to the fact that, when society discards it, it discards the biggest [1] single incentive to effort so far discovered" (1, p. 128).

The unfavorable experience of the Communists in the U.S.S.R. in applying pure Marxian doctrine and the resultant espousal of wage-incentive plans seem further to support this viewpoint (13, 41). However, as has been pointed out in earlier chapters, much remains to be done on the technical improvement of wage-incentive systems. Furthermore, as Whyte points out, full benefits cannot be obtained from wage incentives merely through the technical improvement or enforcement of standards (46). In addition, it is also necessary continually to bear in mind that, as in the case of other incentives, the promise of greater financial returns can produce maximum benefits only when harmony and understanding in employee and labor relations are fully achieved (47).

The Role of Nonfinancial Incentives

The fact that pay is a potent force in stimulating production and morale should not, however, blind management to the further fact that beyond a certain stage the promise of higher wages for higher effort appears generally to bring diminishing returns. As suggested by Mace in a discussion of satisfaction in work, "the pay packet theory is not a bad one to start from,"

[1] As is apparent from earlier discussion of shifts in the prepotency of motives, exception can well be taken to the word "biggest." Nevertheless, in the opinion of this author, a viewpoint emphasizing the importance of the financial incentive is to be preferred to Whitehead's facile generalization concerning the menace of an economic orientation and the belittling of the role of the financial incentive in reports on the Hawthorne studies.

so long, as has happened in the past, it does not "stifle thought precisely where thought should begin" (31, p. 5). Among the most significant findings of psychological research in industry is the clear-cut demonstration that *other incentives—nonfinancial in character—play a tremendous role in satisfying workers' needs and wants.* There seems no question that, particularly *as wages rise above the subsistence level and standards of living are raised, other needs and wants, satisfied by plant conditions other than pay, attain higher levels of prepotency.*

This conclusion is tenable in spite of the fact that the demand for more wages, rather than other desires, so frequently appears as the major demand in union-management negotiations and as the stated reason for strikes. According to U.S. Department of Labor Statistics figures (15), approximately 2,220,000 workers were involved in strikes in 1951. Wages, hours, and fringe benefits were issues in the case of stoppages involving 53.2 per cent of these workers. Of almost 23,000,000 idle man-days resulting from strikes, approximately 62 per cent involved the issues of wages, hours, and fringe benefits. Demands for wage increases accounted in themselves for 27.2 per cent of the work stoppages and 44 per cent of the idle man-days. Such figures are frequently cited as evidence of the dominance of economic motivation in strikes. There is, however, also a growing opinion that the demand for higher wages often conceals the desire for the satisfaction of other, deep-seated, ego-involved needs.

VARIETIES OF EGO-INVOLVED NEEDS

Wages, it is pointed out, are tangible, and demands for higher pay can be specifically and unequivocally stated and clearly understood. Workers vaguely dissatisfied with the way things are going find it difficult to state their needs in concrete terms (39, 42). As a result, dissatisfaction is focused on the concrete grievance of wages. According to McGregor and Knickerbocker, "shrewd union leaders are well aware of this fact, and may make the most of it" (33, p. 54). Even where the desire to face the basic issue is present, it is difficult to formulate a demand and write a contract specifying "treatment [of the worker] like a human being" (17, p. 46).

This phrase perhaps summarizes in popular and general terms what workers want in addition to "fair wages" (40). "Treatment like a human being" requires job conditions and personnel policies and practices suitable for gratifying a number of powerful wants and needs such as

"1. *the urge to achieve a position of security;*
"2. *the desire to achieve status and promotion;*
"3. *the desire of people to earn the approval of those amongst whom they work;*

"4. *the desire of workers to build a set of social values around the job and into the factory community in which they spend so much of their lives*" (5, p. 87).

THE SATISFACTION OF EGO-INVOLVED NEEDS

An examination of employee-attitude survey findings reveals an *ego-involvement* in the job and plant conditions which cannot be gratified by pay increases alone (4). It has been commonly taken for granted that executives and professional people are generally more concerned about a sense of personal worth, about opportunities for self-determination and self-expression, than with pay. The validity of such an opinion is confirmed in the study by Centers (6) referred to in earlier pages. A recent study, reported by Gardner (11), involving the use of "projective" techniques for comparing the motives of "unsuccessful" and "successful" executives has shown that the latter stress such motives as the need for achievement; to acquire status in the eyes of associates; fulfillment of immediate and distant goals, etc. What has been overlooked in industry is the fact, shown in the early and somewhat neglected studies by Houser (19), that workers are similarly motivated. A major outcome of more recent employee-attitude surveys and experimental studies is the repeated demonstration that people working at all levels in the industrial or business organization seek the satisfaction of similar highly ego-involved needs. According to Stagner, "We cannot expect executives to be the only persons craving free self-expression, enhanced status, a sense of planning and doing worth-while things. Workers imbibe these influences and crave these goals—less intensely, less unanimously, but regularly . . . Executives want ego-satisfaction; so do workers" (39, p. 14).

Employee-attitude surveys and experimental studies show that many plant conditions, policies, and practices are involved in the satisfaction of ego-involved needs. The operation of such factors, appearing in the statistical tabulations and summaries of studies reported in this volume, is also strikingly and realistically illustrated in the day-to-day occurrences in the plant. Following are typical instances cited by a few of those who have considered the problems of motivation and morale in industry

Plants with the finest cafeterias have been closed by strikes because the toilets were dirty (35).

Scant hours after the employees of one company had been apparently convinced by a costly morale-building show of the war value of their jobs, the same employees were on strike. In this case, a few dollars spent on wooden partitions would have prevented what a $100,000 show could not stop (35).

A worker refuses a job which pays more money but which gives less intrinsic satisfaction, or an employee compulsorily retired at age 65

with an adequate income insists upon taking a similar job elsewhere. Both situations, as Katz points out, illustrate that the task itself can be rewarding; that the job itself provides real and important satisfactions (24).

John Smith, a highly dexterous worker, may be capable of regularly earning an extra 20 shillings per week, but does not do so because he knows that he will put his less dexterous colleague, John Green, "in a fix" if he does. His own "sense of duty" as well as pressure brought to bear upon him by his fellows cause him voluntarily to give up extra earnings, even when there is conviction that the management will not lower the piecework rates as his earnings increase (5).

A typist complains that her typewriter does not operate properly and, as a result, her output suffers and she "gets tired." The supervisor discovers that the girl does not really believe that her typewriter is faulty, but is disturbed over the fact that another girl with fewer years of service had just been given a new typewriter while she is still required to work with her old but nevertheless good machine.

Included in the industrial-relations program of a company is a system of bonuses, which includes a bonus for regular attendance and punctuality. Among the workers is a man who had been in service several years and had never missed his bonus. He becomes irregular in attendance and tardy in reporting for work, and finally accumulates enough absences to make him ineligible for the bonus. When pay day arrived 4,500 employees were in the factory. On the following day, there were none. Forty-five hundred employees went on strike because one man was docked a small proportion of his usual pay. An investigation by management disclosed that the employee's wife had developed cancer about a year and a half before this incident. During the three months before this incident she had been seriously ill. On the day he was docked for absence, the worker had been attending his wife's funeral. Forty-five hundred employees were willing to make the financial and other sacrifices involved in a strike to express their resentment of apparent callousness of management and apparent disregard of the "worth" of the human being and of his problems (38).

The Role of Supervision

Such are the commonplace incidents which furnish clues to observant supervisors, personnel managers, and others as to what the worker wants. The encouragement and training of supervisory personnel to observe and assess such situations in their proper perspective can become an effective device for detecting frustrations of ego-involved needs which interfere with production, satisfaction, and morale on the job. Both *experimental studies and employee-attitude surveys provide convincing evidence that the quality of supervision is in itself a major factor in influencing attitudes and satisfying the needs of workers.* In fact, one of the most significant outcomes of such investigations has been both to demonstrate conclusively the importance of supervision, and to stimulate programs for

the selection, training, and development of supervisory personnel in relation to their responsibilities in dealing with people on the job. In addition, these studies have revealed supervisory characteristics and supervisory techniques which can be useful in achieving management objectives with respect to motivation and morale.[2] They have shown, for example, that

1. The employee-oriented supervisor can turn out more production than the production-oriented supervisor. He does this by showing interest in employees and by giving major attention to the stimulation of employee motivation. He develops a "supportive personal relationship" in which the individual worker has a definite position as a human being with needs and aspirations requiring fulfillment (24).
2. The supervisor who most adequately achieves production goals gives more time to supervision and less time to paper work and to performing duties assigned to members of his group. He assumes to a greater extent the functions traditionally associated with leadership which involve, among other things, close attention to interpersonal relationships.
3. The high-producing supervisor tends to delegate responsibility—in other words, he supervises the details of the job less closely than do low-producing supervisors. It is this approach to supervision which apparently provides the high-producing supervisor with the time required to pay attention to workers as individuals rather than as so many "people who get the work done."
4. Supervisors who give the employees some degree of freedom with regard to the way in which they do their work accomplish more in the way of effective motivation of employees than do supervisors who prescribe every action that is taken. *Employees do better when they are allowed some degree of participation in decision-making than when all decisions are made for them.* In short, as Katz has pointed out, the individual can be more effectively energized if the supervisor succeeds in tapping the worker's ego-motivations of self-determination, of self-expression, of a sense of personal worth (25).

THE MANAGERIAL CLIMATE OF GOOD SUPERVISION

Those cited above are illustrative of the characteristics and procedures which differentiate supervisors who can make effective contributions to motivation and morale from those who are in a less favorable position for achieving, through their employees, industrial objectives in the way of production, employee adjustment, and the reduction of industrial conflict. Such traits and procedures are at variance with those commonly ascribed to "good" supervisors in an earlier era when supervision was typified by the "little Caesar" rather than by permissive and democratic

[2] The characteristics and procedures listed below are drawn, in the main, from studies, conducted by the Supervisory Research Center of the University of Michigan, discussed in earlier pages.

leadership. In this connection, it is important to note the conclusion, derived from studies such as those conducted by the University of Michigan Survey Research Center and elsewhere, that "the style of supervision which is characteristic of first-level supervisors reflects in considerable degree the 'climate' which exists at higher levels in the management hierarchy" (24). The type of supervision prevailing in any organization is likely to follow closely the pattern set by those in the higher levels of management (7). If executives tend to maintain friendly, easy, comfortable relations with those who report to them, the latter will, in turn, tend to maintain similar relations with their own subordinates, down through all levels of the organization (49). This is one of the factors which brings into relief the problems of organizational structure and relationships which are further discussed in Chapters 21 and 23.

Social Organization and Social Motives

An important outcome of studies of motivation and morale is the finding that successful supervision achieves results by paying attention not only to the worker as an individual, but to the relationships and interactions within the group to which the worker belongs (44). The relationship of the successful supervisor to the group is such as to help "gratify the desire of workers to build a set of social values around the job and into the factory community in which they spend so much of their time" (5, p. 87). As noted in Chapters 10 and 11, studies conducted at the Hawthorne Plant of the Western Electric Company led to the conclusion that *the worker's attitudes and his behavior can be understood only when considered in the light of existing social relations within the plant; the social organization of the group with which he works, and his position in that group* (37, p. 374). From this viewpoint the whole working environment must be looked upon as "being permeated with social significance." According to this way of looking at things, even "*material goods, physical events, wages, hours of work, etc., cannot be treated as things in themselves,*" but "*have to be interpreted as carriers of social value*" [3] (37, p. 557). Such values are derived not alone from the formal organization and social relations of the plant as a whole, or from "union solidarity," but, more particularly, from the *social organization* of *small work groups*. Each such "miniature society," arising more or less spontaneously within the larger framework of the plant, and providing its own informal leadership, tends to develop a relatively stable set of attitudes—of norms of belief and action (34, 43, 45). Plant conditions, policies, and practices, and other incentives which are perceived as opposed

[3] Not italicized in the original.

to the trend of stable social organizations characterizing a group of workers, are resented as threatening to the "miniature society," and may lose their power to motivate (37).

This emphasis upon social motives and the influence of informal social organizations of small groups of workers represents a major and highly significant contribution to the better understanding of the sources of motivation and morale in industry. The "social perspectives" of Elton Mayo (3, 10), as elaborated in the development and interpretation of the Hawthorne studies, has contributed to an organic conception of the industrial organization and of informally organized work groups which focuses attention upon mainsprings of action overlooked in an earlier era of industrial management dominated by the concept of the worker as an "economic man." Similar outcomes have followed from action research, conducted within the context of "field theory," [4] directed toward the "consideration of conditions which allow for maximum co-operation and morale in groups" (30, p. 126).

Many of the studies referred to in earlier chapters point to the need for careful and quantitative studies of the social structure of the entire plant, and of the varieties of social organizations characterizing small working groups, with the view of moulding attitudes and action in such groups toward the achievement of desirable industrial and broader social objectives. This is all the more necessary because, as demonstrated in the Hawthorne studies and in other investigations (8, 18), informal social organizations of workers can lead to disturbing as well as to favorable outcomes in the way of production, employee adjustment, and industrial conflict. There is also the need, discussed in earlier chapters and also in Chapter 23, of dealing with the question of whether the organization of such groups should be "left to chance," and with the role of management and the union in formalizing and guiding the organization of these groups (2).

Emphasis upon social organization and the social motives should not, however, divert attention from the significance of studies, described in this volume, which show that satisfactions and dissatisfactions, attitudes and motives, are *not derived solely* from the influence of more or less closely knit social groups operating within the industrial plant. Pay and hours of work; the quality of supervision; outside circumstances, including home life of the individual, must each still be looked upon as a "thing in itself," capable of acting directly upon the individual apart from the influence of the group to which he nominally or actually belongs. There is need, also, for considering "internally" derived motives—associated with personal qualities of aptitude, ambition, drive, etc. As has been

[4] See Chapter 6.

pointed out in a series of articles on "communication" published in *Fortune* during 1951 and 1952, "in a country where 'individualism'—independence and self-reliance—was the watchword for three centuries," it is necessary to guard against uncritical acceptance of the view that "the individual has no meaning—except . . . as a member of a group" (48, p. 114). The emergence of a "social psychology" does not require or justify the abandonment of "individual psychology" in approaching and solving the problems of motivation and morale in industry.

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21

Applying the Findings of Employee-Attitude Surveys

ATTITUDES expressed by employees in response to survey questions generally have substantial basis either in the objective conditions of a plant or in the meanings these conditions have been permitted to assume (9, p. 130). As a result, survey findings provide the basis for corrective action in dealing with points of irritation in the work situation. Indications as to the kinds of action widely needed in American industry because of prevalent attitudes toward pay, security, status, etc., have been discussed in earlier chapters. The purpose of the present chapter is to present guideposts to the use of survey findings in the individual plant.

A survey does a company no good and may do it real harm unless there is follow-up action on the conditions brought to light by a survey. In a report on company experiences with employee-attitude surveys, prepared by the National Industrial Conference Board, a vice president of one of the co-operating companies is quoted as saying: "*An attitude survey is like a hand grenade—once you pull the pin you have to do something with it. Otherwise it may hurt you rather than help you*" [1] (5, p. 69). This, it is pointed out, may well be an overstatement, since an attitude survey does not explode in the president's fist and destroy the company if management does nothing about the findings. Nevertheless, "the immediate as well as the long-term effect of no action is almost sure to be lower morale" (5, p. 69).

The danger of lowered morale is not the only reason for putting survey findings to use. The failure to do so represents a waste of company funds and a loss of the opportunity to improve attitudes and morale by taking care of undesirable conditions revealed by the survey. As a consequence of

[1] Not italicized in the original.

such considerations—and in contrast to an earlier inclination to tuck the survey results safely away in an executive's desk—there is an increasing tendency to *use survey findings;* to take action in the way of improving conditions, revising policies and practices, initiating training programs, etc., designed to eliminate the sources of low morale and of blockages of the "will-to-work."

Publicizing the Findings of Employee-Attitude Surveys

The publicizing of survey findings to *executive* and *supervisory personnel* is considered by many companies as one step in putting survey findings to use. According to the 1951 National Industrial Conference Board study referred to above, covering the experience of 111 companies, it is the customary practice in plants where employee-attitude surveys have been conducted to distribute a complete report of the survey findings to the company officers and/or to all top-ranking executives (5). Such distribution has generally been supplemented by meetings for the detailed discussion of findings and of their implications in terms of necessary action.

Members of the "middle-management" group (below the top and above the first-line level of supervision) have received the complete report in only a few instances. However, selected relevant portions of the findings have been given to all members of this "middle-management" group in about 60 per cent of the 111 co-operating companies. In general, while each such individual received a complete report on over-all company findings, and the breakdown for his own division and subunits, he was not given the breakdown of findings covering other divisions in the company. A report of the over-all company findings was distributed to all (first-line) supervisors in approximately 60 per cent of the companies. "Only some of the supervisors" received them in about 15 per cent of them. In practically every case, where breakdowns were prepared for supervisors' units, these were discussed with them individually at considerable length. In addition, there were many instances in which meetings to discuss findings were held with "middle-management" groups and the survey report used as training materials in the case of (first-line) supervisors.

THE DISTRIBUTION OF FINDINGS TO EMPLOYEES

A question of considerable importance is whether survey findings should be made available to rank-and-file employees. This question is possibly of particular pertinence where (perhaps contrary to management's expectations) over-all morale proves to be low or where there are severe "sore spots" in the organization as a whole or in units of the plant.

Data on the extent to which the results of 118 surveys were distributed by companies co-operating in the 1951 National Industrial Conference Board study are presented in Table 39. According to the report on this study, the Conference Board "has found no attitude-survey specialists that advocate giving to non-supervisory employees the complete findings of surveys if they contain breakdowns by departments and working units. . . . There are, however, a considerable number of specialists who approve giving the complete findings to non-supervisory workers if the survey covers a limited number of topics or items and if breakdowns by work units are not prepared" (5, p. 65). In the main, differences of opinion seem to center around the question "*How much* of the findings should be made known?" rather than on the question "*Should any* of the findings be publicized?"

TABLE 39. *Company Practices in Giving Survey Findings to Non-supervisory Employees* (after *National Industrial Conference Board*, 1951)

Practice	*Total, No.*	*Per cent of 118 surveys*	*Written questionnaires*	*Interview surveys*	*Companies using both*	
					Written questionnaires	*Interview surveys*
Gave all of the findings	23	19.5	20 *	2	1 *	
Gave only a summary	41	34.7	34 *		5 *	2
Gave only selected parts	10	8.5	9		1	
Gave none of the findings	49	41.5	24	19	1	5

* Five companies gave a summary in addition to "all of the findings."

SUMMARIZING FINDINGS IN BOOKLET FORM AND THROUGH EMPLOYEE MEETINGS

The *distribution to employees of a booklet* summarizing the survey findings is a method used by some companies in passing along information to employees. An illustration of this is found in a 16-page booklet, entitled *What You Think About Your Company*, mailed to 2,500 employees of Pitney-Bowes, Inc., to report on a survey conducted for the company under the direction of J. E. Walters, Amos Tuck School of Business Administration, Dartmouth College. In this booklet, questions asked of employees were grouped under the headings of *Pay, Profits, Op-*

Exhibit I. Kansas City Power and Light Company *

What Employees Think About Kansas City Power & Light As A Place To Work

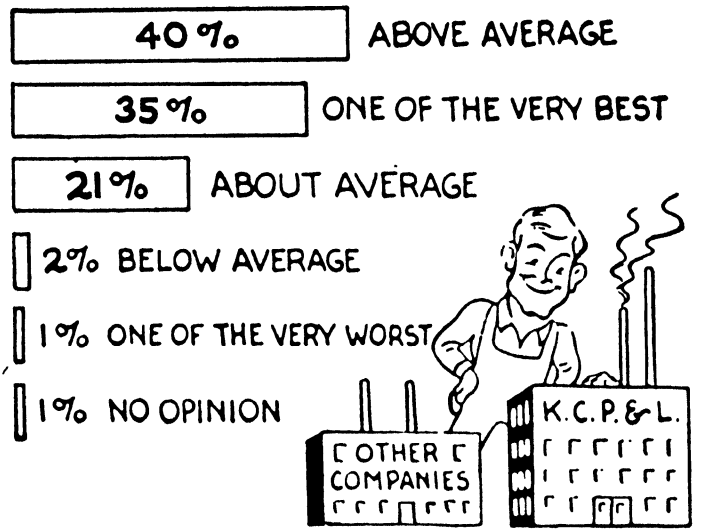
Kansas City Power & Light Company is regarded as a good employer by a large majority of its employees.

1. **Three employees in every four consider the Company *above average* or *one of the very best* employers they know.**

   Only 3% regard the Company as *below average* or as *one of the worst* places to work.

   Comparison with surveys made for other companies indicates that this is a very good showing.

How do you rate Kansas City Power & Light Company as a place to work compared with other companies you know about?



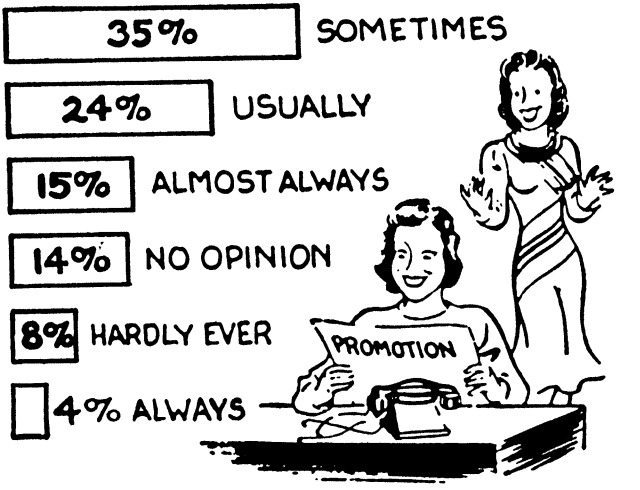
2. **Three-fourths of the employees (76%) say that they *don't think they would* or that they *definitely would not* take a job at the same rate of pay with another company.**

   One-tenth indicate that *they would probably* or *certainly* change jobs.

* By permission, from *Power & Light Employees Speak their Minds*, Kansas City Power & Light Company, 1948.

Exhibit II. Kansas City Power and Light Company *

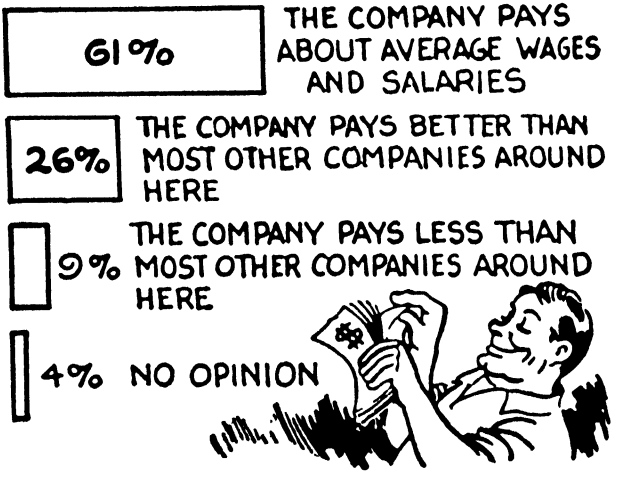
When there is a better job open, how often do you think the best qualified person is promoted to it?



2. Kansas City Power & Light Company employees give the Company a good rating on the score of wages.

One-fourth think wages and salaries are *higher* than at other companies and three-fifths think they are about average.

How about wages and salaries at Kansas City Power & Light compared with most other companies around here?



* By permission, from *Power & Light Employees Speak their Minds*, Kansas City Power & Light Company, 1948.

portunity, Security, Working Conditions, Management, Information, and *Job Satisfaction,* supplemented by a brief "management comment" (14).

In some instances, the distribution of a printed report is associated with meetings for the presentation of the findings and a discussion of the implications to employees and to management. An illustration of this approach is found in steps taken by the Kansas City Power and Light Company upon the completion of an employee-opinion survey conducted by the Opinion Research Corporation in the summer of 1947.

Findings, as reported by the survey organization, were first brought to the attention of supervision.[2] Committees were then formed by the supervisors and a program developed for printing a booklet and for presenting it to employees in groups similar to those formed for the administration of the survey questionnaire. Sample pages of the booklet, entitled *Power and Light Employees Speak Their Mind,* are shown in *Exhibits I* and *II.* In a closing section entitled "SO . . . . . WHAT'LL BE DONE ABOUT IT ALL," signed by the company president, employees were advised that something would be done about the findings. "As an employee," the statement reads, "you may be assured that specific recommendations will be made to improve working conditions and employee-management relationships as well as to keep employees more fully informed regarding the Company and its policies. Of course, not everything can be done overnight. Some improvements you will be able to see right away . . . others will take time. In any event, you will be kept advised of the progress of the program" (11, p. 33).

Following the preparation of the booklet, an executive of the Company (J. W. B. Foringer, Vice President) met with the various employee groups, including 95 per cent of all employees, and reviewed the survey findings. A short discussion period followed this presentation. Following the presentation of the material and the discussion, the booklet was distributed to each employee. In addition, in order to make sure that the family of each employee received the information as well as the employee, a copy of the booklet was sent to the employee's home.

OTHER MEANS OF PUBLICIZING FINDINGS

In addition to special reports, meetings and discussion groups, the *company magazine* or *newspaper* is used as a medium for reporting survey findings to employees. *Exhibits III* and *IV* are sample pages from such a report taken from the December, 1948, Detroit Edison Company house

[2] The details of this program, as described above, are taken from a letter to the author written by J. W. B. Foringer, Vice President, Kansas City Power and Light Co. (May 25, 1948).

Exhibit III. The Detroit Edison Company *

Let's Take a Look at Ourselves—

WE ARE BEGINNING to get back from the Survey Research Center results of the study they are making for us. Some of the things you told them in their questionnaire are charted on these pages. I am currently reviewing with Council Members more detailed information about departments. So far we have received only a small part of the information that will be available, but already we have a better understanding of how you feel about your jobs and the Company.

As I interpret these graphs, most of us agree that this is a pretty good place to work. However, the survey was not made to prove that point—we're primarily interested in finding out where we're falling down and in doing something about it. When more information is available we will know more about the reasons for the dissatisfactions that do show up here.

One thing on these charts is of particular interest to me. That's your reaction to the retirement plan. Detailed results show that not many employes understand it very well, and this may account for some of the dissatisfaction. I'm not sure what should be done about it, but it's getting top priority for further study.

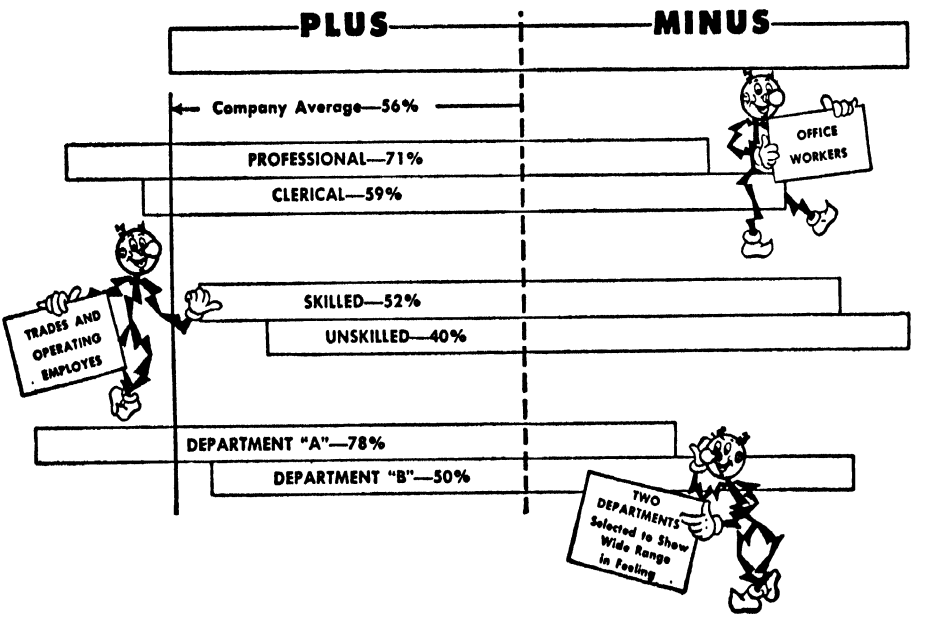
As we proceed we will need help from you and your supervisors in deciding what the results mean and what to do about the problems that are revealed. This will be a big job and will take time. However, the survey will be valuable only as we use it to help solve problems and improve conditions.

It would be helpful if we knew what part of the survey you are especially interested in. We could then get together for you more detailed information on these subjects. Will you please use the Question Box card for this purpose? Further reports, such as I am now making to you, will deal with matters of over-all Company interest.

J. F. Parker

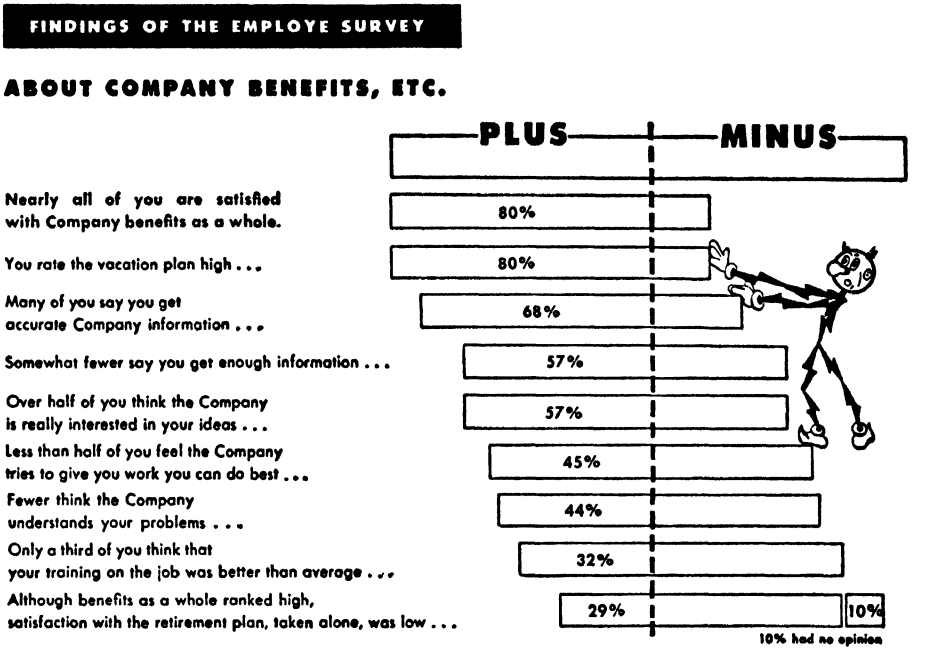
PRESIDENT AND GENERAL MANAGER

OVER-ALL SATISFACTION of employes in different occupations varies from the Company average. As we might expect, folks who do different work feel differently about their jobs—



* By permission, from *Synchroscope*, (December) 1948.

Exhibit IV. The Detroit Edison Company *



organ, *Synchroscope*. In place of group meetings, *informal discussions* with individual employees may be used as a means of informing employees concerning survey findings. Whatever the medium, the report to employees, according to Central Surveys, Inc., can provide an opportunity for the "clarification of actual company policies when survey complaints appear to be based on misinformation, as they often are." Above all, "a report to employees is concrete evidence of management's sincerity and intention to correct any conditions that need correcting" (10).

Implementation of Survey Findings

According to many companies, employee-attitude surveys produce a practical and useful outcome in themselves in the way of increased morale. For example, one company which has conducted a series of employee-attitude surveys reports that "they have increased the pride and confidence of the employee in the company" (7). More than a third of the 111 companies participating in the 1951 National Industrial Conference Board study of experience with attitude surveys reported that "their surveys actually boosted morale" (5). According to Kornhauser, "attitude surveys . . . operate to relieve tensions by letting workers unburden themselves,

* By permission, from *Synchroscope*, (December) 1948.

to improve morale by showing that management is really interested in people on the job" (9, p. 127). These are valuable by-products of employee-attitude surveys which are more likely to occur in companies where there are generally satisfactory employee relations—where there is already a sound basis for employee pride and confidence in the company. Even in such companies, however, employees expect—whether or not they have been implicitly so informed—that something will come of the survey in the way of better working conditions, better policies, more consideration of their wants and needs.

IMPROVING PLANT CONDITIONS

Expectations of employees that something will be done as a result of surveys have been realized. For example, in a study reported by Benge and Copell, the results of an attitude survey were reported to all personnel in the company publication. In this report, definite promises were made that changes in the physical plant and facilities would be made to eliminate undesirable working conditions. Nine months after the presentation of the report, more than 70 per cent of the promises had been complied with, in spite of a tight building-material market. Meeting these promises involved the construction of two entirely new and modern rest rooms, the complete renovation of one plant, and the purchase of ground to permit relocation of lounges and locker rooms at another plant. Extensive research was instituted with the view of eliminating hazardous and costly practices in the use of dusting flour, which polluted the air throughout the bakeshop in the plant. Extensive lighting surveys centered attention on the advisability of proper intensities of illumination for various jobs and on the installation of dustproof fixtures to permit easy cleaning and maintenance of the required amount of light. Combination heating and ventilating units were installed at all locations where temperatures and other atmospheric conditions were unsatisfactory. According to Benge and Copell, "there has been a definite improvement in morale at most of the plants, as indicated by production reports and by a decrease in legitimate grievances" (1, p. 22).

TRAINING SUPERVISORS

The findings of employee-attitude surveys have been widely used as the raw materials for *supervisory training* materials and training programs and for stimulating corrective action on the part of supervisors. An example of this is to be found in the experience of the Florida Power and Light Company. As shown on pages 325–327, a major outcome of a survey conducted in that company was the finding that most problems in a de-

partment were generally associated with poor supervisory practices as reflected in "lack of consideration," failure on the part of supervisors to encourage employees to come to them with their problems, etc. The findings of the survey were reported in the form of a "balance sheet" for each department of the company (15). Each department head could look at his "balance sheet" and know how the figures for his subordinates compared with corresponding company averages, in other words, whether their morale was higher or lower than the morale of the company as a whole.

The "balance sheets" were issued to all department heads and their nature explained at a meeting called for that purpose. At the time the employee-attitude survey was conducted, an additional questionnaire on leadership problems was issued to every member of the executive and supervisory staff. This included 74 questions covering practically all phases of the "art of handling men." Analysts were furnished with ratings by management on the "leadership ability" of the individuals who answered the questionnaire. Correlations between such ratings and answers to the leadership questionnaire provided information on how the "best leaders" in the organization thought about leadership problems which had been presented in the questionnaire. Further analyses showed that the "best leaders followed essentially the same trend of thought as the best leaders in all other sections of the country." From such comparisons was developed a set of standards for use by company executives and supervisory staffs. These were then discussed at small "round-table" meetings. From notes taken of discussions at such meetings, a book on leadership methods was developed. A copy of the final edition of this book, entitled *Important Problems in Leadership*, was presented to each executive bearing his name as the coauthor, as a reference source on leadership methods evolved from this program.

A major problem, as indicated on pages 445 ff., is *to stimulate executives and supervisory personnel into translating information about employee attitudes and understanding of leadership methods into action on the job.* Employee interviews conducted in one phase of the Hawthorne Study, referred to in Chapter 13, resulted in the development of training courses covering approximately 1,000 supervisors in the Western Electric Company. Comments made by the employees were used as the basis of the training program. Such comments, brought back to supervisors and considered by them, led to a marked improvement in supervisory techniques. As a result of this program, "supervision became easier" (12). A number of companies report similar outcomes from the use of survey findings in improving the quality of supervision (3, 19).

THE IMPACT OF SURVEY FINDINGS ON THE INDUSTRIAL-RELATIONS PROGRAM

Of broad significance is the impact of surveys and of the application of survey findings upon the employee or industrial-relations program. For example, the program of employee counseling by the Western Electric Company, and the development of similar programs by other companies, as part of an over-all program of employee relations is, in fact, closely associated with the use of employee-attitude surveys. According to Alexander, the findings of a survey conducted by the Standard Register Company (6) are constantly referred to in planning new and repeated employee-relations activities. "All in all," he says, "this survey has proved to be a valuable tool. It has taken much of the guess work out of our Employee Relations program." [3]

Application of "My Job Contest" *Findings in the GMC Industrial Relations Program:* The application of this viewpoint on a large scale is found in the use made by the General Motors Corporation of the findings of the employee-attitude survey conducted through the medium of *My Job Contest,* described in Chapter 13. Because of General Motors' decentralized operating policy, employee-relations practices are administered at the division level and in line with local conditions. This necessitated the preparation and distribution of reports to individual divisions of the company as a basis for action in strengthening the employee-relations situation in the unit. It was felt that reports to local management should reflect employees' reactions to less favorable conditions, as well as to those which were being handled in an outstanding manner. Since the employees were asked to write letters on what they *like about the job,* it was concluded that the failure of employees to make frequent references to a theme could be accepted as showing that the local employee-relations program was deficient with respect to policies and practices related to the theme, or, at least, that employees were unaware of these policies and practices (4, p. 54).

Tests conducted on objectively verifiable themes, such as "safety," "medical facilities," etc., involving a comparison of rank orders of theme frequencies with rankings of the divisions, led to the opinion that the employees' viewpoints reflected accurately the degree to which employee-relations practices were effective within a division. Modified chi-square techniques were employed to compute the significance of differences between frequency of theme mention in a division and the average frequency of theme mention in the entire corporation. Each division was then pro-

[3] From a letter written to the author by R. E. Alexander, Special Activities Director, Standard Register Co.

vided with a graphic picture of its employee-relations situation in the form of a *bar chart report*, illustrated in Figure 34, which represents a unit in which 6,284, or 49.8 per cent of, eligible employees participated in *My Job Contest*. Each division was also supplied with blank analysis sheets for use by divisions interested in auditing the report, analysing the reasons for its standing on themes, and for indicating any intended action on specific themes.

An illustration of the responses by the divisions is found in *Exhibit* V, taken from the analysis forwarded by Division No. 48, the unit represented by the illustrative bar chart report shown in Figure 34. A total of 42 operating divisions forwarded copies of their analyses to the Employee Research Section. In addition, 42 per cent of the themes commented upon by the divisions either had been or were going to be acted upon in some way. The reactions and comments provided information containing common threads of reasoning and evaluation, suggesting the possibility of a broader interpretation of *My Job Contest* results. This was done by reorganizing the themes in terms of *Six Basic General Motors Principles* of employee relations formulated by A. C. Wilson, President, *viz.*

1. *Put the Right People in the Right Places.*
2. *Train Everyone for the Job to be Done.*
3. *Make the Organization a Co-ordinated Team.*
4. *Supply the Right Tools and the Right Conditions.*
5. *Give Security with Opportunity, Incentive, Recognition.*
6. *Look Ahead, Plan Ahead . . . for More and Better Things.*

An illustration of such a reorganization, considered useful in reviewing the divisions' commitments to remedy conditions uncovered by *MJC*, is shown in *Exhibit VI*. According to those responsible for the analyses of *MJC* findings, the analysis of employees' responses has had a realistic impact upon employee-relations policies and practices in the General Motors Corporation. Media for employee communications have been extended through the use of booklets placed on racks located in strategic positions in the plant. This program, according to Evans and Laseau, has received considerable support from employees, as indicated by the pickup rate of the booklets (18). Further questionnaire and interview surveys have been conducted in divisions desiring more detailed information regarding the attitudes of salaried employees and steps taken to adjust sources of dissatisfaction uncovered in the surveys (17). Check lists have been developed for use by each division in auditing its employee-relations programs in terms of present status, divisional experience with the program, cost, and management's appraisal as to its effectiveness. Continuing follow-up on this appraisal has been planned in order to give better service to divisions on problems arising in employee relations programs.

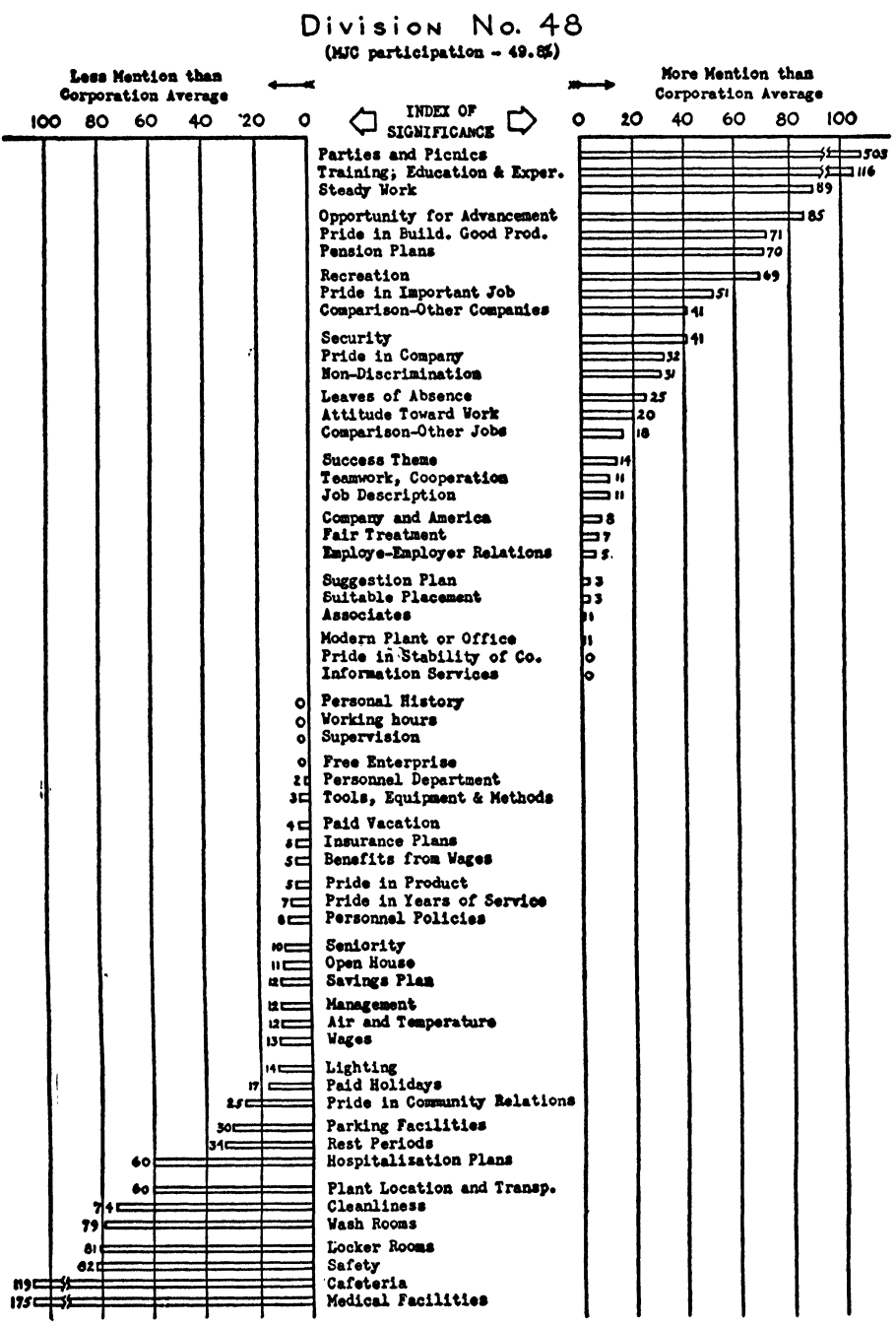


Figure 34. General Motors Corporation, *My Job Contest* *

* By permission, from C. E. Evans and La V. N. Laseau, *My Job Contest* (Personnel Psychology Monograph No. 1), Personnel Psychology, Inc., 1950.

Exhibit V. General Motors Corporation, *My Job Contest* *

ANALYSIS OF MJC THEMES FROM _____ #48 _____ DIVISION

Themes	Index of Significance	Attributable To	Action Taken or Contemplated
MANAGEMENT	-12	As a matter of policy—rightly or wrongly—we have avoided any conscious effort to build up individual members of Management in the public eye through press releases, announcements, etc.	
AIR AND TEMPERATURE	-12	No Comment.	
WAGES	-13	No Comment.	
LIGHTING	-14	No Comment.	
PAID HOLIDAYS	-17	No Comment.	
PRIDE IN COMMUNITY RELATIONS	-25	Our community seems to be somewhat lacking in civic pride. It is very doubtful if many of the residents are aware of the overall contribution to the general welfare of the community made by the General Motors plants located here.	Better job could be done in this connection.
PARKING FACILITIES	-30	At time of My Job Contest, we had serious traffic and parking problem due to the fact that additional parking lots adjacent to new plants had not been completed.	This work has since been completed and we would suppose that today these facilities would receive at least average mention.
REST PERIODS	-34	We have no recognized rest periods, and are quite satisfied with our employes' lack of reference to this theme.	
HOSPITALI-SATION PLANS	-60	The withdrawal of a local hospital from full participation in the Blue Cross Plan, which has given rise to considerable employe dissatisfaction, may account for lack of favorable mention of this theme.	

* By permission, from C. E. Evans and La V. N. Laseau, *My Job Contest* (PersonnelPsychology Monograph No. 1), Personnel Psychology, Inc., 1950.

5. GIVE SECURITY WITH OPPORTUNITY, INCENTIVE, RECOGNITION

There must be individual application to the job in hand. To develop the maximum personal application to his job and his interest in it, each employee must have sound incentives to work. Such incentives include fair compensation, recognition for results achieved, reasonable security and, at the same time, opportunity and hope for advancement in the organization.

RELATED *MJC* THEMES

1. Security
2. Steady work
3. Savings plan
4. Pension plan
5. Pride in stability of company
6. Opportunity for advancement
7. Personal history
8. Success theme
9. Wages
10. Benefits from wages
11. Suggestion plan
12. Paid vacations
13. Paid holidays
14. Pride in years of service
15. Leaves of absence
16. Seniority

Most Common Reasons for Above-average Performance

All those Divisions that attained high scores in the incentive category reported consistent efforts to acquaint employees with the economic security benefits attached to working for a Division of General Motors. Most of them carefully follow a promotion-from-within policy.

The older Divisions explained that they had many long-service employees who would naturally stress the stability of their jobs.

Diversified products or stable ones in steady demand were mentioned.

New and growing Divisions noted diversity of jobs and increased opportunities for advancement as reason for their above-average scores.

Most Common Reasons for Below-average Performance

1. Plant located in urban, highly competitive labor area.
2. Seasonal employment cycles determined by consumer demands.
3. Reduction to 40 hour work week schedules.
4. Nature of the work.

Divisions' Recommendations for Improvement

To achieve the objective of Principle #5, Divisions enumerated eight steps to be taken:

1. Wherever possible, production should be scheduled to stabilize employment.
2. Service recognition plans, giving status to older employees, should be carefully considered.
3. Whenever plants are to be opened, especially if they are in new locations, management should carefully explain the plans to employees as soon as feasible.
4. To enable them to deal with their employees effectively, members of supervision must be thoroughly familiarized with wage structures.
5. All employees should be encouraged to utilize the payroll deduction plan for investing in U.S. Savings Bonds.
6. Employees planning to retire should be specially instructed on any benefits that they have earned.
7. Reinforce the promotion-from-within policy. Plant papers should be used to announce promotions. Personnel records should be so improved that they assist in the full utilization of employee skills.
8. The Suggestion Plan should be used more as an employee-relations tool. Handle suggestions promptly and courteously. Train supervision to fully utilize the by-products of a suggestion plan that is operating efficiently.

* By permission, from C. E. Evans and La V. N. Laseau, *My Job Contest* (Personnel Psychology Monograph No. 11. Personnel Psychology, Inc., 1950.

Exhibit VI. Reorganization of *My Job Contest* Themes in Relation to Principle 5—General Motors Corporation * (*facing page*)

PS Comments on the corporation's Suggestion Plan brought into sharp focus the tremendous potential of the suggestion-award system in a sound program of employee relations. Analysis of findings, supplemented by discussions with supervisors and employees, indicated that "too frequently, the Suggestion Plan is overlooked as a tool for human relations and is considered only as a methods-improvement or material-utilization program. Rather than being concerned with the number of people who participate in the Plan, in too many instances the success of the organization's Plan is measured in terms of the gross number of suggestions selected, the ratio of acceptances to submittals, and the amount of money given as awards for the acceptable suggestions. . . . One may assume," according to Evans and Laseau, "that the Suggestion Plan offers each employee a positive opportunity to make constructive suggestions as to how his job or that of his fellow employees may be improved" (4, p. 131). As a result, attention has been turned toward the possibility that a suggestion may stem from dissatisfaction in an unrelated area, and that "*study of the suggestions made by employees may offer a continuing barometer of the attitudes of employees toward their Division and its management*" (4, p. 132).

Analysis of the thematic structure of the letters submitted by employees in *MJC* suggested that it might be profitable to study the General Motors plant newspapers to determine to what extent material presented through the newspapers received mention in the contest, and such a study was undertaken (8). In addition to a content analysis, a method was developed for the rapid computation of the reading ease of copy (13) for use by plant-paper editors in their day-to-day operations to improve the effectiveness of their papers. Finally, a report has been made to all division personnel management on the over-all findings resulting from *My Job Contest* and, as an outcome of the survey, closer contact has been established between the Employee Relations Staff and the Employee Research Section and the divisions as a step in extending the usefulness of these units to the divisions in dealing with employee-relations matters.

ATTITUDE SURVEYS AND ORGANIZATIONAL STRUCTURE

In a number of instances, the influence of employee-attitude survey findings has extended to the *structuring of the organization* as a whole and of the smaller work units within the organization. An illustration of the use of survey results in such connection is found in investigations conducted by Sears, Roebuck and Company (20).

Over a period of 12 years this company has conducted surveys covering

several hundred different company units and over 100,000 employees scattered through all sections of the United States. Questionnaires, including supplementary comment sheets, have been used to determine the general "feeling tone" or morale of employees, to locate problem departments, and to indicate the general areas in the work situation toward which negative feelings of employees are being directed. In addition, interviews—nondirective in character—have been employed to determine more exactly why morale is low in particular units and to help deal with those departments or employee groups most requiring assistance.

As reported in earlier pages, surveys have yielded valuable information on the state of morale in the various units of the Sears organizations, and upon the influence of pay, profit plans, working conditions, etc., upon satisfaction and morale. Analysis of survey findings has led to the further conclusion that "there is no simple explanation for any given state of employee morale." On the contrary, the studies are interpreted as indicating "the existence of a highly complex set of interdependent factors which combine in subtle ways to produce a particular level of employee satisfaction or dissatisfaction" (20, p. 65). More particularly, the experience of Sears, Roebuck and Company with employee-attitude surveys has led to the conclusion that "some of the more difficult employee relations problems [as reflected in morale levels] could not be properly understood (much less influenced) except in terms of the broader context of the organization in which they developed" (20, p. 61).

Initially, as is still the case with most employee-attitude surveys, surveys were undertaken by Sears, Roebuck and Company for the purpose of finding out how well employees liked their jobs, what their attitudes were toward supervision and management, and what factors might be contributing to dissatisfaction and poor working relationships. Behind this approach was the viewpoint that once such facts were obtained, it would be possible for management to take corrective action and thereby exercise direct control over the quality of management-employee relationships.

According to Worthy, the latter assumption has been proven to be only partially valid. While it is found possible to deal with many situations by direct and specific management action, some of the more difficult employee-relation problems, as stated above, could neither be understood nor dealt with except in the broader social context of the organization in which these problems arose. As a result, the scope of the studies was broadened "to include the functioning of the organization as a whole and the entire pattern of technical and formal and informal relationships which comprise the organization" (20, p. 61). The enlarged scope of the survey program has been recognized by changing the name of the program from "morale surveys" to "organization surveys." Whereas, writes Worthy, "originally we sought merely to determine the level of employee

morale, we now seek to analyze any strains or cleavages within an operating unit which may impede its proper functioning. *Determining the level of morale is useful chiefly as a means for diagnosing organization problems; it is not an end in itself*" [4] (20, p. 61).

This viewpoint colors both the manner in which the employee-attitude surveys are conducted and the way in which the results of surveys are used. The studies conducted by Sears, Roebuck and Company have contributed toward the over-all *structuring of the company organization.* From the surveys, and also from other considerations, has come the conviction that current difficulties in employee-management relations throughout the country are a function of the large, overcentralized and overfunctionalized organization toward which industry has tended. This conviction has led to the adoption of a simpler, more informal "broad" or "flat" type of organizational structure characterized by a considerable delegation of responsibility and authority to local units.

In conformity with a basic policy emphasizing decentralization and freedom from specialization—facilitated by such an organizational structure—employee-attitude surveys in Sears, Roebuck and Company are conducted primarily for the benefit of the manager or other executive in direct charge of the unit under study. The primary purpose of the surveys is problem-solving. Reliance for the latter is placed upon the local executive. As a result, the survey team, drawing on information secured through the survey, attempts to provide the local executive with a more complete picture of his organization and to help him understand the factors operating in his unit and their effects on the attitudes and behavior of his group. In this way the local executive is placed in a better position to take action directed at the roots of the problem rather than at its superficial symptoms. Throughout, the emphasis is on "helping the local executive and his staff work out their own problems," since "they are most intimately familiar with their own organization, and, above all, they are the people who will have to live with the results of whatever course of action is decided upon" (20, p. 64).

According to Worthy, used in this way surveys assist "in liberating the creative resources of the executive and supervisory staff and bring them to focus on the problems of the organization." Orienting surveys from the viewpoint of the organization is based on the conviction that many of the more important problems in a business enterprise arise primarily from the structure of relationships within the organization. From this point of view, also according to Worthy, "The object of the entire survey program is not so much to correct immediate situations as to assist in developing the kind of organization that can solve its own problems. A survey has failed in its primary purpose unless it makes the particular store,

[4] Not italicized in the original.

plant, or department stronger and more self-reliant than it was before" (20, p. 64).

In Summary: The discussion of company uses of survey findings has shown that these have been put to use in a variety of ways. Attitude surveys provide the basis for "pinpointing" problems of motivation and morale in the plant (2). By focusing attention upon the sources of irritation, it becomes possible, in the words of the National Industrial Conference Board, to take corrective action "not with a shotgun, but with a rifle" (16). Such action may vary from relatively minor adjustments of working conditions or of the wage scale to extensive modification of the industrial-relations program and of the very structure of the company. Under any circumstances, of prime importance in initiating a survey is the commitment "to do something about the survey findings . . . A survey should not be started if the company is not willing to act in accordance with the survey findings or to explain fully why such action cannot be taken" (16).

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22

Moulding and Modifying Employee Attitudes

EMPLOYEE-ATTITUDE surveys are used not alone to obtain information as to what is on the worker's mind, but as a basis for positive action to eliminate or reduce sources of dissatisfaction. This, as indicated in Chapter 21, may take the form of furnishing or modifying physical facilities, of changes in personnel policies and practices, etc.

Action can also take the form of an effort to modify unfavorable attitudes which are not in accord with objective facts or reflect responses to features of the industrial organization which cannot be eliminated or modified without, in the opinion of management, undermining the economic stability or the effectiveness of the business enterprise. Industry, as other organizations—including unions—is here faced with a question of what constitute the best techniques in the way of education, of propaganda, or of other devices for promoting or modifying attitudes, opinions, and beliefs.[1]

The Relation Between Knowledge and Attitude

A common approach in moulding or changing employees' attitudes is to supply information on the objects or issues toward which attitudes are

[1] According to Hovland, the phenomena of attitude change "tend to be more complex than those in traditional experimental psychology"(36). For a discussion of the problems, mechanisms and theories of attitude change, not discussed in any detail in this chapter, the reader is referred to Cantril (5), Cartwright (6), Doob (19), Festinger and Kelley (26), Graham (32), Gustad (33), Hartley and Hartley (34), Hovland (36, 37), Hovland, Lumsdaine, and Sheffield (38), Jahoda, Deutsch, and Cook (43), Krech and Crutchfield (45), Lazarsfeld (48), Lewin (50), Lucas and Britt (55), Linebarger (53), McNemar (57), Murphy, Murphy, and Newcomb (61), Vallance (90), Lasswell, Casey and Smith (47), and Smith, Lasswell and Casey (84).

directed. Company magazines (41), bulletin boards, pamphlets (69), meetings (23), educational programs (22), newspaper advertising, and many other forms of written and verbal communication (14, 49)—formal and informal in character—are used for this purpose (13, 66). Underlying their use is the belief that *communication* is a "powerful factor" in moulding attitudes (17)—that well-informed individuals will have "sounder" attitudes than will ill-informed individuals.

It is not uniformly agreed that desired changes in attitudes can be achieved by providing information on the issues involved. As is indicated on pages 371–373, a study of the relations between *attitudes toward* and extent of *information about* the Taft-Hartley Law, combined with considerations of theory, led Gleason (31) to the opinion that nothing could be accomplished in the way of promoting favorable attitudes by providing employees with information about the details of the law. Similar conclusions have been drawn from studies bearing upon the modification of attitudes toward races, national and international issues, etc., through the dissemination of information.[2] Experiments on mass communication (38) conducted during World War II have been cited as demonstrating that communication through mass media, no matter how well presented, has limited effects, since "information increased specific knowledge but was not generalized to attitudes or motivations about the war" (44).

On the other hand, there are many studies from the broader areas of social psychology which show that attitudes *are* subject to modification and development by increments of knowledge. A number of these bear upon the modification of attitudes toward minority groups. Evidence that *course materials* and *selected readings* can be used to improve the favorableness of attitudes toward Negroes and other minority groups is found in studies by Newcomb (62), Remmers (72, 73), Smith (85), Watson (92), and others (61). It has also been shown that not alone formal education and guided readings, but information obtained from various kinds of *personal contacts* and *experience* with formerly unfamiliar situations, can influence attitudes (86).

Integration of Negroes in the Military Forces: Changes in racial attitudes as a result of first-hand experience have been strikingly demonstrated in studies (40) in which officers and enlisted men in the U.S. Army were questioned concerning Negroes as soldiers. In one such investigation, a representative sampling of white enlisted men was asked: (1) "*Some Army divisions have companies which include Negro and white platoons.*

[2] Except for a few illustrative studies from such fields, investigations of the relation between knowledge and attitudes discussed in this book are drawn from the industrial scene. A detailed discussion of studies in the broader area of social psychology is to be found in texts referred to in the footnote on page 414. An especially comprehensive review of earlier studies is found in Murphy, Murphy, and Newcomb (61).

How would you feel about it if your outfit was set up something like that?" and (2) "*In general, do you think it is a good idea or a poor idea to have the same company in a combat outfit include Negro platoons and white platoons?*" It is apparent from Table 40 that integration of white and colored troops was most favored by white soldiers who had been in closest contact with Negro troops and least by those with no such experience. Detailed analysis of responses showed that the proportions of white men from the South were approximately the same in each of the four groups shown in Table 40. From this, the investigators drew the conclusion that the observed changes in attitudes could not be attributed

TABLE 40. *Effect of Experience on the Attitudes of White Enlisted Soldiers to Negro Troops* (from Information and Education Division, U.S. War Department [after Newcomb and Hartley])

Question 1: *Some Army divisions have companies which include Negro and white platoons. How would you feel about it if your outfit was set up something like that?*

Question 2: *In general, do you think it is a good idea or a poor idea to have the same company in a combat outfit include Negro platoons and white platoons?*

Extent of Army contact with Negroes	*Per cent answering* Question 1 "Would dislike it very much"	Question 2 "Good idea"
Field force units with no colored platoons in white companies (N = 1,450)	62	18
Men in same division, not in same regiment, as colored troops (N = 112)	24	50
Men in same regiment, not in same company, as colored troops (N = 68)	20	66
Men in company with a Negro platoon (N = 80)	7	64

TABLE 41. *Changes in the Attitude of Whites toward the Employment of Negroes* (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1951)

Answer to Question: "*Would it be all right if your employer hired Negroes to do the kind of work you do?*"

	Per cent answering "yes" 1944	1951
White employees—total	45	60
White-collar workers	39	55
Skilled workers	50	59
Semiskilled and unskilled workers	55	68

to differences in geographic origin, but represented the effect of experience with Negro troops on the attitudes of white men.

An Industrial Study: Similar findings for industry are reported by the Opinion Research Corporation (11) from a survey involving interviews with a nation-wide sample of white employees distributed in cities of 25,000 or over, and with 390 Negro employees in Detroit, Pittsburgh, New York City, and Philadelphia. Approximately one million "nonwhites" (96 per cent Negro) were added to the industrial labor pool between

TABLE 42. *Acceptance of Negroes as Coworkers*[a] (after *Public Opinion Index for Industry,* Opinion Research Corporation, 1951)

	Whites who have Negro coworkers, per cent	*Whites who do not have Negro coworkers, per cent*
All right to work next to a Negro	84	59
All right for company to hire Negroes for my type of work	79	59
All right to work under a Negro supervisor	54	37
Agree that companies should train Negroes to fill higher skilled jobs	56	43
Agree that companies should open up white-collar jobs to Negroes	63	50

1940 and 1950. As shown in Table 41, replies to the question "*Would it be all right if your employer hired Negroes to do the kind of work you do?*" show a sharp drop in resistance to the employment of Negroes since World War II. Furthermore, as shown in Table 42, in industry, as in the military forces, acceptance of the Negro as a coworker is greater among those who have already had Negro coworkers.

Implications for Industry: The foregoing discussion of attitudes toward racial and national groups has been presented with the primary purpose of showing that knowledge and experience influence attitudes. However, *studies cited above are also of direct significance to industry because of the increasing need for integrating Negroes into working forces* which have, in the past, been composed extensively of white men and women. As illustrated in the study of union members by Rose (77), the process of changing attitudes toward minority groups can be slow and limited, especially in a community where attitudes of nonacceptance are deep-seated. There are indications that the end of discrimination in industry

[a] Southern employees are excluded above to focus on the situation in northern plants.

will not come automatically; "it will require hard work and determined effort" (60), including, as Roper points out, "general campaigns of enlightenment which employ mass communication data" (75). Nevertheless, integration, in terms of acceptance and smooth working relations, must be achieved—in the interest of maintaining harmonious industrial relations—regardless of whether the employment of Negroes, and other minority groups, reflects the initiative and desire of management or the effects of laws or regulations bearing upon *fair employment practices.* Studies of the modification of attitudes toward racial, national, and also religious groups emphasize the importance of disseminating *that kind* of information and also of establishing *that kind* of working atmosphere which will best promote attitudes of acceptance on the part of fellow workers, supervisors, and management personnel. The development of favorable attitudes toward such groups may be viewed as simply one phase of the broader problem of building employee morale which, as indicated throughout this book, represents a continuing challenge to progressive management concerned with the effective use of human resources in industry.

MOULDING EMPLOYEE ATTITUDES TOWARD PERSONNEL POLICIES AND TOWARD THE COMPANY

Management is concerned with the problem of stimulating favorable employee attitudes toward plant personnel policies and toward the company. Studies bearing upon the relation between information and attitudes toward such policies are few in number. Among these is an investigation, conducted in 1950 by the Opinion Research Corporation (58), dealing with the influence upon employee attitudes of increased knowledge concerning *benefits* such as pensions, health and welfare plans, life insurance, etc. Three companies were covered in the study. In *Company A* 2,450 employees were interviewed—all plant employees, with the exception of those who were on vacation or sick leave, filling out self-administered questionnaires. Personal interviews were conducted with 835 employees at 12 different plant locations of *Company B.* A representative cross-section of 281 employees was interviewed at the main plant of *Company C.*

The survey revealed wide ignorance in employee knowledge of benefits. For example, 83 per cent of employees in *Company A* and 67 per cent in *Company B* did not know that the company pays a larger share of the pension costs than do employees. Of employees in *Company C,* 49 per cent were unaware of what they get out of the pension plan. Analysis of findings showed further, as appears in Figure 35, that employees who knew most about the company pension plan more frequently rated the

company as being "*very high on benefits.*" This finding takes on additional importance in view of the further finding, presented in Table 43, that "employees who appreciate their company benefits tend to be high morale employees" (58, p. 13).

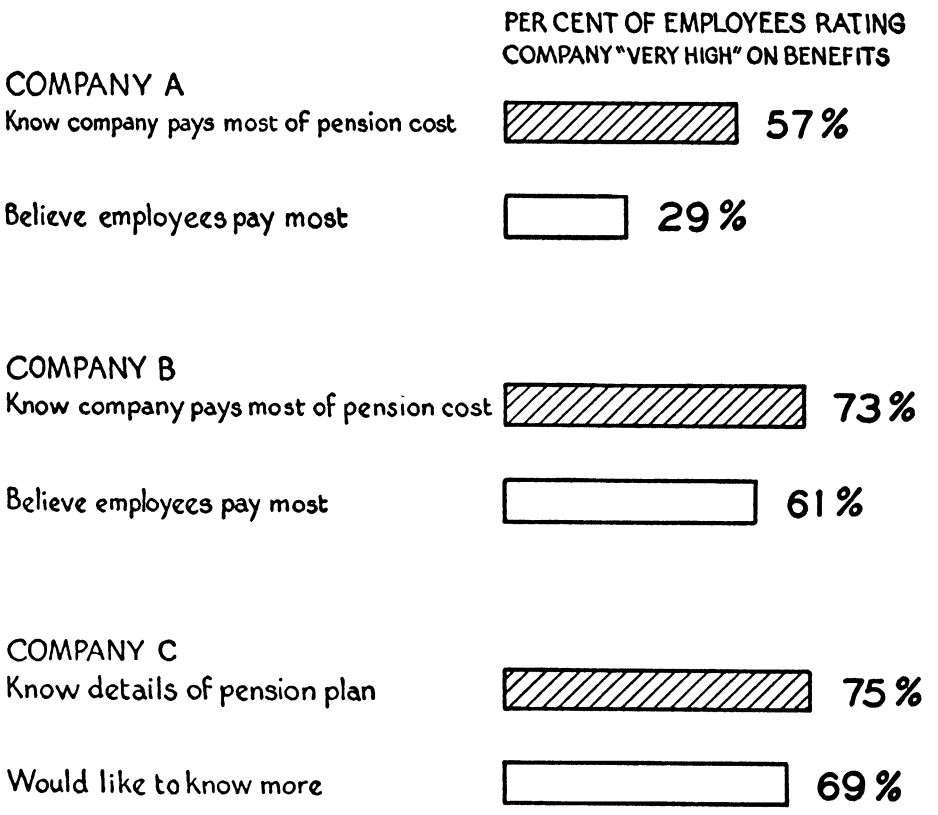


Figure 35. Effect of Knowledge of Company Pension Plan on Attitudes toward Benefits *

The survey involved also a detailed case study of a plant of *Company A*, a chemical producer, located in the South, employing about 3,000 people. This company has had a liberal benefit program in effect over a period of years. Only minorities of the employees knew that the company paid a substantial amount of the cost of various benefit plans, including accident and sickness, group life, hospitalization and surgical, and retirement income. As appears in Table 44, a considerably larger proportion of employees who knew that the company paid most of the pension costs rated the pension plan "*very high.*" As appears in Table 45, the company *benefit program as a whole* was also more frequently rated "*very*

* By permission, from *Public Opinion Index for Industry*, Opinion Research Corporation, 1950.

high" by employees who knew that the company paid most of the benefit costs.

TABLE 43. *Relation between Employee Morale and Appreciation of Benefits* (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1950)

	Per cent of employees with high morale
Company A	
Rate company "very high" on benefits	56
"Average" or "not so high"	41
Company B	
Rate company "very high" on benefits	67
"Average" or "not so high"	51
Company C	
Rate company "very high" on benefits	65
"Average" or "not so high"	47

Alarmed by the widespread employee ignorance of benefit plans and anticipating union pressure for a noncontributory program, *Company A* initiated a widespread and systematic program for informing employees about benefit privileges and the cost of these to the company. Evidence of the success of this program of supplying employees with information about benefits is found in the fact that in a union referendum the employees voted to maintain the company's existing contributory benefit plan in place of the union's noncontributory proposal. Such findings, according to the Opinion Research Corporation, illustrate the basic principle that "good deeds need continuous interpretation if the right employee attitudes are to be created and the necessary economic understanding brought about . . . When interpretation is strong, when employees know what they are getting—they tend to be appreciative" (58, p. 8).

Communication through the Supervisor:

It has become increasingly evident that lack of information or misunderstanding of company policies frequently reflects a failure to use the full potential of supervisory personnel in maintaining lines of communication between management and employees. As a result, increasing attention is being paid to the role of the supervisor as a medium for conveying information and interpreting policies through oral communication.

Evidence that this produces results in the way of improved attitudes and morale is found in the findings of a survey (13), by the National

Industrial Conference Board, covering employees in two plants (operated by the same company) which "were matched except for one factor—communication" (17, p. 414). In *Plant A*, foremen did little or nothing in the way of keeping employees systematically informed of what was going on and in obtaining their reactions to plant policies. In *Plant B*, monthly work-unit meetings have been conducted by each foreman over a period of years. At each such meeting a report is given on matters which affect the employees. A staff specialist, a department head, or the plant manager may be invited in to discuss some topic of particular interest. In addition to receiving such information, the employees are *encouraged* to ask questions and to participate in the discussion of common problems.

Survey findings showed that 62 per cent of employees in *Plant B*, as contrasted with 29 per cent in *Plant A*, feel that they "really belong" as a part of the company. Of employees in *Plant B*, 75 per cent—as contrasted with 60 per cent in *Plant A*—feel that the company is a "better than average" or "one of the best companies" to work for. According to the National Industrial Conference Board, these and other findings indicate that positive attitudes and higher morale follow from the dissemination of information and closer contacts provided in the systematic, supervisory oral communication program in *Plant B* (13).

TABLE 44. *Relation between Knowledge about and Attitudes toward a Pension Plan* (*Company* A) (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1950)

	Rate pension plan "very high"
Know company pays most of pension	53 per cent
Believe employees pay most	21 per cent

TABLE 45. *Relation between Knowledge about Pension Plan and Attitude toward Benefits* (*Company* A) (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1950)

	Rate benefit program "very high"
Know company pays most of pension	57 per cent
Believe employees pay most	29 per cent

ATTITUDES TOWARD ECONOMIC AND SOCIAL ISSUES

Studies bearing upon social and economic issues and upon international relations, as illustrated in investigations by Annis and Meier (1), Cantril (5), Chen (8), and Gardiner (30), have shown that attitudes toward such issues are related to knowledge.

Attitudes toward TVA: The influence of information acquired through

readings upon attitudes toward a domestic issue of interest to industry is illustrated in an investigation, by Sims (83), of attitudes toward the Tennessee Valley Authority. A questionnaire given to students showed that they were favorably inclined to this government hydroelectric project. One group of students was then given literature favorable to TVA; a second group received literature unfavorable to government operation and in favor of private ownership; a third group was given literature presenting both sides of the question. Analyses of replies given by students after reading such materials showed that the attitudes of students who had read literature favorable to government operation shifted in that direction. The attitudes of those who read unfavorable materials shifted towards an unfavorable opinion of the project, while students who had been exposed to both sides of the issue showed no significant change. A follow-up study showed that the effects in the way of attitude changes were still measurable three months after the students were exposed to the propaganda.

Attitudes toward the Taft-Hartley Act: The experience of the American Central Division of the Avco Manufacturing Company (94) illustrates the influence of an informational program upon employee attitudes toward a highly controversial issue in labor legislation. During a three-day period employees, in groups of 100 to 150, attended a meeting at which the general manager explained the features of the Act. An off-stage voice and chorus were used to present "labor's" position in the form of challenging statements about the Act. These were then discussed by the general manager. Upon entering the meeting each employee filled in a ballot expressing his position with respect to the Taft-Hartley Act. Each employee voted again as he came away from the meeting. Balloting was under strict supervision by officers of the company and of the union (Local 151 UAW, CIO). Supervisory and nonsupervisory employees cast their votes separately. As is apparent from Figure 36, the program resulted in a shift toward a more favorable opinion of the Taft-Hartley Act.

THE EFFECTS OF COMPANY COURSES IN ECONOMICS

Among recent developments in the way of educational programs in industry are *courses in economics* for supervisors and rank-and-file employees. According to a 1952 report by the Opinion Research Corporation, "systematic company training in economics stands out as one of the fastest growing and most significant management developments in recent years" (88, p. 5). Such training is designed to present the economic concepts perceived as underlying the traditional American free-enterprise system. Furthermore, the conviction that "big government has meant a loss of freedom" extending beyond the economic sphere, has led to the

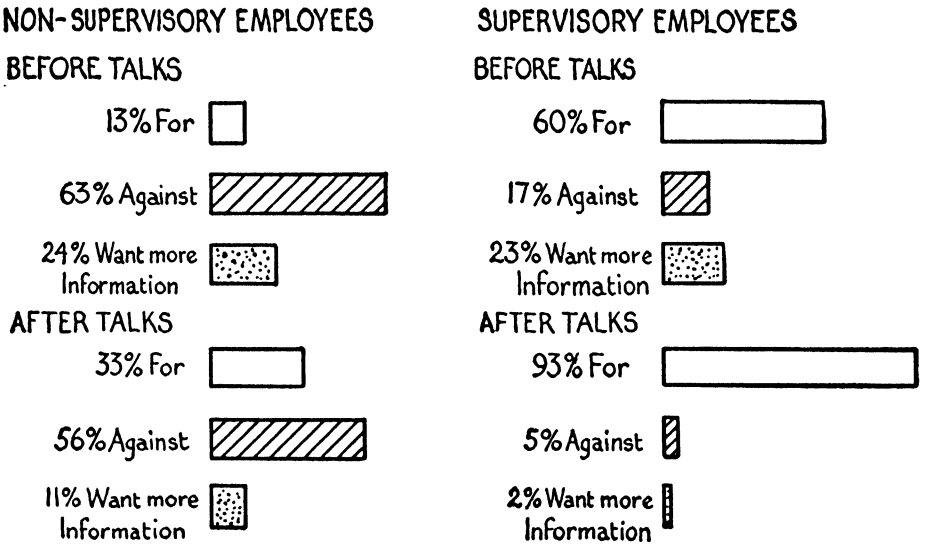


Figure 36. Opinions Expressed before and after Hearing a Talk by Company Officials on the Taft-Hartley Act *

development of employee educational programs devoted to the broader issue of *freedoms* guaranteed to the people under the American Constitution (16).

Evidence that attitudes and opinions are related to knowledge, in the sense of awareness and acceptance of economic principles regarded as basic in the operation of the free enterprise system, is found in a few studies dealing with the effects of economic information upon the attitudes of employees toward the American business system and toward government policies affecting industry and commerce (9, 10). In a study by the Opinion Research Corporation, in 1949, interviews were conducted with a nation-wide sampling of 1,450 manufacturing employees in cities with a population of 2,500 or larger (89). Employees were divided into three groups, i.e., *well-informed, medium-informed,* and *poorly-informed* on the basis of a test covering the following six *economic principles,* viz.

1. *Government control over production destroys free enterprise;*
2. *A man's real job security depends on how good his company is in meeting competition;*
3. *Highest pay should go to those who produce the most;*
4. *The consumer, rather than the company, sets the price;*
5. *Labor-saving machinery makes jobs;*
6. *Stockholder and employee interests are allied.*

* By permission, from W. S. Wheeler, "Giving labor-law facts to workers," *Factory Mgmt. Mainten.,* (March) 1948, 106, 80–81.

Employees were divided into three groups on the basis of their knowledge of *economic facts* and *economic principles* applying to level of business profits; proportion of business income going into wages; relation between trends in output and wage trends, etc. As is shown in Table 46, the percentage favoring government ownership and controls, and stronger unions, proved to be considerably lower in the "well-informed" than in other groups. Moreover, as shown in Figure 37, levels of job satisfaction were found to be directly related to the amount of employee information on these economic principles and facts.[4]

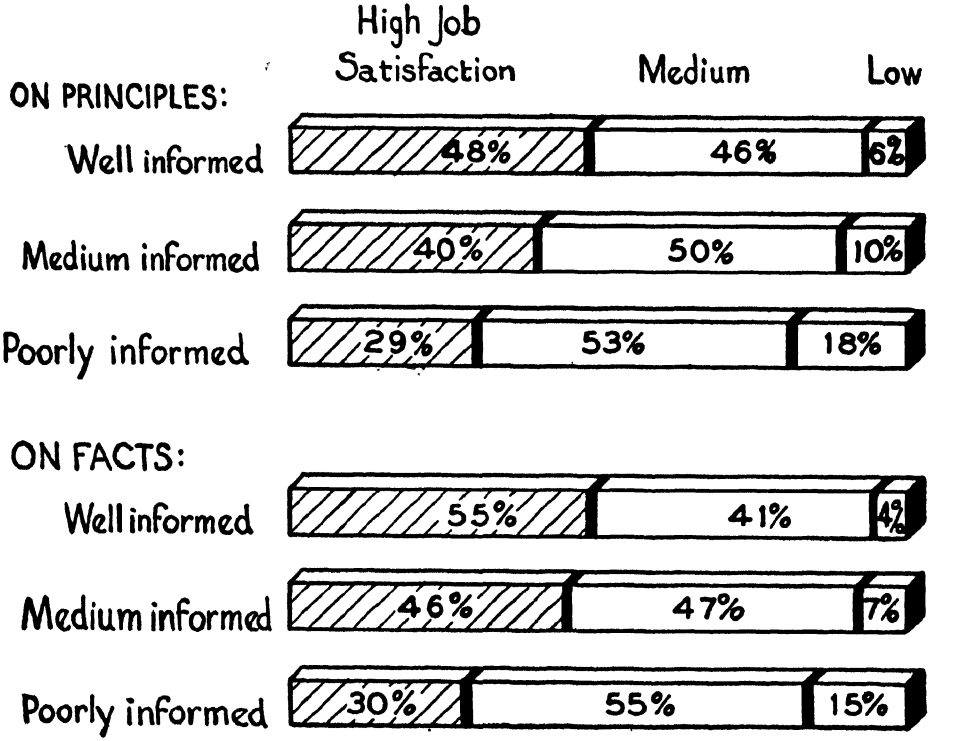


Figure 37. Relations between Economic Literacy and Job Satisfaction *

These findings and other data lead to the conclusions that those ignorant of these economic principles and facts are inclined to embrace "collectivist" proposals while, on the other hand, "at all income and educa-

[4] It should be noted that an analysis of the interrelationships among levels of job satisfaction, amount of economic information, and job levels is required before drawing firm conclusions as to the direct relation between levels of job satisfaction and amount of economic information. Figure 37 should be considered with this reservation in mind.

* By permission, from *Public Opinion Index for Industry*, Opinion Research Corporation, 1950.

tional levels, people who know and believe in the basic principles underlying our economy are far more likely to favor free enterprise solutions" (89, p. 14). Economic education for employees and other members of the plant community is recommended in order to provide better understanding and more favorable attitudes with respect to the American business system (15, 21).

TABLE 46. *Relation between Knowledge of Economic Principles and Facts and Employee-Working Ideology* (after *Public Opinion Index for Industry*, Opinion Research Corporation, 1950)

	Per cent of those					
	Poorly informed on economics		*Medium informed on economics*		*Well informed on economics*	
Favoring	*Principles*	*Facts*	*Principles*	*Facts*	*Principles*	*Facts*
Price controls	54	42	36	29	13	12
Limit on profits	51	43	34	26	24	24
Limit on salaries	38	32	26	20	14	12
Government ownership	32	25	21	18	11	11
Stronger unions	42	40	32	25	20	14

In a later study, the Opinion Research Corporation has investigated the outcomes from ten courses in economics [5] which have been widely used throughout the United States [6] (88). Industrial personnel covered by the study included 8,053 foremen and supervisors in 38 division or plant locations of 25 different companies; 3,810 hourly-paid workers in 3 different companies; and public or industrial relations officers in a national sample of 100 large companies with assets of five million dollars or over.

Methods and findings of the study can be illustrated by reference to the group of supervisors and foremen. All of them were given a "61-question economics quiz" developed in earlier projects conducted by the

[5] These courses also generally include some reference to the freedoms enjoyed under the American economic and political system.

[6] The courses tested included: "HOBSO" (How Our Business System Operates), Distributor: the N.A.M.; "IN OUR HANDS," Distributor: The American Economic Foundation; "PLUG THE LEAKS," Distributor: The American Economic Foundation; "AMERICAN ECONOMIC SYSTEM," Distributor: Middle West Service Company; "WHAT EVERY MAN SHOULD KNOW ABOUT BUSINESS," Distributor: The William H. Stevenson Co.; "THE ABC'S OF ECONOMICS" (Division of large rubber company); "BASIC ECONOMICS FOR SUPERVISION" (Large Steel Company); "COURSE FOR WORKS FOREMEN" (Large farm machine company); "IT'S YOUR BUSINESS" (Large electrical equipment company); "SUPERVISORY CONFERENCE PROGRAM" (Medium-sized farm machine company).

Opinion Research Corporation (21). Where possible, "before" and "after" tests (i.e. before and after taking one of the 10 economics courses) were conducted in the same group. In these instances, *control* groups (not exposed to any course) were tested for comparison purposes. In some cases, however, it was not possible to use control groups since a high proportion of foremen and supervisors had already taken the company course. In the case of all "after" tests, supplementary questions were used to appraise reactions of supervisory personnel to the course experience.

In Figure 38 are shown the average scores of (1) a nation-wide cross-section of foremen in various-sized companies characterized by all degrees of economics education and communication;[7] (2) foremen in 11 companies which do not give formal instruction in economics, although they have well developed communication programs; (3) foremen in 6 companies who are exposed to economics in regular foremen training programs and, in most cases, receive additional economics information through other channels; (4) foremen in 13 companies who have taken special, formal courses in economics.

Findings presented in Figure 38 show "superior economic understanding among supervisors who have been given economic training" (88, p. 7). This broad pattern, it is reported, is consistent with "before" and "after" tests for individual courses covered by the study. Furthermore, 83 to 98 per cent of foremen and supervisors who participated in organized courses want their companies to continue training of this type. Similar findings are reported in the case of rank-and-file employees.

In discussions of communications media in industry, as represented in articles appearing in *Fortune*, questions have been raised as to whether anybody listens; whether anybody learns; whether the unions object; what approaches get results (12, 42). Not only such questions, but also heavy investments in time and money in training and other communication programs, suggest the need for objective evidence bearing upon courses such as those evaluated in the study described above (88). The findings of the study referred to above show that training in economics produces an increment of knowledge and that both supervisory personnel and rank-and-file employees are interested in such training. No effort was made to assess changes in attitudes by means of some external criterion. Analysis of individual questions shows, however, "after"-test gains in terms of views toward profits, competition, the role of capital, etc., which are consistent with the ideology of an economic system of free enterprise. Furthermore, the Opinion Research Corporation reports that company courses are given with the expectation of achieving, in the main,

[7] Derived from earlier studies (21).

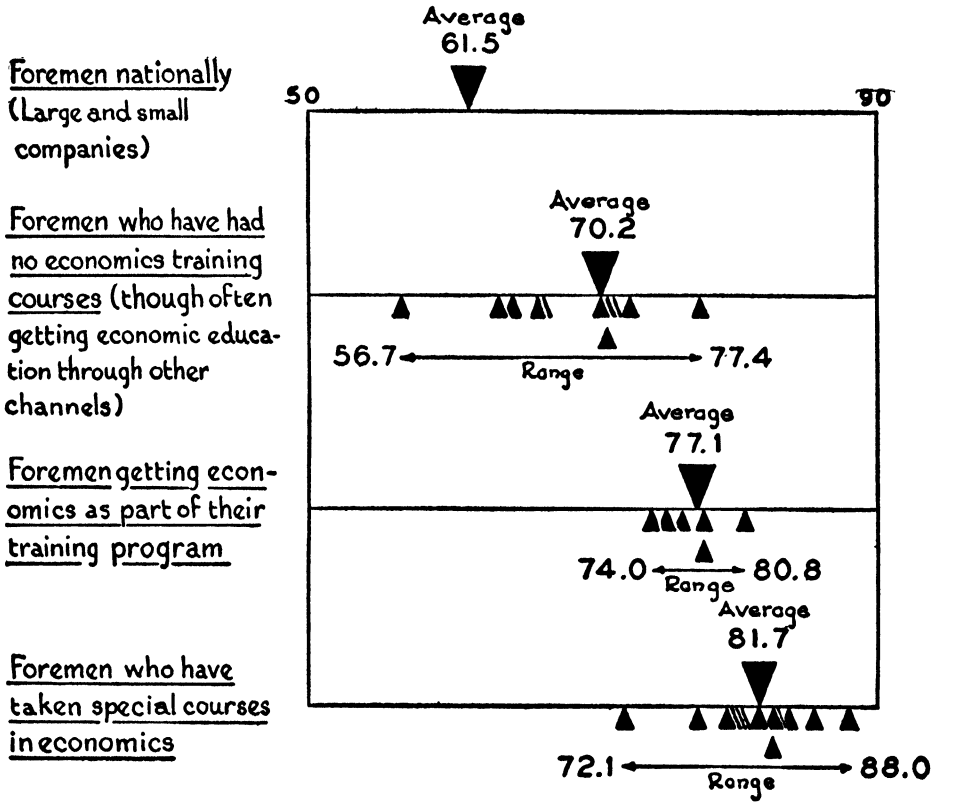


Figure 38. Effect of Training on Supervisors' Knowledge of Economic Facts and Principles *

more interest on the part of the employee in company problems and in working to solve them; better understanding of the business system; increased productivity; improved worker morale, and better citizenship (88).

Evidence with respect to the effectiveness of such economics information programs has also been presented by Parker, of Central Surveys, Inc. (64), in the form of a comparison of opinions concerning government ownership and operation of electric utilities held by employees in three groups of electric-utility companies, including

(a) companies which had carried on the most consistent and extensive employee-information programs;
(b) companies which had carried on less consistent or extensive programs; and
(c) companies which had done little or nothing in the matter of employee information.

* By permission, from *Public Opinion Index for Industry*, Opinion Research Corporation, 1952.

On six questions dealing with government ownership and operation of electric generating and transmission facilities, an average of 69 per cent of employees in Group A were shown to hold opinions *unfavorable* to such "federal encroachment," as compared with 36 per cent of employees in companies (Group C) which had done little or nothing in the way of setting up economic information programs.

A general conclusion drawn by Parker from the consideration of employee educational programs in the electric-utility industry is that "utility workers tend to be well informed, and are less favorable to government operation in this field than is the general public" (63, p. 33). Furthermore, it is added, in studies involving utility employees "proportions ranging from 40 to 86 per cent have said they would like to be better informed regarding such subjects as the taxes their companies pay, public ownership of utilities, the position their companies take regarding federal power projects, and more generally, company relations with the government and with the rural electric co-operatives. These are in addition to the proportions who already felt well enough informed on these subjects" (63, p. 34). Indications of a similar interest in "more information" about "how American business works"; on the history, achievements, and prospects of their company, as well as on company benefits, etc., are found in the survey, covering the employees of two manufacturing plants (13, 17), reported by the National Industrial Conference Board, in 1952.

An Evaluation: It seems possible, as is suggested by Parker, that the findings from these analyses may be somewhat spurious in character, since some of the opinion questionnaires were so worded as to provide "a reminder of information that had been given in the program." Furthermore, it may well be that "the classroom atmosphere in which some before-and-after opinion surveys are made, when the group is aware that it is being given a test of what it has learned, creates a tendency to give the 'learned' or 'correct' response rather than to bring out genuine opinion" (64, p. 9). Involved here, in part, is one of the many methodological problems to which attention must be given in order to obtain maximum results in the way of changed attitudes from "employee information" and similar programs.

In spite of these and other possible sources of error in studies on the relationship between knowledge and attitudes, there is evidence that knowledge can modify attitudes, especially if the attitudes are not intense or predominately ego-involved (62). This effect can occur because attitudes, beliefs, and opinions can be in error simply because the people who hold them are not well informed, or because lack of knowledge of related facts can distort the significance of the correct facts. However, it must be kept in mind that even when changes in attitude occur, there

still remains the major problem of bridging the gap between *knowledge and attitudes*, on the one hand, and *action*, on the other (35). As indicated in earlier chapters, the problem of transforming changes in attitude into changes in behavior remains a knotty one. Experience with public opinion polls during election years has shown that expressed opinions are not necessarily related to voting behavior. There is some evidence, presented in earlier chapters, that attitudes toward plant conditions and policies and morale are related to work performance and adjustment. In spite of a few beginnings, much remains to be done in establishing the relationships between economic indoctrination and attitude toward the economic system on the one hand, and net changes in ideology, morale, productivity, and the action of individuals as citizens of a commonwealth (65).

THE INFLUENCE OF "PRESTIGE" UPON ATTITUDES

Everyday experience supports the opinion that men of prestige influence attitudes, opinions, and beliefs. Evidence from experimental studies [8] further supports the view that the prestige of individuals in positions of leadership and prominence contributes to the acceptance of their ideas by others. The influence of prestige is particularly marked in the case of suggestions or ideas which are in general agreement with the individual's own frame of reference (46, 52, 80, 81). Whatever may be the nature of the process involved (2, 3, 20, 45), the successful use of "big names" in advertising, studies of the use of testimonials in other connections, such as that by Rose of the Buchman Oxford Group Movement (76), as well as everyday observation indicate quite clearly that the prestige of a famous name (and likewise of an organization) is an effective way of promoting the acceptance of an idea and of moulding attitudes, opinions, and beliefs, especially when there is identification with the prestige-suggestion source.

"Building Up the Boss": Of interest to management in this connection is the question of what can be done to "build up" the prestige of executives and supervisors as a way of increasing their influence upon specific employee attitudes and over-all morale. A survey conducted by the Opinion Research Corporation, in 1948, furnishes data bearing upon the role of the "big boss," i.e. the chief executive of an organization, in moulding or changing attitudes (4). The study involved interviews with 1,018 industrial individuals, representing a nation-wide cross-section of employed persons in manufacturing, communications, transportation, and utility

[8] See particularly Lorge (54), Marple (59), Saadi and Farnsworth (78), Sherif (79), and Wegrocki (93). Many of these and other studies are summarized in Murphy, Murphy and Newcomb (61) and in Vaughn (91).

industries. Findings lend support to the opinion concerning the prestige position of the union leader, expressed by Gleason as a result of his investigation of attitudes towards the Taft-Hartley Law, referred to on pages 371–373. However, the Opinion Research Corporation survey also provides evidence that the *extent to which the "boss" is known influences his prestige status and also the over-all morale and specific attitudes of employees.*

Included in such evidence is the fact that "on the average" about twice as many employees who are *"very well acquainted"* with the boss state that *"the boss lives up to his promises"; "is more interested in [the] company than [in] himself"; "is interested in what happens to employees"; "tries to pay higher wages as the company prospers"*; is *"the kind one would pick as a friend"*; etc., than do employees who are *"unacquainted"* with the big boss.

In the course of the investigation, on the basis of six questions (referring to the company as a place to work, steady employment, chances for promotion, etc.) respondents were classified into three groups with respect to job morale, viz., *very well satisfied, moderately well satisfied, strongly dissatisfied.* Of workers rated as *very well satisfied,* 32 per cent were "personally acquainted" with the "big boss," more than three times as many as in the case of *strongly dissatisfied* workers (10 per cent). Conversely, 23 per cent of the *well satisfied* workers were "unacquainted" with the "big boss," but the figures rise to 29 per cent "unacquainted" among those rated as *moderately well satisfied* and to 41 per cent among those rated as *strongly dissatisfied.*

Such relationships between degree of acquaintance with the boss and levels of job morale were found to be consistent regardless of the employee's job or the size of the plant in which he worked. These and other findings lead to the conclusion that "there is a high premium on making company leadership known to the employee group." There is a need, according to the investigators, for personal dramatization of their leadership by companies as a means of influencing employees and moulding attitudes. There is much to be done in this direction, it is added, since, of 50 companies evaluated, only 16 were found to have developed concrete procedures to acquaint employees and other company publics with the company executives, with 21 companies making occasional efforts in this direction, and 13 doing little or nothing.

Methods for Moulding and Changing Attitudes

In presenting information with the view of changing attitudes, as in the case of all forms of propaganda, "the effectiveness of any procedure

adopted . . . will be proportional to the theoretical soundness of the measures taken" (45, p. 195). Consideration of results obtained through the application of diverse methods for moulding or modifying attitudes and opinions has led to the formulation of a series of generally accepted principles bearing upon propaganda techniques.

It can be assumed, as a basic principle, that the readability of written materials used in any educational program has an effect upon understanding and through this upon attitudes. For this reason, techniques developed by Flesch (27, 28, 29), and others (7, 18, 24, 25, 70) for appraising readability can represent useful tools in the development of a program for influencing employee attitudes. There is general agreement that propaganda procedures should involve vivid experience. According to Murphy, Murphy, and Newcomb, "experiments seem to indicate that, other things being equal, experiences which are novel, emotionally charged, and realistic . . . are most effective" (61, p. 979). *Repetition, simplicity,* and *emotional* appeal—especially those which touch desires and attitudes deeply imbedded in the individual by prior conditioning (81) have been described as basic to effective propaganda.

The viewpoint is also widely held that an indirect or disguised approach to moulding attitudes and opinions is more effective than propaganda which is easily recognized as such. Findings bearing upon this conclusion are found in an analysis by Preston of 38 studies on the modification of attitudes summarized by Murphy, Murphy, and Newcomb (61). In 21 of these, the classroom was used as a medium for effecting a change in attitudes. Results in the direction sought by the investigators were achieved in 11, or 53 per cent. Agencies outside of the classroom were utilized in 17 investigations, and changes favorable to the direction intended by the investigator occurred in 14 or 82 per cent of these studies. According to Preston, "the conclusion is of course suggested that the use of propaganda under conditions where it is apt to be recognized is less efficient than under conditions where it is disguised"—a conclusion which, he adds, is "confirmed by the experience of advertising experts and other propagandists" (68, p. 156).

EXPERIMENTAL STUDIES OF METHODS FOR CHANGING ATTITUDES

These and other principles outlined as a result of research and practice in the field of propaganda have value as general guides in planning programs designed to influence employee attitudes. However, it is becoming increasingly apparent that painstaking studies of the differential effects of various media and of methods are needed if industry is to obtain maximum results in influencing employee attitudes. This is the case, in part,

because both everyday experience in industry and experimental investigations in other settings have shown that education and propaganda—as conducted through classes, posters, publications, movies, and in other ways —can have effects far different and at times in a direction entirely opposite from those anticipated in setting up the program (67).

Information, Attitudes, and Behavior: Varying effects and also definite limitations in the effects of information upon attitudes have been noted in studies conducted during World War II bearing upon the indoctrination of American soldiers (38). Research included measurements of the influence of four films in increasing information, moulding opinions, and improving motivation. Among these was an orientation film, entitled "Battle of Britain," covering British resistance to Nazi air attacks in 1940, designed to strengthen confidence in America's ally. The effect of the film was evaluated through the use of questionnaires applied to an *experimental* group which saw the film and a *control* group which did not see the film, and also through the use of "before-after" procedures. Analysis of findings from an extended series of investigations showed a gain in knowledge of specific facts, and some related change in opinions directly related to the facts as presented in the films on the part of those who viewed such films. However, increase in specific knowledge and increased acceptance of stated opinions was not generalized to the desired basic attitudes or, as shown in other phases of the investigation, to increased motivation in terms of active willingness to serve as soldiers and to engage in combat service.

Another series of studies, involving three additional films, yielded similar results. Nevertheless, as suggested by Parker, findings as to the effects of indoctrination films and other propaganda upon motivation toward military activities may have little bearing on the civilian situation, where attitudes and behavior with respect to management and the union or as a voting citizen, which do not subject the individual to mortal dangers, are involved. Results of an investigation by Central Surveys, Inc. showed, for example, that informed employees of utility companies are much more inclined than the uninformed ones to discuss industry and company problems with the public. According to Parker, "There is a substantial difference here I think between Army indoctrination and employee indoctrination. A soldier can hardly be expected to go around advising his comrades to seek service in the front lines . . . But obviously an employee with a better understanding of industry and company problems will be more motivated to tell his story to friends and acquaintances whenever the opportunity presents itself" (64).

It is evident that the problem of changing attitudes and increasing motivation by means of an information program—by "letting the facts

speak for themselves"—is complex in character. Many conditions may account for the fact that changes in attitudes and behavior in desired directions do not always occur as a result of indoctrination programs designed to achieve such changes. For example, the films used in such programs may not be well suited for the purpose, in spite of the best efforts of their producers. Thus, further analysis of the Army studies suggested that "if a more effective method of changing opinion had been available, improvement in motivation might have been produced, despite the fact that with the type of information program actually employed, little overall effect was observed on either opinion or motivation" (38, p. 79). As shown in studies by Peterson and Thurstone (67), and as also suggested in the military studies of mass communication (38), the number of repetitions of films on the same topic affects the results obtained. Differential or unanticipated effects can be associated with the previous knowledge and attitudes of those exposed to the propaganda, in the sense that those who are already well informed with respect to the issues or have strong attitudes toward them (favorable or unfavorable) will react differently than those who have little information and less intense or less ego-involved attitudes. It may also be, as suggested by those responsible for the Army studies on mass communication, that the changes do not take place immediately (as is assumed in the design of most before-and-after studies), but occur only after a "sinking-in" period. Such possibilities, as well as the variability of findings in studies of propaganda methods, indicate a need for extended research in the industrial setting on methods and techniques for moulding and modifying employee attitudes and for effecting a transfer to action.

"One-sided" or "Two-sided" Presentations: The need for such research is particularly well illustrated in studies designed to determine whether the best results in propaganda are accomplished by presenting *one* or *both sides* of an issue or controversial subject. Studies by Sims (83), Annis and Meier (1), and others, involving a deliberate implantation of ideas and alleged facts have generally been interpreted as demonstrating, according to Young, that "with few exceptions, promotional campaigns that present first one view and then the opposite—perhaps on the theory that the public should decide rationally between them—are not effective" (95, p. 514). According to Murphy, Murphy, and Newcomb, "if it is desired to modify the attitude of whole groups in a given direction, it is important that there should be neither strong counter-influences nor opportunity to become familiar with the complexities or the objections to the point of view being advanced" (61, p. 979).

The relative effectiveness of "one-sided" and "two-sided" programs has been examined in an experiment conducted by the Information and

Education Division, U.S. War Department (38, 39) during World War II. At the time the experiment was planned (early in 1945) it was reported that Army morale was being adversely affected by overoptimism with respect to an early ending of the war. It was decided to take steps to provide troops with an appreciation of the magnitude of the job remaining to be done in defeating the Axis. Although military experts believed that the weight of evidence supported one side of this issue, arguments were available on both sides, making this an acceptable topic for a comparison of the relative merits of two types of program content.

Radio transcriptions, in the form of a commentator's analysis of the Pacific War, were used to present the two programs, i.e. *Program A*—a "one-sided" presentation—and *Program B*—a "two-sided" presentation. Program B took exactly the same stand as Program A, viz., that the war would require at least two years, but, in addition, included opposite arguments whenever they were relevant. As a first step, a questionnaire survey was conducted to obtain the "initial" or existing opinions about the Pacific War of men in eight quartermaster-training companies.

Program A (which gave only one side) was presented to an *experimental* group of eight platoons, chosen at random from the eight training companies, in the course of their individual "orientation" meetings. Another *experimental* group of eight platoons, similarly chosen, heard *Program B* (which presented both sides). Immediately after the program, the men filled out a second questionnaire, ostensibly for the purpose of letting those who designed the program know what the troops thought of it, but including some of the questions which had been asked in the preliminary survey, asking men how they personally sized up the Pacific War. A third group of eight platoons, serving as a *control* group, and hearing neither program, filled out a similar questionnaire which, in addition to asking the same questions about the Pacific War, asked what they thought of the orientation meeting itself and what they would like in future meetings. For the *control* group the latter questions, instead of questions about the program transcriptions (which were not presented to them), were represented as the main "purpose" of the questionnaire.

The main question used to assess the relative effectiveness of the "one-sided" and "two-sided" programs was one asking the men for their *best guess as to the probable length of the Pacific War after V-E Day*. Results were analyzed separately for men who were initially *favorable*, i.e. originally estimated that the war would last two years or more and those initially *unfavorable*, i.e. estimated that the war would continue for less than two years. Comparisons were also made between men of different educational backgrounds and in relation to the men's evaluation of factual cover-

age in the program. The over-all findings have been summarized by the investigators as follows:

> "1. Presenting the arguments on both sides of an issue was found to be more effective than giving only the arguments supporting the point being made, in the case of individuals who were *initially opposed* to the point of view being presented.
>
> "2. For men who were *already convinced* of the point of view being presented, however, the inclusion of arguments on both sides was less effective for the group as a whole than presenting only the arguments favoring the general position being advocated.
>
> "3. Better-educated men were more favorably affected by presentation of both sides; poorly educated men were more affected by the communication which used only supporting arguments.
>
> "4. The group for which the presentation giving both sides was *least* effective was the group of poorly educated men who were already convinced of the point of view being advocated.
>
> "5. An important incidental finding was that omission of a relevant argument was more noticeable and detracted more from effectiveness in the presentation using arguments on both sides than in the presentation in which only one side was discussed" (39, p. 577).

Both the design and findings of this experiment have important implications for industry. For example, it is not uncommon practice for industry to use a single information or other program as a device for influencing attitudes of employees at all levels. In fact, programs are frequently tried out or "pretested" more or less formally on executive or supervisory personnel and then extended to cover rank-and-file employees, if the program seems to accomplish results at the higher organizational levels. The results of the experiment described above raise doubts as to the desirability of this approach, since both the educational composition of the supervisory group and the distribution of initial opinions can and frequently do differ from that of rank-and-file employees. The results of the investigation suggest that different programs—perhaps "one-sided" for rank-and-file employees and "two-sided" for supervisory and technical personnel—may be required to accomplish the desired end of influencing attitudes.

The Need for Research in Industry: Under any circumstances, it appears that educational, propaganda or indoctrination programs must be based upon an extensive and detailed knowledge of existing employee attitudes and opinions obtained through the application of appropriate survey techniques. In general, too, this experiment, and also others—including comparisons of the effectiveness of lectures, group discussions, and other procedures (6, 26, 50, 56)—point to the need for *research designed to establish for industry the types of programs which will produce*

most effective results in the way of attitude changes. Such research would include not only major studies on program content and method, but exploratory investigations dealing with the kind of information desired by employees; what they "like" or "dislike" about specific programs, and with other details which need coverage if funds expended to influence employee attitudes are to produce adequate returns to industry. Such research can produce not only direct benefits, in the form of better results in influencing attitudes, but a feeling of participation on the part of employees in planning programs which can, in itself, contribute to successful achievement in moulding and modifying attitudes and in improving motivation and morale.

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23

Motivation and Morale: A Challenge to Management

THE PROBLEM of motivation in industry is one of energy mobilization (132). The problem of morale is that of mobilizing the sentiments of all involved in achieving the objectives of industry within the broader framework of society as a whole. As is clear from the preceding portions of this volume, these problems are particularly intense at the level of the rank-and-file employee. Their solution requires a precise formulation not alone of techniques for stimulating motivation and morale, but of the responsibilities of the various participants in the industrial scene.

Responsibilities of Management and of the Union

Of particular significance in this connection is the question of the respective roles of management and of the union in directing or controlling the media through which workers' basic motives are tapped and workers' wants and needs are satisfied. Recent years have witnessed a growing tendency on the part of union leaders to challenge management's position that a worker can find a satisfying way of life by identifying himself with the company. According to Barkin, "union leaders do not believe this is either desirable or possible . . . Unions are also challenging the belief that personal identification with a particular plant or company is essential in building cooperation and a 'will to work' " (5, p. 63).

Experimental studies and attitude surveys discussed in earlier chapters fail to support the latter view. Furthermore, as stated in Chapter 18, there appears to be no ground for the position taken by Krech and Crutchfield, that "the labor union, by and large, can better meet most of the worker's needs than can other (social) organizations" (78, p. 548). This does not

mean that workers expect little or nothing of labor unions other than material benefits. There is, however, no indication that workers have ceased to look to management for the satisfaction of the needs for security; for status and prestige; for the achievement of integration into the social community of the plant, etc. On the contrary, there is substantial ground for the firm position that workers still look to the industrial organization and to management for these things; that levels of employee motivation and morale are largely determined by the extent to which such needs are recognized and gratified through policies and practices formulated and administered by management.

Profits and Social Goals in Industry

Acceptance of this point of view means that instead of abdicating responsibility for gratifying employee needs and wants, management does everything possible in these respects. Management must accept responsibility for providing "fair wages," security of employment, security against misfortune and in retirement, healthy working conditions, recognition and self-respect, a friendly "social climate," etc. In a large sense, the extent to which a company provides more of these things and more security in their possession to those who work for it is a significant measure of the success of its management (1, 8, 56). This is a measure of success not from a "paternalistic" point of view, or solely from the point of view of the social responsibility of management (35, p. 59), but also because the gratification of such needs is required for the full mobilization of the energy and abilities of employees. From this viewpoint, as suggested by McGregor, management's task is "to create conditions which will generate active and willing collaboration among all members of the organization—conditions which will lead people to *want* to direct their efforts toward the objective of the enterprise . . . *People often expend more energy in attempting to defeat management's objectives than they would in achieving them.* The important question is not how to get people to expend energy, but how to get them to expend it in one direction rather than another. For management, the answer lies in creating conditions such that efforts directed toward the objectives of the enterprise yield genuine satisfaction of important human needs" (97a, p. 323).

ECONOMIC AND SOCIAL PROBLEMS IN SATISFYING WORKERS' WANTS AND NEEDS

It is recognized that the practical difficulty faced by management is that of satisfying the workers and simultaneously meeting its responsibilities to other segments of the broader community—including the company stockholders; its customers; the suppliers of raw material; the com-

pany's neighbors in the community. Added to these, as Ruttenberg has pointed out, is the responsibility of management to envisage an ever-increasing need for its company's product and to work out programs and policies which will lead to an ever-enlarged national economy (124).

The job of professional management "is to conduct the affairs of the enterprise in its charge in such a way as to maintain an equitable and workable balance among the claims of the various directly interested groups" (1, p. 29). From the financial point of view, evaluation of the claims of the interested groups involves decisions as to distribution of the net income of the company. It has become increasingly apparent that the crucial issue here centers around the question of how high the profits of any business should be and to what extent the owners or stockholders should share in the company's income. As Pfiffner has pointed out, this issue revolves around such questions as

> "Should stockholders receive future dividends on profits plowed back into the business? What is the proper charge for depreciation? Why should there be such disparity between the compensation for top management positions and that for rank and file? Should the books of a corporation be opened to the detailed inspection of union representatives? Should the union have some say about the manner in which the accounts are maintained? These are hot issues that strike at the very heart of one of the most prized prerogatives traditionally appertaining to management" (110, p. 200).

In spite of the prevalence of such questions, and also of attacks upon the "profit system," there seems to be little basis for the opinion that questions raised by employees concerning profit levels and demands for a larger share of the business income (28) represent "class conscious" attacks upon the profit system (3, 122). American workers do not appear to be opposed to the American business system as such, although there is considerable misunderstanding on their part as to how it operates and as to the levels and functions of profits (112, 141). Like other elements of the community, many workers fail to understand, for example, that unless there are adequate profits, a large part of which is directly or indirectly reinvested, industry cannot produce the job opportunities required to ensure job security. They tend to overlook the fact that unless a company makes its competitive position secure, not only will opportunities for growth and expansion be curtailed, but the very existence of the company will be threatened (1).

There is no question that management is subjected to severe frustrations in its efforts simultaneously to meet demands for higher wages; lower prices; wider distribution of its goods; shorter hours; higher taxes, etc. Nevertheless, in the effort to establish a harmonious balance among the claims of various interested groups—the stockholders, employees,

customers, and the public at large—growing attention must be paid to the requirement of satisfying employee needs. This statement does not mean that the management of American industry is outstandingly deficient in this respect—in spite of past failures, of backward policies and practices in some segments of industry, and in spite of "endless orations and many printed words to the contrary" (3, 56, 124). It is evident, however, that many employees are not convinced that management is facing its responsibilities toward employees. A current requirement is for the more effective presentation of what industry and what a particular company is doing in these directions. As is suggested in a report by the Opinion Research Corporation, "good deeds need continuous interpretation if the right employee attitudes [and also understanding by the public] are to be created" (89). At the same time, the fundamental requirement is not for propaganda but for deeds—for effective accomplishment in satisfying the needs of the men and women "who have invested their time, their energies, and many of their hopes for security and happiness in their jobs" (1, p. 31). As suggested by Katz and Kahn, "a worker who perceives management as interested exclusively in cutting costs and getting maximum production at least cost possible may easily conclude that the union offers a better means [than the company] for the protection of his interests" (74a, p. 3).

The objection which can legitimately be raised to the point of view expressed above is that "it costs money"—in the sense that to satisfy all needs revealed in employee-attitude surveys and in demands made in the collective bargaining process will require more than the individual enterprise or the national economy can possibly afford. However, the survey of members of Teamsters Local 688, in St. Louis, shows that only a small minority (10.7 per cent) of the members of this union expect to get increases in pay indefinitely. Here, according to Rose, is "evidence that loyalty to a workers' movement does not conflict with a sense of accommodation to the employer" (122, p. 67). Reductions of approximately 15 per cent in average pay and increases in work loads ordered by a Wage Tribunal in the fullfashioned-hosiery industry in Philadelphia, early in 1952, as a means of retaining the competitive position of the plants and providing continued employment, show that even "unions have to bow to economic pressures," regardless even of inflationary wage trends throughout the country (84, 115a).

Capitalizing on Non-financial Incentives

In spite of such facts, management can anticipate continuing pressure for higher wages, enlarged benefits, improvements in working conditions, and other changes which "cost money." Whether or not such demands

are reasonable, and whether or not they can be met are matters of serious consequence to every individual enterprise. At the same time, management of every plant has at its disposal media for stimulating production and raising morale, discussed in earlier chapters, which do not call for substantial increases in out-of-pocket expenditures. Among such conditions and methods not fully utilized by management, which it appears desirable to stress in this closing chapter, are *effective supervision*, a humanized *managerial or "leadership climate"* reinforced by suitable *organizational structure*, and enlarged opportunities for *employee participation* in helping to solve day-to-day problems in the industrial enterprise.

The "Key" Position of the Supervisor in Stimulating Motivation and Morale

As stated earlier in this volume, both experimental studies and employee-attitude surveys provide convincing evidence that the *quality of supervision is a major factor in stimulating production, influencing attitudes, and in satisfying the needs of workers.* The statement, by one worker, that *"Morale is the treatment I get from the boss"* summarizes a not uncommon employee attitude toward supervision. Recognition of this situation by management is apparently found in oft-repeated assertions that the supervisor or foreman is the "key man" in industry, the "cutting edge" of management, or management's "right-hand man" (61).

SUPERVISORY-TRAINING PROGRAMS

The number and variety of supervisory training programs in American industry may be taken as further evidence of the desire of American industry to take full advantage of the potential of the supervisor as a leader of his working group (140).

The *Job Relations Training Program* developed by the Training-Within-Industry group of the War Manpower Commission (152) during World War II was the beginning of an extensive program for training supervisors in the United States. According to a report by the National Industrial Conference Board, issued early in 1952, "interest in the training and development of foremen and supervisors is at an all-time high. Since World War II, many companies in American business have entered into this activity for the first time; and companies with a background of experience have intensified their efforts" (37, p. 3).

Much of this training is centered upon human relations—upon the improvement of supervisory skill in dealing with people (54, 137). Along with the more conventional methods for changing attitudes and moulding behavior, a variety of newer techniques—including *role-playing* and

psychodramatic procedures (9, 14, 17, 51, 83, 88, 120, 168)—have been used for this purpose. Emphasis upon human relations is evident from the analysis, in Table 47, of subjects covered in supervisory-training courses in organizations represented by 160 participants in a Personnel Policies Forum conducted in 1951 by the Bureau of National Affairs (48).

TABLE 47. *Subjects Covered in Foreman Training* (after *Bureau of National Affairs*, 1952)

	Per cent of companies where subject is		
Subject	(*a*) *Taught*	(*b*) *Given primary emphasis*	(*c*) *Given secondary emphasis*
Human relations	96	57	15
Company personnel policies	90	21	10
How to break in new employees	81	10	6
Union contract interpretation	80	17	9
Company organization	79	3	9
Quality control	74	15	10
Cost control	71	16	10
Work planning and scheduling	71	14	10
Company reports and forms	65	—	7
Company business policies	61	3	12
Labor law rules	58	4	9
Business economics	48	5	9

Publications by the National Industrial Conference Board (37, 49) and an immense volume of articles and books, illustrated in lists such as those published by the Industrial Relations Section, Department of Economics and Social Institutions, Princeton University (106), provide further evidence of extensive developments in this area.

TRANSLATING TRAINING INTO ACTION

As suggested above, supervisory training has been widely viewed as a major step in improving the quality of supervision in industry. However, there has been criticism of the content and methods of supervisory training (119, 165), and a growing suspicion that supervisory personnel frequently fail to translate the verbal content of training programs into action on the job (69).

This view is not altogether supported by research in this area. Thus, a preliminary report of a study by Lindblom (82) provides evidence that a supervisory training program was followed by definite improvements in employee attitudes toward type of work, supervision, the company, etc. Studies in Great Britain, reported by Castle, involving the use of both

attitude scales and role-playing as criteria, lead to the conclusion that "courses have altered not only supervisors' attitudes, but their behavior as well" (21, p. 205). Changes in scores on a series of tests of information and attitudes are interpreted by Canter (20) as indicating that a training course developed for supervisory personnel of an insurance company could be considered as valuable in preparing supervisors to deal with human-relations problems.

Evidence has also been presented which shows that effective results do not follow from supervisory training. Thus a detailed five-week study of the behavior of a single foreman (*Tony*) leads Zalzenik (167) to conclude that a training course may actually have hindered instead of furthered the development of skill in dealing with workers. Further support of the view that supervisory behavior may be little influenced by training is found in an evaluation, by Fleishman (43), of an elaborate course (147) given to a group of supervisors employed in a motor-truck plant of a midwestern corporation. In a study by Hariton (64, 74, 91), a somewhat greater average gain in "satisfaction with supervision" was found among employees in two (*experimental*) divisions of an electric utility company whose supervisors had undergone intensive training than among employees in two (*control*) divisions where supervisors had received no such training. However, further analysis, applying particularly to the two experimental divisions, has suggested that such gains may be related primarily to the practices of upper management. According to Kahn, "those foremen whose men showed increases in satisfaction, those foremen who showed the greatest success in utilizing principles which were being brought to them through the training course, tended to be those foremen who felt that they had maximum opportunity for change . . . that their superiors acted in a way that on the whole was consistent with the principles of the training course" (73a, p. 5).

Lack of desired outcomes from supervisory training can be the result of deficiencies in supervisory training programs (119). There is an unquestionable need for a critical review of such programs and for critical research (1) to determine which of the many courses and procedures are most effective and (2) to arrive at course content and techniques which will produce optimal results in the development and subsequent application of supervisory skills. Of at least equal importance is the need to recognize that training is only one step in producing the kind of supervisory attitudes and behavior which will lead to effective accomplishment in stimulating employee motivation and morale. *Another,* and *highly important requirement, is to restore to the supervisor the status and the intrinsic and outward symbols of recognition which will* MOTIVATE THE SUPERVISOR to do the job that is required of him in the way of increasing

production, promoting employees' morale, and reducing conflict in industry.

THE FOREMAN—A "FORGOTTEN MAN" IN INDUSTRY

There are many indications that the repeated description of the supervisor or foreman as the "key man" in industry or the "cutting edge" of management is in the nature of lip service to an ideal (118, 166). Neglect of supervisory personnel has reached the point where the foreman may well be occupying the position of the "forgotten man" rather than that of the "key man" in industry (149). A variety of factors has contributed to this development. The foreman's right to hire and fire has been curtailed by the assignment of this function to the Personnel Department. Staff specialists have been given responsibility for training formerly held by line supervisors. Wage-and-hour laws and company policies with respect to "nonexempt" employees have contributed to narrowing the range of wages between rank-and-file and supervisory employees and toward creating a situation in which the take-home pay of workers is often higher than that of their supervisors. Space and material shortages and simple neglect have deprived the foreman of outward symbols of authority such as an office, or even a desk or a telephone—outward symbols which, as shown in Chapter 5, and further suggested in the Rank Has Its Priviliges EXEC-CHART (*Exhibit VII*), are viewed as necessary to the achievement and maintenance of "objective" status. Furthermore, the appearance of the shop steward and union committeeman has signified the establishment of a new authority right in the foreman's department (61, 159). This situation has been further complicated by management's practices in by-passing foremen in handling grievances with the union and in failing to keep him informed about negotiations. He frequently is not consulted when policy changes are under consideration, or even given advance notice about new policies formulated by management or arising out of collective bargaining (65).

Foremen's awareness of this situation has been concretely revealed in the drive toward unionization of foremen in the 1940's in the United States, and also in a number of surveys of foremen's attitudes (113, 115). Typical comments in interviews conducted in various plants by Fisher, Rudge, & Neblett, Inc., in 1948:

"There's not enough difference in the foremen's pay to make up for all the grief he has to handle."

"We have very little authority. Just have to do the best we can."

"We don't get backed up on grievances. We aren't taken in or consulted at all."

"In most cases the foremen here never even sit in on grievances. It'd

EXHIBIT VII.* MONSANTO CHEMICAL COMPANY, EXEC-CHART; *A Ready Guide for Evaluating Executives or R-H-I-P; In Use by Chemists, Engineers, Trainees, and Students Throughout the General Office*—Hundreds of Satisfied Users

Visible Appurtenances	*Top dogs*	*V.I.P.'s*	*Brass*	*No. 2's*	*Eager beavers*	*Hoi polloi*
BRIEF CASES	None—they ask the questions	Use backs of envelopes	Someone goes along to carry theirs	Carry their own—empty	Daily—carry their own—filled with work	Too poor to own one
DESKS, office	Custom made (to order)	Executive style (to order)	Type A, "Director"	Type B, "Manager"	Cast-offs from No. 2's	Yellow Oak—or cast-offs from Eager beavers
TABLES, office	Coffee tables	End tables or decorative wall tables	Matching tables, type A	Matching tables, type B	Plain work table	None—lucky to have own desk
CARPETING	Nylon—1-inch pile	Nylon—1-inch pile	Wool-twist (with pad)	Wool-twist (without pad)	Used wool pieces—sewed	Asphalt tile
PLANT STANDS	Several—kept filled with strange exotic plants		Two—repotted whenever they take a trip	One medium-sized—repotted annually during vacation	Small—repotted when plant dies	May have one in the department or bring their own from home
VACUUM WATER BOTTLES	Silver	Silver	Chromium	Plain painted	Coke machine	Water fountains
LIBRARY	Private collection	Autographed or complimentary books and reports	Selected references	Impressive titles on covers	Books everywhere	Dictionary
SHOE-SHINE SERVICE	Every morning at 10:00	Every morning at 10:15	Every day at 9:00 or 11:00	Every other day	Once a week	Shine their own
PARKING SPACE	Private—in front of office	In plant garage	In company garage—if enough seniority	In company properties—somewhere	On the parking lot	Anywhere they can find a space—if they can afford a car

* K. B. Barnhardt, Manager of Executive Development, Monsanto Chemical Company, is responsible for the EXEC-CHART, which was reproduced in *Forbes*, July 1, 1952.

be educational to all foremen to sit in and see the procedure, hear the arguments and see what's going on."

"Management should stand behind foremen or else explain why they don't.

"There's too wide a gap between management and supervisors."

Evidence that the foremen have indeed tended to become "the forgotten men," or at least "the confused and uninformed member of management" (137), is found also in studies conducted in other countries. For example, a large-scale study of supervision in British industry, reported in 1951 by the National Institute of Industrial Psychology, leads to the conclusion that management's contention that "supervision is part of management" often seems "little more than a form of lip service to supervisory status" (138, p. 103). Reports from Australia (148) and elsewhere also indicate that there may be a world-wide trend toward the loss of status by the foreman.

Unionization of Foremen: That management has successfully taken some steps to counteract this trend in the United States is suggested in a series of nation-wide surveys conducted by the Opinion Research Corporation between 1943 and 1950, involving three levels of foremen in manufacturing industries. Among the findings for the seven-year period is evidence of a slump of interest in foremen unionization, as shown in Figure 39. Elimination by the Taft-Hartley Law of the obligation to bargain with foremen's unions may, in some part, be responsible for the decline in union sentiment. However, "according to the foremen's own testimony, companies are doing the things that make foremen feel like part of management—giving them authority, raising their stature, treating them like real members of the management team" (115, p. 4). Nevertheless, a further conclusion from the 1950 survey is that "the union idea . . . appears to be slumbering, rather than entirely gone" (115, p. 10). A survey conducted by the Opinion Research Corporation in 1952 provides further evidence that "foremen's unions are by no means extinct in the thinking of the men" (113, p. 7). An increase of 2 per cent in foremen who "want to belong," and a decrease of 5 per cent in foremen who think that "they should *stay out* of unions" (61 per cent in 1950 to 56 per cent in 1952), paralleling rising job dissatisfaction among foremen, show that the problems of reward, recognition, and status remain critical. While the new foremen in large plants contribute to this "setback," the data nevertheless again underline the need for management action which will provide foremen with "a solid feeling of belonging with management" (115, p. 10).

The Restoration of Status: Guiding Principles: To give the foreman status and recognition involves, first of all, a clear formulation of the

boundaries of his job. It calls for specific delegation of authority commensurate with responsibilities. The foreman deserves a place to work and physical appurtenances appropriate to the prestige which he should enjoy. The foreman must not be placed in the position of obtaining in-

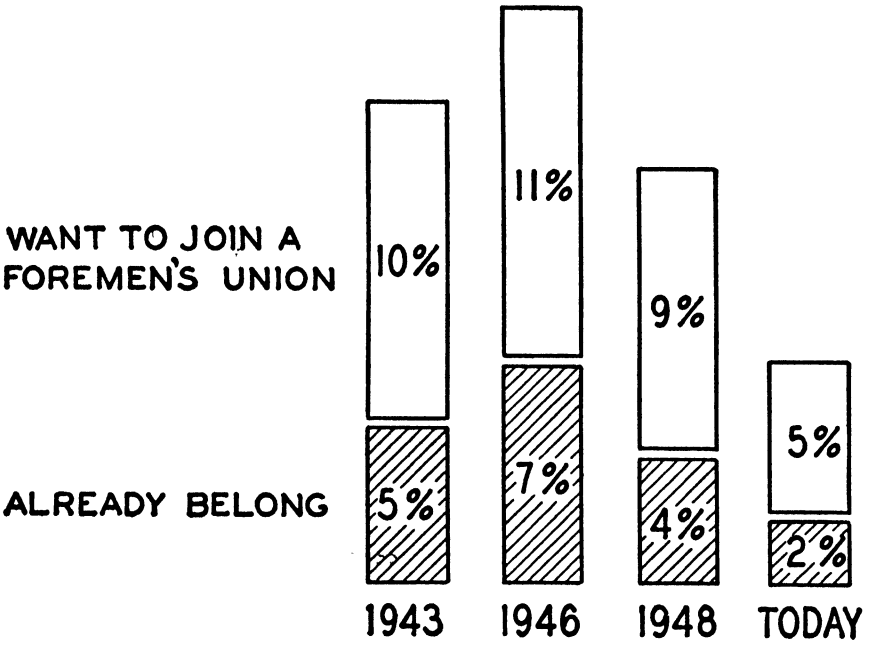


Figure 39. Union Sentiment among Foremen *

formation on policy changes or current information only at second hand, perhaps even from the union steward or the union's business agent. He rightfully has a place in the policy-making mechanism, as it operates with respect to both equipment and personnel. The foreman wants to be seen, recognized by, and occasionally meet with his superiors (134). In short, he wants top management to accept and treat him as though he were truly part of management (137, p. 10). According to Macrury, among tests which can be applied in determining whether foremen are actually part of management are the following:

1. Have foremen complete responsibility for work schedules, layout of work, control of overtime, vacations, etc., of the personnel in their charge?
2. Is there a significant pay differential between foremen and the highest paid wage earner in their departments?

* By permission, from *Public Opinion Index for Industry*, Opinion Research Corporation, 1950.

3. Is 50 per cent to 80 per cent of the foreman's time spent on management work?
4. Do foremen enjoy special privileges, such as greater security, in excess of those given to wage earners?
5. Do foremen have a voice in company policies and do they have an influence on collective bargaining and union contract negotiations?
6. Do foremen have access to confidential records dealing with company business and personnel?
7. Do foremen have good and well-defined steps for advancement?
8. Do foremen have ready access to their superiors at any or all times on subjects related to job matters?
9. Do foremen have a clear definition of their duties and responsibilities? (87, p. 188).

"Leadership Climate" and "Organization Structure"

Meeting requirements of the kind outlined above is a basic step in establishing a frame of reference conducive to the development of sound supervisory attitudes and to the application of effective supervisory skills in dealing with people. Of at least equal importance is what is done by top executives themselves in creating a *"managerial"* or *"leadership climate"* favorable to the accomplishment of such objectives.

THE INFLUENCE OF THE "LEADERSHIP CLIMATE"

The investigation by Fleishman, referred to on page 446, showed little permanent change in the attitudes or behavior of most foremen as a result of training. The study involved also an examination of other environmental factors affecting the role of the foreman as a leader. Included was an investigation of "the relationship between what the foreman does leadershipwise with his group and the attitudes about leadership of those above him in the organizational structure." Findings from this phase of the investigation showed quite clearly that the *leadership climate under which the foremen worked was a more important determiner of foremen attitudes and behavior than the supervisory-training course.* Those foremen whose superiors acted in a way that was consistent with what the foremen had been taught in the training program were more apt to show permanent gains—both in attitudes and leadership behavior —than those foremen whose superiors failed to apply, in their own work, the principles taught in the training program (43).

Investigations conducted by the University of Michigan Survey Research Center (73a, 74, 74a, 75, 76), studies reported by Worthy (165), and by British investigators (71, 138) also point to the existence of relationships between supervisory attitudes and behavior, on the one hand, and those of their superiors, on the other. The type of supervision prevailing in any organization is likely to follow closely the pattern set by those

in higher levels of management. Involved in this repetitive pattern is a tendency of lower-level supervision to copy, deliberately or otherwise, the traits and methods of their supervisors (67).

One conclusion from the study of leadership climate and supervisory behavior by Fleishman is that "the more intensive training of supervisors above the level of foremen in the organization might be more effective in making the training effects more permanent among the foremen" (43, p. 154). There seems no question that supervisory training is apt to bring little or nothing in effective accomplishment of the job, and perhaps even "backfire" when, as frequently happens, training programs are initiated at the lower supervisory levels without any corresponding attention to the need of improving the skills of executives higher up the line (165). Nevertheless, as in the case of supervisory training, executive training (29, 38, 116) is only one step toward a solution of the problem.

The Problem of Organizational Structure: There is also the even more basic requirement of setting up an *organizational structure* which will permit and encourage executives to maintain friendly, easy, and comfortable relations with their subordinates as a pattern for similar relations down through all levels of the organization, including rank-and-file employees (165). Involved here, in addition to opportunities for day-to-day personal contacts, are issues centering around the supervisor's place in the chain of executive control; his place in relation to functional departments; his role in committees and meetings and in management-union affairs; his function in connection with the maintenance of discipline, etc. (138).

As pointed out in pages 409–412, employee-attitude surveys conducted by Sears, Roebuck and Company have contributed to the modification of the organizational structure as a means of enlarging the scope of supervisory action and providing a managerial climate conducive to the exercise of leadership functions at all supervisory levels (165). This has been achieved by adopting the "*broad*" or "*flat*" as contrasted with the more "*vertical*" or "*tall*" organizational structure. Among advantages claimed for the "broad" or "flat" type of organization is that the few layers of supervision and reduction in formal controls place a premium upon the ability of supervisory and executive personnel to stimulate and to lead. There is discouragement of the "authoritarian" or "driver type" of executive. The "flat" organizational structure, it is said, offers enlarged opportunity to move to higher levels of responsibility for supervisory and management personnel who are able to secure the willing, enthusiastic support of colleagues and subordinates and to supply the type of leadership which leads to higher levels of employee morale.

This reference to the Sears, Roebuck and Company organization is

not intended to convey the impression that this is the best possible kind of organizational structure, or that the "broad" or "flat" type of organization is necessarily the best of all structures.[1] Nevertheless, studies of the type conducted by this company; investigations of "leadership in a democracy" at Ohio State University (66, 135), and other studies—as discussed particularly in Chapters 6, 8, 11, and 17—point to the need for continued consideration of the relations among (1) the organizational structure of the company; (2) the quality of its "leadership climate," and (3) the morale and motivation of the employees.

Employee Participation

From a thoughtful consideration of "why men work," Heron concludes that most members of management who "think clearly . . . will realize that workers whose tasks do not invite their thinking and understanding will never be effective workers" (68, p. 197). "Passing a sense of responsibility for management to the humblest worker," he adds, "seems to stimulate his efforts for a common objective . . . With this new stimulation and release of thinking power, the workers of America will become a team. Those who organize their work will call the signals to an understanding and responsive group. The organization and managers will become a 'hierarchy' which has meaning. The productive ability of such a system will undergird the system of American political democracy" (68, p. 197).

In this colorful statement, Heron underlines an important requirement for effective achievement in stimulating motivation and morale, viz., a managerial climate which provides for *employee participation* as a means of satisfying significant ego-involved needs and releasing the productive energies of workers.

THE ROLE OF THE FOREMAN AND OF THE STEWARD IN PROMOTING EMPLOYEE PARTICIPATION

The advantages, to management, of a "climate" in which employees can become active and participant are illustrated in findings of the study, by Jacobson (70), conducted in the plant of an automobile manufacturing company, referred to on pages 366–368. All of the 12,000 production workers in this plant were members of a local of the United Automobile,

[1] It is not within the scope of this volume to discuss the varieties and theories of organizational structure or the many problems which must be considered in arriving at the optimal structuring of the industrial enterprise. Discussions of such matters from a number of viewpoints are to be found in publications by Bakke (4), Chamberlain (23), Barnard (6), Bethel, Atwater, Smith, and Stackman (11), Dale (34), Follett (99), Given (55), Leighton (80), McCormick (96), Staley (133), Tead (136), Urwick (144, 145), and Weschler, Tannenbaum, and Talbot (156).

Aircraft and Agricultural Implement Workers of America (UAW), a CIO union. Collective bargaining in the plant dates back to 1933, following the organization of an AFL union which was converted to CIO in 1937. Labor relations have been carried on with a minimum of stress, without any strike sanctioned by the official union organization during the 17-year period, although there have been unauthorized work stoppages involving union workers in the plant, including one which occurred during the collection of data for the study.

A major purpose of the study was to investigate "the way in which the foremen and the union stewards related to the workers—to find out something about how the individual worker responded to the 'cross-pressures' on him for loyalty to two almost completely overlapping membership groups: the company and the union" (70, p. 18). Preliminary analysis of the relationships between two measures—*participation* and *union-management polarity*—has revealed a number of significant trends, viz., "*Uniformly, in departments where the foreman is active in involving the men and the steward is not, the workers are more likely to be high on the management index and low on the union index. In departments where the steward is active in involving the men in working out union matters and the foreman does not involve them, the men are high on the union index and relatively low on the management measure. Where both foreman and steward are active, the men are somewhat higher on the management index.*[2] These relationships hold on the basis of the workers' report, the foremen's report and the stewards' report, and are particularly marked in those departments where there is a consensus of report" (70, p. 20).

Of particular interest, in so far as the formulation of management policy is concerned, is the finding that, in the plant involved in this study, about *half as many foremen as stewards reported that they made an active effort to involve their men in joint-decision processes.* Furthermore, approximately half as many workers reported that the foremen call them in for joint-decision making as reported that their stewards do so. *Most workers,* it was found, *feel that both the foreman and the steward should involve them in decision making,* although among those who say that both the foreman and the steward should involve them, about twice as many feel strongly that the steward should enlist their aid as feel strongly that the foreman should do so. According to those responsible for the study, "*men report that they want the foreman to get their help in making decisions because they know how the work should be done and are capable of making suggestions that would add to the productive efficiency of the job*" [3] (70, p. 21).

[2] Not italicized in the original.
[3] Not italicized in the original.

EMPLOYEE PARTICIPATION THROUGH LABOR-MANAGEMENT COMMITTEES

Such findings, and those from other studies, clearly suggest that *any management which wants its employees to be management-minded must take steps to provide the opportunity for and to encourage active participation by workers* in arriving at decisions pertaining to the work process and to the work situation. As discussed in the above section, employee participation refers to participation by the employee as an individual or as a member of a small workgroup or team. Many years prior to systematic research on employee participation, it was suggested that harmony in the working situation—and also production and efficiency—could be improved by setting up some kind of *formal* organization through which employee representatives could join with management representatives in discussing problems of common interest. Production needs during World War I provided impetus to the implementation of this idea through the organization of "work councils" and "shop committees"—particularly in Great Britain, but also in the United States (16, 164). World War II brought an active drive in the United States—strongly supported by the War Production Board—for the establishment of *labor-management committees* as a means of enlisting the interest and tapping the "know-how" of workers in increasing production; reducing waste; selling bonds; promoting blood banks, etc. (7, 33, 41, 117, 143). With the Korean incident has come a renewed interest in the possibilities of labor-management committees for encouraging wider employee participation in dealing with production and other problems (111).

UNION-MANAGEMENT CO-OPERATION

Formal plans for labor-management co-operation do not require that employee representation be through the union. As will appear later, there are many instances of labor-management co-operation in unionized plants in which employees are not represented by their union leaders and in which workers serve as committee members in their capacity as employees and not as union members. There are many who contend that obstacles to participant activity arising out of divided loyalties in a unionized shop can be best avoided through *union-management co-operation,*[4] as contrasted with plans which involve consultation with employees as such. There is a growing conviction in at least some quarters—that the time has been reached when the role of the union must be ex-

[4] For a discussion of viewpoints, history and accomplishments in union-management co-operation see Lever and Goodell (81), Rowntree (123), Slichter (129), Guillebaud (62), Chamberlain (24), Cooke and Murray (30), Golden and Ruttenberg (57), Chase (25), Dale (33), Harbison and Dubin (63), McKelvey (98), and others (102, 107).

tended beyond the bounds of collective bargaining to "genuine" co-operation as a means of increasing productive efficiency and of achieving other goals (57, 77, 102).

Case Histories in Union-Management Co-operation: The view that *union-management co-operation* might be a powerful force in both increasing productive efficiency and promoting industrial stability is generally supported by reference to case histories (158). Frequently mentioned is the long history of union-management co-operation on the Baltimore and Ohio Railroad (12). Support for union-management co-operation is found in the activities of clothing workers' unions in facilitating technological changes and in even helping to rehabilitate ailing firms (2, 10, 31). In fact, a number of union-management co-operative plans—especially in the early history of this movement—"developed in plants which were pushed to the wall by economic necessities, leaving management with no alternative but to accept the proposal of the union for full-fledged co-operation, if the firm were to survive" (101). Among examples cited is also the "ill-fated" case of union-management co-operation on the stretch-out at the Pequot Mills of the Naumkeag Steam Cotton Company (105). Evidence of successful union-management co-operation in the installation of wage-incentive systems is found in the introduction of varieties of the Scanlon plan in steel and other industries (30, 36, 58, 125). The laundry industry (79), a furniture-manufacturing plant (139), and many other types of businesses yield case histories cited to support the psychological hypothesis that "divisive rivalry affiliation attitudes disappear under union-management co-operation" (60), with resulting increases in production and morale, and reduction of industrial strife.

A SURVEY OF LABOR-MANAGEMENT CO-OPERATION BY THE AMERICAN MANAGEMENT ASSOCIATION

Extent of Labor-Management Co-operation: Data bearing on the scope and outcomes of formalized programs involving regular planned meeting between management and labor are found in a survey of *labor-management co-operation* (33) reported by the American Management Association in 1949. In this investigation, a detailed questionnaire was sent to almost 1,000 companies in manufacturing industries which were believed to have some kind of labor-management co-operation program. Of companies to which questionnaires were sent, 263 replied. Visits were made to 40 of these in order to interview managements, unions, and employees, to attend co-operation meetings, and to study the records.

Of the 263 companies which replied to the questionnaire, 228, or close to 87 per cent, reported that they have (in 1949) or had at some time

during the preceding five years, some type of *formal* labor-management co-operation.[5] Of these, 201 companies, employing approximately 1,500,000 workers, were continuing with plans of labor-management co-operation. Of the latter companies, which furnished the data reported by AMA, 98 had CIO unions; 52 AFL unions; 29 independent unions, and 23 had no unions.[6] Over one third of the labor-management co-operative plans were found in shops with maintenance-of-membership agreements; about one-quarter in open shops with a union and in union shops. In considering the number of failures in co-operation, it was found that "*the number of failures was greatest in plants with maintenance-of-membership agreements, less under the union shop, and least under the open shops with no union and under the closed shop*" (33, p. 22). A general conclusion from the findings concerning the number of plants with continuing plans is that *labor-management co-operation is more common than it was a decade ago.* A further conclusion, from the fact that 40 per cent of current (1949) committees have been in existence from two to five years; 20 per cent for five to ten years; and 20 per cent for more than ten years, is that *co-operation's capacity to survive is greater than generally believed.*

Areas and Degrees of Co-operation: In Table 48 are shown the areas within which labor-management co-operation took place in the plants under consideration. Consideration of the findings leads to the conclusion that "the areas of co-operation are chiefly those in which the possibility of conflict is small. Labor-management co-operation," it is pointed out, "tends to function best in fields in which a substantial common interest exists, and objectives are generally compatible. In such areas the parties' voluntary collaboration obviously furthers attainment of common goals" (33, p. 22).

Four degrees of co-operation are noted, viz., *informational co-operation; advisory co-operation; constructive co-operation,* and *joint determination.* The first three represent essentially *consultative* arrangements—with neither side bound to accept the other's decision—whereas joint determination gives labor an equal voice with management. Furthermore, according to the AMA report, the data in Table 48 can be interpreted as showing that the degree of co-operation tends to vary inversely with its

[5] As used in the report, the word "labor" refers not alone to the union, but also to groups of rank-and-file employees, jointly and separately. "We are," writes Dale, "discussing union-management co-operation and employee-management co-operation" (33, p. 13). However, the prevalence of unions in the companies analyzed makes the findings pertinent also to the consideration of the general question of union-management co-operation.

[6] The total number of various collective bargaining arrangements was as follows: Maintenance of membership, 96; union shop, 70; open shops with no unions, 73; closed shop, 16.

frequency. On the one hand, *informational co-operation* occurs most frequently; on the other, *joint determination* (described as a "limping kind of co-operation" which shades into collective bargaining) is rare (33, p. 25).

Machinery for Labor-Management Co-operation: A major distinguishing characteristic of the procedures for co-operation in the plants surveyed by AMA is that the machinery is almost always set up especially for this purpose, and is distinct from that for collective bargaining. The machinery involves a series of labor-management committees, generally organized either under a *plant-wide* or under a *departmental* approach. In the latter, according to the AMA report, co-operation between management and employees is stressed. Management representation generally includes foremen and superintendents; on the labor side hourly-rated workers take part, generally "simply as employees, even if they are union members or, as in some instances, union stewards" (33, p. 140). By contrast, under the plant-wide approach, emphasis in organized plants tends to be placed upon the relationship between the *members of management* and *representatives of the union.* However, while labor representatives in plant-wide committees are more frequently drawn from the union, in about one-half of such committees labor members were rank-and-file employees, and there was no participation by union officials.

Attitudes Toward Labor-Management Co-operation: Outcomes of labor-management co-operation were assessed, in part, through interviews designed to elicit the attitudes of employers, union leaders, and employees toward the operation of the plan. As is pointed out in the AMA report, the interviews conducted with limited time may have produced findings which are unreliable in some respects. Nevertheless, a consideration of the data, leads to the conclusions that

1. *"Two-thirds of the companies replying were 'pleased' with the results of cooperation . . ."* (33, p. 25). According to Dale, analysis of the replies suggests, however, that "pleased" cannot be interpreted in the usual context of this word. "It may simply mean that *co-operation,* on balance, *contributed to freedom from labor strife or threat of strike when disagreements occurred,*[7] that labor and management had learned to live together more intelligently, even though they achieved nothing more than a 'state of peaceful disagreement,' *and some elimination of obstacles to higher productivity.*[8] 'Disappointing' means that, on balance, co-operation was detrimental to efforts to reach management's economic objectives" (33, p. 26).

2. *"The preponderance of opinion of top level union officials was that it had helped to shift relationships with management from open warfare*

[7] Not italicized in the original.
[8] Not italicized in the original.

TABLE 48. *Areas of Co-operation in Formal Labor-Management Co-operation Plans* (after *American Management Assn.*, 1949)

Subject	Number of times mentioned		
	Departmental labor-management co-operation (*I*)	*Plant-wide labor-management co-operation* (*II*)	*Total* (*I*) & (*II*)
Accident prevention	87	76	163
Elimination of waste and defective work	106	41	147
Furthering labor understanding of policies	97	48	145
Regular attendance	84	31	115
Employee insurance plans	68	42	110
Quality control	84	21	105
Job evaluation	52	50	102
Physical working conditions	65	36	101
Lateness	80	20	100
Maintenance of tools, fixtures, etc.	74	24	98
Employee health	71	26	97
Methods improvement	67	29	96
Discipline control	65	23	88
Training, apprenticeship, and induction programs	55	30	85
Labor turnover	50	19	69
Setting output standards	42	26	68
Incentive systems	42	25	67
Production planning	45	14	59
Promotional program	39	14	53
Utilization of machinery	43	8	51
Employment stabilization	37	12	49
Technological changes	37	11	48

to peaceful disagreement." Furthermore, it was found that "the AFL was on the whole pleased; the CIO disappointed, the independents divided" with respect to their experience in co-operation (33, p. 27). Again, as in the case of management opinion, "being 'keenly pleased' may signify nothing more than peaceful disagreement. Furthermore, since many unions expressed an opinion only about co-operative efforts still in existence, the answers are biased in favor of co-operation" (33, p. 27).

3. "*The preponderance of employee opinion was favorable to co-operative experience, but less so than management and top union leaders* . . . Employees who liked co-operation stressed satisfaction of non-economic objectives" (33, p. 28).

Conclusions from the AMA Survey of Labor-Management Co-operation: In addition to opinions, the survey furnishes specific examples of objective outcomes in the way of improved production; elimination of wage inequities; reduced absenteeism; increases in the number of employee suggestions; better accident records; waste reduction, etc. On the other hand, many instances of failure in labor-management co-operation —due in some instances to the inability to elicit union support—are given in the AMA report. Nevertheless, there is considerable evidence that in the experience of American industry formal plans for stimulating employee participation through representation on labor-management committees can produce effective results. According to the AMA, the data gathered in the survey make it appear that "formal co-operative plans can be both a means of reducing the area of hostility between management and labor and a means of converting a general attitude of hostility into one of 'peaceful disagreement.' In many cases, also, they have resulted directly in increased productivity . . . From the limited experience available, it cannot be said that formal co-operation will necessarily provide a solution to any particular company's labor relations and productivity problems; but it can be stated that it is, at least, one possible answer, and there has been enough success with it to make consideration of the idea worthwhile" (33, p. 163).

Along with such conclusions the AMA report presents a thoughtful analysis of reasons why management may turn to formal co-operative plans; reasons why unions may be brought to consider them; the requirements each side lays down as prerequisites; the extent to which conflict with management and union beliefs constitutes an obstacle, and management attitudes toward possible alternatives. However, while generally supporting the concept of labor-management co-operation, there is a note of caution exemplified in the quotation which closes the report, that, "those who start co-operation should not enter with the blare of trumpets and ride in on a golden chariot; it would be better to come through a crack on the back of a tiny mouse" (33, p. 175).

A SURVEY OF JOINT CONSULTATION IN GREAT BRITAIN

The extent, advantages, shortcomings and governing principles of labor-management co-operation—commonly designated in Great Britain as joint consultation [9]—have also been investigated in a large-scale study conducted by the National Institute of Industrial Psychology under the

[9] For general references on the history and scope of joint consultation in Great Britain, see Brown (15), Marriott (93), Roper (121), Walpole (151), and reports published by the Institute of Personnel Management (72), the Industrial Welfare Society (73, 163), and by other agencies (100).

sponsorship of the Human Factors Panel of the Committee on Industrial Productivity (103).

The study, reported in 1952, included interviews with managerial and worker personnel in a sample of 157 manufacturing establishments employing more than 250 people, supplemented by a second sample of 32 plants. In addition, questionnaire data were obtained from 751 factories —of which 545 had some form of joint consultation—representing returns from 4,719 manufacturing establishments employing over 250 people to which questionnaires were sent.

Areas and Degree of Co-operation: The varieties of problems considered in joint consultation in Great Britain are much the same as those handled by labor-management committees in the United States. Techniques developed for measuring the effectiveness of outcomes showed that "hours, breaks, and shifts" were discussed in 98 per cent of the firms, with an average effectiveness rated at 70 out of a total of 100 points. High frequency of consideration and relatively high effectiveness are reported in dealing with such matters as holidays, redundancy (lay-off), dismissal, safety and accidents, physical conditions of work, and similar work situations. By contrast, problems of training, promotion and prospects, and labor turnover were dealt with less frequently and with much lower effectiveness.

Production problems were a matter of discussion in most firms engaging in joint consultation, but with generally mediocre outcomes. According to the British investigators, "the generally low level of scores obtained on production problems suggest that in this field of discussion, which is most directly associated with the main industrial objective of the firm, there may be a marked absence of common purpose between workers as a whole and management" (103, p. 198). Some worker representatives, it is reported, did become "efficiency-minded," but, it is added, "such individuals frequently complained in interviews that it was very hard to get their constituents to show any real enthusiasm" (103, p. 198).

Machinery for Joint Consultation: As in the United States, there are many varieties of mechanisms for the achievement of joint consultation, differentiated with respect to the levels at which consultation takes place, procedures for the selection of representatives, etc. In some cases, joint consultation had been organized throughout in conjunction with trade unions. In 14 per cent of the firms investigated, there was the requirement that only shop stewards could serve as workers' representatives on joint consultation bodies. In many instances, even in the absence of a formal requirement, stop stewards were elected as representatives and, in a few cases, workers chosen to become members of the Works Council automatically became shop stewards. General conclusions suggested by this

and other phases of the study are that (1) there is no single best mechanism of joint consultation, and (2) the machinery is of less importance than the attitudes of those involved.

Attitudes toward Joint Consultation: Both the interviews and questionnaires included items from which such attitudes toward joint consultation could be assessed. Questionnaire items were phrased in such a way as to reveal four degrees of interest in, and co-operation with joint consultation, viz., *strong, fair, apathetic,* and *opposed.* From replies given during interviews, individuals and groups in the factory were classified as to whether they *support, accept,* or *resent* joint consultation in terms of the following definitions:

SUPPORT Keen interest: sees real possibilities in joint consultation and prepared to work for its development.

ACCEPT Feels joint consultation has a useful purpose; prepared to use it in a limited way but does not see any great developments ahead.

RESENT Feels it has few advantages and some serious drawbacks; for example, it undermines authority or status or overlaps trade union negotiations; is completely apathetic and would be quite indifferent if it failed (103, p. 62).

Interview findings, summarized in Figure 40, show clearly that support for joint consultation was strongest at highest levels of management and became progressively weaker through the lower levels. Strong support for joint consultation was found among worker-representatives on joint consultation bodies; weaker support among shop stewards, and less support among rank-and-file workers. Replies to the questionnaires, usually filled in only by members of management, showed a similar pattern of response, with the exception that the assessment of workers' support suggested even less active interest in joint consultation than that revealed by the interview data.

Appraising the Role of Joint Consultation: Along with numerical data on the effectiveness of joint consultation in dealing with specific problems, the British study furnishes many illustrations of accomplishments in individual plants. As in the United States, there are instances of failure, in a few cases associated with a systematic effort to distort the objectives of joint consultation. Thus, according to the British investigators, "In a few cases we met with extreme attitudes in individual worker representatives. Some of these saw joint consultation as a step in the direction of the management of industry by Workers' Committees (Syndicalism), others used joint consultation not as a means of co-operation with the management but as a means of disrupting it" (103, p. 82). In general the findings, as those of the American study, appear to support the view that joint consultation has yielded more in the way of removing worker

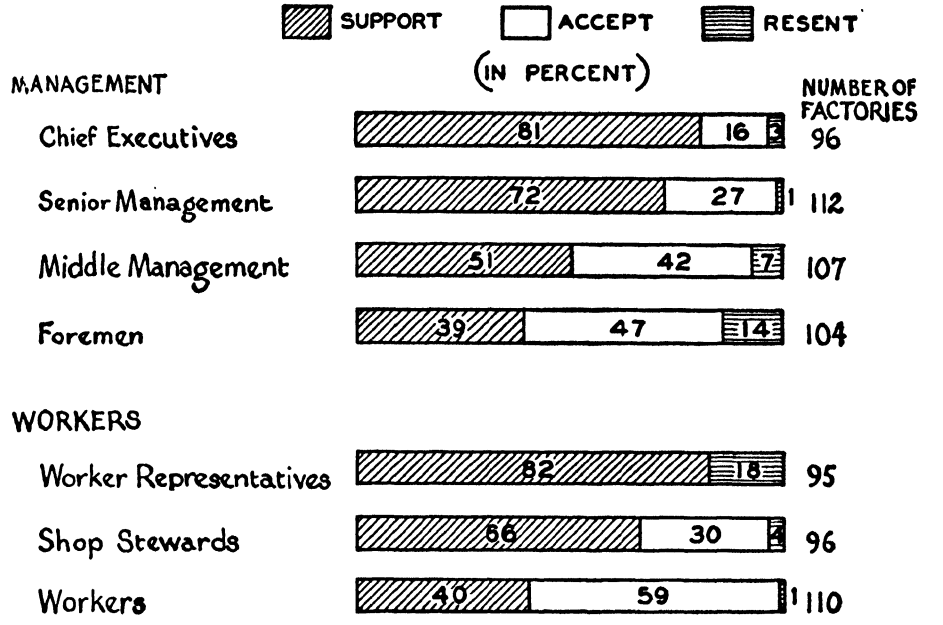


Figure 40. Attitudes of Management and Workers in British Factories toward Joint Consultation *

dissatisfactions—of eliminating frustrating conditions—than in the way of creating co-operation in increasing production or in meeting other industrial goals. One potent factor in this "gloomy situation," according to the investigators, is the apathy of workers with respect to joint consultation—the tendency to view joint consultation as merely a means of "airing grievances"; the tendency to show little interest unless joint consultation "happens to be dealing with something of immediate concern to themselves" (103, p. 211). Nevertheless, throughout the report, there is repeated reference to the complexity of the psychological, economic, and social factors involved. Throughout there is emphasis upon the need for the development of firm principles and methods designed to serve "the end of making each industrial unit a harmonious, live, co-operating community working together with a sense of common purpose which is understood and accepted by all its members" (103, p. 7).

FORMAL OR INFORMAL PARTICIPATION?

There can be no disagreement as to the significance of this objective. It is also evident, from studies reported in this and earlier chapters, that consultative methods can contribute to its achievement. A question of

* Adapted, by permission, from National Institute of Industrial Psychology, *Joint Consultation in British Industry*, Copyright 1952, Staples Press.

practical importance which nevertheless arises in this connection bears upon the respective roles of *informal* and *formal consultation* in arriving at a "working harmony" characterized by high levels of production, job satisfaction, and morale. Involved here also is a supplementary question as to whether high productivity and morale can be fully realized in a "laboristic or union economy" unless, to quote Myers, management develops a "genuine practice of consulting workers *through their union*[10] about all problems affecting the enterprise" (102, p. 138). Growing emphasis upon *union-management co-operation* as contrasted with other forms of employee participation by union leaders and others makes this a vital issue in considering the over-all problems of motivation and morale in industry (58, 77, 78, 81, 125). Specifically involved here is the question as to whether the will to work can *better* be achieved through participation of the employee as a member of an *informal group*; as a member of a *team organized by management* (through the supervisor), or through some formal plan of *labor-management* including *union-management co-operation.*

On this question there are firm opinions, but few facts. Data included in the AMA report do not permit a clear-cut evaluation of the extent to which favorable results were achieved because of union co-operation in formal plans, i.e., because committee members were representing organized labor in the plant. In fact, as stated earlier, the objective of the study was not to consider union-management co-operation alone, but "union-management co-operation and employee-management co-operation." The word "labor" as used in the report "means not only the union, but also groups of rank-and-file employees, jointly and separately" (33, p. 13). Similarly the British study of joint consultation (103), while considering the role of the union in some detail, provides no basis for assessing the merit of union-management or labor-management co-operation in comparison with that of more direct and less formal employee participation.

French has cited the rejection of a union by employees who had been actively engaged in the participation process at the work-group level as a possible indication that some employees believe that they can get more through persuasion than through collective bargaining or "democratic methods" embodied in the voting procedure and styles of labor-management co-operation (52, p. 49). Among research findings of immediate pertinence to this problem are those derived from a comparison of two metal-working plants in a study conducted under the direction of Mayo during World War II (50). In one of these, for a period of approximately 20 years, foremen had been instructed not only in the technica

[10] Not italicized in the original.

details of their work but in the "almost equally technical methods of handling human situations." Their work programs were so organized that they were able "to concentrate on communication" and to spend considerably more time with employees who had poor attendance records. This, it is stated, has contributed to the rise of a "team spirit" characterized by a pressure for achievement.

In the second company, where a plan of union-management co-operation was attempted (January, 1942, to June, 1943), absenteeism was only one of the problems considered by the union-management committee. Communication upward was poor; discipline was more lax—workers were welcomed back after absences and not penalized. Findings of the study showed that considerably better results were obtained in the firm where competent foremen, operating in a good "leadership climate," were allowed to handle the problem of absenteeism (33, p. 57). Absenteeism in the first company was consistently half what it was in the second; month-to-month fluctuations and the effect of changes in wages and hours were considerably less marked. Detailed examination of the study shows that a number of variables in the plant situations contributed to these differences. Nevertheless, as Dale suggests, the findings also show that "where foremen are capable and well-trained, their efforts to reduce absenteeism may be more successful than those of a union-management committee" (33, p. 57).

This possibility is also suggested in a thoughtful analysis of the roles of the foreman and of the small work group by the investigators responsible for the survey of joint consultation in Great Britain. Since, it is suggested, "the problems of dissatisfaction which came up so often in joint consultation . . . are derived from problems of individuals . . . *it is reasonable to suppose that the most effective point at which the consultative relation should be developed is in the primary working group—between the foreman and his operatives*" [11] (103, p. 218). Observations made during the British study, and also American experience, make it permissible, according to the investigators, to ask "whether, had the problem of developing the consultative relation in the primary working group been solved in the first place, so many firms in this country would have developed the works council as the primary form of consultation. For," they add, "although our inquiry has convinced us of the value of formal joint consultation, we are still left with the feeling that, as at present organized, it is very often an unspontaneous movement requiring long and careful 'nursing' and, perhaps, far too easily upset by misunderstanding" (103, p. 219).

In considering the view that consultation should start at the level of

[11] Not italicized in the original.

the primary group, the British investigators carefully point out that it is *not* intended to suggest that such consultation should be regarded as a substitute for formal systems encompassing higher levels and larger groups. On the contrary, the position is taken that comprehensive formal joint consultation at all levels "is likely to encourage consultation in the primary group in so far as unsettled items may be carried to higher levels" (103, p. 220). It is further suggested that there are problems and information which can be adequately discussed only with higher levels of management, and that such discussion "may help to resolve problems involving workers with which the primary group is unable to deal." At higher levels, it is added, unsolved problems first thrashed out by the primary groups will have "been stripped of much of their emotional loading and will therefore be discussed in more realistic terms" (103, p. 221).

Conceptual Backgrounds of Labor-Management Co-operation

Support for the use of consultative methods has been sought not alone in case histories and extended surveys, but also in the findings of laboratory research. Research on co-operative activity by Watson (153), Shaw (127), and Maller (90), has been cited in support of the view that a group solution of a problem is better than an individual solution (33)—that "group thinking is superior to individual thinking" (88, p. 302). Although questions have been raised as to whether "groupthink" actually constitutes the road to progress in achieving industrial goals (160), acceptance of the view that the group decision yields either more acceptable or better solutions is generally inherent in the use of consultative methods.

Domination, Compromise, or Integration?

As is indicated particularly in Chapters 6 and 9, consultation at the level of the primary group—designated as *employee participation*—receives support both from "field theory" as elaborated by Lewin and from industrial research in "group dynamics" conducted by him and his associates. The case for more formal consultation—for labor-management co-operation committees and similar mechanisms—has been argued largely on the grounds of theory which presupposes a transformation of management viewpoints, and also stages in union development (52, 77), through which *integration* is substituted for less effective methods in dealing with conflict situations in industry. This approach has particular pertinence if, as suggested specifically in the AMA report, the major gain in formal labor-management co-operation is that of "reducing the area of hostility between management and labor"—of "converting a

general attitude of hostility into one of 'peaceful agreement' " (33, p. 163).

The concept of integration, as applied to the resolution of misunderstanding and actual strife in industry, is derived from the thoughtful consideration of problems of conflict and co-operation by Follett (44, 45, 46, 99, 146). According to the latter, conflict is not always open warfare; it may appear as an expression of differences—differences of opinions, interests, desires, etc.—an interaction of desires (45). Conflict is not necessarily undesirable. In the form of rivalry among industrial organizations, as competition among individual employees, as the clash of opinion in committee meetings and executive conferences, as disagreement between labor unions and employers, conflict has been a force in preventing stagnation—in bringing about improvements in methods and conditions of work (130).

Conflict, from Follett's point of view, is a pernicious influence only when it becomes an end in itself, when it is used to secure the domination of one group without respect to the justice of the situation. The desirability of conflict depends also upon the way in which it is resolved—whether it is ended by a solution which is mutually satisfactory and which really strikes at the root of the difficulty, or whether it leads to a compromise which merely sets the stage for the recurrence of the same conflict, with perhaps only a change in the name or symbol. Conflict, it is added, is most destructive when contestants seek to dominate one another as the only available means of securing the satisfaction of their desires. *Domination* is a victory of one side over the other. At the moment of conflict, this generally *appears* to be the easiest way of dealing with it and, for this reason, domination is the method most frequently adopted for its solution. *Compromise* represents a second method of dealing with conflict. In this type of settlement each side gives up a little—makes concessions—in order that the activity which has been interrupted may go on. The danger of compromise is that the conflict will arise again in another form.

The ideal method of dealing with conflicts, according to Follett, is that of *integration.* In accomplishing this in industry, the situation cannot be surveyed separately from the viewpoint of management, and then again as a distinct problem from the viewpoint of the workers, organized or unorganized. The attempt must be to view the needs and desires of workers and management in relation to one another, and to arrive at a solution which will permit an adequate satisfaction of the desires of the two groups in a way that will be beneficial to the organization as a whole (130, p. 208).

Follett has made a broad application of this viewpoint to the settlement

of conflicts between workers and management. "If," she wrote, "we want a settlement which will mean progress, greater success for our business, we shall try to include the value of both sides, which will give us more than the values of the two sides added together, will give us an emergent value. Our outlook is narrowed, our chances of success are largely diminished, when our thinking is constrained within the limits of an either-or situation. We should never allow ourselves to be bullied by an either-or. We want to learn how to make any human association most effective, most fruitful . . . When employers and employees are willing to sit down together to try to solve their problems rather than to bargain on the basis of who possesses the greater economic power of the moment, then we shall be on the road to settling 'the labor question' " (47, p. 177).

Application of this theoretical frame of reference to labor-management co-operation appears most explicitly in the analysis, by the British in-

TABLE 49. *Characteristics of Different Approaches to the Solution of Problems in Industry* (after *Joint Consultation in British Industry*, 1952; reproduced with the permission of Staples Press)

Meeting	*Relationship*	*Method*	*Status and Authority*	*Sense of Responsibility*	*Decider*
Deputation	Dominant-servile	Dictation	Rank	"His"	He decided
Negotiation	Competitive rivalry	Compromise	Strength	"No one's"	It was decided
Consultation	Collaborative	Integration	Function and quality of performance	"Ours"	We decided

vestigators, of the joint-consultation process as contrasted with other methods of solving problems. According to this analysis, summarized in Table 49, in the process of consultation, collaboration replaces a competitive rivalry or a dominant-servile relationship. Integration is substituted for compromise or dictation. The sense of responsibility in arriving at a decision becomes "ours" instead of "his." The feeling that "we decided" is substituted for the feeling that "he decided."

Such transformations, it is contended, are effected by building up a decision from the factual evidence as perceived by each of the parties concerned. The basis of the integrated decision "is not rank or strength, but facts brought to light through knowledge and experience," and the discussion of problems in a "de-personalized way" (103, p. 28). The end-result is that all who participate will tend to feel an obligation to see that decisions are successfully carried out. In this light, it is suggested, the con-

sultative relationship "provides a particularly fertile ground for the growth of understanding and the realization of a common purpose between people whose interests may appear to them to be opposed" (103, p. 244).

LABOR-MANAGEMENT CO-OPERATION AND INDUSTRIAL DEMOCRACY

Labor-management co-operation, or joint consultation, has been supported not alone by reference to psychological theory, but also on the grounds that it represents merely an application to industry of democratic principles which have been beneficially applied in the political communities of the Western World (20a, 57, 123). According to those responsible for the British study, "Joint consultation can be thought of as a management technique or as a philosophy of management. As a management technique it can certainly contribute to the solution of many problems of industry; but as a technique only, its scope must be limited; it is no panacea, no moral philosophers' stone, which will convert suspicion and antagonism into confidence and harmony. As a philosophy of management," write the British investigators, "joint consultation emerges as a development of a democratic principle . . ." (103, p. 244). As such, it is said, "its development must be mainly concerned with people's attitude toward the arbitrary use of power: the degree to which those in authority feel able gradually to surrender it and 'those under their orders' to share the responsibility of leadership" (103, p. 243) in adherence to "a basic philosophy of democracy" . . . According to the British investigators, "the current trend of thinking in the Western World justifies democracy on the grounds that by such forms of government the individual is enabled to develop his potentialities to a greater degree, and that the social 'output' is thereby increased both in quality and quantity" (103, p. 242). Such an "adult form" of democratic government in industry, it is suggested, is "yet in its early stages of development" and cannot be achieved quickly. Nevertheless, "to 'wait until people are ready to govern themselves' is to put off the vesting day forever" (103, p. 242). It is from this perspective that two firms in which no matters of policy affecting the factory could be put into operation unless they were agreed to by a central committee of management and workers—in which "the committee had come to be recognized as a legislative body" (103, p. 23)—are cited as examples of consultation which merge into an "adult form" of industrial democracy.

The Hazards of Formal Consultation

Democracy, it has been said, is a "tricky word" (27, p. 158). Much depends upon the meanings and values attached to "democratic methods"

(52, p. 49). Furthermore, as suggested by Tripp in a discussion of the union's role in industry: "While no one is against democracy, questions are raised as to whether industrial democracy is consistent with values of efficiency and private business initiative which are also basic characteristics of our economy" (142, p. 101).

To discuss such dilemmas is not to question the value of consultation with employees as a device for the stimulation of motivation and morale in industry. There is ample evidence that within the limits of a "truly democratic concept of a free society which depends on a balance of integrating and opposing forces (3, p. 3) . . . a realistic, intensive and analytic investigation of the potentialities and limits of joint decision making may pay handsome returns to those who initiate it and in any case is likely to make business life more comfortable and satisfying" (3, p. 5). Data discussed in earlier chapters reveal tremendous possibilities from stimulating active co-operation of individuals and of small informally or formally organized work groups through *employee participation* on a more or less formal basis. Case histories and studies reported in earlier pages furnish considerable evidence of gains in the way of increased production and in other areas—as well as of reductions in strife—from *formal labor-management* co-operation. Not alone case studies of the type referred to on page 456, but also observations in studies by Rose (122), by Jacobson (70), and in *Factory*'s 1952 survey of what workers think (157, p. 87), which show that employees can simultaneously be "company-identified" and "union-identified," support the possibility of effective union-management co-operation in organized plants. Nevertheless, it must be clearly recognized that many serious problems—practical and ideological—arise when consultation with workers is conducted through the union, i.e., through the medium of union-management co-operation. Thus, according to the British investigators, "Recognition of unions, where workers demand this of the management, appeared to exercise a strong influence upon the working of the consultative system, and it can safely be inferred that even a small amount of friction between the management and the union could render the consultative system ineffective, or turn it into an additional means for pressing union objectives" (103, p. 211). Involved here, in part, is the fundamental question of whether it is reasonable or desirable to require or expect management to further actively *union* goals as well as *management* goals (40, 102). This situation becomes particularly complex if, as suggested by Whiting Williams, top union leaders are losing touch with rank and file—are "more concerned with increasing the vested security of their organizations, and enhancing their personal status and prestige" than "with

the freedom and all-around progress of their members" (161, p. 91).

Union, Management, and Other Views on Labor-Management Co-operation: Labor union leaders are themselves divided on how far the union should extend the area of formal co-operation with management (110, p. 297). In a five-year report on the operation of the Scanlon Plan at the Lapointe plant, Daigneault reports that it "has been criticized by officials of certain national unions on the ground that the local is identified more with management under the plan than it is with the national union" (32, p. 16). Dangers for the union are foreseen in an analysis of the union's role in industry by Tripp. According to the latter, "integrating the union into management decision-making and effectuation on any broad scale is inimical to the survival of unions and to demonstrated managerial values as well" (142, p. 107). In a further discussion of the scope and extent of union participation, Tripp suggests that the extreme forms of participation, which would establish collective management of an enterprise, "may involve unions in responsibilities and activities inimical to their survival as worker-protective agents. Strains and conflicts created within their ranks as they assume authoritative and directing functions may break down their cohesiveness in aggressive and defensive moves in worker interest. In short, the new boss will have the same unpleasant duties and may attract a similar reaction as did the old boss" (142, p. 98).

Management support—particularly top-management support—has been a potent factor in the initiation and continuation of labor-management co-operation in individual plants. As shown in Figure 40, support for joint consultation in British industry was strongest at the senior levels and became progressively weaker down through subordinate levels to that of foreman (103). However, there is also evidence of continuing strong skepticism on the part of management representatives and others who have given consideration to the methods and role of labor-management co-operation. Thus from a study of joint consultation in three British firms, also sponsored by the Human Factors Panel of the Committee on Industrial Productivity, Scott (126), a sociologist, reaches conclusions which are far more critical of this process than do those responsible for the larger investigation (103). Scott notes, as did the latter, that "workers' assessment of the achievements of joint consultation is hardly inspiring" (126, p. 72). Attention is called to "a marked feeling that the machinery was rather cumbersome and ineffective in its working" (126, p. 72). Of particular significance is the observation that "joint consultation has had little influence on established relationships, whether these exist between persons at different levels in the line organization, between

supervisors and workpeople, between representatives and their constituents, or between the members of various groups of employees. Indeed, in some cases, it may have led to a deterioration of such relationships, as for example between junior management and their superiors, or between supervision and representatives, or even perhaps between rank and file employees and their chargehands and foremen" (126, p. 151).

Further evidence of skepticism concerning the concrete results of joint consultation is found in a survey of the experiences of 600 firms with "industrial democracy" reported by Brown and Howell-Everson (15) in 1950. A consideration of the plea for greater "union participation in management functions" by Lever and Goodell (81) leads Mason, of the Armstrong Cork Co., to raise a question on the extent to which joint production councils might prevent management from grappling with its "real problem," viz., how to continue the efficiency of a single line organization for planning and control under a formal system of union-management co-operation.

Underlying such questions, in part, is the fact, referred to by the Chairman of the Human Factors Panel of the Committee on Industrial Productivity of Great Britain, that "there has not yet been any broad and effective attack on the problem of how to create a true sense of participation in a common purpose while preserving a proper scope for the exercise of leadership and authority" (103, p. 8). There seems no question that behind management's reluctance to accept formal systems of joint consultation—particularly in the form of *union-management co-operation*—"is a concern for management's prerogatives or 'rights,' a fear that unless it can take action quickly, management will not be able to do the job effectively" (101, p. 230). As Chamberlain has suggested, "the prospect of a further sharing of the authority with labor may appear only as another turn of the screw" (3, p. 5) to management already fretting under a host of restrictions. There is also growing concern that union-management co-operation represents the "beginning of a major redistribution of control in private enterprise" (18, p. 62), and a step toward the socialization of industry (22).

THE SPECTRE OF "CO-DETERMINATION"

Such fears have been strengthened by the insistence in some quarters that there can be no genuine co-operation unless management accepts the union as a partner in solving all kinds of problems, e.g., marketing as well as production (26). Early in World War II, Walter Reuther urged that control of steel, autos, and other major industry be taken over by councils constituted of labor, management, and public members. Philip Murray has likened this plan to Germany's *co-determination* (3, 26, 86, 155),

which gives labor a share in the management of all private enterprise. At a CIO convention in New York, it was announced that union sharing in decision-making on prices, location, and size of plants, production levels, capital investments, and technological changes was a major goal of the CIO (114). According to Wolman, the climax of "the systematic and cumulative encroachment by unions on the rights and authority of management . . . may well be the condition called co-determination" (162, p. 33).

At this point, the question of union-management co-operation becomes one of a series of broader problems, having wide political and social significance, the scope of which extends beyond the sphere of psychology. Even in its narrower sense, union-management co-operation raises a question as to where the line of union influence on management decision should "be drawn to satisfy as many as possible of labor's legitimate aims, without creating a mountain of practical difficulties which will hamper the efficient conduct of the business in the best interests of employees, consumers, and employers—without interfering with the discharge by management of those functions for which management, not labor, is responsible" (128, p. IV). In the broader implications of co-determination, there are raised the wider questions of whether management—thoroughly convinced that it is making a useful contribution to the national welfare, and thoroughly devoted to the American economic and political system—should take the initiative in initiating or supporting a plan which can lead to a transformation of the American economic and political way of life.

Under these conditions it is not surprising that the reaction of executives is one of anxiety, not alone or even primarily because of loss of status and prestige for themselves, but because of deep convictions bearing upon the wider issue—upon the national welfare. It is to be anticipated that in the face of proposals calling for an increasing sharing of management functions with labor, management will reassert its responsibilities and point to its achievements in developing the national economy and in satisfying workers' needs and wants (128).

THE TRIANGLE IN THE USSR

The underlying problem was, in fact, foreseen by Sidney Webb, an outstanding spokesman for labor in England. "Under any social order from now to Utopia," wrote Webb in 1917, "management is indispensable and all-enduring" (154). An outstanding risk in union-management co-operation, carried to the extreme, is the loss of the values represented in talented leadership and the transformation of the factory into a debating society. The reality of this danger is apparent from a consideration of

USSR experience with so-called "triangular management"—with responsibility shared jointly by a factory manager, a union representative, and a government representative. Reviewing this situation in 1932, Stalin declared, "We cannot any longer put up with our factories being transformed from productive organizations into parliaments. Our Party and Labor Union organizations must at length understand that without ensuring one management and strict responsibility for work done we cannot solve the problems of reconstructing industry" (150, p. 257). By 1937, complete managerial control had been returned to the factory manager throughout the USSR. In 1944, the manager of the Ilyitch Plant is quoted by Edgar Snow as saying (in answer to a query bearing upon the role of the union in the direction of the plant)

> "We don't have such a system here any more. We find it neither necessary nor desirable. The workers do their job and I do mine. They don't interfere with management in any way. The Commissariat that hired me is my board but it doesn't tell how to run the plant, either. Does a good board in America interfere with the manager? Certainly not! That is why you have efficient factory operation there" (131, p. 145).

The position might well be taken that co-operative activity is necessarily impossible in a totalitarian state and that extensive sharing of responsibility can still succeed in a country with a democratic tradition. Nevertheless, there still remains the basic question of whether joint management or determination—at any executive or supervisory level—is a desirable condition for industrial leadership. Assessment of the potentialities and hazards of such division of responsibility—for all who share in the benefits of American industry—is a long-range problem which, like others, can be solved only by fact-finding and objective analysis and not by appeals to ideologies and to emotions. In this area, as in the case of other issues, solutions "must eventually be built up from all the little bits of experience wherever people are consciously trying to solve problems of relations."

THE DISCOVERY OF MANAGEMENT IN THE UNITED STATES

To the above statement, made by Follett in the second decade of the century, was added the comment: "And this attempt is being made more consciously in business than anywhere else . . . among business men (not all, but a few), I find the greatest vitality of thinking to-day." [12] Support of this view is found, more recently, in Selekman's statement that "recognition of individual and social welfare as a component of shop management is much more prevalent than many business executives themselves are inclined to think" (3, p. 2). This view of management

[12] Cited from Dale (33, p. 175).

in American industry is confirmed in reports by European productivity teams, composed of hand-picked business men, technicians, educators, workers, and union officials, who have been touring American industry under the Marshall Plan. Instead of gadgets and techniques, according to a report by Drucker (39), they have found that an "attitude of mind" accounts for American superiority in production. "Attitude of mind," as summarized by Drucker, includes attitudes toward job mobility, cooperation between stewards and foremen, a friendly and relaxed atmosphere in labor negotiation, a social viewpoint in industry, an acceptance of the principle that rewards must parallel contributions to productive efficiency, etc. But, above all, credit is given to the American's discovery of the central role of good management in industry. The main impression of his team was summed up by a French manufacturer in the statement: "The United States has made a major discovery—that it is management that makes the wheels go round." From a group of British labor leaders came the statement: "We are convinced that it is efficient management who set the pace of productivity in American industry . . . American trades union officials can rely on management to be sufficiently progressive" (39, p. 35). Even more colorful is the statement made by the chief of Australia's biggest single union upon a return from the United States in 1951 as the guest of the AFL: "I wouldn't want anything so awful to happen to your country, but I'm convinced that if American and Australian industry were to swap managements, our production would go up and yours would come down" (104, p. 74).

There seems every reason for the opinion that such comments—on the quality of industrial leadership in this country—are well merited. On the other hand, as is clear from the materials in this book, management—even progressive management—still has much to do in order to achieve maximum gains for all who share in the benefits of the American economic system. There seems reason to recall that the long record of human society shows work—economic activity—to be at the basis of its development. Upon work depend all other pursuits of man. Hence, the permanence of a social system—of a civilization—is determined by its ability to maintain and direct to its desired ends the will-to-work. Here is the continuing challenge which management in modern industry must face!

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