



UNIVERSITY OF MINNESOTA

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*A Definition
of
Work Adjustment*

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This Bulletin is dedicated to Professor Donald G. Paterson who retires from the University of Minnesota faculty in June of this year. After his early career of important achievements at the Ohio State University, in the U. S. Army, and in the Scott Company, Professor Paterson came to the University of Minnesota in 1921 with the intention of devoting himself to the development of applied psychology. His impact has been tremendous.

Among his many accomplishments are: a personal publication rate of one publication every two months over his career to date as a psychologist; service as secretary of the American Psychological Association for six years; founding and actively participating in the Minnesota Employment Stabilization Research Institute; and actively working as a founder and active member of the Industrial Relations Center.

Most important, Professor Paterson has served as the major adviser to more than 90 Ph.D. students and approximately 200 Masters degree students. The authors of the present Bulletin owe their training and interest in applied psychology to Professor Paterson. We are happy to report that he will continue to serve the IRC in an advisory capacity.

T.B.S.	R.V.D.
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Overview

The development of a research framework within which rehabilitation outcomes can be studied meaningfully requires a comprehensive definition of work adjustment. The following major conclusions from the literature provide a conceptual basis for studying rehabilitation, occupational, and counseling outcomes.

1. Work adjustment is inferred from two primary sets of indicators: "satisfaction" and "satisfactoriness." "Satisfaction" includes overall job satisfaction and satisfaction with various aspects of the individual's work environment (his supervisor, his co-workers, the company or institution for which he works, his working conditions, his hours of work, his pay, and the type of work in which he is engaged). It includes the satisfaction of his needs and the fulfillment of his aspirations and expectations. It includes the congruence of his vocational interests with the interests of most "successful" people working in his occupation. "Satisfactoriness" is indicated by his productivity and efficiency, and by the way he is regarded by his supervisor, co-workers, and the company or institution for which he works. It is negatively indicated by his absences and tardiness, by the accidents that he has, and by his ability to stay on the job for a satisfactory period of time. It is also indicated by the congruence of his abilities and skills with those demanded by the job.

2. The individual should be the basic unit in the study of work adjustment. While group comparisons are enlightening, differences among individuals and differences within the individual may be more significant. These possibilities emphasize the need for studies of individuals.

3. Work adjustment occurs over a period of time. Actually, the working years of an individual constitute the period during which work adjustment takes place. "Satisfaction" and "satisfactoriness" may differ in the same individual for different periods of time. There may be cycles of satisfaction and dissatisfaction, and cycles of satisfactoriness and unsatisfactoriness in the work history of the individual. Changes in satisfaction and satisfactoriness may be the more significant aspects of work adjustment. Consideration of the requirement of reliability in measurement also argues for long-term study of individuals.

4. Work adjustment patterns may differ for different occupations. The set of criteria that is relevant may differ from occupation to

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occupation. Even if the set of relevant criteria were the same, the pattern of interrelationships among the criteria may differ from occupation to occupation.

5. The study of interrelationships among criteria is probably the most neglected aspect of research in this field. The potential rewards of such study are very attractive when it is considered that it might be possible to determine a minimum number of criterion variables that would account for most of the variability in work adjustment. It is quite obvious that rehabilitation, occupational and counseling research would be greatly facilitated by such a development.

6. Work adjustment is likely to be affected by such factors as the individual's age, sex, education, training, personality, and adjustment outside the work situation. The same degrees of satisfaction and/or satisfactoriness conceivably may reflect different degrees of work adjustment for different ages or sexes, or levels of educational attainment, etc. Consideration of these correlates is necessary to an adequate understanding of work adjustment.

A Definition of Work Adjustment

I. Introduction

Bulletin I of the *Minnesota Studies in Vocational Rehabilitation* presented an annotated bibliography of evaluation studies in vocational rehabilitation. This bibliography brought to light the paucity of research on evaluation or outcome criteria, not only in vocational rehabilitation, but even in the field of counseling. Since many (if not most) research problems in vocational rehabilitation involve evaluation criteria, it became apparent to the research staff of the Vocational Rehabilitation Research Laboratory in the Industrial Relations Center that progress in vocational rehabilitation research could be made more rapidly after intensive study of the criterion problem. Consequently, this problem was designated the core research problem for the laboratory.

To set the stage for research planning, past research involving the use of evaluation criteria was reviewed. It included literature on criteria used in vocational rehabilitation and in several fields of applied psychology (counseling, industrial, personnel, occupational and vocational psychology). The review also included literature on the more commonly used economic and sociological criteria.

From this review the concept of "work adjustment" was developed to designate the general area encompassing evaluation criteria. This concept seems to be particularly relevant to the evaluation of vocational rehabilitation outcomes. For example, the effectiveness of vocational rehabilitation counseling techniques might be assessed by the subsequent "work adjustment" of counselees.

The appropriateness of "work adjustment" as a concept integrating the various evaluation criteria is strongly suggested by the research literature. Studies of job satisfaction show there are many workers who are dissatisfied for different reasons. Studies of vocational choice show there are those who would prefer working at jobs different from the ones they have. Attitude studies and studies of industrial conflict frequently point toward various areas of low morale among workers. Counseling interviews and exit-interviews have uncovered a variety of adjustment difficulties that concern workers. Studies of productivity and efficiency reveal wide differences in job performance. Job mobility studies show a diversity of work history patterns. Work and the worker do not always "fit."

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"Work adjustment" conveys a broader meaning than the adjustment of an individual to his specific job tasks. It is the adjustment of the individual to his world of work. It includes the adjustment of the individual to the variety of environmental factors that surround him in his work, his adjustment to changes in these factors over periods of time, and his adjustment to his own characteristics. Thus, the adjustment of the individual to his employer, his supervisor, his co-workers, as well as to the demands of the job itself, his adjustment to changing job market conditions, and his adjustment to his own aptitudes, interests, and temperament are all encompassed in the concept of work adjustment.

However, arriving at some conceptual notions regarding work adjustment is only a preliminary step in the research process. It is necessary to define the concept more rigorously if it is to aid substantially in the planning of research. It is necessary to define the concept in operational terms, that is, in terms of the specific variables, instruments, and procedures that actually can be used in research.

This bulletin reviews the different variables that have been used to indicate various facets of work adjustment. The instruments used to measure these variables are evaluated, and their correlates are examined. Then a research-oriented definition of "work adjustment" is developed in terms of variables, instruments, and procedures.

The bulletin is organized around the literature—psychological, sociological, and economic—which appears to be pertinent to the definition of the concept of work adjustment described above. Part II reviews the literature on job satisfaction. Part III discusses studies on morale and employee attitudes. Part IV presents related literature on the topic of worker motivation. The literature on behavioral criteria is the subject of Part V. Part VI discusses vocational fitness as an indicator of work adjustment. Finally, what has been learned from the literature is summarized in Part VII, and a research definition of work adjustment is advanced.

II. The Literature on Job Satisfaction

The development of a definition of work adjustment might profit by a suggestion from Heron (1954c). Heron speaks of two complementary aspects of occupational adjustment: satisfaction and satisfactoriness. The former views adjustment from the individual's (i.e., the worker's) vantage point; the latter looks at adjustment "from the outside," that is, from the employer's viewpoint or from an expert's point of view.

Important indicators of work adjustment, therefore, might be found in the literature on job satisfaction.

One problem is readily apparent from even a cursory survey of the literature on job satisfaction. Hoppock, in *Job Satisfaction* (1935), reviews 32 studies done prior to 1933 and remarks that although there was much opinion about job satisfaction, there were not too many "factual" studies. Some twenty years later, Stagner, Flebbs, and Wood comment: "The number of studies dealing with job satisfaction has become so large that the newcomer to the field may well be appalled" (1952, p. 293). Current reviews (e.g., Robinson, 1956; 1957; 1959) are convincing testimony to the extraordinary volume of job satisfaction literature.

Another problem that confronts the reviewer of job satisfaction research is the increasing tendency in recent years toward ambiguity in defining "job satisfaction" and the use of this term interchangeably with "morale" and "employee attitudes." Some writers carefully distinguish between job satisfaction and morale, usually on the basis of reference to the work group. For example, Blum (1956) differentiates these terms, defining "job satisfaction" as referring to over-all attitudes about (a) the job, (b) factors related to the job, and (c) life-in-general, and "industrial morale" as a "by-product of a group," a "feeling of group solidarity; need for a goal; observable progress toward that goal; and individual participation in meaningful tasks necessary to achieving the goal" (1956, pp. 125-126). Strong (1958) also states a preference for using "job satisfaction" in reference to the individual, and "morale" when talking of the group. He refers to job satisfaction and morale as "two attitudes toward one's job."

Katzell (1958), on the other hand, regards job satisfaction as a necessary and integral part of morale. He advises that measures of

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job satisfaction be designed to get information relevant to the hypothetical construct "morale" rather than being a "catch-all of questions about this or that" (1958, p. 74).

In striving toward a definition of work adjustment that includes job satisfaction, it might be enlightening to begin with an examination of the various ways by which job satisfaction is measured.

The measurement of job satisfaction—Brayfield and Crockett assert, "... we have found it necessary to assume that the measuring operations define the variables involved" (1955, p. 397). Blum expresses this opinion: "Reviewing the many studies in the area almost leads one to the conclusion that job satisfaction is anything that an author measures when he thinks he is measuring job satisfaction" (1956, p. 124). It would seem, from these comments, that any satisfactory definition of job satisfaction would depend on an analysis of the measures used and their correlates.

Studies reviewed by Hoppock (1935) used several types of measures to get at job satisfaction. Some of the pre-Hoppock investigators used lists of attitude statements to get a total attitude score. Others used observation, checklists of likes and dislikes, interest measures, interviews, and self-ratings of satisfaction about certain areas or jobs.

What are job satisfaction measures supposed to investigate? Hoppock (1935) states that measures can be (a) about the job as a whole, or (b) about different aspects of the job. With the first alternative, the individual makes a global decision based on the factors he considers relevant. While these factors may actually differ and/or vary in importance with different individuals, Hoppock believes that the individual's over-all feeling may be more meaningful than some system of weighting the various factors. He feels that the weighting of different job aspects in a predetermined manner does not reflect the significance of these aspects to the individual. Hoppock also feels that "the mere summation of satisfaction with various aspects of the job is not equivalent to satisfaction with the job as a whole" (1935, p. 274). He points out that job satisfaction, while depending on many aspects of the job, could be thought of as one variable.

Hoppock mentions two methodological problems: (a) developing a technique of measurement independent of the worker's willingness to tell the truth, and (b) obtaining a sample representative of all occupations and ages. He states that no earlier study (prior to 1933) overcame these problems, and he himself did not solve the first

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problem. (The first problem may have no solution aside from taking those steps that would appear to yield maximum cooperation with the investigators.)

From his own observations, Hoppock concludes: "When the individual is better off than his neighbor, he is satisfied and when he is worse off, he is dissatisfied" (1935, p. 10). Hoppock also feels that most individuals end up in a job area that at least partially agrees with them, although he admits that satisfaction at the time of his study—1933—undoubtedly depended to a large extent on simply having a job.

Hoppock's job satisfaction blank (1935) has four 7-choice items asking how the individual liked his job, how much of the time he felt satisfied with his job, how he felt about changing his job, and how he felt he compared with other people in relation to satisfaction with their jobs. One question compares satisfaction with one's job with the things he does in his spare time. Another asks about his choice of "all the jobs in the world." Two questions ask about changing jobs. The last question is: "Are your feelings today a true sample of the way you usually feel about your job?" The corrected reliability reported for this scale was .83, only .04 lower than that of Hoppock's earlier, 100-item questionnaire.

Post-Hoppock measures of job satisfaction are not much different from the earlier types. It is questionable whether any of them improve on the Hoppock blank for getting the information wanted. For example, in spite of its more sophisticated development, the Brayfield-Rothe scale of 18 Likert-type items correlated .92 with the Hoppock scale for a group of employed persons in a personnel psychology class (Brayfield and Rothe, 1951).

The underlying rationale of the Brayfield-Rothe blank differs somewhat from Hoppock's reasoning. The expressed approach of Brayfield and Rothe centers on the assumption that job satisfaction can be inferred from a "quantification of the expression of feeling" toward work (1951, p. 307). They state a preference for an index of "over-all" job satisfaction rather than sub-indices of specific aspects of the job situation. (In this respect, they are in agreement with Hoppock.) Brayfield and Rothe's items reflect this preference for an "over-all" index, as in, for example: "My job is like a hobby to me," and "Each day of work seems like it will never end."

Other requirements for a job satisfaction scale, according to Brayfield and Rothe, include: (a) applicability to a wide variety of jobs, (b) sensitivity to variations in attitudes, (c) ability to evoke

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cooperation from both management and workers, (d) reliability, and (e) validity. (Blum [1956] notes that reliability and validity, essential qualities of any measuring instruments, are often overlooked in job satisfaction measures.)

Other job satisfaction instruments include the Kerr Tear Ballot, Johnson's questionnaire, and Morse's job satisfaction indices. The Kerr Tear Ballot (Kerr, 1948) has ten 5-point items that are answered, anonymously, by making a tear at one of the five points. These items cover such areas as attitudes toward supervision, working conditions, co-workers, income, security, and the company in general. For example, two of the items are: "Do you have confidence in the *good sense of the management?*" and "What effect is your experience with the company having upon your personal happiness?" Kerr reports corrected split-half reliabilities of .65 to .82 with a median of .75. Most studies using this instrument compare Tear Ballot scores to such behavioral criteria as turnover and job tenure, frequently resulting in significant correlations.

Johnson (1955) developed a 99-item questionnaire on job satisfaction covering several work-related factors and primarily designed for use with teachers. He refers to the instrument as an "adjustment questionnaire" designed for "complete coverage of the factors and conditions influencing adjustment to work life" (1955, p. 29). Validity is inferred from the construction of the instrument, that is, from "a logical analysis" of existing scale items and job satisfaction literature, from ratings by ten judges, and from work characteristics rated important by teachers. Johnson reports a test-retest reliability of .90 and a correlation of .64 with self-estimates of job satisfaction for a group of 98 teachers.

Morse (1953) reports the use of four 4-item satisfaction indices derived from items used in a structured interview situation. Each item correlated highly with the other three items in its group. Morse states: "This method of developing measures makes the assumption that the items chosen for one index are all measuring the psychological variable which was originally defined" (1953, p. 14). Morse was interested in judging organizational effectiveness using employee satisfaction as a criterion. Although she had positive results, she points to the lack of "operational independence" in her technique of measuring need-satisfaction and selecting conditions contributing to need-satisfaction from interviews with the same people.

The problem of over-all job satisfaction vs. satisfaction with different aspects of the job deserves some additional consideration.

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Factor analytic studies might throw some light on this problem.¹ For instance, Schreiber, Smith, and Harrell (1952) factor-analyzed data on five areas of job satisfaction and ended up with a two-factor classification: (a) job satisfaction and (b) knowledge of employee benefits. "Job satisfaction" included items from many areas, but had a concentration of items related to supervision.

Twery, Schmid, and Wrigley (1958), using a job satisfaction inventory with Air Force personnel, compared three methods of factor analysis that resulted in these five factors in common: (a) general attitude toward the job, (b) satisfaction with the supervisor, (c) satisfaction with the higher echelon, (d) satisfaction with living conditions, and (e) satisfaction with co-workers. In addition, the investigators found a tendency for a monotony-variety factor to emerge.

Bullock expresses job satisfaction as an attitude resulting from a "balancing and summation of many specific likes and dislikes experienced in connection with the job" (1952, p. 7). An evaluation of the job and the company by the worker is the job satisfaction attitude. Thus, according to Bullock, the worker may dislike the major portion of his work but have a favorable attitude toward the job when he feels he is attaining desired goals.

The studies cited suggest that for purposes of studying work adjustment it might be advantageous to have (a) a measure of over-all job satisfaction (such as Hoppock's scale) and (b) measures of satisfaction with the different aspects of the job.

Several other problems are involved in the measurement of job satisfaction besides those indicated above. Rosen and Rosen (1955) question the assumption frequently made by investigators that job satisfaction items about the same subject are equivalent even though these items may be worded differently. They worded items in three different ways, designed to investigate "standards, perception, and evaluation." The varied wordings stressed, respectively, (a) what ought to be done, (b) what was seen as being done, and (c) feelings about what was seen as being done. Their rationale was that ". . . satisfaction and dissatisfaction are related to the extent to which desires are perceived as being met" (1955, p. 305). From their study of union members they concluded that it is not advisable to treat answers to different-type questions as equivalent.

Strong (1958) questions the use of indirect items in job satisfaction measures. He suggests that the individual be asked whether or

1. For other factor analytic studies of employee attitudes see pp. 24-25, 26-27.

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not he is satisfied with whatever factors are relevant to the situation being investigated. Weitz and Nuckols (1953) compared direct and indirect items in measuring job satisfaction and concluded that there was no advantage in using indirect items because direct items did as well or better in predicting job tenure. Also, direct items were less affected by the "halo" effect.

The most difficult problem, however, remains the problem of validation. Brayfield and Crockett comment: "Usually employee attitude indices are assumed to have some form of face validity; empirical validation is seldom attempted. The reader is expected to assume that the questionnaires measure what they are intended to measure" (1955, p. 411). Strong (1955, 1958) mentions the problem of establishing criterion groups for interest measures on the basis of "satisfaction," and notes that this problem persists for the empirical validation of job satisfaction measures.

Many studies separate the satisfied from the dissatisfied on the basis of scores on job satisfaction measures. In such cases job satisfaction is the independent variable, and the assumption is that the measurement taken actually means job satisfaction. For example, Stagner, Rich, and Britton (1941) classified the highly satisfied and the highly dissatisfied on the basis of an orally-administered 34-item questionnaire with the answers recorded on a 5-point scale from an "emphatic yes" to "emphatic no." These groups were then compared on such variables as estimated age, number of dependents, and length of service. Older workers and those with three or more dependents were more satisfied. Length of service did not follow the age trend.

Other studies use job satisfaction as the dependent variable. For example, Bullock (1952) separated various groups and compared them on job satisfaction scores. These groups include: (a) employees vs. ex-employees; (b) those rated satisfied on the basis of personnel records vs. those rated dissatisfied, and (c) those who recently received a pay raise or promotion and those who recommended the company to their friends vs. those who were looking for another job. Statistically significant differences in job satisfaction scores (on a modified Hoppock questionnaire) were obtained between groups. The differences were uniformly in favor of those groups hypothesized to be the more satisfied.

Factors and correlates of job satisfaction—Bullock's study is noteworthy as being one of the few attempts at the validation of a job satisfaction measure. Because of the paucity of validation stud-

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les in job satisfaction research, the significance of job satisfaction as an indicator of work adjustment might be understood best through a study of the factors and correlates of job satisfaction. Even in this respect, unfortunately, the voluminous literature on job satisfaction seems to be of limited assistance. A current complaint is that even recent studies, though based on facts, contribute little other than relationships between one or at most a few variables and job satisfaction. Strong (1958) states that most job satisfaction studies utilize inadequate measures in the first place, then pay little or no attention to the relationships between the factors studied. He cautions, "We need to develop adequate measures of each factor and determine the relationship to an adequate criterion before attempting a summary of all factors" (1958, p. 451). Katzell, having asserted that job satisfaction is a relevant part of morale, states: "*The measurement of morale is, then, a manifold. We must endeavor to measure each of the several variables and attributes that are comprised in our conceptual network, and to ascertain their inter-relations*" (1958, p. 73). Brayfield and Crockett comment: "Only infrequently are discussions of the correlates of employee attitudes found and these are almost never substantiated by empirical evidence" (1955, p. 396).

What are the factors of job satisfaction that appear in investigations and reviews of this topic? The factor analytic studies by Schreiber, Smith, and Harrell (1952) and by Twery, Schmid, and Wrigley (1958) have been mentioned. Hoppock (1935), from his study of satisfied and dissatisfied teachers, decided there were six major factors in job satisfaction: (a) manner of response of the individual to unpleasant situations; (b) adjustment of the individual to others both on and off the job; (c) status of the individual compared to status of others in his socio-economic group; (d) nature of the work in relation to the abilities, interests, and training of the individual; (e) desire of the individual for economic and social security; and, (f) loyalty of the individual as a worker to interests beyond his own. Factor (b) includes adjustment to co-workers and factor (f) includes attitudes toward management and the company, two aspects of the work situation mentioned frequently in other studies.

Morse (1953) states that job satisfaction depends on (a) job content, (b) identification with the company, (c) financial and job status, and (d) pride-in-group performance.

Worthy (1950a; 1950b) reports a study for Sears Roebuck, com-

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paring groups of employees in different geographical areas. Using a tailor-made questionnaire, these factors were investigated: company in general, the local organization, local management, immediate supervision, co-workers, and working conditions. The questionnaire was supplemented by interviews. Worthy comments: ". . . studies indicate the existence of a highly complex set of interdependent factors which combine in subtle and obscure ways to produce a particular level of employee satisfaction or dissatisfaction" (1950a, p. 65). For example, he notes that when jobs were organized into small units (i.e., "over-specialization"), the job itself lost importance as a factor in satisfaction, and pay increased in importance.

Grove and Kerr (1951) ran intercorrelations on ten aspects of job satisfaction and concluded that "wages" and "liking for work associates" seemed to be the major components of the worker's job satisfaction.

The importance of the job itself in determining job satisfaction may be inferred from the findings and comments of many writers. Kristy (1952) considers satisfaction with the physical demands of the job in relation to the rewards as one component of job satisfaction. Hoppock and Super (1950) point out that there are irritations and disadvantages with any job that the worker must feel are worth enduring, and men feel better about their job when they choose it because of inherent interest in the work itself. The *Fortune* Survey (Roper, 1947c) found that feelings of being over-worked, added to other sources of dissatisfaction, led to over-all job dissatisfaction. Morse (1953) refers to "intrinsic job satisfaction," i.e., satisfaction with the work itself. Heron (1954c) also used "intrinsic liking for the work itself" as one "positive element" of his satisfaction criterion.

A related study by M. Hammond (1954) asked college freshmen what they rated important for success and satisfaction later in life. A 90-item questionnaire was developed from the answers given. The questionnaire was factor analyzed, resulting in the following five group factors: (a) financial success, (b) personal-social success, (c) technical satisfaction, (d) social-contact satisfaction, and (e) social-service satisfaction.

Another type of study is that which has the individual doing his own ranking of factors, or asks the worker questions concerning what he likes about his work situation, what satisfies and dissatisfies him, what he expects from the work environment, or why he is

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leaving his present job. These studies also result in lists of factors regarded by the worker as important in his job environment.

Jurgensen (1947; 1948), using a ten-factor questionnaire, had job applicants rank these factors in order of their importance. With approximately 4,000 applicants, the factors were ranked in the following order for the men: (a) job security, (b) opportunity for advancement, (c) type of work, (d) pride in company, (e & f, tie) pay and co-workers, (g) supervisor, (h) hours, (i) working conditions, (j) benefits. Women differed from men in that they ranked type of work first, followed by security and advancement. Jurgensen also tabled rankings by age, educational level, and occupational sub-groups.

Blum and Russ (1942) and Blum (1956) report other studies of expressed importance of job factors. Men stated preferences in the following order: (a) advancement, (b) security, (c) salary, (d) supervision, and (e) hours. Women had similar preferences except for a change in rank between supervision and salary, ranking the former as more important. Advancement was also relatively more important to large firm employees than to small firm employees. Desire for advancement was related to educational level in the expected direction.

Stagner, Flebbs, and Wood (1952) studied job satisfaction in railroad employees and found that these workers ranked "general qualities of supervision" as one important factor in job satisfaction, while "rating of present supervisor" was ranked as a factor of less importance. Other important factors were union-management relations, handling of grievances, and general working conditions.

Krugman (1955) found that satisfied scientific personnel credited "team work" with playing a major role in their satisfaction. Working conditions and personal satisfaction were also important, and Krugman concluded that scientists have the same attitudes toward the working situation as other types of workers.

The General Motors "My Job Contest" reported by Evans and Laseau (1950), used another method for investigating job factors considered important by the workers. Themes of the relatively unstructured "stories" on "My Job and Why I Like It" were tabulated and the most frequently mentioned (these were mentioned by at least 30% of the participants) were: (a) income, (b) interesting and important job, (c) pride in company, (d) fellow-workers, (e) immediate boss, (f) management, (g) working conditions, (h) se-

curity, (i) chance to get ahead, (j) benefit plans, and (k) safety and medical facilities.

Exit interview studies and those asking "why did you leave your last job" also list factors connected with reported sources of dissatisfaction. Smith and Kerr (1953) did a topical analysis of exit interviews from 48 companies and tabulated the sources of dissatisfaction. "Pay grievances" were mentioned twice as frequently as any other complaints. After pay, and in order, came "transportation, promotion, working conditions, poor health, job security, co-workers, housing, the job, supervision, confidence in management, interest in employee welfare, freedom of communication with higher levels, recreation, and method of wage payment" (1953, pp. 344-345).

Palmer, Purpus, and Stockford (1944) question whether exit interviews obtain honest and reliable answers to why workers quit. Furthermore, to Palmer, *et al.*, most analyses of reasons get at "apparent reasons" or symptoms and not the "real reasons" or causes of voluntary job termination. They believe it is necessary to interview the worker *after* he has left the job, not while he is leaving. They interviewed 421 ex-aircraft industry employees two to four weeks after quitting, grouping their reasons as either "occupational" or "personal." Occupational reasons, in order of frequency of mention and representing 48% of all reasons were: "*placement, desire to take another job, general dissatisfaction, wages, shift, excessively heavy work, supervision, and working conditions*" (1944, p. 114). The personal reasons (the remaining 52%) were: "*health, child care, transportation, and home responsibilities*" (1944, p. 114). Reasons for leaving were primarily occupational for men, primarily personal for women.

Reynolds and Shister (1949) investigated job satisfaction by asking workers why they left their previous job, and for what reasons they were satisfied or dissatisfied with their present job. Essentially the same reasons were given for leaving the last job and for current dissatisfaction. The five factors of primary importance to satisfaction were: (a) physical characteristics of the job; (b) closeness of supervision; (c) adequacy of wages; (d) treatment by the company; and (e) intrinsic interest in the work. Job security was generally important to satisfaction, and wages were given more often as a source of dissatisfaction. Interest in the work included being allowed to use one's skills.

The studies reviewed above emphasize the importance of including measures of satisfaction with various job factors as indicators of

work adjustment. The important job factors seem to be the following: (a) pay, (b) co-workers, (c) supervision, (d) type of work (job demands or intrinsic job satisfaction), (e) working conditions, (f) identification with company, (g) over-all job satisfaction, (h) security, (i) management, and (j) opportunity for advancement.

Studies on the correlates of job satisfaction indicate the desirability of including these variables in the study of work adjustment. As noted earlier, Jurgensen (1947) and Blum and Russ (1942) found some differences between men and women in their job factor preferences. Herzberg, Mausner, Peterson, and Capwell (1957) report that of 14 studies they reviewed, six showed women more satisfied with their jobs than men, three showed men more satisfied, and five showed no sex differences in job satisfaction. Brayfield, *et al.*, (1957) found a difference between men and women in the relationship of general satisfaction level to job satisfaction. Strong (1958) goes as far as to question the practice of using the same measuring tool to determine satisfaction of both men and women since the requirements for satisfaction may differ with the sexes.

Age is another correlate that must be considered. Super (1939) found satisfaction in the 20 to 24 age group, dissatisfaction between 25 and 34, satisfaction from 35 to 44, then another decrease in satisfaction with ages from 40 to 54. Heron (1954c) found no such cyclical changes in satisfaction with age, although he did find a slight and significant correlation between job satisfaction and age. Herzberg, *et al.*, (1957) conclude from their review of the literature, that age trends in satisfaction persist even with length of service held constant.

Education has been mentioned as another correlate. Jurgensen (1947) reports that changes in job factor preferences were affected more by educational level than by age. Changes with age were not linear.

Vollmar and Kinney (1955) investigated the relationship of age and education to job satisfaction. They found that more dissatisfaction was expressed in higher educational level groups. The younger the worker, regardless of educational level, the more the expressed dissatisfaction. Vollmar and Kinney concluded that education was probably more important than age in job satisfaction because of the expectations of the workers. Those with college education expected more from work than those with high school and grammar school educations.

Schreiber, Smith, and Harrell (1952) found that education was

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related to the feeling of ability to advance; freedom in doing one's job was related to freedom in expressing dissatisfaction; and satisfaction with tools and equipment was related to lack of grievances. They also found that quality of supervision was related to job satisfaction.

In their review of job attitude research, Herzberg, et al., (1957) summarize research on characteristics of dissatisfied workers. The major characteristics reviewed include age, sex, education, intelligence, personality and adjustment, occupation, length of service, income and position, marital status and number of dependents, work history, geographic location, physical disability, social class, and ethnic group.

Super (1939) investigated the relationship of occupational level to job satisfaction. He classified jobs into six levels from professional at the top to unskilled at the bottom. The relationship was not quite linear. For example, the higher level blue collar workers scored higher in "satisfaction" than did low-level white collar workers. Several studies since Super's also have shown increased satisfaction with higher prestige jobs (Centers, 1948; Roper, 1947a; Strong, 1955).

Centers' (1948) study on the "motivational aspects of occupational stratification" was based on the hypothesis that the individual's satisfactions, desires, aspirations, and goals are conditioned or determined by his present role and level of achievement. He found that the frequency of job dissatisfaction differed for groups of workers at different occupational levels. In addition, stated causes of satisfaction or dissatisfaction and what the workers desired in their jobs were found to vary with occupational level.

Since the pay continuum correlates highly with the prestige continuum over the entire range, pay, too, has been found related to job satisfaction. Stagner, Rich, and Britton (1941), for example, found attitude toward pay to be the most important factor in distinguishing highly satisfied and highly dissatisfied defense workers. Although several writers begrudge the importance of economic factors, stressing that the old idea of "the economic man" is erroneous, the pay factor appears consistently in most lists of job satisfaction factors. Some of the complexity involved with the pay factor is illustrated in the *Fortune* Survey (Roper, 1947a) that found differences in the relative importance of income and security for employees at different occupational levels.

Using liberal arts graduates for subjects, Inlow (1951) found satisfaction related to the type of occupation, pay, job tenure, and

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job status. These correlates are not different from those investigated in other studies but, as with occupational level studies, the population being investigated can lead to differences in the relative importance of correlates.

Weitz and Nuckols (1955) investigated job satisfaction among life insurance company employees. They noted that training, supervision, and insecurity of new workers were related to dissatisfaction.

Van Zelst (1951), using a job satisfaction questionnaire and a fellow-employee-rating sheet on a sample of construction workers, found that job satisfaction and worker popularity correlated .82. The popular worker expressed much greater satisfaction than did the disliked worker.

McNaughton (1956) investigated the change of attitudes with time after quitting the job. The longer the period of time since quitting a job, the less interest in returning to that job. Also, the reasons for quitting change from "enticements" of other jobs to dissatisfactions with the old job as the period of time since quitting lengthens.

Is job satisfaction related to general satisfaction? Weitz (1952) proposes that job satisfaction be interpreted in light of a general satisfaction index. He hypothesizes that the worker with a high general dissatisfaction score is less likely to quit his job than one with low general dissatisfaction even though both have a large number of specific job dissatisfactions. He developed a Test of General Satisfaction and found that scores on this test correlated .39 with job satisfaction scores in the study reported.

Brayfield, Wells, and Strate (1957) studied the "interrelationships among measures of job satisfaction and general satisfaction." Using the Brayfield-Rothe job satisfaction inventory, the SRA Employee Inventory, the Rundquist-Sletto Morale Scale and the Weitz Test of General Satisfaction, they found a significant relation between job and general satisfaction for male workers, but not for female workers. With males, the Brayfield-Rothe scale correlated .32 with the General Satisfaction Test and .40 with the SRA inventory. With females, the respective correlations were .23 and .20. They interpreted this to mean that because work is important to men, job satisfaction can play a major role in general satisfaction. Since work is not the center of life for women, however, there is no relationship between job and general satisfaction. Brayfield, *et al.*, concluded that general satisfaction does not necessarily determine job satisfaction although job satisfaction may determine general satisfaction.

Woods (1944) surmised that a general satisfaction factor gov-

erned the elevation of the total profile of subscale scores on his job satisfaction scale, whereas the importance of various job factors underlay the relative positions of the subscale scores.

From the preceding review, the following observations relevant to a definition of work adjustment might be made:

1. The results of job satisfaction research sufficiently justify the inclusion of job satisfaction measures among the major indicators of work adjustment.

2. Two types of job satisfaction measures seem desirable: a measure of over-all job satisfaction, and a measure of satisfaction with specific job-related factors. The literature suggests a difference in results and conclusions from the use of these two types of measures. The need for more studies into the interrelationships among over-all job satisfaction and satisfaction with specific job-related factors is worth noting. It would seem advantageous to include both types of measures as indicators of work adjustment.

3. The job-related factors most frequently mentioned as significant to job satisfaction are pay, co-workers, supervision, type of work, working conditions, identification with the company, security, management, and opportunity for advancement. Job satisfaction measures designed to reflect satisfaction with specific job-related factors should include at least these factors.

4. The requirements of good measurement, such as reliability and validity, have often been overlooked by job satisfaction researchers. Methodological problems, such as item wording, also should be studied thoroughly. With respect to the choice between direct and indirect items, the evidence seems to favor the direct approach.

5. Several correlates of job satisfaction add to the meaning of work adjustment, and measures of these correlates might be considered as indicators of work adjustment. These include: (a) wage progression, (b) advancement within the company, (c) steadiness of employment, (d) turnover, (e) worker popularity, (f) grievances, and (g) the utilization of one's abilities.

6. Other correlates studied seem to be important to the understanding of job satisfaction and therefore of work adjustment. Some of these correlates are age, sex, education, occupation and occupational level, personality, general adjustment, and general satisfaction.

III. The Literature on Morale and Employee Attitudes

Another source of criteria and correlates for work adjustment is the literature on industrial morale and employee attitudes. This is indicated by the following comments on morale:

In a symposium on morale, Guion states: "Morale is the extent to which an individual's needs are satisfied and the extent to which the individual perceives that satisfaction as stemming from his total job situation" (1958, p. 627). Morale defined this way, Guion continues, has these five attributes: (a) it comprises many factors; (b) it is basically an attribute of the individual; (c) it exists in relation to the job; (d) it is a function of motivational forces; and (e) it applies to any employee at any level or in any job classification. According to Stagner (1958), in the same symposium, morale depends on the individual's perception of having his own motives satisfied through cooperation with the group. Katzell, also in this symposium, describes morale as "a condition of congruent motivation among members of a group, resulting in relatively high levels of energy expenditure toward common goals having positive valence" (1958, p. 73).

Since the publication of findings from the widely discussed Hawthorne experiments (Roethlisberger & Dickson, 1939), research on morale and employee attitudes has proliferated to extreme proportions. Research in this area has often overlapped with research on job satisfaction, probably because job satisfaction was presumed by many researchers to be one of the determinants or components of morale. The resulting confusion in terminology has already been noted in the preceding section.

It would seem from the many terminological discussions that the simplest distinction is, as Brayfield and Crockett (1955) note, that studies on morale deal with groups, while job satisfaction studies deal with individuals. Both morale and job satisfaction deal with employee attitudes.

This part of the bulletin reviews pertinent studies on morale and studies on employee attitudes which were not explicitly specified as studies of job satisfaction. Because of existing terminological difficulties, consideration of the ways by which morale and employee attitudes are measured seems to require initial attention.

The measurement of morale and employee attitudes—Measures of morale and employee attitudes may be classified in several ways.

