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between job satisfaction and life satisfaction. The possibility of applying results from this research to the task of improving life quality through changes in the work place is addressed. 

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Organizational Work and the Overall Quality of Life

Robert W. Rice

State University of New York at Buffalo

Technical Report ONR-2



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Organizational Work and the Overall Quality of Life

The research discussed in this chapter has sought to understand the role that organizational work plays in determining the overall quality of life (QL). My collaborators in this research have been Raymond G. Hunt, Janet P. Near, Dean B. McFarlin and the late C. Ann Smith. We view our research as "problem oriented research" (Deutsch, 1980) because it has implications for an important social problem, namely, improving QL. One major goal of our research has been to generate empirically grounded conceptual models that provide useful ways of thinking about the problem of improving QL through changes in the workplace. It is our hope that decision makers, armed with such theories and relevant data, will be able to improve QL both for those who work in organizations and for those who share their lives with such workers.

PLAN OF THE CHAPTER

The plan for this chapter is to: (1) define organizational work, (2) define QL, (3) consider the bases for predicting that organizational work has some influence on QL, (4) review the findings of our empirical research on the job satisfaction-life satisfaction relationship, (5) present several propositions from our emerging conceptual framework of organizational work influences on QL, and finally (6) consider the possibilities of applying this research to the task of improving QL through changes in the workplace.

ORGANIZATIONAL WORK

Philosophers, behavioral scientists, and social commentators of assorted varieties have long grappled with the task of defining work (e.g., Kahn, 1972, 1981; Neff, 1977; Tilgher, 1930). Based on such discussions, we have adopted the following definition of organizational work.

Definition 1. Organizational work refers to human activities, within the context of formal work organizations, performed with the intention of producing something of acknowledged social value.

This definition of organizational work is modeled after the definitions of work offered by Kahn (1981) and by the Special Task Force that prepared the Work in America (1973) report. Their concept of "acknowledged social value" is included in our definition of organizational work because it recognizes that not all work is performed for money. Other outcomes of value can also motivate work activities.

We added the idea of "intention" to the Kahn (1981) and Work in America (1973) definitions because this concept recognizes that one need not successfully produce something of value to qualify as a worker. Activities would qualify as work under our definition as long as the person intended to produce something of value. The definitions offered by Kahn and by the Special Task Force imply that only activities leading to the successful achievement of valued products can be considered as work.

For most people, organizational work takes the form of paid employment. However, unpaid volunteer work at a hospital would ^{also} qualify as organizational work because of the setting in which it occurs. On the other hand, work activities such as tending one's children, preparing meals for one's family, or cleaning and repairing one's house would not qualify as organizational work because these work activities do not occur within the context of formal work organizations.

Because the present volume is devoted to applications of social psychology to organizational settings, it is appropriate to limit our focus to work activities that occur within the context of formal organizations. Furthermore, most of our empirical research has been limited to this particular type of work. The analysis of QL effects associated with other types of work (e.g., child rearing and housework) must remain a task for future research.

QUALITY OF LIFE

We turn our attention now to the second term in our title: quality of life (QL). This term has become common in contemporary American speech. We hear it mentioned by politicians, media broadcasters, managers, and academics. Mayo and LaFrance (1980) proposed that an "applicable" social psychology "must be concerned with improving the quality of life" (p. 82). Unfortunately for efforts to move social psychology in such a direction, Mayo and LaFrance offered no conception definition of this important term. They simply invited researchers interested in an applicable social psychology to debate among themselves "what in fact are the specifics of quality of life and its improvement" (p. 84). In accepting Mayo and LaFrance's (1980) challenge, the following conceptual definition of QL is offered.

Definition 2. The quality of life is the degree to which the experience of an individual's life satisfies his/her personal wants and needs (both physical and psychological).¹

Szalai (1980) nicely captured the general meaning of QL when he noted that QL is essentially the answer to the question "How are you?" The quality of your life is high if you are doing well (i.e., wants and needs are being satisfied). Conversely, the quality of your life is low if you are doing poorly (i.e., wants and needs are not being satisfied). Well-being is a good synonym for QL as used in the present chapter.

Objective QL vs. Perceived QL

As background for subsequent discussion, it is necessary to distinguish between objective QL and perceived QL. The following definitions are offered for these two terms.

Definition 3. The objective quality of life is the degree to which specified standards of living are met by the objectively verifiable conditions, activities, and activity consequences of an individual's life.

Definition 4. The perceived quality of life is a set of affective beliefs directed toward one's life.

Whereas perceived QL concerns how people feel about their lives, objective QL concerns an account of what is actually happening in people's lives in terms of the activities performed, the consequences of those activities, and the conditions of both people and their environments. Satisfaction, anxiety, happiness and contentment are sample measures of perceived QL. Examples of objective QL measures are daily caloric intake, crime rates, per capita residential square footage, disease rates, and education level.

Considerable research has shown that perceived QL measures correlate only modestly with objective QL measures (Andrews & Withey, 1976; Bradburn, 1969; Campbell, 1972, 1976, 1981; Campbell, Converse & Rodgers, 1976). Because all people with the same objective QL do not experience the same level of perceived QL, an adequate theoretical account of the relationship between objective and perceived QL must emphasize individual difference variables. For example, our model of perceived QL (Rice, McFarlin, Hunt & Near, 1984) accounts for this relatively weak relationship by relying on three such individual difference variables: a) individual perceptions of the outcomes associated with life activities, b) personal standards used to appraise the amount of different outcomes experienced, and c) subjective judgments concerning the importance of the outcomes. According to our model, high objective QL will result in high perceived QL only when the relevant perceived outcomes match up to the personal standards held by the individual for outcomes he or she judges to be personally important. Given that individual difference variables of this type serve as qualifiers to the relationship between objective QL and perceived QL, it is not surprising to find that objective QL measures are quite limited in their general ability to predict perceived QL measures.

Life Overall vs. Domains of Life

The distinction between QL for life as a whole and QL for specific domains of life is also important for subsequent discussion. The totality of life can be viewed as a mosaic composed of the many specific domains of life in which the individual is active, e.g., worker, parent, spouse, friend, neighbor, lodge member, hospital volunteer, etc. In role theory terms, each domain would represent a role sector of life (Biddle, 1979). Many prominent philosophers, sociologists, and psychologists have presented ideas in their writings consistent with this mosaic image (e.g., William James, G. H. Mead, F. Allport, and Simmel). In addition, several studies using national samples provide empirical evidence that people can easily identify and discuss their lives in terms of the activities, conditions, and experiences within different life domains (e.g., Andrews & Withey, 1976; Campbell et al., 1976; Flanagan, 1978).

Following from the work of Andrews and Withey (1976, p. 11), domain will be used in the manner defined below.

Definition 5. A domain of life is a component of life associated with particular places, things, activities, people, social roles, or elements of the self concept.

The degree to which individual wants and needs are satisfied by a particular domain of life is the QL for a domain, e.g., the quality of work life, the quality of family life, the quality of religious life, etc.

Overall QL is the degree to which life as a whole meets the personal wants and needs of the individual.

In addressing the relationship between domain specific QL and overall QL, several scholars have proposed that overall QL is determined by summing across the level of QL for each specific domain of life. Andrews and Withey (1976), Campbell (1981), Campbell et al. (1976), Flanagan (1978), and Michalos (1980, 1982, 1983) have all provided strong support for this additive view of overall QL. As much as 60-70% of the variance in measures of overall perceived QL can

be predicted by regression equations comprised of perceived QL scores for many specific domains of life. This research has also shown that more complex regression models do not add substantially to the predictive powers provided by the simpler additive models. Among the more complex factors considered by this research are cross-products to represent interactions among domains, power functions to represent curvilinear relationships, and weighting by the rated importance of different domains.

A Typology of QL Concepts and Measures

By crossing objective vs. perceived QL with overall QL vs. domain specific QL, one can create a 2 x 2 table portraying four different types of QL. Table 1 provides examples of operational measures for three of these four types of QL. One type of QL measure does not seem possible: objective overall QL. With the possible exception of income, no single objective indicator can claim to reflect overall QL in the same way as answering questions concerning life satisfaction or happiness can reflect overall perceived QL. Most objective QL indicators reflect quite specific facets of life, e.g., health, housing conditions, or education level.

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INFLUENCES OF WORK ON QL

Having defined both organizational work and the quality of life, we can now turn to a discussion of the relationship between these two variables. There are several lines of empirical evidence and general social theory suggesting that organizational work can have important effects on both objective and perceived QL.

First, relatively few people derive significant financial rewards from sources other than income earned through their organizational work. For most organizational workers and their financial dependents, organizational

work strongly influences QL to the extent that earned income provides goods and services that help meet individual needs and wants.

Second, time studies (e.g., Robinson, 1977; Robinson, Converse & Szalai, 1972; Szalai, 1972) have shown that original work accounts for a large share of waking hours in the day of most employed adults. If we add the time required to prepare for, commute to and from, and recover from work to the actual time spent working, the fraction of the day spent working is even greater. To the extent that life activities per se influence QL, organizational work must play an important role because so many of life's waking hours are devoted to work-related activities for that large segment of society that is employed or otherwise engaged in organizational work.

Third, organizational work plays a vital role in forming one's self-concept, at least in modern western civilization. When asked to respond to the question "Who am I?" occupation is one of the most frequent answers among those who are employed. Further reflecting the crucial nature of work to self and social identity, consider how often the question "What do you do for a living?" comes up in the process of making initial acquaintances. Self-esteem may also be influenced by occupation because of the widely recognized status system associated with occupation. Jobs such as physicians, judges, and scientists are accorded a great deal of social esteem by nearly all members of society; conversely, jobs such as janitor, bartender and garbage collector are accorded little esteem (Kahn, 1981). To the extent that factors such as self concept and self esteem play a role in determining QL, the influence of work must also be substantial as it is so clearly intertwined with these two self-related issues.

Fourth, there are the reactions of people who are without organizational work. Several observations made by Kahn (1981, 1982) in discussing the importance of work bear repeating here. (1) There are a large number of unemployed people in our society who want employment. (2) Many people are

unhappy when they retire from work. (3) The stressful effects of losing work through unemployment are well-documented. By themselves, none of these observations explain why work is important. But all three observations are fully consistent with the proposition that work provides for certain wants and needs, and that it must, therefore, contribute to QL.

Empirical evidence of the type offered above has not gone unnoticed by social theorists. Several such theorists have expressed views consistent with the proposition that work plays a crucial role in determining QL. Freud explicitly acknowledged the importance of work when he proposed that the basic indicators of mental health are the abilities "to work" and "to love." Marx and Engels (1939) also recognized the importance of work. They identified production as the dominant institution of modern society and proposed that capitalistic systems of production would alienate workers from both the production system and from the other aspects of society influenced by production. Similarly, Durkheim (1947) warned that the integration of society's institutions could be fragmented if work-related division of labor became too specialized. In turn, fragmented society was identified as the cause of individuals feeling isolated, estranged, and devoid of guidance from social norms.

Influenced by the many considerations suggesting that work plays an important role in life, Work in America (1973) identified work as a "point of leverage." With this phrase, the Special Task Force attempted to capture the proposition that by providing work for more Americans and by improving the quality of work experiences, one could significantly improve the quality of American life.

The potential impact of work on the overall quality of life is enhanced by the possibility of indirect influences of work. The influence of work on overall QL is not limited to direct effects whereby changes in the workplace

result in changes in overall QL that are mediated through changes in the quality of work life. It is also possible that changes in work can indirectly influence overall QL through changes in the QL of nonwork domains such as family, health, housing, or education. Unfortunately, a well developed theory of how work affects nonwork life is not yet available. Instead there are three rather vaguely stated hypotheses generally attributed to Wilensky (1960) and Dubin (1956): spillover, compensation, and segmentation. The spillover hypothesis suggests that the activities and affective reactions experienced at work can carry over into nonwork life (and vice versa), thereby creating a pattern of similarity between work and nonwork life. The compensation hypothesis proposes that people seek out nonwork experiences that compensate for the personal needs that are either satisfied or left unsatisfied by what they do or do not do at work; this would lead to the prediction of dissimilar patterns of activities and affect in work and nonwork. The segmentation hypothesis suggests that work and nonwork are unrelated, either by virtue of separation among major life institutions at the societal level or through personal efforts to keep work and nonwork separate at the individual level. We and other reviewers have summarized the major conceptual weaknesses of these three hypotheses (Kabanoff, 1980; Kahn, 1981; Near et al., 1980; Rice et al., 1980). These reviews also indicate that no one of these hypotheses has received consistent and unambiguous empirical support.

THE JS-LS RELATIONSHIP

Based on empirical considerations and global theoretical pronouncements of the type reviewed above, we hypothesized that the relationship between job satisfaction (JS) and life satisfaction (LS) would be strong and positive for the general population of American workers. This hypothesis was based on the assumption that JS is an indicator of the perceived quality of organizational work life and that LS is an indicator of the perceived quality of

life overall (cells a and c of Table 1). It was further assumed that the magnitude of the JS-LS relationship reflects the strength with which the quality of organizational work life influences the overall quality of life, as proposed earlier by Brayfield, Wells and Strate (1957).

The Western New York Survey

A 1975 household probability sample survey of Erie and Niagara counties in Western New York provided the opportunity to test this hypothesis. As Director of the SUNY-Buffalo Survey Research Center at the time, Ray Hunt had arranged for the "ENAS" (the Erie Niagara Area Survey) to include measures of JS and LS. He invited Janet Near and myself, as Associates of the Survey Research Center, to work with him in examining the JS-LS relationship.

In our analyses of the data (Hunt, Near, Rice, Graham & Gutteridge, 1977; Near, Rice & Hunt, 1978), we found a correlation of .30 between our one-item measures of job and life satisfaction. The JS question asked: "On the whole, how satisfied (are/were) you with the work you (do/did on your last job)?" The LS question was stated as follows: "Taking everything into consideration, how satisfied are you with life in general at this time?"

The Literature Review

Given the assumption that organizational work plays a very important role in the lives of workers, we were surprised by the small size of the JS-LS correlation in the Western New York data. We had expected it to be stronger and we began to question the representativeness of our results. These suspicions motivated us to become more systematic in our search of the existing literature concerning the JS-LS relationship. The result of this search was a review article (Rice, Near & Hunt, 1980). The review uncovered three somewhat surprising features of the JS-LS literature: its volume, the consistency of its results, and the absence of temporal trends.

Volume. A search of the literature published through 1979 uncovered 23 separate studies reporting 379 empirical relationships between some measure of job satisfaction and some measure of life satisfaction. Of these 379 relationships, 131 involved job satisfaction and some measure of overall satisfaction or happiness with life. The remaining 248 results concerned the relationship between job satisfaction and satisfaction or happiness with some particular nonwork domain of life such as marriage, leisure, or family. Some JS measures considered the job in global (facet-free) terms while others concerned satisfaction with particular facets of the job (e.g., pay, co-workers, challenge, etc.).

Consistency. The results of this research, summarized in Tables 1-3 of Rice et al. (1980), are remarkably consistent. Over 90% of all the reported relationships were positive; 55% of these positive relationships achieved statistical significance. By contrast, not a single one of the occasional negative JS-LS relationships reported in this literature was statistically significant. The magnitude of these relationships was stronger for overall LS than for domain-specific measures of LS. Overall LS measures typically shared about 10% common variance with measures of JS; correlation coefficients ranged from .04-.58 with a mean of .31 and a median of .31 (SD = .13). The relationship between JS and domain-specific measures of LS typically indicated only 1-2% common variance; correlation coefficients ranged from -.29-.55 with a mean of .13 and a median of .14 (SD = .12). There were no apparent trends in these domain specific results showing that satisfaction with particular domains of nonwork life were more strongly correlated with JS than were satisfaction with other nonwork domains. It is not surprising that the correlations between JS and domain-specific measures of LS are weaker than those between JS and overall measures of LS. The former are correlations between two separate parts of life (work and some specific nonwork domain) whereas the

latter are part-whole correlations (work and the whole of life, one part of which is work).

Temporal trends. Brayfield, Wells and Strate (1957) is typically the earliest study cited in discussions of the JS-LS relationship. Hence, we were surprised to find that there were reports of the empirical relationship between JS and LS as early as 1939 (to their credit, Brayfield et al. themselves cited many of these early studies). To determine if there are any temporal trends in the strength of the JS-LS relationship, we plotted the correlations as a function of the year the study was reported in the literature. Contrary to social commentary concerning the death of the work ethic and changes in the importance of organizational work to contemporary men and women, there was no discernible relationship (linear or curvilinear) between date of the study and strength of the correlation.

Based on this review of previous empirical findings, it became apparent that the LS-JS correlation of .30 from the Western New York data was quite representative. And furthermore, the several studies published subsequent to the review have reported similar results (e.g., Bamundo & Kopelman, 1980; Chacko, 1983; Schmitt & Bedian, 1982; Schmitt & Mellon, 1980).

Alternative Interpretations

Given this consistent pattern of results showing weaker JS-LS correlations than we had originally expected, we began to consider alternative means of explaining these results. Three such alternatives have come to mind.

(1) Because of shared variance among JS, LS, work, and nonwork variables, complex suppressor effects may cause the simple zero-order correlation between JS and LS to underestimate the true magnitude of this relationship.

(2) There may be important subgroup differences in the strength of the JS-LS relationship; by collapsing across these subgroups to assess a single correlation for the entire sample, researchers may be misrepresenting the

true nature of the relationship.

(3) The relative power of JS as a predictor of LS may be strong even though it is weak in terms of absolute predictive power.

Our efforts to address each of these three issues are summarized below.

Possible Suppressor Effects

To assess the possibility of suppressor effects, a series of multivariate analyses were conducted on four large sample survey data sets available to us (Rice, Near & Hunt, 1979; Near, Smith, Rice & Hunt, 1983, in press). The first of these papers reported analyses of the data provided by the survey of Western New York. The two later papers reported the results of similar analyses conducted on three large sample survey data sets collected at the University of Michigan's Survey Research Center: the 1977 Quality of Employment Survey (Quinn & Staines, 1979), the 1971 Quality of American Life Survey (Campbell et al., 1976), and the 1971 Social Indicators of Well-Being Survey (Andrews & Withey, 1976).

With each of these four data sets, the strategy for statistical analysis was the same. Variables were first classified into one of five categories: 1) measures of the overall life satisfaction, 2) measures of satisfaction with nonwork domains of life (e.g., satisfaction with marriage or home), 3) measures of job satisfaction, 4) measures of nonwork conditions of life, and 5) measures of working conditions. Using hierarchical multiple regression procedures, we dictated the order by which these different sets of variables would enter into the regression equations. As these analyses involved sets of variables falling into a certain category rather than individual predictor variables, individual regression coefficients could not be used to interpret these results. Rather, we focused on the percentage of variance added to the prediction of the criterion score by the entire set of variables under consideration. The "unique variance" (Coleman, 1976; Mood, 1971) associated with a

set of predictors was determined on the basis of analyses in which all other variable sets had been entered into the regression equation prior to that set of predictor variables with which we were principally concerned. Any predictive power added by the last set of variables was free of overlap with those variables entered at previous steps; this increment in predictive power was "unique" to the variables included in the last set.

Of interest here are the results of those analyses in which LS was the criterion variable and JS was entered as the final step in the multiple regression equation (after already entering the other three sets of predictor variables: satisfaction with nonwork facets of life, work conditions variables, and nonwork conditions variables). Despite differences in specific wording of questions, number of items used to create scale scores, and the specific conditions of work and nonwork life assessed in each survey, the results from these analyses were quite consistent. The incremental variance of job satisfaction in prediction of overall life satisfaction was extremely small when added to regression equations that already included variables from the other three sets; unique variance estimates never exceeded 1% in any of the four data sets.

Subgroup Differences

We used both our literature review and original statistical analyses to explore the possibility of subgroup differences in the strength of the JS-LS relationship.

The Literature

In previous research, gender is the only group difference variable that has been investigated frequently. Our review identified eight studies reporting 88 separate JS-LS correlations for either males or females (see Table 2, Rice et al., 1980). Of the 38 pairs of JS-LS relationships presented in our summary table, 25 (66%) were stronger for males than for females.

When Pearson correlations and sample sizes were reported, it was possible to perform secondary analyses on these results to determine if the correlations for males and females were significantly different from each other. For three such cases, males had significantly higher JS-LS correlations than females. Among males, correlations ranged from .09 to .68 with a median of .34 and a mean of .36 ($SD=.18$). Of the 33 relationships tested for significance among males, 30 (91%) were significant with $p < .05$ and all were positive. For females, correlations ranged from $-.07$ to .57 with a median of .23 and a mean of .26 ($SD=.18$). Of the 33 relationships tested for significance among females, 12 (36%) were significant with $p < .05$; four of the 33 correlations for females were negative although all 12 of the significant correlations were positive. In summary, past research has shown somewhat a stronger JS-LS relationship for males than for females (12% vs. 6% shared variance).

Kavanagh and Halpern (1977) provided some insight into the possible causes of the gender effect described above. They criticized previous research for failing to control for the fact that the men in these studies typically held higher level jobs than did the women. In their own study, Kavanagh and Halpern controlled for organizational level. They found only one significant gender difference in the 16 pairs of JS-LS correlations they reported. Their results suggest that the gender effect may disappear if society achieves more equal representation of men and women at all levels of the organizational hierarchy.

Turning to moderators other than gender, there is very little evidence available. In our review, we identified four studies providing data relevant to this question (see Rice et al., 1980, p. 52). Since the publication of our review, Bamundo and Kopelman (1980) did an additional study of this type. Taken together, these five studies have examined the moderating effects of several demographic variables such as age, sex, race, marital status, income,

educational level, etc. While there have been occasional instances of statistical significance among such effects, the absence of proven replicability precludes any firm conclusions.

Our Analyses

In addition to reviewing previous research for evidence of subgroup differences, we have also conducted our own analyses relevant to such effects (Rice, McFarlin, Hunt & Near, 1982). Using data from the 1973 Quality of Employment Survey (Quinn & Shepard, 1974) and the 1971 Quality of American Life Survey (Campbell et al., 1976), we pursued two goals. Our first goal was to test the replicability of previously reported subgroup differences based on demographic variables such as gender, age, income, and education. Our second goal was to test the hypothesis that the JS-LS relationship is stronger for respondents placing greater importance in work than for those placing less importance in work. While an importance interpretation had been given to the gender difference reported by Brayfield et al. (1957) and others, job importance was never measured directly in any previous moderator studies. The two data sets used in these analyses each included several different indicators of importance that could be used for this purpose. Each of the data sets used multi-item measures of JS and LS with proven reliability and validity. In addition, each data set used large national probability samples (N 's > 1500 based on sophisticated multi-stage sampling).

In testing for moderator effects, we relied primarily on the moderated regression technique (Zedeck, 1971), but we also examined the JS-LS correlations for different subgroups. In the regression procedure a cross-product is used to represent the moderator effect (e.g., JS x gender). By entering this moderator term last in a hierarchical regression equation predicting LS, one can determine the variance associated with the moderator effect after controlling

for each variable in terms of its simple main effects (JS and gender in the example presented).

Replication efforts. With regard to the replication of previously reported moderator effects, our analyses of these two nationally representative data sets yielded totally nonsupportive results. The strength of the JS-LS relationship did not vary significantly as a function of variables that had sometimes yielded significant moderator effects in previous studies, e.g., socio-economic status, collar color of occupation, race, income, age, sex, education, marital status, and job tenure.

In face of this inconsistency between certain previous results and our own research, we have chosen to side with our own findings. Two major factors influenced this judgment: (1) the lack of consistency in previous studies for any moderator other than gender and (2) the strengths of our own study (i.e., the statistical procedures used, the care with which JS and LS were measured, the size and national representativeness of the samples, and the relatively recent date of data collection).

Importance of work. From the American Life and Employment data, several reliable multi-item scales were created to reflect different aspects of job importance. We considered the job to be more important if it took up a lot of the respondent's time or energy, if job skills and knowledge were seen as instrumental to the respondent's future, if the respondent was the major wage earner in the family, if the respondent saw him/herself as important to the work organization, if the respondent felt personally involved and absorbed in the job, or if the respondent indicated that he/she had considerable influence and freedom at work (thereby making the outcomes of their job activities a reflection of self). When the moderating effect of those several measures

of job importance was assessed in separate moderated regression analyses, the results were consistently nonsignificant. Regardless of the level of importance given to work, the correlation between JS and LS did not vary dramatically from the correlation obtained for the entire sample in each of these studies.

Additional moderator analyses. In addition to our effort to replicate certain demographic moderators and to test the job importance hypothesis, we systematically analyzed every one of the several hundred variables in both the American Life and Employment data sets to see if they moderated the JS-LS relationship. This frankly exploratory analysis was conducted in hopes that we would be able to "bootstrap" a common theoretical explanation underpinning many of the diverse variables we expected to identify as significant moderators of the JS-LS relationship in our search of these data. Unfortunately, we found very few significant moderator effects. And more important, we could make no conceptual sense of the scattered results that did achieve statistical significance. Unpublished analyses of our Western New York survey also failed to identify any meaningful and statistically reliable moderator effects. Thus, it seems quite accurate to summarize our many analyses of subgroup differences in the JS-LS relationship by saying that we have failed totally, thus far, to identify any variables capable of strongly and replicably moderating this relationship.

Qualitative considerations. Although we failed to find anything useful by way of moderators, our secondary analyses of the American Life and Employment data did provide an incidental result that now seems quite important. The overall JS-LS correlation was substantially higher in these analyses ($r = .49$ and $.48$) than typically found in the research we had reviewed (Rice et al., 1980). In hindsight, it now appears that we may have erred in our review by relying too heavily on quantitative summaries of all research reporting JS-LS relationships

and giving too little attention to qualitative differences in the methodological strengths and weaknesses of individual studies. The JS-LS correlations we reported from these two very strong data sets showed more than twice as much common variance between JS and LS than indicated by the median correlation of all JS-LS studies we had previously reviewed (25% vs. 10%). This larger value is now our preferred estimate of the true strength of the relationship between JS and overall LS in the population of American workers.

Relative Predictive Power

To compare the strength of the JS-LS relationship to the strength of the relationship between LS and satisfaction with some specific facet of nonwork satisfaction, two forms of analysis are useful. First, the zero-order correlation between JS and LS can be compared to the zero-order correlations between LS and satisfaction with specific nonwork domains. Second, multiple regression procedures can compare JS with other domain satisfaction measures in terms of regression coefficients when predicting LS. The studies conducted by Campbell et al. (1976) and by Andrews and Withey (1976) provide the best basis for comparative judgments of the type concerning us here. Using probability samples of the American public, these two studies provided measures of satisfaction with overall life and with many specific domains of life (12 for Campbell et al. and 30 for Andrews and Withey). Unfortunately, the main results of these two studies are quite inconsistent.

Consider first the zero-order correlations from these two studies. In the Campbell et al. study, the strongest correlates of their nine-item overall measure of psychological well-being were satisfaction with how spare time is spent (.54), family life (.53), standard of living (.48), work (.42)², and marriage (.40); each domain-specific measure of satisfaction was measured with a single item. As standard of living is a work-related outcome for most people, the total effects of work appear strong relative to nonwork domains

in the Campbell et al. data. In the Andrews and Withey study, the strongest eta correlations with their two-item measure of overall perceived QL involved satisfaction with self efficacy (.55), family (.38), money (.47), amount of fun (.51), and spare time activities (.41); their five-item JS index had an eta of .23, ranking 19th among 30 domains. Even granting that money is a work-related outcome for most people, work is not as strongly correlated with overall perceived QL in the Andrews and Withey data as in the Campbell et al. data.

The same pattern of results is found in the regression analyses reported for these two studies. Campbell et al. (1976) found the domain satisfaction score for work to have the fourth largest regression coefficient. In the Andrews and Withey regression analyses, the JS index had a beta of .03, ranking only 28th among 30 domains in terms of strength of prediction.

Conclusions About the JS-LS Relationship

The conclusions suggested by our analyses of the JS-LS relationship are summarized below.

Conclusion 1. Based on our regression analyses of four different data sets, it appears that the zero-order correlation between JS and LS is probably not somehow suppressed and thereby masking a stronger but more complex relationship between these two variables. Quite to the contrary, the LS variance uniquely predictable from JS is much less than the total common variance indicated by squaring the zero-order correlation.

Conclusion 2. The regression analyses also suggest that much of the JS-LS relationship is influenced by nonwork satisfaction and by the objective conditions characterizing work and nonwork life. When these variables are controlled statistically, JS has almost no ability to predict LS.³ In our subsequent efforts to develop a conceptual model of the relationship between work and perceived QL, we have attempted to specify how conditions of work and nonwork life may influence variables such as JS, nonwork satisfaction, and overall LS

(Rice, McFarlin, Hunt & Near, 1984).

Conclusion 3. The empirical evidence does not support the intuitively appealing proposition that the JS-LS relationship is moderated by selected demographics and/or indicators of job importance. The strength of the JS-LS relationship remains relatively constant across the various subgroups of the working American public, at least as defined by the potential moderators examined in our research.

Conclusion 4. When reliable and valid measures of both concepts are used, the correlation between JS and LS is nearly .50, indicating as much as 25% shared variance.

Conclusion 5. The results are inconclusive when the strength of the JS-LS relationship is compared to the relationship between overall LS and satisfaction with any single nonwork domain of life. Whereas one major study indicates that the predictive powers of JS are strong relative to satisfaction with specific nonwork domains (Campbell et al., 1976), the other available study capable of addressing this issue suggests that JS is relatively weak (Andrews & Withey, 1976). However, the available research does seem consistent in showing that satisfaction with any single domain of life will necessarily leave unexplained much of the variance in overall LS.

A methodological caution. The conclusions offered here are all based on research employing just one method of data collection: direct questioning about the level of perceived QL for life as a whole or for specific domains of life. Given the weaknesses inherent in any single research method (McGrath, Martin & Kulka, 1982), it is essential that these issues be examined further by research methods with different weaknesses than those characteristic of the method employed in this research. This general warning seems particularly appropriate with regard to our failure to detect reliable moderator effects. The results for these analyses are not consistent with common sense or certain

lines of related research (e.g., the job involvement literature and certain aspects of the sex role literature).

TOWARDS A CONCEPTUAL MODEL

As we tried to interpret the empirical results of JS-LS research conducted by ourselves and others, we became increasingly dissatisfied with the level of conceptual guidance provided by the general pronouncements of social theorists such as Freud, Marx and Durkheim or from general hypotheses such as spillover, compensation, and segmentation (Near, Rice & Hunt, 1980). As a result, we have been pushing ourselves toward development of a conceptual model that provides a more specific account of the relationship between work and perceived QL (Rice, McFarlin, Hunt & Near, 1985). The JS-LS relationship is but one of many relationships considered in this model. Thus, our initial interest in a quite specific empirical relationship has led us to a present concern with a much more general set of theoretical relationships.

In the following discussion, several propositions from our model of organizational work and perceived QL are extended to an analysis of the effects of organizational work on QL in general (including both objective QL and perceived QL). Because the propositions concerning organizational work and perceived QL have been developed just recently, they have not yet been tested by original data collected specifically for that purpose. However, much previous research is consistent with our propositions. Because of space restrictions, this supportive research cannot be reviewed in the present discussion. The reader interested in examining such data is referred to our article on perceived QL (Rice, et al., 1985).

Work-mediated and nonwork-mediated effects. One proposition from our model of perceived QL is that an individual's sense of overall perceived QL is determined by the sum of the perceived QL for all the specific life domains in which the person is active. If all domains of life away from

work are combined into a single category labelled "nonwork," we can propose that overall perceived QL is the sum of the perceived quality of work life and the perceived quality of nonwork life. This additive model is equally applicable to QL in general as to perceived QL. Hence, the following proposition can be put forward: Overall QL is determined by the sum of QL for work life and QL for nonwork life.

Based on this two category version of an additive model of overall QL, there are two general pathways through which the experiences and outcomes of work might influence overall QL: those involving the quality of work life and those involving the quality of nonwork life. Within this first category of work influences on overall QL, the quality of work life changes as a result of changes in work variables such as hours, duties, or working conditions. As a result of changes in work QL, the level of overall QL is also changed. The quality of work life is the mediating variable in this pathway.

The second pathway of work influences on overall QL is mediated by the quality of nonwork life. Within this second category, the quality of nonwork life changes as a result of changes in work variables. For example, the quality of family or leisure life may be influenced by the scheduling of work or by levels of health and energy resulting from working conditions. As a result of changes in nonwork QL, the level of overall QL is also changed.

The additive model of overall QL and the two pathways of work effects on overall QL are represented graphically in Figure 1. The ABD pathway in this figure represents effects of work on overall QL that are mediated by the quality of work life. The ACD path represents nonwork-mediated effects of work on overall QL.

 Insert Figure 1 about here

A single work variable may have effects on overall QL that are mediated through both the quality of work life and the quality of nonwork life. For example, flextime scheduling may improve both the quality of work life and the quality of nonwork life.

Person-changing and environment-changing effects. A second proposition concerns the mechanisms through which work might influence activities in either work or nonwork domains. We had defined organizational work as a special form of human activity and we had proposed that QL is determined, in part, by the nature of life activities and the consequences of those activities. Hence, we felt compelled, in developing our model, to consider the factors that determine life activities. Following Lewin (1951), we proposed that human activity is determined by the interaction of 'personal characteristics and environmental properties. Based on this interactionist perspective on human activity, there are two general classes of activity determining variables through which the effects of work on overall perceived QL might operate: the personal characteristics of the individual or the properties of the environment within which the person functions. If changes in a work variable result in changes in the work or nonwork environment of the person, it is an environment-changing effect. If changes in a work variable result in changes in some personal characteristic of the person, it is a person-changing effect. Person-changing effects can be further subdivided to reflect the distinction between relatively short-term effects (changes in mood, energy level, immediate interests, etc.) and relatively long-term effects (changes in skill, knowledge, personality, values, health, etc.). Of course, it is possible that a single workplace variable can have effects on overall perceived QL that are mediated through changes in both the environment and the person. This distinction between person-changing and environment-changing effects is equally applicable to QL in general as to perceived QL.

First-party and second-party effects. The final propositions from our model of perceived QL to be considered here stem from our effort to recognize explicitly the social context in which both nonwork activities and organizational work activities typically occur. Because many important nonwork activities occur within role systems such as families and friendship networks, it is possible for work to affect the overall perceived QL of people other than the worker in question (e.g., his/her friends, spouse or children). It is also possible for the overall perceived QL of one worker to be influenced by the work of another worker (e.g., the work of his/her spouse). When the effects of an individual's own work on their own perceived QL are considered, it is a first-party effect. When the perceived QL of one individual is influenced by another individual's work, it is a second-party effect. The distinction between first- and second-party effects is equally applicable to QL in general as to perceived QL.

APPLICABILITY

In the introduction to this chapter, it was suggested that there are strong possibilities for applying a social psychological analysis of work and QL. This final section considers how the emerging conceptual framework discussed above might be used to guide applied efforts to improve QL through work-place innovations. The conceptual guidance provided by such a model could be useful to two groups: a) the policy-makers in government, labor, and work organizations responsible for bringing about such innovations, and b) the applied researchers involved in evaluating these programs.

A recognition of the whole person. The propositions concerning nonwork-mediated effects and second-party effects of organizational work on QL give a strong social psychological flavor to our model. In the form of these concepts, we sought to recognize that people are whole and integrated individuals who function within the total social context of the different

domains comprising their lives. Even though the individual may be only "partially included" (Katz & Kahn, 1978) in the social system constituting the work organization, it is a whole and integrated person who comes to work each day.

The perspective on workplace innovations suggested by these propositions is broader than typically adopted by policy makers. The proposition concerning the possibility of nonwork-mediated effects of work suggests to policy makers that the changes they propose for the workplace may have important QL implications beyond the workplace. Even though changes in work QL are important and intrinsically worthwhile, it is crucial for policy makers to recognize that the nonwork lives of workers may also become more or less fulfilling as a result of changes in the workplace. Our second-party propositions suggest to policy makers that the effects of workplace changes are not necessarily limited to changes in the work QL and nonwork QL of the workers involved. Such changes can also affect the QL of second parties who share their lives with workers.

Evaluation efforts could also benefit from adopting the social psychological perspective represented by these propositions. Evaluators could provide more useful and thorough assessments of workplace innovations if their research designs examined nonwork QL-mediated and second-party effects as well as the more obvious work QL-mediated and first-party effects.

Person and environment. The proposition concerning person-changing and environment-changing effects of work on QL could provide further guidance for policy makers and program evaluators. It suggests that policy makers systematically consider the ways in which a given program can change either the person's environment (work and nonwork) or the properties of the person. The efforts of program evaluators could also be more thorough if they were to examine both types of effects. Attention to both environmental and personal factors is demanded by our interactionist approach to human activity as well

as by our definition of QL in terms of the degree to which the environment satisfies the needs and wants of the person.

Perceived QL. Statements justifying workplace innovations and research evaluating the effects of such programs often consider perceived QL, almost always in the form of job satisfaction responses. However, little attention is typically given to the theoretical components that combine to determine perceived QL responses such as job satisfaction. Our model identifies outcomes, standards, and importance judgments as such determinants. Policy makers might design innovative workplace programs with better chances of attaining the goal of improving perceived QL if they thought in terms of possible impacts on each of these three components. Similarly, the reports of those evaluating such programs might be more useful if they included measures of these determining variables and were able to use appropriate statistical analyses to indicate more precisely the intervening mechanisms responsible for any observed effects in important outcome measures of perceived QL.

Coda

It is more accurate to consider the research activities described in this chapter as "applicable" social psychology than as "applied" social psychology (Mayo & LaFrance, 1980). My colleagues and I have not yet participated in action programs seeking to improve QL through workplace interventions. Furthermore, we are not aware that anyone else has used our research as the basis for action programs of this type. However, as argued above, we see great potential for such application. The results of future research will indicate the degree to which this apparent potential can actually be achieved.

Footnotes

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¹Need satisfaction notions are implicit in virtually all discussions of the QL concept. However, I know of no one who has explicitly defined QL in the manner offered here. My general use of the needs satisfaction concept is modeled after Suttle (1977) who defined the quality of work life as the degree to which individual needs are met through activities and experiences in the workplace. I have simply extended the need satisfaction concept to include nonwork life as well as worklife (i.e., all of life).

²This JS-LS correlation differs slightly from the one originally reported by Campbell et al. (1976) because we used different procedures to calculate JS. Our procedures better match the treatment of JS provided by the Quality of Employment study (see Rice et al., 1982).

³The logic here is like that of the three variable case where some third variable Z causes both X and Y and is responsible for the relationship between the two. A partial correlation between X and Y in which Z is held constant would be small even if the zero-order correlation between X and Y were large.

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Table 1.
Examples of Different Types of QL Indicators.

Target	Nature of Judgment	
	<u>Perceived</u>	<u>Objective</u>
Specific domain of life	a. job satisfaction marital happiness family satisfaction satisfaction with house, neighborhood, city, or nation	b. residential square footage daily caloric intake crime rates health (BP, weight, heart rate) education level
	c. satisfaction with life overall how happy "things are these days" feeling proud, interested, excited feeling restless, lonely, bored	d. ?
All of life		

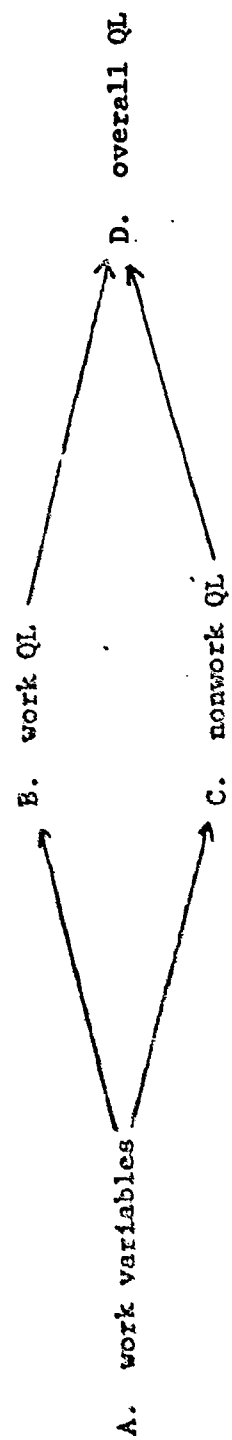


Figure 1.

Alternative pathways through which organizational work can influence overall QL.

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