Individual differences in the nature of the relationship between job and life satisfaction

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There is a controversy in the literature over which theory of the job–life satisfaction relationship (spillover, compensation or segmentation) is correct. We argue in the present study that each model is possible for different individuals. Using techniques derived from Ghiselli (1960), the results suggested that while the relationship is positive for most individuals, it is not for all. Contributions of the findings and future research directions are discussed.

The relationship between job and life satisfaction has long been of interest to researchers. While many studies have reported that job and life satisfaction are positively related, others have reported either that job and life satisfaction are inversely related, or that no relationship exists between the constructs. A recent meta-analysis suggested that the relationship between job satisfaction and life satisfaction is positive and significant (Tait, Padgett & Baldwin, 1989). However, while this study provides important cumulative information on the overall nature of the relationship between job and life satisfaction, much remains unknown (Rain, Lane & Steiner, 1991). In particular, very little research has investigated how the functional nature of the relationship between job and life satisfaction might differ between individuals (for notable exceptions, see Evans & Bartolome, 1980, and Near, Rice & Hunt, 1987).

The purpose of this paper is to present a methodology that examines the degree to which different hypotheses about the functional nature of the relationship between job and life satisfaction vary by the individual. Past research has focused on confirming or disconfirming specific hypotheses of the form of the relationship between job and life satisfaction. We argue and present results demonstrating that it may not be a matter of whether a particular hypothesis about the form of the relationship is true or false, but that each model is possible for different individuals.

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Past research

A recurring distinction has been made between three hypotheses about the relation between job and life satisfaction: spillover, compensation and segmentation (Champoux, 1981; Kabanoff, 1980; Kabanoff & O'Brien, 1980; Near, Rice & Hunt, 1978, 1987; Rice, Near & Hunt, 1980; Wilensky, 1960). Wilensky's (1960) conceptualization of the overlap between job and life was originally intended to reflect *activities* rather than *emotions* or *attitudes*. Although some researchers have focused on activities (e.g. Kabanoff & O'Brien, 1980; Payton-Miyazaki & Brayfield, 1976), most researchers have not differentiated between activities and attitudes (Near *et al.*, 1987). In the present study, we will approach the relationship between job and life from an attitudinal perspective, although we realize other positions are possible.

From an attitudinal perspective, the spillover hypothesis indicates that one domain 'spills over' onto the other such that workers who have (dis)satisfying jobs also will have (dis)satisfying lives, and vice versa. A positive correlation between job and life satisfaction supports the spillover hypothesis. The compensation hypothesis suggests that workers with dissatisfying jobs seek out more pleasurable experiences in their non-work lives, and vice versa. Thus, a negative correlation between job and life satisfaction supports the compensation hypothesis. Finally, the segmentation hypothesis suggests that there is no relationship between job and life satisfaction—job and life satisfaction are independent of one another. A weak or non-significant correlation between job and life satisfaction supports the segmentation hypothesis.

The .44 correlation uncovered by Tait *et al.* (1989) suggests that the spillover hypothesis may be the most accurate means of characterizing the job–life satisfaction relationship. However, a number of studies have found support for either the segmentation or the compensation hypothesis (Rain *et al.*, 1991). Furthermore, there may be circumstances or individual differences that bring out the other hypothetical models (Kabanoff & O'Brien, 1980; Near *et al.*, 1987). Unfortunately, as Rice *et al.* (1980) pointed out, little work has appeared explicitly testing the form of the job–life satisfaction relationship. A procedure to determine the relative validity of the spillover, compensation and segmentation hypotheses is needed. Some previous research has investigated individual job–life satisfaction profile clusters (Near *et al.*, 1987; Shaffer, 1987), and potential moderators of the job–life satisfaction relationship (Champoux, 1981; Iris & Barrett, 1972; Rice *et al.*, 1980). However, this research has produced incomplete evidence regarding the proportion of individuals characterized by each model.

Furthermore, discussions of the three models of the job–life satisfaction relationship have assumed that one model is true at the expense of the others. In other words, if the spillover model is true, then the compensation and segmentation models cannot be. Neglected in this discourse is the possibility that all three models might be true for subgroups of individuals. Thus, the spillover model may be appropriate for some individuals, the compensation model appropriate for others, and the segmentation model for still others. Difficulties in defining and measuring such differences operationally have probably discouraged investigation of this possibility. The potential of such an approach in understanding the job–life satisfaction relationship is considerable as it may offer the potential to understand the relative merits of the models discussed above.

Method

Sample and procedure

The data used in this study were obtained from the Quality of Employment Surveys (Quinn & Staines, 1979). Two waves of data were collected, the first in 1973 and the second in 1978. The sample size used for the analyses (individuals with complete data in 1973 and 1978) was $N = 804$. The primary analyses were conducted using the 1973 data, but a replication analysis was performed using the data from the 1978 surveys.

Measures

Job satisfaction. Overall job satisfaction was measured by a five-item scale. Respondents indicated their degree of overall job satisfaction by reacting to several statements about their job using a four-point Likert scale (e.g. 'All in all, how satisfied are you with your job—very satisfied, somewhat satisfied, not too satisfied, or not at all satisfied?'). Several items from this scale closely resemble items contained in Brayfield & Rothe's (1951) measure of overall job satisfaction. The coefficient alpha reliability estimate for this scale was .75.

Life satisfaction. Life satisfaction was measured with a 10-item scale designed to assess overall life satisfaction. Respondents reacted to eight bipolar adjectives describing their life, indicating their degree of agreement with each item along a seven-point Likert scale (e.g. my life is 'enjoyable–miserable', 'useless–worthwhile', 'discouraging–hopeful'). These items are very similar to Andrews & Withey's (1976) delighted–terrible scale, an often-used measure of life satisfaction (Diener, 1984). Additionally, respondents reacted to two general questions about their life (e.g. 'In general, how satisfied are you with the ways you're spending your life these days?'). These two items appear similar to items contained in the satisfaction with life scale (Diener, Emmons, Larsen & Griffin, 1985). The coefficient alpha for the composite scale was .89.

Analysis and results

Over 30 years ago, Ghiselli (1960) proposed a technique by which individuals can be differentiated in the degree to which scores on a predictor and criterion are related. Generally, the attempt in personnel selection is to reduce the difference between standard predictor scores and standard criterion scores. The higher the correlation between predictor and criterion scores, the smaller this difference is expected to be. In other words, if a predictor and criterion are highly related, high (low) scores on the predictor would be associated with high (low) scores on the criterion. Ghiselli (1960) argued that this difference will not be the same for all individuals. Although the application of Ghiselli's technique concerned personnel selection (see Ghiselli, 1956), this technique can be applied to differentiating individuals based on the relationship between job and life satisfaction.

An issue not considered by Ghiselli (1960) but relevant to our analysis concerns a negative relationship between the scores. Ghiselli's analysis is not symmetrical in this respect; it was oriented towards only positive relationships. Zedeck (1971) made a logical extension of Ghiselli's technique by computing algebraic differences which consider underpredicted, overpredicted and predicted individuals. While Zedeck's emphasis on underpredicted and overpredicted individuals, as opposed to combining these individuals into an unpredictable group, has practical implications, there remains room for further improvement of Ghiselli's technique. In fact, we propose a two-step technique that provides further enhancement of the understanding of the psychological composition of groups in terms of positively predicted, negatively predicted and non-predicted individuals.

Separation of positively and negatively predicted individuals is relevant here because the compensation hypothesis predicts a negative relationship between job and life

satisfaction. If one simply used the absolute value of the difference between job satisfaction and life satisfaction, inverse relationships between the two would receive the highest difference value even though job and life satisfaction would be related, albeit negatively. In order to remove this confound, the following difference score was computed:

$$D1 = ||ZLS| - |ZJS||$$

where ZLS = standardized life satisfaction score and ZJS = standardized job satisfaction score.

The formula separates those for whom job and life satisfaction are related (spillover and compensation) from those for whom they are unrelated (segmentation). High D1 scores indicate that for these people, job and life satisfaction are unrelated. Low D1 scores indicate that there is some relationship, positive or negative, for those individuals. For example, if an individual is 1.5 standard deviations above (or below) the mean of job satisfaction scores and 1.5 standard deviations above (or below) the mean of life satisfaction scores, their D1 score is 0—job and life satisfaction are related for those persons. On the other hand, if a person is 1.5 standard deviations above (or below) the mean of job satisfaction scores and at the mean of life satisfaction scores, their D1 score is 1.5—for them job and life satisfaction are less related than for other individuals.

We applied this analysis to the 1973 job and life satisfaction data, but for purposes of replicating the result using changes from 1973 to 1978, we included only those individuals ($N = 804$) who had complete data in both years. In order to determine for which individuals the relationship between job and life satisfaction was not significant, we sorted the individuals based on their D1 scores. We then computed correlations for consecutive 5 per cent (a similar percentage to that used by Ghiselli, 1960) subgroups of lowest to highest D1 scores (where 1 was the lowest ranked D1 score and 804 was the highest ranked D1 score). In order to avoid spillover and compensatory correlations cancelling each other out, the absolute values were computed. The point at which the relationship between job and life satisfaction became non-significant would be the point at which the related versus unrelated groups would be demarcated. A point of clear demarcation was found. The correlation between job and life satisfaction for individuals with D1 scores ranked from 601 to 640 (the 15th lowest group of D1 scores) was .46 ($p <$ .001). The correlation for individuals with D1 scores ranked from 641 to 680 (the 16th lowest group of D1 scores) was .08 (n.s.). Therefore, those individuals with the 164 highest D1 scores were labelled as belonging to the segmented group—for them job and life satisfaction were not significantly related. Those individuals with the 640 lowest D1 scores were labelled as the related group—for them job and life satisfaction were significantly related. In fact, the average absolute correlation between job and life satisfaction for the individuals with the 640 lowest D1 scores was .5531 ($p < .001$). The correlation between job and life satisfaction for the individuals with the 164 highest D1 scores was −.01 (n.s.). We can infer from this result that for roughly 80 per cent (640/804) of the population, job and life satisfaction were significantly related. For the other 20 per cent (164/804) of the population, there is no significant relationship between job and life satisfaction. From these results it is possible to conclude that about 20 per cent of individuals are correctly characterized by the segmentation hypothesis. The results are summarized in Table 1.

Table 1. Determining spillover, compensation and segmentation groups

Analysis and group	$r_{LS, JS}$	p value	N	Per cent of total
Segmented from related				
Related group (640 lowest D1 scores)	.55	<.01	640	79.6
Segmentation group (164 highest D1 scores)	−.01	n.s.	164	20.4
Spillover from compensation				
Spillover group (544 lowest D2 scores)	.77	<.01	544	67.7
Compensation group (96 highest D2 scores)	−.77	<.01	96	11.9
Total sample	.40	<.01	804	100.00

Note. D1 = ||ZLS| − |ZJS||; D2 = |ZLS − ZJS|; LS = life satisfaction; JS = job satisfaction.

In order to separate spillover versus compensation models, we conducted another analysis on those individuals for whom job and life satisfaction were related with the following equation (ZLS and ZJS are as before):

$$D2 = |ZLS - ZJS|$$

This analysis should separate members of the spillover group from members of the compensation group. For example, of the 640 individuals for whom job and life satisfaction were related, an individual may have a standard score of −1.5 on job satisfaction and 1.5 on life satisfaction. Another individual may have a standard score of 1.5 on both measures. The D2 score for the first individual would be 3.0 whereas the D2 score for the second individual would be 0. Therefore, as D2 increases, the individual is more likely to belong to the compensation group and less likely to belong to the spillover group. Again sorting the 640 individuals based on their D2 scores, and computing correlations for consecutive 5 per cent subgroups of lowest to highest D2 scores, a clear cut-off was obtained. For the group of 513–544 lowest D2 scores, the correlation between job and life satisfaction was .49 (p < .01). For the group of 545–576 lowest D2 scores, the correlation between job and life satisfaction was −.53 (p < .001). In fact, using that cut-off, the correlation between job and life satisfaction for the group composed of the 544 lowest D2 scores was .77 (p < .001). The correlation between job and life satisfaction for the 96 highest D2 scores was −.77 (p < .001). Based on these results, it is possible to conclude that for about 68 per cent (544/804) of the sample, job and life satisfaction were significantly positively related. For about 12 per cent (96/804) of the sample, job and life satisfaction were significantly negatively related. Thus, our results suggest that 68 per cent of all individuals belong to the spillover group and 12 per cent belong to the compensation group. These results are shown in Table 1. Using change scores (e.g. differencing changes in job satisfaction between 1973 and 1978 from changes in life satisfaction between 1973 and 1978) yielded essentially equivalent results.

In an effort to replicate the results, the two-step approach was applied to the 1978 data. Applying the same analysis as before, the 1978 results suggested the following classifica-

tion: spillover = 68 per cent; compensation = 17 per cent; and segmentation = 15 per cent. These results are similar to those obtained using the 1973 data.

Discussion

The results of this study suggest that for most individuals job and life satisfaction are positively related. These findings are consistent with Tait *et al.*'s (1989) meta-analysis cumulated across individuals, and are generally concordant with the past research that has taken a more idiographic perspective (Evans & Bartolome, 1980; Near *et al.*, 1987). Our results also indicate, however, that for a significant minority the relationship is negative and significant, or there is little relationship at all. Thus, our results suggest that it is improper to argue that any of the models of the job–life satisfaction relationship are either correct or incorrect. While the spillover model seems to appropriately characterize most individuals, the compensation and segmentation models characterize many. We urge abandonment of efforts to confirm or disconfirm these different models, but encourage attempts to replicate our findings using different techniques and samples, and to discover the conditions that influence each model's applicability to each individual.

A limitation in the results is that the data are two decades old. Given the social, political and economic changes in the last 20 years, it is possible that more recent data might reveal different relationships between job and life satisfaction (see Veenhoven, 1984). Beyond replication of the results using more recent data, the natural extension of this research is to derive a theoretical set of dispositional and psychological predictors that cause different individuals to belong to each group. One applicable construct would seem to be job importance, but there are undoubtedly many other relevant variables (Rice, McFarlin, Hunt & Near, 1985), such as affective disposition and other dispositional and psychological constructs. As noted by Near *et al.* (1987), a critical issue in understanding what causes individuals to belong to different subgroups is that of intentionality. If spillover, compensation and segmentation are consciously intended strategies, the theoretical set of variables may be quite different than if the overlap between these domains results from unintentional factors. Whatever the approach taken, our results, by indicating that it is possible to identify and verify the existence of three distinct groups, may stimulate research on individual differences in the job–life satisfaction relationship.

Acknowledgements

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