

## **Spillover Versus Compensation: A Review of the Literature on the Relationship Between Work and Nonwork<sup>1</sup>**

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*This paper reviews the evidence concerning the relationship between workers' experiences on and off the job. Of particular interest is the debate over two rival hypotheses: the "spillover" hypothesis and the "compensation" hypothesis. The former argues that workers' experiences on the job carry over into the nonwork arena, and possibly vice versa, such that there develops a similarity in the patterning of work and nonwork life. The latter marshals several arguments for a negative association between work and nonwork, for example, the contention that the work situation is likely to be deficient in need fulfillment, at least in some respects, for most workers and that they will compensate for these deficiencies in their choices of leisure and family activities. Data from relevant studies support the notions of spillover and compensation under different conditions but, overall, offer more evidence of spillover than compensation. Support for spillover, for example, is reflected in the positive correlations between general types of activities engaged in at work and corresponding types of activities in nonwork. Support is also shown in the positive correlations between subjective reactions to work and to leisure and family life. The most important exceptions to this pattern of spillover concern physical effort on the job. Workers who expend a relatively great amount of physical effort at work are less involved in nonwork activities and less likely to be physically active away from their jobs.*

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## INTRODUCTION

Investigations of experiences on and off the job seem fragmented and in need of a conceptual framework to integrate the research on the relationships between work and leisure (Parker & Smith, 1976), work and family life (Aldous, Osmond, & Hicks, 1977; Kanter, 1977; Pleck, 1978), and work and other nonwork domains such as political participation (e.g., Allardt, 1976). In an attempt to provide such integration, the present discussion uses role terminology and treats work as a role, leisure as a role, and family life as a cluster of roles (Nye, 1976). Potentially relevant are several role-related concepts: *degree of role involvement*, *types and level of role expectations*, *types of role activities*, *level of role competence*, *types of needs satisfied by a role*, and *subjective role reactions*.

It would be possible, in principle, to correlate measures of all role-related concepts concerning work with measures of all such concepts concerning nonwork. The existing literature, however, does not cover many of the permutations so generated. The more modest but realistic task attempted here is to examine the literature linking work and nonwork roles on just three of the role-related concepts: degree of role involvement, types of role activities, and subjective role reactions.

Degree of involvement in work refers to subjective feelings of involvement, as well as to objective factors such as time and energy invested in the job and range of work activities undertaken. Degree of involvement in nonwork activities invokes the same criteria as applied to leisure pursuits, family and home activities, and so on. The types of activities that various jobs entail may be measured along dimensions such as degree of complexity, autonomy, and social interaction. The same dimensions may be used to classify types of nonwork activities. Subjective reactions to work experiences may be scored in a positive or negative direction along common dimensions such as satisfaction and enjoyment. Again, the criteria applied to work may be applied equally effectively to experiences outside the work environment.

This review concentrates on two general and competing approaches to the relationship between work and nonwork that have appeared frequently in the literature (e.g., Champoux, 1976; Kanter, 1977; Karasek, 1976; Parker & Smith, 1976; Rapoport & Rapoport, 1965; Staines & Pagnucco, 1977). The first approach asserts a fundamental *similarity* between what occurs in the occupational environment and what transpires elsewhere. Generically termed the *positive* approach in this discussion, it appears in the literature under a variety of labels: *spillover*, *extension*, *generalization*, *familiarity*, *identity*, *isomorphism*, *continuation*, and *congruence*. The second or *negative* approach proposes an inverse association between work and nonwork. It asserts that work experiences and nonwork experiences tend to be antithetical. The negative approach may be recognized in the

Table I. Cells Containing Positive and Negative Hypotheses which Link Work and Nonwork

Work	Nonwork		
	Degree of involvement	Types of activities	Subjective reactions
Degree of involvement	1 Mechanisms for positive hypothesis Integration Personality type Skills and abilities Cultural pressures	2 Mechanisms for positive hypothesis Integration Skills and abilities Cultural pressures	3 No mechanisms cited for positive hypothesis  Mechanisms for negative hypothesis Fixed sum of scarce resources Uniform and stable preferences
	Mechanisms for negative hypothesis Fixed sum of scarce resources Uniform and stable preferences	Mechanisms for negative hypothesis Uniform and stable preferences Desire for variety	6
Types of activities	4 Mechanisms for positive hypothesis Integration Personality type Skills and abilities Cultural pressures	5 Mechanisms for positive hypothesis Integration Skills and abilities Learned habits Strong preferences	No positive or negative hypotheses
	Mechanisms for negative hypothesis Fixed sum of scarce resources Uniform and stable preferences	Mechanisms for negative hypothesis Fixed sum of scarce resources Uniform and stable preferences Desire for variety	
Subjective reactions	7 No mechanisms cited for positive hypothesis  Mechanism for negative hypothesis Uniform and stable preferences	8 No positive or negative hypotheses	9 Mechanisms for positive hypotheses Integration Integration Skills and abilities Personality type Absence of work problems means family relationships unimpaired Mechanism for negative hypothesis Fixed sum of scarce resources

literature by terms such as *contrast*, *compensation*, *complementarity*, *opposition*, *competition*, *regeneration*, and *heteromorphism*. As a formal alternative to these two major hypotheses, there is the null position according to which work and nonwork are unrelated, as is suggested by the terms *separateness*, *compartmentalization*, *segmentation*, and *neutrality*.

Although they will need qualification throughout this review, the general positive and negative approaches provide a convenient framework for reviewing the evidence on the relationship between work and nonwork. As depicted in Table I, the three role-related concepts as they concern the work role may be crossed with the same three concepts as they pertain to nonwork roles. Table I therefore contains nine separate (numbered) cells. Each cell contains correlations between one work concept and one nonwork concept, and most cells invite specific hypotheses about the relationship between work and nonwork, based on the positive and negative approaches. Cell one, for example, explores the relationship between involvement in work and involvement in nonwork roles; cell two concerns associations between work involvement and types of nonwork activities; and so on. For most of the nine cells we will present the rationale for specific hypotheses based on the positive and negative approaches, spell out the causal mechanisms behind each hypothesis, and review the available evidence that bears on the specific hypotheses as well as on the causal mechanisms, where possible.

Consistent correlational patterns so generated raise the complex issue of causal direction. Do the correlations support the causal mechanisms according to which work affects nonwork, nonwork affects work, or third factors affect both work and nonwork? Breer and Locke (1965) and Meissner (1971) have pointed out that the work environment lacks the flexibility or malleability of nonwork. For example, a worker rarely picks and chooses among jobs the way he may among leisure activities, nor can he quit his job as readily as he can abandon a hobby. To the extent that the worker cannot select and shape his work environment, it becomes less plausible to attribute correlations between work and leisure to the impact of leisure on work. On the other hand, family life may make demands on work which the work role must accommodate, just as work may require adjustments in family life (Kanter, 1977). Yet, despite the greater causal symmetry between work and family, the work experiences of employed people probably affect their family life more than the reverse.

## EMPIRICAL STUDIES

### *Cell One*

As applied to cell one, the positive approach directly and straightforwardly predicts a positive correlation between involvement in the work

role and involvement in nonwork roles. The relevant causal arguments are fourfold.

*Integration.* Integration means that high involvement in work accompanies high involvement in nonwork, and vice versa. As a causal mechanism for the positive approach, integration has at least four distinct components: overlap of *time, place, people, and activities*.

*Personality Type.* Certain people have a general disposition to become heavily involved in all activities including work-related ones and are generally referred to as having the Type A personality (Rosenman, Friedman, Straus, Wurm, Jenkins, Messinger, Kositchek, Hahn, & Werthessen, 1966).

*Skills and Abilities.* Workers heavily involved in their jobs may acquire skills and abilities, especially social and organizational skills, that facilitate their involvement in nonwork activities, or vice versa (Meissner, 1971).

*Cultural Pressures.* Certain segments of the working population (e.g., corporate executives) may experience pressures to become involved in social and political activities as well as work responsibilities (Levinson, Price, Munden, Mandl, & Solley, 1962).

The negative approach to cell one directly predicts a negative association between involvement in work and involvement in other roles. The most obvious formulation of the negative hypothesis concerns objective measures of involvement. Accordingly, the more time, energy, and money devoted to work activities, the less these resources are available for off-the-job activities (e.g., Clark, Nye, & Gecas, 1978). In short, there is a *fixed sum of scarce resources*, and work and nonwork act as mutually exclusive alternatives vying for the allocation of such resources.

Meissner (1971) has suggested another possible mechanism behind the negative hypothesis in cell one. According to Meissner, people have relatively *uniform and stable preferences for levels* (and types) of activity and involvement; their preferences have lower and upper bounds and apply across major domains of activity in the relatively short run. Thus, what people get from their experiences at work they do not need to seek outside of work, and vice versa.

A number of studies have tested the positive and negative hypotheses in cell one using subjective measures of involvement in the work role, but their results have been inconsistent. Whereas Cotgrove (1965) found a negative relationship between work and family involvement, two other studies suggested a positive relationship between work involvement and involvement in work-related but off-the-job political activity, specifically trade union activities (Lipset, Trow, & Coleman, 1956; Seppänen, 1958, cited in Allardt, 1976). In addition, Goldstein and Eichhorn (1961) recorded consistently negative associations between involvement in work and nonwork activities, the latter defined broadly. Yet, in a more recent and more extensive study, Staines and Pagnucco (1977) found predominantly positive relationships between the same two concepts. Moreover, when they

repeated their analyses with statistical controls for four major resources (time, energy, money, and health), Staines and Pagnucco noted that the correlations were still positive though not as decisively so as before.

Objective measures of work involvement sometimes unnecessarily predispose the correlations in cell one to be negative. For example, the approach based on time budgets (Nelander, 1971) to a certain extent builds in a negative relationship between time allotted to work and to nonwork activities. Investigations based on time budgets have tended to report negative relationships among husbands' involvement in work and nonwork roles. Studies by Walker and his colleagues (Walker & Gauger, 1973; Walker & Woods, 1976) obtained negative associations among husbands between hours employed and hours devoted to household tasks and to parental role activity. Other recent studies by Clark and his colleagues (Clark & Gecas, 1977; Clark et al., 1978) concluded that husbands' time in the work role was negatively and significantly related to their degree of participation in two family roles, recreation with spouse and childcare, though not to their participation in housekeeping, or in therapeutic (marital) and child socialization roles. In Staines and Pagnucco's (1977) study, time devoted to work proved uncorrelated with overall nonwork involvement for both husbands and wives.

### *Cell Two*

Cell two concerns the relationship between work involvement and types of nonwork activities. Strictly, the positive and negative approaches entail no direct predictions in cell two, although a number of predictions in this cell may be loosely allied with the notions of similarity and dissimilarity between work and nonwork. For example, nonwork activities may be described in terms of their similarity to work activities rather than in absolute terms. Accordingly, the positive approach suggests that highly involved workers will choose leisure activities similar to or related to their work. This hypothesis gains theoretical support from three of the positive mechanisms in cell one: *integration, skills and abilities*, and *cultural pressures*. The negative hypothesis links high involvement in work to nonwork activities that are quite different from or unrelated to work. It relates to one of the negative mechanisms in cell one, *uniform and stable preferences*, plus an additional mechanism, *desire for variety* in activities.

Parker (1965) tested this pair of positive and negative hypotheses using bank employees, youth employment officers, and childcare officers. In accordance with the positive hypothesis, Parker found that the highly involved youth employment and childcare officers frequently engaged in work-related forms of leisure, whereas bank officers, low on involvement,

generally selected leisure activities completely different from and unconnected with their work.

### *Cell Three*

Cell three also contains no predictions derived directly from the general positive and negative approaches. By stretching the notion of (positive) subjective reactions to work to include (high) work involvement, however, we can generate positive and negative predictions in cell three. Despite the absence of any compelling causal mechanisms, the relevant positive hypothesis maintains that extensive work involvement induces a favorable reaction to leisure and family, or that favorable reactions to non-work roles facilitate involvement in work. According to the negative hypothesis, high work involvement creates dissatisfaction with off-the-job activities either because of insufficient time and energy to pursue them (*fixed sum of scarce resources*), or because satisfactions gained in nonwork activities discourage efforts to become highly involved in work (*uniform and stable preferences*).

Four studies have tested the relationship between (subjectively measured) involvement in work and subjective reactions to leisure. Overall, their results are most compatible with the null hypothesis: One study obtained support for the negative hypothesis (Rapoport, Rapoport, & Thiessen, 1974) but the other three uncovered virtually no significant relationships (secondary analysis based on Campbell, Converse, & Rodgers, 1976; Haavio-Mannila, 1971; Iris & Barrett, 1972).

The negative hypothesis gains additional plausibility in the case of working wives. Extensive involvement in the work role may arouse anxiety and guilt regarding their performance in traditional family roles (*fixed sum of scarce resources*). Alternatively, wives dissatisfied with their traditional family roles may seek greater involvement in work (*uniform and stable preferences*). The evidence on working men and women from six relevant studies has proved somewhat inconsistent but mostly in line with the null hypothesis. Two studies found no relationship among men between subjectively measured work involvement and satisfaction with family roles (secondary analysis based on Campbell et al., 1976; Iris & Barrett, 1972); one study obtained a negative association (Fogarty, Rapoport, & Rapoport, 1971). Among wives, the comparable findings were one positive relationship (Safilios-Rothschild, 1970), two negatives (Fogarty et al., 1971; Haavio-Mannila, 1971), and one that was nonsignificant (secondary analysis based on Campbell et al., 1976).

Three studies have investigated the relationship between involvement in work and subjective reactions to the household role among wives: Two

found negative relationships (Haller & Rosenmayr, 1971; Shea, Spitz, & Zeller, 1970), while one found no significant relationship (secondary analysis based on Campbell et al., 1976).

#### *Cell Four*

Cell four involves correlations between types of work activities and degree of nonwork involvement. The positive and negative approaches entail no predictions directly, but certain dimensions of work activities, especially levels of mental and physical energy required by the job, can act as proxies for involvement in work. Cell four is thus the same as cell one as regards positive and negative predictions and causal mechanisms.

The available evidence connecting mental effort at work to involvement in leisure favors the positive hypothesis both before and after the application of statistical controls (Karasek, 1976; Staines & Pagnucco, 1977). The same two studies also examined physical effort required at work, and unlike the results for mental effort, both supported the negative hypothesis.

#### *Cell Five*

Cell five concerns the widely discussed relationship between types of work and nonwork activities. The positive approach directly predicts that workers choose nonwork activities that match in character what they do on their jobs. The negative approach directly predicts that off-the-job activities will differ markedly from activities at work. A number of possible causal mechanisms support the positive hypothesis. The component of *integration* designated in cell one as overlap of activities represents the extreme value on the scale of similarity of activities. *Skills and abilities* acquired during work activities may facilitate similar behavior off the job, and vice versa. *Strong preferences* among workers for certain types of activities may also underlie the positive hypothesis.

As for the negative hypothesis, which predicts dissimilarity between on-the-job and off-the-job activities, three of the causal mechanisms cited earlier apply here: *fixed sum of scarce resources* (energy as a scarce resource), *uniform and stable preferences*, and a *desire for variety*.

Rousseau (1978) compared the work and nonwork activities of employees in two organizations along six parallel dimensions (e.g., task identity, feedback from people, and skill variety). She reported generally positive and frequently significant correlations between the six work and six nonwork dimensions. In addition, she found that in about half the cases,



the correlations were highest for the matching work and nonwork dimensions.

As to the relationship between work and leisure activities, the evidence favors the positive hypothesis for most dimensions, including interpersonal interaction (Bishop & Ikeda, 1970; Meissner, 1971; Staines & Pagnucco, 1977), autonomy (Karasek, 1976; Meissner, 1971), and mental effort (Karasek, 1976; Kohn & Schooler, 1973; Staines & Pagnucco, 1977). For positively correlated dimensions, moreover, Staines and Pagnucco (1977) detected stronger relationships among matched than nonmatched dimensions. Only for the dimension of physical effort expended have investigators reported a negative relationship (Bishop & Ikeda, 1970; Karasek, 1976; Staines & Pagnucco, 1977, female subsample only). In addition, the studies conducted by Kohn and Schooler (1973) and by Staines and Pagnucco (1977) have established that the imposition of statistical controls does not disturb the foregoing bivariate relationships.

Studies relating work activities to family activities have been little more than suggestive. In the case of men, available studies have contained little or no hard evidence of actual behavioral parallels between a father's activities at work and at home (e.g., Aberle & Naegele, 1952; Miller & Swanson, 1958). Though not yet well demonstrated empirically, a reversed version of the positive hypothesis has special significance for working women. The typically female occupations (e.g., school teacher, social worker, nurse, and secretary) appear to call for the same types of nurturant, supportive, and interpersonal behavior that women regularly perform in their traditional family roles (Kanter, 1977).

#### *Cell Six*

Cell six connects types of work behaviors and reactions to nonwork activities, but the general positive and negative approaches do not suggest any specific hypotheses pertaining to this cell.

#### *Cell Seven*

Cell seven links subjective reactions to work to degree of nonwork involvement. Parallel to the argument in cell three, positive and negative hypotheses may be generated only by stretching the notion of (positive) subjective reactions to nonwork to include (high) involvement in nonwork activities. The positive hypothesis in cell seven joins favorable work reactions to extensive nonwork involvement; the negative hypothesis does the opposite. No obvious causal mechanism supports the positive

hypothesis, but one of the mechanisms cited earlier, uniform and stable preferences, provides a rationale for the negative hypothesis. It contends that if workers satisfy their major needs at work, they will not be motivated to seek additional gratification via extensive involvement in nonwork roles.

In the city of Kuwait, then a restrictive environment for foreign professionals and thus an atypical situation, Matthews and Abu-Laban (1959) found that male primary school teachers from overseas who were satisfied with their jobs engaged in fewer different leisure pursuits and spent less time on leisure than those dissatisfied. On the basis of a more standard industrial situation, Staines and Pagnucco (1977) reported that, prior to imposing statistical controls on major life resources, measures of subjective reactions to work correlated positively, and in several cases significantly, with an overall objective index of nonwork involvement. Once controls were imposed, nevertheless, the correlations became wholly trivial.

#### *Cell Eight*

Cell eight correlates reactions to work with types of nonwork activities, but, similar to cell six, the entries in cell eight cannot be subsumed under any positive or negative hypothesis.

#### *Cell Nine*

The final cell tests whether the relationship between subjective reactions to work and nonwork roles is positive or negative. Analogous to cells one and five, the positive and negative general approaches directly predict positive and negative correlations, respectively, between subjective reactions to the two domains. Relevant positive mechanisms include *integration, skills and abilities, and personality type*. The last mechanism suggests that people generally tend to feel either optimistic or pessimistic toward all domains of their lives. *Fixed sum of scarce resources* represents the only negative mechanism: If role involvement is a prerequisite for role satisfaction, many people may not have the resources sufficient to involve themselves in and feel satisfaction with both work and nonwork.

Consistent with the positive hypothesis in cell nine, Rousseau (1978) reported a significant positive correlation between job satisfaction and satisfaction with life outside of work, among a predominantly female sample.

Other studies have supported the positive hypothesis regarding satisfaction with work and leisure. Positive correlations were found in three studies (secondary analysis based on Campbell et al., 1976; Kornhauser,

1965; London, Crandall, & Seals, 1977), while nonsignificant correlations were reported in a fourth study which suffered from small sample sizes (Iris & Barrett, 1972). In Campbell et al.'s data, moreover, the correlational pattern held for working men and working women but was appreciably stronger for men.

Kemper and Reichler (1976) delineated several additional reasons why favorable reactions to marital and family roles among men might accompany high levels of job satisfaction. They noted that the husband satisfied with his work does not bring his troubles home to burden his wife and family; his positive frame of mind makes him more receptive to their needs; and his achievements at work add to their admiration for him (i.e., *absence of work problems means family relationships unimpaired*). Based on college students' reports of their parents, Kemper and Reichler's own study found significantly positive correlations between the father's intrinsic job satisfaction and his marital satisfaction, but no relationship between his satisfaction with extrinsic aspects of the job (income, recognition) and his marital satisfaction. A number of other studies found that husbands dissatisfied with their jobs registered lower levels of marital adjustment (Bradburn & Caplovitz, 1965; Haavio-Mannila, 1971; Renne, 1970; Ridley, 1973). I found similar results for husbands from secondary analyses of Campbell et al.'s 1971 Quality of Life Survey (Campbell et al., 1976) and the Survey Research Center's 1973 Fall Omnibus Survey (Staines, Pleck, Shepard, & O'Connor, 1978).

Satisfaction with job and with family life proved positively associated among men in several studies: Kornhauser (1965), husbands; Haavio-Mannila (1971), significant correlations for both married and unmarried men; and Campbell et al. (1976), husbands (based on secondary analysis). Iris and Barrett (1972) correlated satisfaction with five specific job facets and satisfaction with family among two small samples of male supervisors (not restricted to husbands). They recorded but one significant (positive) relationship.

By comparison, data on reactions to work and family roles (i.e., marriage) among women have suggested a more marginally positive relationship. Renne (1970) reported that satisfaction with job and with marriage were positively related among wives, though not as consistently as among husbands. Ridley (1973) obtained no association between job satisfaction and marital adjustment in a study of married female school teachers. For three subgroups of wives (e.g., those with school-aged children), however, the association was significantly positive. My secondary analysis of the 1971 Quality of Life dataset produced nonsignificantly positive correlations among employed wives between job satisfaction and three indicators of marital adjustment. Parallel analyses of working wives in the 1973 Fall

Omnibus Survey generated a significantly positive correlation between job satisfaction and marital happiness, but the correlation was lower than that for husbands.

As regards satisfaction with work and with family life, secondary analyses of the 1971 Quality of Life dataset generated a significantly positive correlation among employed wives, but the relationship was not as strong as for employed husbands. Among female factory workers, Westlander (1976) reported no association between job satisfaction and satisfaction with several different aspects of home life, even though positive associations had emerged among similarly employed men in a slightly earlier study.

In addition, Campbell et al.'s dataset permitted computation of correlations among working wives between job satisfaction and subjective reactions to the household role. Although secondary analyses uncovered no association between job satisfaction and satisfaction with housework, they did indicate a significantly *negative* correlation between job satisfaction and enjoyment of housework.

## DISCUSSION

It seems clear that the empirical findings in the cells reviewed were responsive to various methodological factors, including the selection of measures of role involvement. This issue of measurement applies in principle to cells one, two, three, four, and seven, but emerges most clearly in one and three. When a measure of involvement in work forced a choice between work and some nonwork role, it tended to elicit an artifactually negative relationship between work involvement on the one hand and nonwork involvement (cell one) or subjective reactions to nonwork (cell three) on the other. Alternatively, when indices of work involvement in cell three included items that tapped job satisfaction, they tended to produce the results found in cell nine for job satisfaction (i.e., positive relationships with subjective reactions to nonwork).

The distinction between subjective and objective measures of role involvement also proved important. In cell one, the only cell that provided actual empirical comparisons, subjective measures of work involvement related positively, at least in the most extensive study (Staines & Pagnucco, 1977), to (objectively measured) nonwork involvement, whereas certain objective measures of work involvement (time spent at work) tended to relate negatively among husbands to (objective) measures of involvement in family life. These correlational differences between subjectively and

objectively measured work involvement accord broadly with the causal mechanisms cited in Table I. In cell one of that table, the positive mechanisms had greater relevance for subjective measures of work involvement, whereas the negative mechanisms applied more directly to objective measures.

The results also proved contingent to a certain degree upon demographic factors. Sex differences are a case in point. In a within-study comparison in cell one, Staines and Pagnucco (1977) detected a statistically significant positive (median) correlation among women but not among men between subjective measures of work involvement and an objective index of nonwork involvement. Yet they reported no sex difference for the correlation between an objective index of degree of work involvement (hours worked per week) and their objective index of nonwork involvement. Within-study comparisons from several other investigations in cell three suggested no differences between men and women. Staines and Pagnucco detected no appreciable sex differences in cells four, five, or seven. Cell nine, however, exhibited a consistent sex difference based on within-study comparisons. The positive relationships among men between subjective reactions to work and nonwork exceeded those for women for several nonwork roles: leisure, marriage, and family life in general.

### *Causal Inferences*

As noted earlier, empirical relationships between work and nonwork are compatible with three major causal interpretations: the effects of work on nonwork; the effects of nonwork on work; and the effects of third factors on both work and nonwork. All of the causal mechanisms cited earlier except personality type apply to the causal sequence in which work affects nonwork. With two additional exceptions (cultural pressures and an absence of work problems means family relationships unimpaired), the same causal mechanisms apply to the reverse sequence in which nonwork affects work. Personality type is the only mechanism cited which suggests that a third factor affects both work and nonwork, for instance, by influencing the selection of work and nonwork activities (e.g., highly motivated and intense individuals tend to select highly involving jobs and styles of leisure).

Cross-sectional analyses do not permit any easy or decisive resolution of causal issues. Yet they do contain some information pertinent to alternative causal interpretations. Obviously, the issue of causal inferences arises only when there are clearcut effects to be explained. With greater weight

given to the more sophisticated studies, data from the relevant literature have established appreciable positive relationships between subjective measures of involvement in work and (an objective measure of) involvement in nonwork (cell one); mental effort required by the job and (objective) involvement in nonwork (cell four); types of work and nonwork activities, with the exception of physical effort expended (cell five); subjective reactions to work and (objective) involvement in nonwork (cell seven); and subjective reactions to work and nonwork (cell nine).

Though perhaps with less consistency, the available data also have generated negative relationships between certain objective measures of involvement in work (time invested) and involvement in family roles, among husbands (cell one); subjective measures of work involvement and subjective reactions to the household role among working wives (cell three); physical effort required by the job and (objective) nonwork involvement (cell four); and physical effort expended on work and nonwork activities (cell five). Cells one, three, four, five, seven, and nine thus remain of causal interest.

### *Cell One*

The introduction of statistical controls in Staines and Pagnucco's (1977) study detracted only slightly from the positive findings in cell one for the subjective measures of involvement in work. This fact implies that the resources of time, energy, money, and health made, at best, a marginal contribution to the positive correlations in that cell. The impotence of these four resources as control variables for nonwork involvement is not too surprising, since only for money (and, conceivably, health) could they be generated by high subjective involvement in work. Otherwise, as Table I suggests, four possible mechanisms may explain the positive correlations in cell one: integration, personality type, skills and abilities, and cultural pressures.

Cell one also contains a marginally negative relationship between certain objective measures of involvement in work and nonwork. The negative association has been documented only among husbands and only between measures of time in work and participation in family roles, however, and even then it did not appear consistently (cf. Staines & Pagnucco, 1977). Time as a scarce resource seems the most likely causal mechanism, but energy as a scarce resource cannot be ruled out.

### *Cell Three*

The negative relationship among wives between work involvement and subjective reactions to the household role appears to indicate that, even

among wives who work, paid work and housework act as partial alternatives. Thus, women who enjoy housework commit themselves less to the work role and, conversely, those who dislike the household role become more involved in paid employment.

#### *Cell Four*

The investigations of Karasek (1976) and Staines and Pagnucco (1977) both supported the positive hypothesis in cell four linking mental effort required by the job to nonwork involvement. In addition, Staines and Pagnucco reported that the positive correlation in their study survived the introduction of statistical controls. All four positive causal mechanisms in cell one offer plausible explanations.

The same two studies supported the negative hypothesis in cell four for degree of physical effort required at work, but Staines and Pagnucco also demonstrated that the relationship persisted after the imposition of controls. The most plausible causal mechanism behind the negative relationship between physical effort required by the job and nonwork involvement is energy as a scarce resource.

#### *Cell Five*

Studies in cell five tended to establish positive associations between matched dimensions of work and nonwork activities for all dimensions except physical effort. Staines and Pagnucco (1977) reported positive correlations for interpersonal involvement, supervision, and mental effort. Because statistical controls had no substantial effect on the overall correlational pattern, a simple appeal to resources needed for nonwork activities cannot explain the findings. The data in the cell thus provide some support for the four positive mechanisms cited in Table I (integration, skills and abilities, learned habits, and strong preferences), but fail to pick among them.

Cell five also offers limited support for the negative hypothesis as a result of the negative relationships reported by Karasek (male sample) and Staines and Pagnucco (female subsample only) between physical effort expended on and off the job. Statistical controls on the resources of time, energy, money, and health had no effect on the negative correlation for female workers in Staines and Pagnucco's study. These negative associations involving physical effort in the two studies favor only one of the three negative mechanisms, energy as a scarce resource (i.e., physical fatigue), because the other two (uniform and stable preferences and need for variety) do not explain why the negative pattern applies only to the dimension of physical energy.

### *Cell Seven*

As predicted by the positive hypothesis, Staines and Pagnucco (1977) observed a consistent array of positive correlations between subjective reactions to work and (objective) involvement in nonwork. Yet the imposition of statistical controls eliminated the positive trend and replaced it with a slightly negative one. Some combination of major resources thus appears to explain the positive findings in cell seven, but the nature of the combination is unclear.

### *Cell Nine*

Cell nine exhibits more consistent support for the positive hypothesis than any other cell, but contains very little evidence on the possible causal mechanisms: integration, skills and abilities, personality type, and absence of work problems means family relationships unimpaired. The fact that subjective reactions to work and nonwork roles were more strongly positive among husbands than wives may underscore the common assumption that wives face greater role conflict than husbands between these two life domains. In that event, role conflict should perhaps be added to the list of negative mechanisms in cell nine, at least for working women.

### *Leisure versus Family*

Not yet addressed directly is one important question: Does work relate to leisure in the same way and to the same extent that work relates to family life? One approach explored earlier in this paper leads to a clearcut prediction. Of the three basic domains reviewed here, work boasts the most constraints and leisure the fewest with family somewhere in between. Because of its greater flexibility, leisure offers a better opportunity for spillover from work (positive relationships) than does family life, whereas family life has a greater probability of conflict with work (negative relationships) than does leisure. However, data comparing the relationships between work and the two nonwork domains have proven tantalizingly scanty, but the partial and fragmentary evidence available does hint generally at more positive relationships between work and leisure than between work and family life.

In cell one, several studies displayed a marginally negative association among husbands between objective measures of work involvement (time spent at work) and involvement in family roles. No parallel trend has been established for leisure, but it is not clear how thoroughly investigators have



searched for such a relationship. Data collected by Staines and Pagnucco (1977) in cell two on work involvement and types of nonwork activities revealed a tendency for subjective measures of work involvement to be more positively related to participation in leisure than to participation in family life, at least before the introduction of statistical controls. In cell five, matched activities between work and leisure correlated positively for all dimensions except physical effort. No similar findings have emerged for work and family activities, but this may merely reflect neglect on the part of investigators. Only one study in cell seven compared the relationship between subjective reactions to work and involvement in leisure with the corresponding relationship for work and family life. Before (but not after) controlling for resources, Staines and Pagnucco's (1977) data exhibited a somewhat stronger positive relationship for leisure than for family life. Cell nine continued the pattern of stronger positive correlations for leisure than for family. Whereas correlations between subjective reactions to work and leisure proved consistently positive for both sexes, those between subjective reactions to work and family roles were consistently positive for men but only marginally positive for women.

## CONCLUSION

This paper has explored two broad and potentially diffuse approaches to the relationship between work and nonwork. Underlying the various positive and negative approaches investigated here were the general notions of similarity and dissimilarity, respectively, between work and nonwork. The predominantly correlational evidence favored the positive, negative, and null approaches under different conditions but more frequently sided with the positive approach.

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