

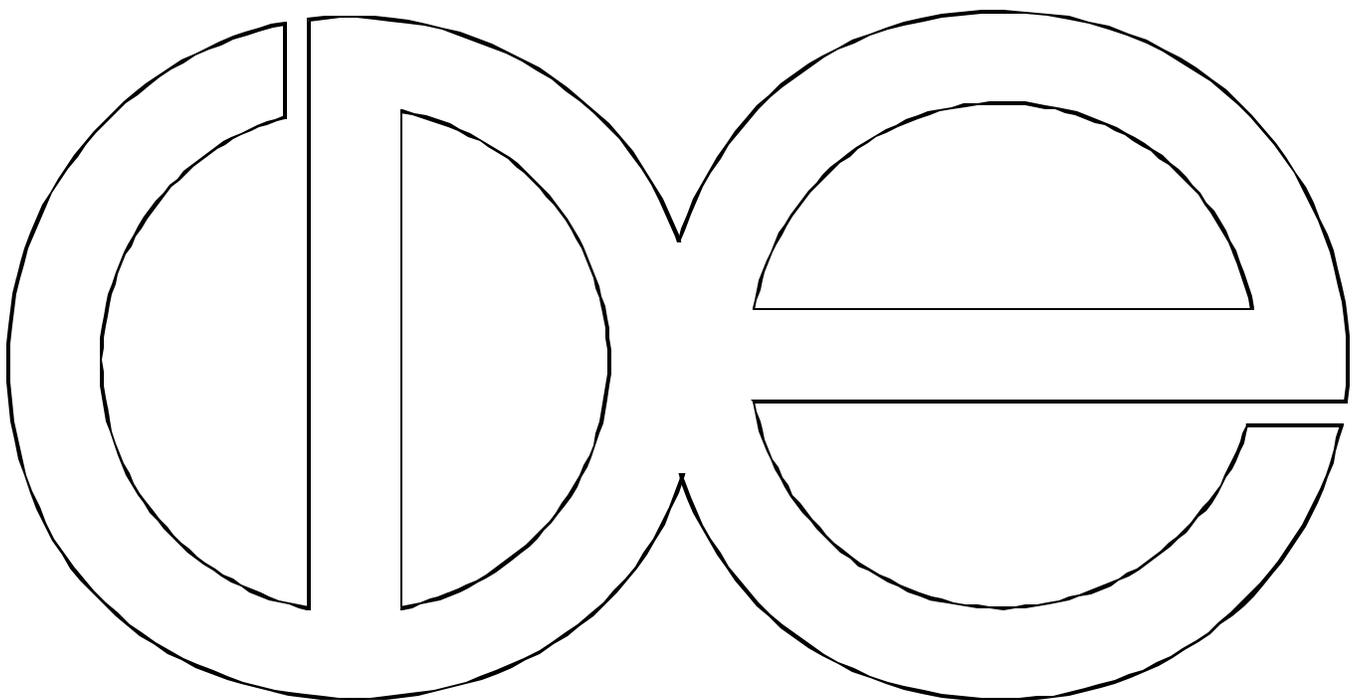
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**Reconceptualizing the Work-Family Interface: An Ecological
Perspective on the Correlates of Positive and Negative
Spillover between Work and Family**

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Reconceptualizing the Work-Family Interface: An Ecological Perspective on the Correlates of Positive and Negative Spillover between Work and Family

ABSTRACT

The overarching goal of this study was to use ecological theory to develop a more expanded conceptualization of the work-family interface, and to identify significant correlates of both positive and negative spillover between work and family. Using a subsample of employed adults from the National Survey of Midlife Development in the United States (n=1,986), results from principal components analysis indicated four distinct dimensions of work-family spillover: negative spillover from work to family, positive spillover from work to family, negative spillover from family to work, and positive spillover from family to work. Results from multivariate regression analyses indicated more resources that facilitate development in work or family settings (e.g., more decision latitude at work, support at work from co-workers and supervisors, emotionally close spouse and family relations) were associated with less negative and more positive spillover between work and family. By contrast, more barriers arising from person-environment interactions at work and in the family (e.g., more pressure at work, spouse disagreement, and perception of family burden) were associated with more negative spillover and less positive spillover between work and family. In some cases results differed significantly by gender, and all results controlled for the potential confounding effects of age, race, education, household income, parental status, marital status, employment status, and personality characteristics.

Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family

Converging social and ideological trends suggest that work-family issues will become increasingly important in the new millennium. Social trends such as increasing participation of women in the workforce (Lerner, 1994; U. S. Bureau of Labor Statistics, 1999), greater numbers of working single-parent and dual-earner families (Bumpass, 1990; U.S. Bureau of the Census, 1998; Zill, 1991), and the increasing caregiving needs of an aging population (N. Marks, 1996; Myers, 1990) are providing new responsibilities and new challenges to both women and men to blend work and family commitments. Concurrent with these sociohistorical trends, greater numbers of women and men are adopting more egalitarian perspectives on both work and family issues, further breaking down the traditional compartmentalization by gender of work and family spheres (Barnett & Rivers, 1996; Pleck, 1993; Willinger, 1993).

An increasing number of contemporary women and men are finding themselves involved in work and family arrangements that were largely unknown to their parents' generation (Barnett & Rivers, 1996; Hochschild, 1997). Unfortunately the work-family interface, despite a growing multidisciplinary literature, is not well understood. Research informing our understanding of the work-family nexus remains limited in a number of theoretical and methodological ways (for detailed review see Barnett, 1996); consequently, the research base from which we might develop policies and practices to assist individuals through the relatively new and uncharted waters of today's work-family arrangements also remains limited.

The lack of an overarching and integrating theoretical framework is perhaps the most pronounced barrier facing work-family research (Barnett, 1996). Since the early 1950s work-family

research has been driven by various hypotheses derived from role theory (e.g., role conflict, scarcity of resources, role accumulation, role congruence, role strain; Marshall, Chadwick, & Marshall, 1991). Structural-functionalist role-theory's assumptions regarding a biologically-based proclivity of men toward an instrumental role in the workplace and women toward an expressive role in the family (Parsons, 1954) led to a deterministic perspective and an overemphasis on "separate spheres" of life for adult men and women. This perspective is not helpful for understanding and explaining contemporary complexities in work-family relationships for individuals (Osmond & Thorne, 1993).

One of the most significant limitations in our conceptualization of work-family interrelationships, arising from the predominant use of structural-functionalist role theory, is the generally accepted assumption that the interface between work and family is best characterized in terms of strain, resulting in an almost exclusive empirical focus on work-family conflict (Barnett, 1996). Unpleasant work characteristics are consistently found to "spillover" and "crossover" into the family domain (e.g., Williams & Alliger, 1994); likewise, family problems have been found to "spillover" into the work domain (e.g., Bowen & Pittman, 1995; Crouter, 1984). Conflict at the work-family interface has been implicated in a variety of deleterious consequences such as depression (Frone, Russell, & Cooper, 1997; Higgins, Duxbury & Irving, 1992), alcohol abuse (Frone, Russell, & Cooper, 1997), and marital tension (Marshall, Chadwick, & Marshall, 1991).

However, considerable evidence within the work-family literature, as well as a separate but related literature on multiple roles and wellbeing, suggest that the work-family interface can also result in synergies, or "positive spillover" between work and family (Barnett, Marshall, & Pleck, 1992; Bedeian, Burke, & Moffett, 1988; Hibbard & Pope, 1991; S. Marks, 1977; Moen, Dempster-McClain, & Williams, 1989, 1992; Seiber, 1974; Thoits, 1983; Waldron & Jacobs, 1988). Although the

synergistic potential of work and family experiences sometimes has been footnoted or briefly commented upon, empirical inquiry into “positive spillover” between work and family is noticeably missing from most of the literature (Barnett, 1996). The overarching goal of this paper was to use ecological theory (Bronfenbrenner, 1979, 1989; Bronfenbrenner & Morris, 1998) to develop a more expanded conceptualization of the work-family interface and to identify significant correlates of both positive and negative spillover between work and family.

Empirical and Theoretical Background

Work-Family Conflict

Work-family research has been dominated by empirical inquiry into work-family conflict (Barnett, 1996) postulating, based upon structural-functionalist role theory (Marshall, Chadwick, & Marshall, 1991), that responsibilities from different, separate domains compete for limited amounts of time, physical energy, and psychological resources (Greenhaus & Beutell, 1985; Small & Riley, 1990). Research using community and regional samples often finds that work pressure can undermine marital satisfaction and other family processes, and that family pressure or problems can undermine job performance and job satisfaction (Crouter, 1984; Frone, Russell & Cooper, 1992a; MacEwen & Barling, 1994; Parasuraman, Purohit, Godshalk, & Beutell, 1996). Structural-functionalist role theory’s deterministic perspective of role strain requires conceptualizing the work-family interface as a continuum ranging from little to much conflict between work and family; and, postulates that positive aspects of work and family reduce levels of conflict or buffer the individual from conflict’s undesirable consequences.

Multiple threads of evidence consistently indicate that conflict from work to family is distinct from conflict from family to work (for review, see Frone, Yardley, & Markel, 1997). Empirical reports

from different samples indicate that work to family conflict and family to work conflict are, at best, moderately correlated ($r=.30$ -.55; Frone, Russell, & Cooper, 1992a; Frone, Yardley & Markel, 1997; Gutek, Searle, & Klepa, 1991; Klitzman, House, Israel, & Mero, 1990; Netemeyer, Boles, & McMurrian, 1996). Theory and evidence also suggest that individuals can discern when work is interfering with family and when family is interfering with work (Barnett, 1996; Bromet, Dew, & Parkinson, 1990; Crouter, 1984). Therefore, work-family spillover appears to be, at a minimum, two-dimensional (Frone, Yardley, & Markel, 1997; Netemeyer, Boles, & McMurrian, 1996).

Positive Spillover between Work and Family

While it is clear that in some circumstances, pressure from one life setting (e.g., work or family) may spillover and undermine functioning in another, a parallel body of theory suggests that participation in multiple roles provides a greater number of opportunities and resources to facilitate individual growth and better functioning (Barnett, 1996; S. Marks, 1977; Sieber, 1974). For example, empirical reports using a variety of samples consistently indicate that marital quality is an important buffer for job related stress, particularly for men (Adams, King, & King, 1996; Barnett, Marshall, & Pleck, 1992; Barnett, Marshall, Raudenbush, & Brennan, 1993; Bolger, DeLongis, Kessler & Wethington, 1989; Gattiker and Larwood, 1990; O'Neil & Greenberger, 1994; Weiss, 1990). Scholars typically conclude that having the opportunity to talk through difficulties at work, or having a partner who is sensitive to job-related pressures may help individuals better handle the pressures associated with their jobs and consequently perform better (Barnett, 1996; Gattiker & Larwood, 1990; Weiss, 1990). Conversely, numerous reports from cross-sectional and longitudinal analyses indicate that being employed and being a mother together with being a wife is associated with better physical and psychological wellbeing in contrast to being an unemployed wife, particularly among women who want to work or who are

economically disadvantaged (S. Marks, 1977; Waldron, Weiss, & Hughes, 1998). Consequently despite an almost exclusive focus on conflict, separate but related bodies of research suggest that the work-family interface can be characterized as both negative and positive.

Negative Spillover and Positive Spillover: Isomorphic or Orthogonal?

The evidence for potential well-being benefits associated with blending work and family roles suggests an important conceptual and methodological question: Are negative spillover (i.e., work-family conflict) and positive spillover (i.e., work-family enhancement) isomorphic or orthogonal constructs? An isomorphic conceptualization would posit that positive and negative spillover are simply the opposite ends of the same continuum (e.g., no work-family conflict to much work-family conflict), predicted by the same determinants and having the same consequences, albeit in opposite directions. An orthogonal conceptualization would posit that positive and negative spillover are distinct dimensions of the work-family interface (e.g., no work to family conflict to much work to family conflict; but additionally, no work to family enhancement to much work to family enhancement). These two relatively distinct dimensions of spillover might coexist to some degree (e.g., a job that provided a high degree of negative spillover in the form of long hours and psychological carryover into home life at the same time could provide a high degree of positive spillover in the form of financial security for providing positive experiences for the family and opportunities for personal growth that make for a better family member) and have shared as well as relatively distinct determinants and consequences. Analogous multidimensional conceptualizations of positive and negative social interactions (Schuster, Kessler, & Aseltine, 1990) and their impact on health (Burg & Seeman, 1994; Rook, 1984), positive and negative psychological well-being (Bradburn, 1969; Bryant & Veroff, 1982; Lawton, 1983; Ryff, 1989, Ryff &

Keyes, 1995), and positive and negative marital quality (Fincham, 1997) suggest the usefulness of exploring a similar multidimensional conceptualization of work-family spillover.

Empirical inquiry focusing on the negative aspects of the work-family interface is necessary given the consistent evidence indicating that work-family conflict undermines physical and mental health (Bromet, Dew & Parkinson, 1990; Frone, Russell, & Barnes, 1996; Frone, Russell, & Cooper, 1992a, 1992b, 1993; 1995;1997; Frone, Barnes & Farrell, 1994; Higgins, Duxbury, & Irving, 1992; Klitzman, House, Israel & Mero, 1990; Parasuraman, Purohit, Godshalk, & Beutell, 1996; Rice, Frone & McFarlin, 1992). However, it is also necessary to consider both the antecedents and consequences of positive spillover between work and family; unfortunately, the existing work-family literature lacks a strong overarching theoretical framework that can capture a broader conceptualization of work-family experiences (Barnett, 1996).

Ecological Systems Theory

In contrast to the individual, deterministic perspective of structural-functionalist role theory, Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1979; 1983;1986; 1989;1995; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998) suggests that the work-family experience is a joint function of process, person, context and time characteristics. Consistent with previous theory (e.g., Greenhaus & Parasuraman, 1986; Voydanoff, 1988) and research (Barnett, 1996; Marshall, 1991, Marshall, Chadwick, & Marshall, 1991), ecological theory suggests that each type of characteristic exerts an additive, and potentially interactive, effect on the work-family experience. Also consistent with ecological theory, a review of the literature suggests that the work-family experience reflects the adequacy of fit between the individual and his or her environment (Barnett, 1996, Bronfenbrenner, 1986). In contrast to previous theory however, ecological theory mandates a

broader scope of work and family factors that shape an individual's work-family experience; and ecological theory does not restrict the experience to being either positive or negative spillover.

Empirical evidence supports the contextual component of ecological theory (Bronfenbrenner, 1979) by finding that contextual factors in both work and family microsystems are independently associated with work-family conflict (Frone, Russell, & Cooper, 1992a; Frone, Yardley & Markel, 1997; Greenhaus & Parasuraman, 1986; Higgins, Duxbury & Irving, 1992). Unfortunately, however, these studies consistently sum across different work and family experiences to operationalize key latent constructs such as family and work pressure. For example, work pressure typically reflects low levels of autonomy on the job, high levels of psychological strain, and high levels of role ambiguity (Bromet, Dew, & Parkinson, 1990; Frone, Russell & Cooper, 1992a). The implicit assumption is that each item contributes equally to the negative work-family experience in a linear fashion.

Processes, or interactions between the individual and the persons, objects and symbols of his/her environment that are perceived as positive or as providing resources for personal growth within and across different environments are postulated as the actual mechanisms that promote development (Bronfenbrenner & Ceci, 1994; Lawton & Nahemow, 1973). Work and family interactions that result in feelings of affective support or control might be seen as resources that can be used for adaptation in multiple domains (Lawton & Nahemow, 1973). By contrast negative interactions between the individual and the persons, objects and symbols in his/her environment such as spouse disagreement, family criticism or work related pressure might be seen as potential barriers to development in different domains (Lawton & Nahemow, 1973). In short, different experiences in the family and on the job can contribute to different overall evaluation of the work-family interface.

Different person characteristics elicit different responses from the social environment, and these differential responses condition person-environment interactions (Bronfenbrenner & Morris, 1998). In operational terms, this postulate of ecological theory suggests that specific individual level characteristics might moderate the association between different work and family interactions and the work-family experience. The asymmetrical boundary hypothesis (Pleck, 1977) suggests that family factors would spill over into work more for women than men, and that work factors would spill over into family more for men than women because of patterns of gender role socialization.

Empirical support for the asymmetrical boundary hypothesis remains mixed. Some scholars find significant main effects for sex consistent with traditional gender role socialization (i.e., more work spillover for men and more family spillover for women), but no evidence of gender differences in the effects of this spillover on well-being (i.e., work spillover does not affect women's well-being more than men's well-being) (Loscocco, 1997; Parasuraman, Purohit, Godshalk, & Beutell, 1996). Others find gender differences in the antecedents and/or consequences of work-family conflict (Duxbury & Higgins, 1991; Duxbury, Higgins, & Lee, 1994; Gutek, Searle, Klepa, 1991; MacEwen & Barling, 1994; Parasuraman, Greenhaus, & Granrose, 1992). Still other research reports a weak or complete absence of a main effect for gender or effect differences by gender (Bedian, Burke, & Moffett, 1988; Eagle, Miles, & Icenogle, 1997; Frone, Russell & Cooper, 1992a, 1992b). Inconsistent findings may result from a variety of methodological limitations, however, such as differences in analytical strategies and samples.

Other person factors such as resource and disposition characteristics are also important features of an ecological perspective (Bronfenbrenner & Morris, 1998). Unfortunately, we know very little about difference resource characteristics such as age, race/ethnicity, education, and income shape the

work-family experience (Barnett, 1996). Moreover, we know even less about how enduring personality traits (e.g., neuroticism and extraversion; Costa & McRae, 1980) set into motion and sustain different person-environment interactions relevant to understanding the work-family interface.

Hypotheses

Guided by ecological systems theory and previous research we examined the following hypotheses and research question:

H1. The work-family interface is best characterized by four dimensions of spillover:

negative spillover from work to family, negative spillover from family to work, positive spillover from work to family, and positive spillover from family to work.

H2. The correlates of work-family spillover differ by gender. Specifically, family interactions will be associated with more work-family spillover for women than men, while work interactions will be associated with more work-family spillover for men than women.

RQ1. Are differences in other individual characteristics, specifically, age, race/ethnicity, educational status, household income, parental status, marital status, employment status, neuroticism, and extraversion associated with differences in work and family spillover?

H3. A higher level of negative spillover from work to family will be associated with fewer ecological resources (i.e., a lower level of decision latitude, less support from co-workers and supervisors, and a lower level of spouse and other family affectual support); a lower level of negative spillover from work to family will be associated with lower levels of ecological barriers (i.e., less pressure at work, less spouse disagreement, and a lower level of other family criticism/burden).

H4. A lower level of positive spillover from work to family will be associated with fewer ecological resources (i.e., a lower level of decision latitude, less support from co-workers and supervisors, and a

lower level of spouse and other family affectual support); a higher level of positive spillover from work to family will be associated with fewer ecological barriers (i.e., less pressure at work, less spouse disagreement, and a lower level of other family criticism/burden).

H5. A higher level of negative spillover from family to work will be associated with fewer ecological resources (i.e., a lower level of spouse and other family affectual support, less decision latitude, and a lower level of support from co-workers and supervisors); a lower level of negative spillover from family to work will be associated with fewer ecological barriers (i.e., less spouse disagreement, a lower level of family criticism/burden, and less pressure at work).

H6. A lower level of positive spillover from family to work will be associated with fewer ecological resources (i.e., a lower level of spouse and other family affectual support, less decision latitude at work, and a lower level of support from co-workers and supervisors); and a higher level of positive spillover from family to work will be associated with fewer ecological barriers (e.g., less spouse disagreement, a lower level of family criticism/burden, and less pressure at work).

Methods

Data and Sample

The data used for this study are from the National Survey of Midlife Development in the United States (MIDUS) collected in 1995 by the John D. and Catherine T. MacArthur Foundation Research Network on Successful Midlife Development. The original purpose of the MIDUS was to examine patterns, predictors and consequences of midlife development in the areas of physical health, psychological well-being, and social responsibility. MIDUS respondents are a nationally representative general U.S. population sample of non-institutionalized persons aged 25-74, who have telephones. The sample was obtained through random digit dialing, with an oversampling of older respondents and men

made to guarantee a good distribution on the cross-classification of age and gender. Sampling weights correcting for selection probabilities and non-response allow this sample to match the composition of the U.S. population on age, sex, race and education.

MIDUS respondents first participated in a telephone interview lasting approximately 40 minutes. The response rate for the telephone questionnaire was 70%. Respondents to the telephone survey were then asked to complete two self-administered mailback questionnaires. The response rate for the mailback questionnaire was 86.8%. This yielded an overall response rate of 60.8% (.70 X .868) for both parts of the survey.

The analytic sample used here represents all employed respondents under the age of 62 regardless of the number of hours worked per week (N=1,986; women n=948, men n=1,038). In contrast to some work-family studies we did not limit our sample additionally to married persons and/or parents (although we control for these statuses in our analyses). We believe such a limitation reflects too-narrow a conceptualization of family, since single childless adults often carry considerable family commitments to parents, siblings, and other kin (Allen & Pickett, 1987).

Measures

[Insert Table 1 about here]

Dependent Variables

Four distinct dimensions of work-family spillover were evaluated by considering the factor structure of 16 different items (four for each dimension) that were new to the MIDUS survey.

(Descriptive statistics for all variables used in the analysis are provided in Table 1.) **Negative spillover from work to family** items included: “How often have you experienced each of the following in the past year? 1) Your job reduces the effort you can give to activities at home. 2) Stress at work makes your

irritable at home. 3) Your job makes you feel too tired to do the things that need attention at home. 4) Job worries or problems distract you when you are at home.” Response categories for each of these items and each of the subsequently described work-family spillover indices were never=1, rarely=2, sometimes=3, most of the time=4, and all of the time=5.

Positive spillover from work to family was assessed with the following items: “How often have you experienced each of the following in the past year? 1) The things you do at work help you deal with personal and practical issues at home. 2) The things you do at work make you a more interesting person at home. 3) Having a good day on your job makes you a better companion when you get home. 4) The skills you use on your job are useful for things you have to do at home.”

Negative spillover from family to work was measured with the following items: “How often have you experienced each of the following in the past year? 1) Responsibilities at home reduce the effort you can devote to your job. 2) Personal or family worries and problems distract you when you are at work. 3) Activities and chores at home prevent you from getting the amount of sleep you need to do your job well. 4) Stress at home makes you irritable at work.”

Positive spillover from family to work was measured by items including: “How often have you experienced each of the following in the past year? 1) Talking with someone at home helps you deal with problems at work. 2) Providing for what is needed at home makes you work harder at your job. 3) The love and respect you get at home makes you feel confident about yourself at work. 4) Your home life helps you relax and feel ready for the next day’s work.”

Independent Variables

The Family Microsystem

Previous research suggests that age of the oldest child, in contrast to **parental status** measured in strictly a dichotomous way, is an important predictor of the work-family experience (Voydanoff, 1988). Consequently three dichotomous categories (not a parent, oldest child 5 years of age or less, and oldest child older than 5) were constructed from self-reports of parental status and eldest child's birthday. We also included a dichotomous measure of **marital status** (1=not married).

Spouse affectual support was assessed by summing the responses to the following questions new to the MIDUS survey: (1) "How much does your spouse or partner really care about you? (2) How much does he or she understand the way you feel about things? (3) How much does he or she appreciate you? (4) How much can you rely on him or her for help if you have a serious problem? (5) How much can you open up to him or her if you need to talk about your worries? (6) How much can you relax and be yourself around him or her?" Response categories were not at all=1, a little=2, some=3 and a lot=4 (alpha =.90).

Spouse disagreement was measured by summing responses to the following three items. "How much do you and your spouse disagree on the following issues? (1) Money matters, such as how much to spend, save or invest? (2) Household tasks, such as what needs doing and who does it? (3) Leisure time activities, such as what to do and with whom?" Response categories were the same as those described for spouse affectual solidarity (alpha=.70). Preliminary analyses indicated that spouse affectual solidarity and spouse disagreement are only moderately correlated ($r = -.47$), and that both aspects of the marital relationship added significantly to explaining overall self-reported marital quality (e.g., Rook, 1984; Schuster, Kessler, & Aseltine, 1990), therefore both variables were included in our analyses.

Other family affectual support was assessed by summing the responses to the following questions adapted from Schuster and colleagues (1990): (1) “Not including your spouse or partner, how much do members of your family really care about you? (2) How much do they understand the way you feel about things? (3) How much can you rely on them for help if you have a serious problem? (4) How much can you open up to them if you need to talk about your worries?” Response categories for each item were not at all=1, a little=2, some=3, and a lot=4 (alpha = .83).

Other family criticism/burden was measured by summing the responses to the following items that were also adapted from Schuster and colleagues (1990): (1) “Not including your spouse or partner, how often do members of you family make too many demands on you? (2) How often do they criticize you? (3) How often do they let you down when you are counting on them? (4) How often do they get on your nerves?” The response categories for the family criticism/burden items were the same as those described for family affectual solidarity (alpha=.78). Family affectual solidarity and family criticism/burden were only moderately correlated ($r = -.37$), and both items were uniquely associated with overall life satisfaction (Rook, 1984; Schuster, Kessler, & Aseltine, 1990) therefore we included both variables in our analyses.

The Work Microsystem

The number of reported **hours spent working** is often linked to work-family outcomes (for complete review see Barnett, 1996). In this study four categories of hours spent in employment were constructed from self-reports. Given the great variability in part-time employment arrangements, low part-time (i.e., less than 20 hours per week) was differentiated from high part-time (i.e., working 20-34 hours per week). The remaining two categories differentiated respondents working between 35 and 44 hours per week and respondents working more than 45 hours per week.

Decision latitude assessed the amount of control the individual has over their work environment. The latent construct was measured by summing responses to four items revised from the Whitehall II survey (1989): (1) “How often do you have a choice in deciding how you do your tasks at work? (2) How often do you have a choice in deciding what tasks you do at work? (3) How often do you have a say in decisions about your work? (4) How often do you have a say in planning your work environment –that is, how your workplace is arranged or how things are organized?” Response categories for each item in this index (as well as the indices for job pressure and support at work described subsequently) were never=1, rarely=2, sometimes=3, most of the time=4, and all of the time=5 (alpha = .87).

Job pressure, assessing the amount of psychological strain associated with working, was measured by summing responses to the following five questions that were new to the MIDUS survey: (1) “How often do you have to work very intensively – that is, you are very busy trying to get things done? (2) How often do different people or groups at work demand things from you that you think are hard to combine? (3) How often in the past year have you had too many demands made on you at your job? (4) How often in the past year have you had enough time to get everything done at your job? (5) How often in the past year have you had a lot of interruptions at your job?” (alpha = .76).

Support at work assessing the extent to which relationships with co-workers and supervisors are perceived as supportive, was measured by averaging responses to the following questions revised from the Whitehall II survey (1989): (1) “How often do you get help and support from your co-workers? (2) How often are your coworkers willing to listen to your work-related problems? (3) How often do you get the information you need from your supervisor or superiors? (4) How often do

you get help and support from your immediate supervisor? (5) How often is your immediate supervisor willing to listen to your work-related problems?" ($\alpha=.84$).

Individual Characteristics

Age, race/ethnicity, sex, level of educational attainment, household earnings (quartiles), and two aspects of personality were included in all analyses. Neuroticism was constructed by calculating the mean score of the following items: "Please indicate how well each of the following describes you: (1) Moody. (2) Worrying. (3) Nervous. (4) Calm." Response categories for these items were 1=not at all, 2=a little, 3=some, 4=a lot. Cronbach's alpha for this index was .73, with the last item reverse coded. Extraversion was assessed by taking the mean response to the following items: "Please indicate how well each of the following describes you: (1) Outgoing. (2) Friendly. (3) Lively. (4) Active. (5) Talkative. Response categories for the extraversion scale were the same as those described for neuroticism ($\alpha=.79$).

Variable Construction

Several of the independent variables were found to be skewed; therefore, we trichotomized the work and family measures based upon approximate tertile cut-points to comply with the general assumptions of regression analyses (Neter, Kutner, Nachtsheim, & Wasserman, 1996) and to avoid strong assumptions regarding the shape of the association. A separate category was created for respondents missing on each of the continuous work and family variables and these missing data indicator variables were included in the analyses to provide more reliable parameter estimates for the associations between work and family factors and work-family spillover (Orme & Reis, 1991).

Analytic Sequence

The first hypothesis was tested using principle-axis factor analysis with varimax rotation to explore the structure of the 16 items measuring work-family spillover. Factors with eigen-values greater than one were retained, and specific items were retained if the factor loading was greater than .40. The remaining hypotheses and the research question were tested using multivariate ordinary least squares regression models where each dimension of work-family spillover was regressed on the work characteristics, family characteristics, and individual characteristics (i.e., age, race/ethnicity, education, household earnings, neuroticism, and extraversion).

Results

[Insert Table 2 about here]

Multiple Dimensions of Work-Family Spillover

Examination of the scree plot, a consideration of factors with an eigen value greater than one, and principal components analyses with varimax rotation all provided evidence to support our first hypothesis that negative spillover from work to family, positive spillover from work to family, negative spillover from family to work, and positive spillover from family to work are distinct forms of work-family experience. Two items (i.e., item three described earlier for positive spillover from work to family, and item two described earlier for positive spillover from family to work) were eliminated because they strongly loaded on multiple factors (see Table 2). Consequently negative spillover from work to family was constructed using a four item scale ($\alpha=.83$), positive spillover from work to family was constructed using three items ($\alpha=.73$), negative spillover from family to work included four items ($\alpha=.80$), and positive spillover from family to work was constructed from three items ($\alpha=.70$).

[Insert Table 3 about here]

Additional analyses further supported our first hypothesis that the positive and negative dimensions of the work-family experience identified in the factor analysis are distinct. First, consistent with the factor analysis results, examination of the intra-class correlation matrix (see Table 3) revealed that the internal correlation between individual items constructing the measures were moderate on the diagonal while correlation estimates off the diagonal were modest. Next the bivariate correlation between each dimension of work-family spillover ranged from modest to moderate. Indeed, the highest correlation was between work to family and family to work negative spillover (i.e., $r=.45$) falling in the range found in previous empirical work (e.g., Frone, Russell, & Cooper, 1992a; Frone, Yardley & Markel, 1997; Gutek, Searle, Klepa, 1991; Klitzman, House, Israel, & Mero, 1990; Netemeyer, Boles, & McMurrian, 1996). Additional analyses suggested concurrent and predictive validity for each of the work-family measures identified by the factor analysis. Multivariate regression analyses (not shown) demonstrated that all four dimensions of work-family spillover were independently associated ($p \leq .01$) with global measures of physical and mental health, and life satisfaction. Moreover each measure, except for positive spillover from work to family, was found to be independently associated ($p \leq .01$) with marital quality.

Gender and Other Individual Differences in Work-Family Spillover

Consistent with some previous research, descriptive analyses indicated that negative work to family spillover and negative family to work spillover do not systematically differ by gender (Bedian, Burke, & Moffett, 1988; Eagle, Miles, & Icenogle, 1997; Frone, Russell & Cooper, 1992a, 1992b). We do however find that women report higher levels of positive spillover from work to family in contrast to men (see Table 1).

[Insert Table 4 about here]

Preliminary analyses combining women and men were undertaken to consider the gender moderation hypothesis. Each dimension of work-family spillover was regressed on all of the family, work, and individual characteristics, along with gender interaction terms for each of the independent and exogenous variables. Several significant gender interactions were found, consequently separate models are provided in Table 4 for women and men with superscripts indicating where significant gender interaction terms were found in the preliminary analyses. (More discussion of gender differences follows in the description of results of the models estimated separately for men and women.) Unweighted results are reported since factors used in over-sampling were controlled in all analyses and the overall pattern of findings were similar for both weighted and unweighted analyses (Winship & Radbill, 1994).

In answer to our research question, we did find that individual-level factors were associated with work-family spillover once family and work characteristics were controlled. Younger men reported more negative spillover between work and family (both work to family and family to work), and less positive spillover from family to work than older men. Similarly younger women reported less positive spillover from work to family and more negative spillover from family to work than older women.

Race/ethnicity was not a consistent robust predictor of work-family spillover, however non-Hispanic white women reported more negative spillover from family to work than nonwhite women did. Across outcomes, an individual's educational level and household earnings were not found to be systematically associated with work-family spillover. Notably however, education and household earnings were significantly associated with positive spillover from work to family, and these associations differed significantly by gender. Specifically, a lower level of education and income were robustly associated with a lower level of positive spillover from work to family for women, but were

unassociated with this outcome among men. There was also some evidence that high school educated women (and possibly men) experienced less negative work to family spillover than college graduates, and that men with less than a high school education experienced less negative family to work spillover than college graduates.

In terms of personality characteristics, a higher level of neuroticism was associated with more negative spillover between work and family (in both directions) for both women and men, and less positive spillover between work and family among women only. A higher level of extraversion on the other hand was associated with less negative spillover and more positive spillover for both women and men.

Negative Spillover from Work to Family

Work Factors and Negative Spillover from Work to Family

Consistent with previous research, the strongest correlates of negative spillover from work to family (i.e., work to family conflict) were work characteristics, particularly pressure on the job. Indeed, in contrast to women and men in the highest tertile of pressure at work, being in the lowest tertile was associated with nearly one full standard deviation reduction in the amount of negative spillover from work to family. These results lend strong support for Hypothesis 3 which predicted that more barriers in the workplace would be associated with more negative spillover from work to family.

Also consistent with Hypothesis 3, results reported in the first model on Table 4 indicate that fewer ecological resources (i.e., lower levels of decision latitude and support at work) are associated with more negative spillover from work to family. Although there is no evidence for gender differences, the association between decision latitude and negative spillover from work to family appears to be somewhat more robust for women in contrast to men. Inconsistent with the gender moderation

hypothesis, results indicated that a low level of support at work was more strongly associated with negative spillover from work to family for women in contrast to men.

Finally our results indicated that working less than 20 hours per week was associated with less negative spillover from work to family among women only, while working 45 hours per week or more was associated with more negative spillover from work to family for both women and men.

Family Factors and Negative Spillover from Work to Family

Although work characteristics were important correlates in the model estimating the association between work and family factors and negative spillover from work to family, different aspects of family relationships were also significant correlates. Consistent with our hypothesis, analyses indicated that a lower level of family criticism/burden and spouse disagreement was associated with less work to family conflict for both men and women. Additionally, for men a low level of affectual support from family members and spouse (trend effect) was associated with more negative spillover from work to family.

Two interesting gender differences emerged in the gender separate analyses. First, providing very limited support for our gender moderation hypothesis, results indicated that the lowest level of other family criticism/burden was associated with less negative spillover from work to family among women only. Second, despite the absence of a significant between gender difference, it is interesting to note that within gender results indicate no association between spouse affectual support and work to family conflict among women, whereas among men there was a trend indicating that a low level of spouse affectual support might be associated with more negative spillover from work to family.

Positive Spillover from Work to Family

Work Factors and Positive Spillover from Work to Family

Resources within the workplace clearly were the most robust correlates of positive spillover from work to family among both women and men. Results reported in Table 4 indicate that lower levels of decision latitude are linearly associated with less positive spillover from work to family among both women and men. A lower level of support at work from coworkers and supervisors was also strongly associated with less positive spillover from work to family. Women and men who work alone do not systematically differ from women and men who report a high amount of support at work. Finally, contrary to our hypothesis, results indicated that a low level of pressure at work among men is associated with less positive spillover from work to family.

Family Factors and Positive Spillover from Work to Family

A trend level effect suggested that among men having an oldest child less than 5 years old was associated with a higher level of positive spillover from work to family than having no children. Another trend level finding, running counter to our hypothesis, suggested that being in the lowest tertile of other family criticism/burden was associated with less, rather than more, positive spillover from work to family among women.

Negative Spillover from Family to Work

Family Factors and Negative Spillover from Family to Work

While a lower level of both spouse and other family criticism/burden were clearly important correlates of more negative spillover from family to work, it is also important to note the other family factors that have a significant influence on this dimension of the work-family interface. Gender separate results reported in the fifth and sixth columns of Table 4 indicate that having a child of any age (in contrast to having no children) is associated with more negative spillover from family to work for both women and men. Similarly, having a low level of spouse affectual support is associated with more

negative spillover. Taken together, these results suggest that family structure, and both positive and negative dimensions of family relations are important correlates of family to work conflict.

Work Factors and Negative Spillover from Family to Work

Although previous research suggests that family factors are the primary source of family to work conflict, results from our analyses indicated that less pressure at work was also strongly associated with less negative spillover from family to work. Moreover, results indicated that the association between pressure at work and negative spillover from family to work differs along gender lines. Although a low level of pressure is associated with a strong decrease in negative spillover from family to work among both women and men, our results indicate that among men, even moderate in contrast to high pressure at work is beneficial.

Supportive of Hypothesis 5, results indicated that a being in the middle tertile of support at work in contrast to being in the highest tertile is associated with more negative spillover from family to work for both women and men. Similarly, a trend level finding among women suggests that being in the middle tertile of decision latitude is associated with more negative spillover from family to work in contrast to being in the highest tertile. Finally, controlling for quality of work measures, our results indicated that working less than 20 hours per week was associated with less family to work conflict among both women ($p \leq .001$) and men ($p \leq .10$).

Positive Spillover from Family to Work

Family Factors and Positive Spillover from Family to Work

The results reported in Table 4 for the associations between family factors and positive spillover from family to work are largely consistent with Hypothesis 6. Less affectual support from both spouse and other family members is associated with less positive spillover from family to work among both

women and men. Moreover, while being unmarried is associated with less negative spillover from work to family, being unmarried was also robustly associated with less positive spillover from family to work. Also, consistent with our gender moderation hypothesis, results indicated that a low level of family criticism/burden was associated with more positive spillover from family to work among women but not men.

In contrast to our gender moderation hypothesis anticipating that family related factors would be associated with work-family spillover more for women than men, results suggest that only men benefit from a lower level of spouse disagreement. Indeed among women, spouse disagreement is not associated with positive spillover from family to work. Additionally, trend level evidence suggests that fathers report more positive spillover from family to work in contrast to men without children, but parental status does not influence this outcome among women.

Work Factors and Positive Spillover from Family to Work

Supportive of Hypothesis 6, a lower level of decision latitude at work was associated with less positive spillover from family to work. Similarly, lower levels of support at work were associated with less positive spillover. Working alone is associated with less positive spillover from family to work among both women and men, while being in the lowest tertile of support at work is associated with less positive spillover from family to work among women only. Finally, although working less than full-time was associated with less negative spillover between work and family it is also associated with less positive spillover from family to work among women only (trend level).

Discussion, Summary and Conclusions

The overarching goal of this research project was to use ecological theory to consider a broader conceptualization of work-family spillover and to systematically examine the correlates of positive and

negative spillover between work and family. Our exploratory factor analysis suggests that negative spillover from work to family, positive spillover from work to family, negative spillover from family to work and positive spillover from family to work are, indeed, distinct dimensions of the work-family interface. Additional analyses provided further evidence that each dimension of work-family spillover is relatively orthogonal by indicating that the correlates of each outcome were different. For example, negative spillover between work and family (both work to family and family to work) shared some correlates such as pressure at work, spouse disagreement, and other family criticism/burden; however, spouse affectual support was also an important correlate of negative spillover from family to work but not negative spillover from work to family. Similarly, decision latitude is strongly associated with both positive spillover from work to family and positive spillover from family to work, while spouse affectual support is a strong correlate of positive spillover from family to work and unassociated with positive spillover from work to family. In brief, these analyses suggest that the work-family interface can be both positive and negative, and the correlates and antecedents of these different work-family experiences may be different.

The pattern of results that emerged from our analyses also provides support for an ecological perspective of the work-family interface. Consistent with the ecological premise that different individual characteristics may moderate the effect of contextual factors on person-environment interactions, we find that gender interacts with several work and family characteristics creating different work-family experiences for women and men. However, these gender interaction effects were not uniformly consistent with the asymmetrical boundary hypothesis (Pleck, 1977); that is, sometimes family factors influenced women's work-family spillover more for women than men, and other times men were more affected by family factors. Next consistent with the ecological postulate that processes, rather than role

occupancy or social address, influence outcomes our results indicated that individual characteristics were not consistent predictors of work-family spillover above and beyond work and family processes. Finally our results indicate that personality characteristics, positive and negative interactions in the family microsystem, and positive and negative experiences in the work microsystem were all independently associated with the work-family interface. These analyses confirm that personality factors alone do not account for the propensities of individuals to experience or report work and family conflict or enhancement.

If the work-family interface can be both positive and negative what are the goals of work-family policies and programs, and consequently what are the targets for intervention? If the goal is to reduce negative spillover between work and family (i.e., work-family conflict) then workplace programs such as flex-time and job sharing (increasing decision latitude or control) may not be the most effective intervention strategies. Indeed our results suggest that pressure on the job, supportive work environments, and different aspects of the family relationship are more salient leverage points for intervention (Stokols, 1996). These results suggest that programs and policies focused on reducing pressure at work, building supportive work environments, and promoting emotionally close family relationships may provide more benefit in reducing work-family conflict than programs that enhance decision latitude. If the goal however is to promote a synergistic work-family relationship, then programs that provide employees with higher levels of decision latitude are important. Additionally, programs that promote supportive work relationships as well as more emotionally close and less conflicted family relations may further the cause of benefiting business and society. In short, we must adequately specify the goal (i.e., define the work-family related outcome) before we can develop targeted interventions to achieve the goal.

Next, this research replicates and extends key findings from previous research. Consistent with results from non-representative samples, our analyses suggest that work factors are the primary sources of work to family spillover, while family factors are the primary sources of family to work spillover (Crouter, 1984; Frone, Russell & Cooper, 1992a, 1997; MacEwen & Barling, 1994; Parasuraman, Purohit, Godshalk, & Beutell, 1996). Additionally, our nationally representative results generally suggest that qualities of work and family interactions are more robust correlates of work-family spillover than simply role occupation (e.g., Barnett, Marshall, & Pleck, 1992). Since our analyses did not include measures of parent-child relations it is not surprising that parental status was found to be associated with negative spillover from family to work. However, in contrast to previous research indicating that work characteristics typically mediate the association between employment status and work-family spillover (Barnett, 1996), our results indicate that once both work and family characteristics are controlled the number of hours worked each week is associated with perceptions of work-family conflict. These results begin to address, albeit in a modest way, the importance of considering both work and family characteristics in work-family research (Barnett, 1996).

The next step is to examine a larger, more integrated model of work-family spillover. For example Frone, Yardley and Markel (1997) have developed and tested a model of the complex reciprocal relations between work and family; however, their measures were limited to work-family conflict and work and family pressures/burdens. The evidence from this study suggests that a greater elaboration of the work-family interface requires consideration of the reciprocal relations between positive and negative aspects of work and family, as well as the reciprocal relations between positive and negative spillover between work and family.

Although the multidimensionality of these results are consistent with theoretical and empirical discussions as well as everyday parlance, the results from this study must remain regarded as preliminary. When we attempted to move our multi-dimensional conceptualization of work-family spillover into confirmatory factor analysis, our model quickly became “under-identified” given the limited number of work-family items available in the MIDUS. Future research is necessary to further confirm the structure of work-family spillover.

It is also important to recognize the limitations of this research. These data were cross-sectional and self-reported; consequently, it is important for future research to follow-up on the long-term consequences of both positive and negative spillover for the individual, his/her family members, as well as the individual’s performance in the workplace. Moreover it is important for additional cross-sectional replication and extension to consider if self-reports of work-family spillover are accurate. Some evidence, for example, suggests that men may under-report negative spillover from work to family, and over-report positive spillover from work to family since traditional gender role socialization encourages men to “protect” their wives and families from the burdens of their work (Weiss, 1990).

Additionally, although data in the MIDUS are nationally representative, due to the length of the interview they are likely to be somewhat biased toward higher functioning individuals. Consequently we still may know less about individuals who may have the most problematic work-family interactions.

Notwithstanding these limitations, this study advances our understanding of the work-family nexus in several important ways. The results from this study provide nationally representative evidence indicating that limiting the work-family interface to work-family conflict is too simplistic. Indeed, results from this study suggest that an individual’s experiences within the family and within the workplace can simultaneously benefit and undermine functioning at home and at work. The task for future scholarship

is to develop an integrated model of adults' work and family experiences so that policies and programs can remain attentive to the synergistic whole of individual experience, rather than compartmentalize specific sources of "conflict" and develop one-sided interventions for working adults.

References

Adams, G. A., King, L. A., & King, D. W. (1996). Relationships of job and family involvement, family social support, and work-family conflict with job and life satisfaction. Journal of Applied Psychology, 81, 411-420.

Allen, K. R., & Pickett, R. S. (1987). Forgotten streams in the family life course: Utilization of qualitative retrospective interviews in the analysis of lifelong single women's family careers. Journal of Marriage and the Family, 49, 517-526.

Barnett, R. C. (1996). Toward a review of the work/family literature: Work in progress. Boston, MA: Wellesley College Center for Research on Women.

Barnett, R. C., & Baruch, G. K. (1985). Women's involvement in multiple roles and psychological distress. Journal of Personality and Social Psychology, 49, 135-145.

Barnett, R. C., Marshall, N. L., & Pleck, J. H. (1992). Men's multiple roles and their relationship to men's psychological distress. Journal of Marriage and the Family, 54, 358-367.

Barnett, R. C., Marshall, N. L., Raudenbush, S. W., & Brennan, R. T. (1993). Gender and the relationship between job experiences and psychological distress: A study of dual-earner couples. Journal of Personality and Social Psychology, 64, 794-806.

Barnett, R. C., & Rivers, C. (1996). She works, he works: How two-income families are happy, healthy, and thriving. Cambridge, MA: Harvard University Press.

Bedeian, A. G., Burke, B. G., & Moffett, R. G. (1988). Outcomes of work-family conflict among married male and female professionals. Journal of Management, *14*, 475-491.

Bolger, N., DeLongis, A. Kessler, R. C., & Wethington, E. (1989). The contagion of stress across multiple roles. Journal of Marriage and the Family, *51*, 175-183.

Bowen, G. L., & Pittman, J. F. (1995). The work and family interface: Toward a contextual effects perspective. Minneapolis, MN: National Council on Family Relations.

Bradburn, N. (1969). The structure of psychological well-being. Chicago: Aldine.

Bryant, F. B., & Veroff, J. (1982). The structure of psychological well-being: A sociohistorical analysis. Journal of Personality and Social Psychology, *43*, 653-673.

Bromet, E. J., Dew, M. A., & Parkinson, D. K. (1990). Spillover between work and family: A study of blue-collar working wives. In J. Eckenrode, & S. Gore (Eds.), Stress between work and family (pp. 133-152). New York: Plenum Press.

Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (1983). The context of development and the development of context. In R. Lerner (Ed.), Developmental psychology: Historical and philosophical perspectives (pp. 147-185). Hillsdale, NJ: Erlbaum.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. Developmental Psychology, *22*, 723-742.

Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed), Six theories of child development. Annals of child development: A research annual (Vol. 6 pp. 187-249). Greenwich, CT: JAI Press.

Bronfenbrenner, U. (1995). Development ecology through space and time: A future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), Examining lives in context: Perspectives on the ecology of human development (pp. 619-647). Washington, DC: American Psychological Association.

Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. Psychological Review, *101*, 568-586.

Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. in W. Damon (Ed.), Handbook of child psychology (5th ed., Vol. 1 pp. 993-1028). New York: John Wiley & Sons.

Burg, M. M., & Seeman, T. E. (1994). Families and health: The negative side of social ties. Annals of Behavioral Medicine, *16*, 109-115.

Bumpass, L. L. (1990). What's happening to the family? Interactions between demographic and institutional change. Demography, *27*, 483-498.

Costa, P. T. Jr., & McCrae, R. R. (1980). Still stable after all these years: Personality as a key to some issues in adulthood and old age. In P. B. Baltes, & O. G. Brim (Eds.), Life-span development and behavior (Vol. 3 pp. 65-102). New York: Academic Press.

Crouter, A. C. (1984). Spillover from family to work: The neglected side of the work-family interface. Human Relations, *37*, 425-442.

Duxbury, L. E., & Higgins, C. A. (1991). Gender differences in work-family conflict. Journal of Applied Psychology, *76*, 60-74.

Duxbury, L. E., Higgins, C., & Lee, C (1994). Work-family conflict: A comparison by gender, family type, and perceived control. Journal of Family Issues, *15*, 449-466.

Eagle, B. W., Miles, E. W., & Icenogle, M. L. (1997). Interrole conflicts and the permeability of work and family domains: Are there gender differences. Journal of Vocational Behavior, *50*, 168-184.

Fincham, F. (1997). A new look at marital quality: Can spouses feel positive and negative about their marriage? Journal of Family Psychology, *11*, 489-502.

Frone, M. R., Russell, M., & Cooper, M. L. (1992a). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. Journal of Applied Psychology, *77*, 65-78.

Frone M. R., Russell, M., & Cooper, M. L. (1992b). Prevalence of work-family conflict: Are work and family boundaries asymmetrically permeable? Journal of Organizational Behavior, *13*, 723-729.

Frone, M. R. Russell, M., & Barnes, G. M. (1996). Work-family conflict, gender, and health related outcomes: A study of employed parents in two community samples. Journal of Occupational

Health Psychology, 1, 57-69.

Frone, M. R., Barnes, G. M., & Farrell, M. P. (1994). Relationship of work-family conflict to substance use among employed mothers: The role of negative affect. Journal of Marriage and the Family, 56, 1019-1030.

Frone, M. R., Russell, M., & Cooper, M. L. (1993). Relationship of work-family conflict, gender, and alcohol expectancies to alcohol use/abuse. Journal of Organizational Behavior, 14, 545-558.

Frone, M. R., Russell, M., & Cooper, M. L. (1995). Job stressors, job involvement and employee health: A test of identity theory. Journal of Occupational and Organizational Psychology, 68, 1-11.

Frone, M. R., Russell, M., & Cooper, M. L. (1997). Relation of work-family conflict to health outcomes: A four-year longitudinal study of employed parents. Journal of Occupational and Organizational Psychology, 70, 325-335.

Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. Journal of Vocational Behavior, 50, 145-167.

Gattiker, U. E., & Larwood, L. (1990). Predictors for career achievement in the corporate hierarchy. Human Relations, 43, 703-726.

Greenhaus, J. H. & Beutell, N. J. (1985). Sources of conflict between work and family roles. Academy of Management Review, 10, 76-88.

Greenhaus, J. H., & Parasuraman, S. (1986). A work-nonwork interactive perspective of stress and its consequences. Journal of Organizational Behavior Management, 8, 34-60.

Gutek, B. A., Searle, S., & Klepa, L. (1991). Rational versus gender role explanations for work-family conflict. Journal of Applied Psychology, 76, 560-568.

Hibbard, J. H., & Pope, C. R. (1991). Effect of domestic and occupational roles on morbidity and mortality. Social Science and Medicine, 32, 805-811.

Higgins, C. A., Duxbury, L. E., & Irving, R. H. (1992). Work-family conflict in the dual-earner family. Organizational Behavior and Human Decision Processes, 51, 51-75.

Hochschild, A. R. (1997). The time bind: When work becomes home and home becomes work. New York: Metropolitan Books.

Klitzman, S., House, J. S., Israel, B. A., & Mero, R. P. (1990). Work stress, nonwork stress, and health. Journal of Behavioral Medicine, 13, 221-243.

Lawton, M. P. (1983). The varieties of wellbeing. Experimental Aging Research, 9, 65-72.

Lawton, M. P., & Nahemow, L. (1973). Ecology and the aging process. In C. Eisdorfer & M. P. Lawton (Eds.), The psychology of adult development and aging (pp. 619-674). Washington DC: American Psychological Association.

Lerner, J. V. (1994). Working women and their families. Thousand Oaks, CA: Sage.

- Loscocco, K. A. (1997). Work-family linkages among self-employed women and men. Journal of Vocational Behavior, 50, 204-226.
- MacEwen, K. E., & Barling, J. (1994). Daily consequences of work interference with family and family interference with work. Work and Stress, 8, 244-254.
- Marks, N. F. (1996). Caregiving across the lifespan: National prevalence and predictors. Family Relations, 45, 27-36.
- Marks, S. R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. American Sociological Review, 39, 567-578.
- Marshall, C. M., (1991). Family influences on work. In S. J. Bahr (Ed.) Family research: A sixty-year review, 1930-1990: Vol. 2 (pp. 115-166). New York: Lexington Books.
- Marshall, C. M., Chadwick, B. A., & Marshall, B. C. (1991). The influence of employment on family interaction, well-being, and happiness. In S. J. Bahr (Ed.) Family research: A sixty-year review, 1930-1990: Vol. 2 (pp. 167-229). New York: Lexington Books.
- Moen, P., Dempster-McClain, D., & Williams, R. M. (1989). Social integration and longevity: An event history analysis of women's roles and resilience. American Sociological Review, 54, 635-647.
- Moen, P., Dempster-McClain, D., & Williams, R. M. (1992). Successful aging: A life course perspective on women's multiple roles and health. American Journal of Sociology, 97, 1612-1638.

Myers, G. C. (1990). Demography of aging. In R. H. Binstock & L. K. George (Eds.), Handbook of aging and the social sciences, (3rd ed.) (pp. 19-44). San Diego, CA: Academic Press.

Netemeyer, R. G., Boles, J. S., & McMurrin, R. (1996). Development and validation of work-family conflict and family-work conflict scales. Journal of Applied Psychology, 81, 400-410.

Neter, J., Kutner, M. H., Nachtsheim, C. J., & Wasserman, W. (1996). Applied linear regression models (3rd Edition). Chicago: Irwin.

O'Neil, R., & Greenberger, E. (1994). Patterns of commitment to work and parenting: Implications for role strain. Journal of Marriage and the Family, 56, 101-112.

Orme, J. G., & Reis, J. (1991). Multiple regression with missing data. Journal of Social Service Research, 15, 61-91.

Osmond, M. W. & Thorne, B. (1993). Feminist theories: The social construction of gender in families and society. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), Sourcebook of family theories and methods: A contextual approach, (pp.591-622). New York: Plenum Press.

Parasuraman, S., Greenhaus, J. H., & Granrose, C. S. (1992). Role stressors, social support, and well-being among two-career couples. Journal of Organizational Behavior, 13, 339-356.

Parasuraman, S., Purohit, Y. S., Godshalk, V. M., & Beutell, N. J. (1996). Work and family variables, entrepreneurial career success, and psychological well-being. Journal of Vocational Behavior, 48, 275-300.

Parsons, T. (1954). Age and sex in the social structure of the United States. In Essays in Sociological Theory (2nd Edition), pp. 89-103. New York: Free Press of Glencoe (original edition, 1949). (Reprinted from the American Sociological Review, 7, 604-616.)

Pleck, J. H. (1977). The work-family role system. Social Problems, 24, 417-442.

Pleck, J. H. (1993). Are “family-supportive” employer policies relevant to men? In J. C. Hood (Ed.), Men, work, and family (pp. 217-237). Newbury Park, CA: Sage.

Rice, R. W., Frone, M. R., & McFarlin, D. B. (1992). Work-nonwork conflict and the perceived quality of life. Journal of Organizational Behavior, 13, 155-168.

Rook, K. S. (1984). The negative side of social interaction: Impact on psychological well-being. Journal of Personality and Social Psychology, 46, 1097-1108.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. Journal of Personality and Social Psychology, 57, 1069-1081.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. Journal of Personality and Social Psychology, 69, 719-727.

Schuster, T. L., Kessler, R. C., & Aseltine, R. H. (1990). Supportive interactions, negative interactions, and depressed mood. American Journal of Community Psychology, 18, 423-438.

Sieber, S. D. (1974). Toward a theory of role accumulation. American Sociological Review, 39, 567-578.

Small, S. A., & Riley, D. (1990). Toward a multidimensional assessment of work spillover into family life. Journal of Marriage and the Family, 52, 51-61.

Stokols, D. (1996). Translating social ecological theory into guidelines for community health promotion. American Journal of Health Promotion, 10, 282-298.

Thoits, P. A. (1983). Multiple identities and psychological well-being: A reformulation and test of the social isolation hypothesis. American Sociological Review, 48, 147-187.

U. S. Bureau of Labor Statistics (1999). Unpublished raw data from the Current Population Survey.

U. S. Bureau of the Census (1998). Marital Status and Living Arrangements: March 1998 (Update). Current Population Reports, Series P20-514.

Voydanoff, P. (1988). Work role characteristics, family structure demands, and work/family conflict. Journal of Marriage and the Family, 50, 749-761.

Waldron, I. & Jacobs, J. A. (1988). Effects of labor force participation on women's health: New evidence from a longitudinal study. Journal of Occupational Medicine, 30, 977-983.

Waldron, I., Weiss, C. C., & Hughes, M. E. (1998). Interacting effects of multiple roles on women's health. Journal of Health and Social Behavior, 39, 216-236.

Weiss, R. S. (1990). Bringing work stress home. In J. Eckenrode, & S. Gore (Eds.), Stress between work and family (pp. 17-38). New York: Plenum Press.

Whitehall Health Survey (1989). Department of Community Medicine, University College of London, Civil Service Occupational Health Service (version S2).

Williams, K. J., & Alliger, G. M. (1994). Role stressors, mood spillover, and perceptions of work-family conflict in employed parents. Academy of Management Journal, *37*, 837-868.

Willinger, B. (1993). Resistance and change: College men's attitudes toward family and work in the 1980s. In J. C. Hood (Ed.), Men, work, and family (pp. 108-130). Newbury Park, CA: Sage.

Winship, C., & Radbill, L. (1994). Sampling weights and regression analysis. Sociological Methods and Research, *23*, 230-263.

Zill, N. (1991, Winter). U.S. children and their families: Current conditions and recent trends, 1989. Society for Research in Child Development Newsletter, 1-3.

Table 1:
Descriptive statistics for all analysis variables

	Everyone			Women		Men		Gender Difference
	Mean	SD	Range	Mean	SD	Mean	SD	
Outcomes								
Negative Spillover Work to Family	10.61	2.91	4-20	10.53	2.99	10.70	2.82	
Postive Spillover Work to Family	7.84	2.51	3-15	7.89	2.53	7.77	2.50	**
Negative Spillover Family to Work	8.48	2.67	4-20	8.53	2.65	8.42	2.68	
Positive Spillover Family to Work	10.27	2.48	3-15	10.22	2.56	10.33	2.40	
Family Microsystem								
<u>Marital Status</u>								
Not married	0.32	0.46	0-1	0.37	0.48	0.26	0.44	***
<u>Parental Status</u>								
No Children	0.24	0.43	0-1	0.21	0.41	0.27	0.44	
Oldest child ≤ 5 years	0.06	0.24	0-1	0.06	0.24	0.07	0.25	
Oldest child > 5 years	0.70	0.46	0-1	0.73	0.45	0.67	0.47	
<u>Spouse Affectual Support</u>								
Lowest Tertile	0.24	0.43	0-1	0.26	0.44	0.23	0.42	***
Middle Tertile	0.18	0.38	0-1	0.17	0.37	0.19	0.39	
Highest Tertile	0.25	0.44	0-1	0.21	0.40	0.31	0.46	
<u>Spouse Disagreement</u>								
Lowest Tertile	0.25	0.43	0-1	0.23	0.42	0.27	0.44	***
Middle Tertile	0.19	0.39	0-1	0.21	0.41	0.17	0.38	
Highest Tertile	0.24	0.43	0-1	0.19	0.40	0.29	0.45	
<u>Other Family Affectual Support</u>								
Lowest Tertile	0.38	0.49	0-1	0.34	0.48	0.42	0.49	***
Middle Tertile	0.33	0.47	0-1	0.33	0.47	0.33	0.47	
Highest Tertile	0.27	0.45	0-1	0.31	0.46	0.23	0.42	
<u>Other Family Criticism/Burden</u>								
Lowest Tertile	0.30	0.46	0-1	0.26	0.44	0.34	0.47	***
Middle Tertile	0.36	0.48	0-1	0.35	0.48	0.38	0.49	
Highest Tertile	0.32	0.47	0-1	0.38	0.49	0.26	0.44	
Work Microsystem								
<u>Hours Worked/Week</u>								
1-19 hours/week	0.05	0.21	0-1	0.07	0.26	0.02	0.13	***
20-35 hours/week	0.13	0.34	0-1	0.19	0.39	0.07	0.25	
35-44 hours/week	0.37	0.48	0-1	0.43	0.50	0.30	0.46	
45 hours/week or more	0.46	0.50	0-1	0.31	0.46	0.61	0.49	
<u>Decision Latitude</u>								
Lowest tertile	0.35	0.48	0-1	0.38	0.49	0.33	0.47	***
Middle tertile	0.33	0.47	0-1	0.34	0.47	0.32	0.47	
Highest tertile	0.30	0.46	0-1	0.26	0.44	0.35	0.48	
<u>Pressure at Work</u>								
Lowest tertile	0.29	0.45	0-1	0.27	0.44	0.30	0.46	***
Middle tertile	0.36	0.48	0-1	0.36	0.48	0.36	0.48	
Highest tertile	0.34	0.48	0-1	0.35	0.48	0.33	0.47	
<u>Support at work</u>								
Work Alone	0.18	0.38	0-1	0.17	0.37	0.19	0.39	***
Lowest tertile	0.23	0.42	0-1	0.20	0.40	0.26	0.44	
Middle tertile	0.23	0.42	0-1	0.23	0.42	0.23	0.42	
Highest tertile	0.35	0.48	0-1	0.40	0.49	0.31	0.46	
Individual Characteristics								
Age	40.86	9.83	25-62	41.07	10.09	40.63	9.54	*
Sex (female=1)	0.52	0.50	0-1					
Race/ethnicity (black=1)	0.11	0.31	0-1	0.13	0.33	0.09	0.29	**
Less than H.S. education	0.08	0.27	0-1	0.07	0.26	0.09	0.28	**
H.S. education or GED	0.36	0.48	0-1	0.38	0.49	0.34	0.47	
Some College	0.28	0.45	0-1	0.29	0.45	0.27	0.44	
College Graduate	0.28	0.45	0-1	0.26	0.44	0.31	0.46	
Bottom Quartile Household Earnings	0.22	0.42	0-1	0.26	0.44	0.18	0.39	***
Low Quartile Household Earnings	0.26	0.44	0-1	0.29	0.45	0.23	0.42	
High Quartile Household Earnings	0.27	0.44	0-1	0.23	0.42	0.30	0.46	
Top Quartile Household Earning	0.25	0.43	0-1	0.22	0.41	0.28	0.45	
Neuroticism	2.25	0.66	1-4	2.35	0.68	2.17	0.63	***
Extraversion	3.20	0.56	1-4	3.25	0.56	3.16	0.56	***

Source: National Survey of Midlife Development in the United States (MIDUS) 1995.

+ p≤.10 * p≤.05 ** p≤.01 *** p≤.001 (two-tailed): Differences based on t-tests or chi-square tests.

Note: Weighted data

Table 2:
Rotated Factor Matrix for Work-Family Spillover Items

	Negative Work to Family Spillover	Positive Work to Family Spillover	Negative Family to Work Spillover	Positive Family to Work Spillover
Your job makes you feel too tired to do the things that need attention at home.	.768			
Stress at work makes you irritable at home.	.684			
Job worries or problems distract you when you are at home.	.675			
Your job reduces the effort you can give to activities at home.	.640			
Personal or family worries and problems distract you when you are work.		.748		
Stress at home makes you irritable at work		.689		
Activities and chores at home prevent you from getting the amount of sleep you need to do your job well.		.631		
Responsibilities at home reduce the effort you can devote to your job.		.581		
The love and respect you get at home makes you feel confident about yourself at work.			.815	
Your home life helps you relax and feel ready for the next day's work.			.664	
Talking with someone at home helps you deal with problems at work.			.533	
Providing for what is needed at home makes you work harder at your job.				
Having a good day on your job makes you a better companion when you get home.				
The things you do at work help you deal with personal and practical issues at home.				.739
The things you do at work make you a more interesting person at home.				.717
The skills you use on your job are useful for things you have to do at home.				.598

Source: National Survey of Midlife Development in the United States (MIDUS), 1995.

Note: Principle axis extraction and varimax rotation with Kaiser Normalization.

Table 3:

Intra-class correlation matrix estimating the average correlation between items within and across work-family spillover factors

	Negative Spillover Work to Family	Positive Spillover Work to Family	Negative Spillover Family to Work	Positive Spillover Family to Work
Negative Spillover Work to Family	.55			
Positive Spillover Work to Family	-.02	.48		
Negative Spillover Family to Work	.32	.08	.50	
Positive Spillover Family to Work	-.01	.19	-.04	.43

Source: National Survey of Midlife Development in the United States (MIDUS) 1995.

Table 4:

Unstandardized OLS estimates for the association between family relations, work characteristics, individual characteristics, and work-family spillover among employed adults aged 25-62.

	Negative Spillover Work to Family		Positive Spillover Work to Family		Negative Spillover Family to Work		Positive Spillover Family to Work	
	Women	Men	Women	Men	Women	Men	Women	Men
Family Microsystem								
<u>Marital Status</u>								
Not married ^a	-0.62 +	-0.54 *	-0.42	0.05	-0.28	0.04	-1.86 ***	-1.71 ***
<u>Parental Status</u> ^b								
Oldest child ≤ 5 years	-0.33	0.19	-0.03	0.55 +	0.92 *	0.95 **	-0.07	0.59 +
Oldest child > 5 years	0.25	0.01	0.18	0.12	0.99 ***	0.84 ***	-0.20 ^f	0.34 ^f
<u>Spouse Affectual Support</u> ^c								
Lowest Tertile	-0.08	0.39 +	-0.35	0.17	0.60 *	0.84 ***	-2.12 ***	-1.92 ***
Middle Tertile	0.16	0.01	-0.23	0.23	0.27	0.48 *	-0.88 ***	-0.68
<u>Spouse Disagreement</u> ^c								
Lowest Tertile	-0.81 **	-0.78 ***	-0.42	-0.13	-0.74 **	-0.54 **	0.14 ^f	0.64 ** ^f
Middle Tertile	-0.46 +	-0.15	-0.23	0.08	-0.03	-0.25	-0.27	0.27
<u>Other Family Affectual Support</u> ^c								
Lowest Tertile	0.32	0.60 **	-0.09	-0.33	0.13	0.29	-0.52 **	-0.63 ***
Middle Tertile	-0.01	0.31	0.22	-0.05	-0.16	0.32 +	-0.15	-0.13
<u>Other Family Criticism/Burden</u> ^c								
Lowest Tertile	-0.61 ** ^f	-0.31 ^f	-0.41 +	-0.08	-0.80 ***	-1.05 ***	0.47 * ^e	-0.15 ^e
Middle Tertile	0.07	-0.44 *	-0.08	-0.13	-0.22	-0.56 **	0.16	-0.16
Work Microsystem								
<u>Hours Worked/Week</u> ^d								
1-19 hours/week	-1.61 ***	-0.88 +	0.48	-0.22	-1.06 ***	-0.90 +	-0.52 +	-0.56
20-35 hours/week	-0.35	-0.31	0.15	-0.04	0.14	0.14	-0.40 ^f	0.23 ^f
45 hours/week or more	0.59 **	0.63 ***	0.01	0.05	-0.03	0.23	0.02	-0.16
<u>Decision Latitude</u> ^e								
Lowest tertile	0.39 +	0.33 +	-1.49 ***	-1.70 ***	0.11	0.12	-0.78 ***	-1.09 ***
Middle tertile	0.43 *	-0.04	-0.54 **	-0.85 ***	0.34 +	-0.01	-0.63 ***	-0.80 ***
<u>Pressure at Work</u> ^c								
Lowest tertile	-2.34 ***	-2.18 ***	-0.12	-0.41 *	-0.99 ***	-1.00 ***	-0.21	-0.17
Middle tertile	-1.16 ***	-1.20 ***	-0.10	-0.15	-0.19 ^e	-0.43 * ^e	-0.05	-0.05
<u>Support at work</u> ^c								
Works Alone	0.70 **	0.43 +	-0.33	-0.36	0.24	0.24	-0.72 **	-0.54 *
Lowest tertile	1.20 *** ^e	0.61 *** ^e	-0.45 *	-0.85 ***	0.32	0.32	-0.52 *	-0.22
Middle tertile	0.69	0.25	-0.25	-0.37 +	0.45 *	0.45 *	0.12	-0.26
Individual Characteristics								
Age	-0.01	-0.02 *	0.02 *	0.01	-0.05 ***	-0.05 ***	0.01 ^e	-0.02 * ^e
Race/Ethnicity (Black=1)	-0.03	-0.55 +	-0.38 ^e	0.09 ^e	-0.56 *	-0.41	0.38	0.54 +
Education								
Less than H.S. educ.	0.15	-0.42	-0.89 * ^e	-0.08 ^e	-0.22	-0.85 **	0.66 +	-0.01
H.S. educ. or G.E.D.	-0.51 *	-0.36 +	-0.82 *** ^e	-0.09 ^e	-0.65	-0.30	0.07	-0.03
Some college	-0.13	-0.10	-0.53 ** ^f	-0.02 ^f	-0.20	-0.15	0.08	0.05
Household Earnings								
Bottom quartile	-0.27	-0.15	-0.17 ^f	0.30 ^f	-0.12	0.19	0.24	0.31
Low quartile	-0.15	0.01	-0.54 * ^e	0.16 ^e	-0.14	0.22	0.20	-0.16
High quartile	-0.31	-0.25	-0.57 * ^e	0.03 ^e	-0.38	-0.01	-0.05	-0.03
Neuroticism	1.09 ***	0.88 ***	-0.25 *	-0.12	0.95 ***	0.69 ***	-0.21 +	-0.07
Extraversion	-0.43 **	-0.46 ***	0.63 ***	0.39 **	-0.31 *	-0.15	0.70 ***	0.78 ***
Constant	10.78 ***	11.86 ***	7.93	7.93 ***	9.36	9.13 ***	10.29 ***	10.54 ***
Adjusted R ²	0.384	0.347	0.154	0.133	0.252	0.249	0.236	0.293

Source: National Survey of Midlife Development in the United States (MIDUS) 1995.

Note: Unweighted data (N=1,986; Women n=948, Men n=1038).

+p ≤ .10 * p ≤ .05 **p ≤ .01 *** p ≤ .001 (two-tailed)

^a: contrast group is married with high spouse affectual solidarity and high spouse disagreement. ^b: contrast group is no children.

^c: contrast group is highest tertile

^d: contrast group is working 35-44 hours per week

^e: a significant gender difference (p ≤ .05) was noted in a combined gender model.

^f: a significant gender difference (p ≤ .10) was noted in a combined gender model.

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