

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

Joseph G. Grzywacz
University of California, Irvine

Nadine F. Marks
University of Wisconsin—Madison

Ecological theory was used to develop a more expanded conceptualization of the work–family interface and to identify significant correlates of multiple dimensions of work–family spillover. Using data from employed adults participating in the National Survey of Midlife Development in the United States ($N = 1,986$), 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 were found to be distinct work–family experiences. Analyses indicated that work and family factors that facilitated development (e.g., decision latitude, family support) were associated with less negative and more positive spillover between work and family. By contrast, work and family barriers (e.g., job pressure, family disagreements) were associated with more negative spillover and less positive spillover between work and family. In some cases, results differ significantly by gender.

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 the Census, 1998b), greater numbers of working single-parent and dual-earner families (Bumpass, 1990; U.S. Bureau of the Census, 1998a; Zill, 1991), and the increasing caregiving needs of an aging population (N. F. 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 and an almost exclusive focus on work–family conflict are perhaps the most pronounced barriers facing work–family research (Barnett, 1996). Although much evidence indicates that work–family conflict results in a variety of problems, evidence also consistently indicates that individuals benefit from combining work and family and that women and men perceive that these benefits are worth the difficulties. Consequently, the overarching goal of this article is to use ecological theory (Bronfenbrenner, 1979) to develop a more expanded conceptualization of the work–family interface and to

Joseph G. Grzywacz, Psychology and Social Behavior, University of California, Irvine; Nadine F. Marks, Child and Family Studies, University of Wisconsin—Madison.

A previous version of this article was presented at the November 1998 "Work and Family: Today's Realities, Tomorrow's Visions" conference supported by the Alfred P. Sloan Foundation, the Business and Professional Women's Foundation, and the Wellesley College Center for Research on Women. This research was supported by a National Institute on Mental Health postdoctoral traineeship (MH19958), a National Institute on Aging FIRST grant award (AG12731), and a grant from the John D. and Catherine T. MacArthur Foundation Research Network on Successful Midlife Development.

Correspondence concerning this article should be addressed to Joseph G. Grzywacz, Psychology and Social Behavior, University of California, 3325 Social Ecology II, Irvine, California 92697-7085. Electronic mail may be sent to jgrzywacz@uci.edu.

identify significant correlates of both positive and negative spillover between work and family.

Empirical and Theoretical Background

Role Strain Hypothesis

Work-family research has been dominated by the role strain perspective of the work-family interface (i.e., work-family conflict; Barnett, 1996) postulating that responsibilities from different, separate domains compete for limited amounts of time, physical energy, and psychological resources (Greenhaus & Beutell, 1985; Small & Riley, 1990). Role strain results in a variety of negative consequences in both the workplace and the family (Crouter, 1984; Frone, Russell, & Cooper, 1992a; MacEwen & Barling, 1994; Parasuraman, Purohit, Godshalk, & Beutell, 1996; Williams & Alliger, 1994). Although most research views the workplace as the primary source of strain (cf. Crouter, 1984), evidence from different samples consistently indicates that work to family conflict and family to work conflict are distinct aspects of the work-family interface and are at best only moderately correlated ($r = .30$ to $.55$; Frone et al., 1992a; Frone, Yardley, & Markel, 1997; Gutek, Searle, & Klepa, 1991; Klitzman, House, Israel, & Mero, 1990; Netemeyer, Boles, & McMurrian, 1996). Therefore, work-family spillover appears to be, at a minimum, two dimensional.

Role Enhancement Hypothesis

A parallel body of theory to the role strain perspective suggests that participation in multiple roles provides a greater number of opportunities and resources to the individual that can be used to promote growth and better functioning in other life domains (Barnett, 1996; S. R. Marks, 1977; Sieber, 1974). For example, empirical reports from a variety of samples suggest that marital quality or spouse support is an important buffer for job-related stress, particularly for men (Barnett, 1996; Gattiker & Larwood, 1990; O'Neil & Greenberger, 1994; Repetti, 1989; Weiss, 1990). Scholars typically conclude that having a supportive partner and the opportunity to talk through difficulties at work may help individuals recover from stressful days (Repetti, 1989) and better handle the pressures associated with their jobs and, consequently, perform better (Barnett, 1996; Gattiker & Larwood, 1990; Weiss, 1990). Another literature consistently finds that employed, married mothers have better physical and psychological well-being in contrast to unemployed, married

mothers (Thoits, 1983; Waldron & Jacobs, 1988; Waldron, Weiss, & Hughes, 1998). Consequently, despite an almost exclusive focus on conflict, separate but related bodies of research suggest that work can benefit family life (e.g., via better personal well-being) and that family can benefit work (e.g., via stress management and reduction).

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? These two dimensions of spillover might coexist to some degree, and each dimension may have common and distinct determinants and consequences. For example, a job that provides a high degree of negative spillover in the form of long hours and psychological stress carryover into home life, at the same time, could provide a high degree of positive spillover in the form of family financial security and opportunities for personal growth that make for a better family member.

Role strain and role enhancement research and theory provide valuable information about the work-family interface; however, the deterministic, separate-spheres perspective of structural functionalist role theory is not helpful for understanding and explaining the secular complexities of modern work-family arrangements (Osmond & Thorne, 1993). Unfortunately, the existing work-family literature lacks a strong overarching theoretical framework that can integrate concepts and findings across perspectives and capture a broader conceptualization of work-family experiences (Barnett, 1996).

Ecological Systems Theory

In contrast to the individual, deterministic perspective of structural-functional role theory, Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1979, 1986, 1999; 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 an individual's 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 either positive or negative spillover.

Empirical evidence supports each component of the ecological model. Contextual factors in both work and family microsystems are often found to be independently associated with work-family conflict. Specifically, a higher level of negative person-environment interactions (Bronfenbrenner & Ceci, 1994; Lawton & Nahemow, 1973; Stokols, 1979), such as work or family pressure, is found to be associated with more work-family conflict (Frone et al., 1992a; Frone, Yardley, & Markel, 1997; Greenhaus & Parasuraman, 1986; Higgins, Duxbury, & Irving, 1992). By contrast, a higher level of positive person-environment interactions, such as spouse or family support, undermines negative spillover between work and family (Bolger, DeLongis, Kessler, & Wethington, 1989; Repetti, 1989; Weiss, 1990). Person characteristics, such as work or family role salience, are also frequently associated with work-family conflict (Frone, Russell, & Cooper, 1995). Finally, the family time component, often operationally defined as the age of an individual's oldest child, has also been found to be associated with work-family conflict (Voydanoff, 1988).

The impact of gender, as a specific person characteristic (Bronfenbrenner & Morris, 1998), is an important factor for understanding the work-family nexus; however, empirical evidence on the issue of gender remains mixed. Guided by a model of traditional gender-role socialization, Pleck (1977) hypothesized that family factors would spillover into work more for women than men and that work factors would spillover into family more for men than women. Consistent with this asymmetrical boundary hypothesis, some scholars find significant main effects for sex following traditional gender-role socialization but find no evidence of gender differences in the effects of this spillover on well-being (Loscocco, 1997; Parasuraman et al., 1996). Others find gender differences in the antecedents or consequences of work-family conflict, or both (Duxbury & Higgins, 1991; Duxbury, Higgins, & Lee, 1994;

Gutek et al., 1991; MacEwen & Barling, 1994; Parasuraman, Greenhaus, & Granrose, 1992). Still other research has reported 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 et al., 1992a; Frone, Russell, & Cooper, 1992b).

Other individual 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 how different resource characteristics such as age, race/ethnicity, education, and income shape the work-family experience (Barnett, 1996). Moreover, we know even less about how relatively enduring personality traits (e.g., neuroticism and extraversion; Costa & McCrae, 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.

Hypothesis 1. 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.

Hypothesis 2. The correlates of work-family spillover differ by gender. Specifically family factors will be associated with more positive and negative work-family spillover for women than men, whereas work factors will be associated with more positive and negative work-family spillover for men than women.

Hypothesis 3. A higher level of negative spillover between work and family, both work to family and family to work, will be associated with fewer ecological resources (i.e., a lower level of decision latitude, less support from coworkers and supervisors, and a lower level of spouse and other family affectual support); a lower level of negative spillover between work and 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).

Hypothesis 4. A lower level of positive spillover between work and family, both work to family and family to work, will be associated with fewer ecological resources (i.e., a lower level of decision latitude, less support from coworkers and supervisors, and a lower level of spouse and other family

affectual support); a higher level of positive spillover between work and 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).

Research Question 1. 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?

Method

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 noninstitutionalized persons aged 25–74 years, 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 nonresponse 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 min. The response rate for the telephone questionnaire was 70%. Respondents to the telephone survey were then asked to complete two self-administered mail-back questionnaires. The response rate for the mail-back questionnaire was 86.8% of telephone respondents. This yielded an overall response rate of 60.8% ($.70 \times .868$) for both parts of the survey (for detailed technical report regarding field procedures, response rates, and weighting, see <http://midmac.med.harvard.edu/research.html#tchrpt>).

The analytic sample used here represents all employed respondents aged 25 to 62 years ($N = 1,986$; 948 women and 1,038 men). In contrast to some work–family studies, we did not limit our sample to married persons or parents (although we control for these statuses in our analyses). We believe such a limitation reflects too narrow a conceptualization of family, as even single childless adults often carry considerable family commitments to parents, siblings, and other kin (Allen & Pickett, 1987).

Measures: Dependent Variables

Four distinct dimensions of work–family spillover were evaluated by considering the factor structure of 16 different items (4 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 you 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 items were 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*most of the time*), and 5 (*all of the time*).

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 asking “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.”

Measures: 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 six items (e.g., “how much does your spouse or partner really care about you?”; $\alpha = .90$) adapted from Schuster, Kessler, and Aseltine (1990). Spouse disagreement was measured by summing responses to three items common in national surveys measuring the level of disagreement between the respondent and her or his spouse regarding money matters, household tasks, and leisure time activities ($\alpha = .70$). Preliminary analyses indicated that spouse affectual support 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 (Rook, 1984; Schuster et al., 1990); therefore, both variables were included in our analyses.

Other family affectual support ($\alpha = .83$) and other family

criticism/burden ($\alpha = .78$) was assessed by summing the responses to four questions for each latent construct (e.g., "Not including your spouse or partner, how much do members of your family really care about you?"; "How often do members of your family make too many demands on you?") that were adapted from Schuster et al. (1990). Other family affectual support and other family criticism/burden were only moderately correlated ($r = -.37$), and both measures were uniquely associated with overall life satisfaction (Rook, 1984; Schuster et al., 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). Four categories of work hours were examined in this study (i.e., less than 20 hr per week, 20-34 hr per week, 35-44 hr per week, and 45 hr per week or more).

Decision latitude assessed the amount of control the individual has over his or her work environment. This latent construct was measured by summing responses to four items revised from the Whitehall Health Survey (1989; e.g., "How often do you have a choice in deciding how you do your tasks at work? How often do you have a choice in deciding what tasks you do at work?"). Response categories for each item in this index (as well as the items for job pressure and support at work described subsequently) were 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*most of the time*), and 5 (*all of the time*) ($\alpha = .87$).

Job pressure, assessing the amount of psychological strain associated with working, was measured by summing responses to five questions that were new to the MIDUS survey (e.g., "How often do you have to work very intensively—that is, you are very busy trying to get things done? How often do different people or groups at work demand things from you that you think are hard to combine?"; $\alpha = .76$).

Support at work, assessing the extent to which relationships with coworkers and supervisors are perceived as supportive, was measured by averaging responses to five questions revised from the Whitehall Health Survey (1989; e.g., "How often do you get help and support from your coworkers? How often do you get the information you need from your supervisor or superiors?"; $\alpha = .84$).

Individual Characteristics

Measures for age, race/ethnicity (Black = 1), sex (female = 1), level of educational attainment (college graduate vs. less than high school, high school or general equivalency diploma, and some college), household earnings (quartiles), and two aspects of personality (i.e., neuroticism and extraversion) were included in all analyses. Neuroticism and extraversion were constructed using items from standard personality scales (see Lachman & Weaver, 1997). Latent personality constructs were measured by calculating the mean of four items for neuroticism (i.e., "How well does the following describe you: moody, worrying, nervous, calm?"; $\alpha = .75$), and five items for extraversion (i.e., "How well does the following describe you: outgoing, friendly, lively, active, talkative?"; $\alpha = .79$), with appropriate items recoded.

Variable Construction

Several of the independent variables were found to be skewed; therefore, we trichotomized the work and family measures on the basis of approximate tertile cutpoints 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 principal-axis factor analysis with varimax rotation to explore the structure of the 16 items measuring work-family spillover. Factors with eigenvalues 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 in which 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

Multiple Dimensions of Work-Family Spillover

Multiple strands of evidence resulting from a principal components analysis with varimax rotation supported our first hypothesis: 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 3 described earlier for positive spillover from work to family, and Item 2 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 4-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 ($\alpha = .70$).

Additional analyses further supported our first hypothesis that the positive and negative dimensions of the work-family experience identified in the factor analysis were distinct. First, consistent with the factor analysis results, examination of the intraclass correla-

Table 1
Descriptive Statistics for All Analysis Variables

Variable	Total sample			Women		Men	
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Outcome							
Negative spillover work to family	10.61	2.91	4-20	10.53	2.99	10.70	2.82
Positive 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							
Marital status***							
Not married	0.32	0.46	0-1	0.37	0.48	0.26	0.44
Parental status							
No children	0.24	0.43	0-1	0.21	0.41	0.27	0.44
Oldest child ≤5 years of age	0.06	0.24	0-1	0.06	0.24	0.07	0.25
Oldest child >5 years of age	0.70	0.46	0-1	0.73	0.45	0.67	0.47
Spouse affectual support***							
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
Spouse disagreement***							
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
Other family affectual support***							
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
Other family criticism/burden***							
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							
Hours worked/week***							
1-19 hr/week	0.05	0.21	0-1	0.07	0.26	0.02	0.13
20-35 hr/week	0.13	0.34	0-1	0.19	0.39	0.07	0.25
35-44 hr/week	0.37	0.48	0-1	0.43	0.50	0.30	0.46
45 or more hr/week	0.46	0.50	0-1	0.31	0.46	0.61	0.49
Decision latitude***							
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
Pressure at work							
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
Support at work***							
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
Gender (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
Education**							
Less than high school	0.08	0.27	0-1	0.07	0.26	0.09	0.28
High school 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

Table 1 (continued)

Variable	Total sample			Women		Men	
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Household earnings***							
Lowest quartile	0.22	0.42	0-1	0.26	0.44	0.18	0.39
Second quartile	0.26	0.44	0-1	0.29	0.45	0.23	0.42
Third quartile	0.27	0.44	0-1	0.23	0.42	0.30	0.46
Highest quartile	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

Note. Data are from the 1995 National Survey of Midlife Development in the United States. Means for dichotomous items are proportions. Descriptive statistics are based on weighted data. Totals across proportions do not always total 100% because of rounding. GED = general equivalency diploma.

* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed. Significant gender difference (based on *t* tests or chi-square tests).

tion matrix (see the Appendix) revealed that the internal correlation between individual items constructing the measures were moderate on the diagonal, whereas 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, Yardley, & Markel, 1997; Netemeyer et al., 1996). Finally, multivariate regression analyses (not shown) demonstrated that each dimension of work-family spillover was uniquely associated ($p \leq .01$) with global measures of physical and mental health and life satisfaction, while controlling for the other dimensions of work-family spillover. Moreover each measure, except for positive spillover from work to family, was found to be uniquely 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 did not systematically differ by gender (Bedian et al., 1988; Eagle et al., 1997; Frone et al., 1992a, 1992b). We did, however, find that women reported a higher level of positive spillover from work to family in contrast to men (see Table 1).

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 Table 3 reports separate models for women and men, with superscripts indicating where significant gender interactions 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.) Factors used in oversampling were controlled in all analyses, and the overall pattern of findings was similar for both weighted and unweighted analyses. Consequently, unweighted analyses are reported in Table 3 (Winship & Radbill, 1994).

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 ecological barriers would be associated with more negative spillover between work and family.

Also consistent with Hypothesis 3, results reported in the first model on Table 3 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. Inconsis-

Table 2
Rotated Factor Matrix for Work-Family Spillover Items

Item	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.				.739
Having a good day on your job makes you a better companion when you get home.				.717
The things you do at work help you deal with personal and practical issues at home.				.598
The things you do at work make you a more interesting person at home.				
The skills you use on your job are useful for things you have to do at home.				

Note. Data from the 1995 National Survey of Midlife Development in the United States. Principal axis extraction and varimax rotation with Kaiser normalization.

tent 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 hr per week was associated with less negative spillover from work to family among women only, whereas working 45 hr 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. Different aspects of family relationships, in addition to work factors, were also significant correlates of negative spillover from work to family. Consistent with our hypothesis, analyses indicated that a lower level of spouse disagreement was associated with less work to family conflict for both men and women. Also, 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. We note also that nonmarried men and nonmarried women (at a trend level) report less negative spillover from work to family than their married counterparts.

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 3 indicate that a lower level of decision latitude is 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 did 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 (possibly because of other unmeasured aspects of job quality that this measure picks up).

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 in contrast to men without 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. A low level of spouse and other family criticism/burden was clearly uniquely associated with less negative spillover from family to work; it is also important, however, to note the other family factors that have a unique significant influence on this dimension of the work-family interface. Gender-separate results reported in the fifth and sixth columns of Table 3 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, even controlling for spouse disagreement, was 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 has suggested that family factors are the primary source of family to work conflict, results from our analyses indicated that pressure at work was also a robust correlate of negative spillover from family to work, and support the proposed interrelationship between work stress and family stress (Frone, Yardley, & Markel, 1997). Results also indicated that the association between pressure at work and negative spillover from family to work differs somewhat along gender lines. Whereas a low level of pressure at work was associated with a strong decrease in negative spillover from family to work among both women and men, our results indicated that among men, even moderate pressure in contrast to high pressure at work is beneficial.

Supportive of Hypothesis 3, results indicated that

Table 3
Unstandardized Ordinary Least Squares Estimates for the Association Between Family Factors, Work Characteristics, Individual Characteristics, and Work-Family Spillover Among Employed Adults Ages 25-62 Years

Variable	Negative spillover from work to family		Positive spillover from work to family		Negative spillover from family to work		Positive spillover from family to work	
	Women	Men	Women	Men	Women	Men	Women	Men
Family microsystem								
Marital status								
Not married ^a	-0.62†	-0.54*	-0.42	0.05	-0.28	0.04	-1.86***	-1.71***
Parental status ^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 ^b	0.34 ^{†h}
Spouse affectual support ^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
Spouse disagreement ^c								
Lowest tertile	-0.81**	-0.78***	-0.42	-0.13	-0.74**	-0.54**	0.14 ^b	0.64*** ^h
Middle tertile	-0.46†	-0.15	-0.23	0.08	-0.03	-0.25	-0.27	0.27
Other family affectual support ^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
Other family/criticism/burden ^c								
Lowest tertile	-0.61*** ^h	-0.31 ^h	-0.41†	-0.08	-0.80***	-1.05***	0.47* ^g	-0.15 ^g
Middle tertile	0.07	-0.44*	-0.08	-0.13	-0.22	-0.56**	0.16	-0.16
Work microsystem								
Hours worked/week ^d								
1-19 hr/week	-1.61***	-0.88†	0.48	-0.22	-1.06***	-0.90†	-0.52†	-0.56
20-35 hr/week	-0.35	-0.31	0.15	-0.04	0.14	0.14	-0.40 ^{†h}	0.23 ^h
45 hr or more/week	0.59**	0.63***	0.01	0.05	-0.03	0.23	0.02	-0.16
Decision latitude ^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***
Pressure at work ^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 ^g	-0.43* ^g	-0.05	-0.05
Support at work ^c								
Works alone	0.70**	0.43†	-0.33	-0.36	0.24	0.24	-0.72**	-0.54*
Lowest tertile	1.20*** ^g	0.61*** ^g	-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

Table 3 (continued)

Variable	Negative spillover from work to family		Positive spillover from work to family		Negative spillover from family to work		Positive spillover from family to work	
	Women	Men	Women	Men	Women	Men	Women	Men
Individual characteristics								
Age	-0.01	-0.02†	0.02*	0.01	-0.05***	-0.05***	0.01 ^b	-0.02* ^g
Race/ethnicity (Black = 1)	-0.03	-0.55†	-0.38 ^g	0.09 ^g	-0.56*	-0.41	0.38	0.54†
Education ^c								
Less than high school	0.15	-0.42	-0.89* ^g	-0.08 ^g	-0.22	-0.85**	0.66†	-0.01
High school or GED	-0.51*	-0.36†	-0.82*** ^g	-0.09 ^g	-0.65	-0.30	0.07	-0.03
Some college	-0.13	-0.10	-0.53*** ^h	-0.02 ^h	-0.20	-0.15	0.08	0.05
Household earnings^d								
Lowest quartile	-0.27	-0.15	-0.17 ^h	0.30 ^h	-0.12	0.19	0.24	0.31
Second quartile	-0.15	0.01	-0.54* ^g	0.16 ^g	-0.14	0.22	0.20	-0.16
Third quartile	-0.31	-0.25	-0.57* ^g	0.03 ^g	-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

Note. Data from the 1995 National Survey of Midlife Development in the United States. Unweighted data ($N = 1,986$; women, $n = 948$; men, $n = 1,038$). GED = general equivalency diploma.

^a Contrast group is married respondents. ^b Contrast group is respondents without children. ^c Contrast group is the highest tertile. ^d Contrast group is respondents working 35-44 hr per week. ^e Contrast group is college graduates. ^f Contrast group is highest quartile of earnings. ^g A significant gender difference ($p \leq .05$) was noted in combined gender model. ^h A significant gender difference ($p \leq .10$) was noted in a combined gender model.

† $p \leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$, two-tailed.

being in the middle tertile of support at work in contrast to being in the highest tertile was 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 was 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 hr per week (in contrast to 36–44 hr 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 3 for the associations between family factors and positive spillover from family to work are largely consistent with Hypothesis 4. Less affectual support from both spouse and other family members was associated with less positive spillover from family to work among both women and men. Moreover, although 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. Also, trend level evidence suggested that fathers report more positive spillover from family to work in contrast to men without children, but parental status did not influence this outcome among women.

Work factors and positive spillover from family to work. Supportive of Hypothesis 4, a lower level of decision latitude at work was associated with less positive spillover from family to work. Similarly, a low level of support at work was associated with less positive spillover. Working alone was associated with less positive spillover from family to work among both women and men, whereas being in the lowest tertile of support at work was 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).

Individual characteristics and work–family spillover. 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. Younger women reported more positive spillover from work to family and more negative spillover from family to work than did older women.

Black women reported less negative spillover from family to work than other women did. Whether this association is due to unmeasured differences in the type of jobs held by Black women or unmeasured differences in kinship responsibilities is an interesting question for future research. Education and household earnings were significantly associated with positive spillover from work to family, and these associations differed significantly by gender. Specifically, lower levels of education and income were robustly associated with a lower level of positive spillover from work to family among women, but were not associated 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.

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, four 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, whereas spouse affectual support is a strong correlate of positive spillover from family to work and unassociated with positive spillover from work to family. Furthermore, pressure at work was found to be a robust correlate of negative spillover between work and family, yet a modest, almost nonsignificant correlate of positive spillover between work and family.

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 found that several work and family factors influence work-family spillover differently for women in contrast to 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. Also, consistent with the ecological model, our results indicate that individual characteristics, positive and negative interactions in the family microsystem, and positive and negative experiences in the work microsystem all independently contribute to understanding the work-family interface. These analyses also 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 flextime and job sharing (increasing decision

latitude or control) may not be the most effective intervention strategies. Indeed, our results suggest that programs, policies, and the design of jobs 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 is to promote an enhancement across the work-family interface, then programs that provide employees with higher levels of decision latitude are important. Also, programs that promote supportive work relationships as well as more emotionally close and less conflicted family relations may further the cause of benefiting individuals in both their work and family lives.

This research replicates and extends key findings from previous research. Consistent with results from nonrepresentative samples, our analyses suggest that work factors are the primary sources of work to family spillover, whereas family factors are the primary sources of family to work spillover (Crouter, 1984; Frone, Russell, & Cooper, 1992a, 1997; MacEwen & Barling, 1994; Parasuraman et al., 1996). Also, our results from a national population sample generally suggest that particular work and family experiences are more robust correlates of work-family spillover than simple role occupation (e.g., Barnett, Marshall, & Pleck, 1992). In contrast to Barnett's (1996) hypothesis that work characteristics mediate the effect of hours spent in paid employment on work-family spillover (Barnett, 1996), our results indicated that once both work and family characteristics were controlled, the number of hours worked each week was associated with perceptions of work-family conflict. Other unmeasured aspects of paid employment (e.g., time of day work is performed), however, may explain the association between hours worked per week and work-family spillover.

Future research is needed 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 more complete understanding of the work-family interface requires consideration of the reciprocal relationships between positive as well as negative aspects of work and family.

Although the four dimensions of the work-family interface that we put forward here 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 multidimensional conceptualization of work–family spillover into confirmatory factor analysis, our model quickly became underidentified, given the limited number of work–family items available in the MIDUS. Future research is necessary to further confirm the four-dimensional structure of work–family spillover.

It is also important to note other limitations of this research. These data were cross-sectional; consequently, it is important for future research to longitudinally study the determinants and consequences of both positive and negative spillover for the individual, his or her family members, and the individual's performance in the workplace. It will also be important for additional research to rule out the possibility that the associations we found were due to common-method variance (i.e., all data here were self-reported). Given the lack of a consistent pattern across all outcomes and the congruence between our results and the results of previous research, however, a monomethod bias does not appear to be a major limitation of this study. Future research is needed to examine whether self-reports of work–family spillover are accurate across different groups; for example, some evidence suggests that men may underreport negative spillover from work to family and overreport positive spillover from work to family, because traditional gender role socialization encourages men to “protect” their wives and families from the burdens of their work (Weiss, 1990).

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 that limiting the work–family interface to work–family conflict is too simplistic. Work can have an independent positive spillover influence on family life, and family life can have an independent positive spillover influence on work life. The task for future scholarship is to develop a more complete, dynamic ecological model of adults' work and family experiences to inform the development of more optimal workplace policies, programs, and practices.

References

- 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 workfamily literature: Work in progress*. Boston: Wellesley College Center for Research on Women.
- 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., & 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.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723–742.
- Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman, & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3–28). 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: Wiley.
- 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.
- 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., & 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.
- 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.
- Lachman, M. E., & Weaver, S. L. (1997). *The Midlife Development Inventory (MIDI) personality scales: Scale construction and scoring* (Tech. Rep. No. 1). Waltham, MA: Brandeis University, Department of Psychology.
- 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.
- 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., & McMurrian, 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 ed.). 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.
- 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.
- Repetti, R. L. (1989). Effects of daily workload on subsequent behavior during marital interaction: The roles of social withdrawal and spouse support. *Journal of Personality and Social Psychology*, 57, 651-659.
- Rook, K. S. (1984). The negative side of social interaction: Impact on psychological well-being. *Journal of Personality and Social Psychology*, 46, 1097-1108.
- 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. (1979). A congruence analysis of human stress. In I. G. Sarason, & C. D. Spielberger (Eds.), *Stress and anxiety* (Vol. 6, pp. 27-53). New York: Wiley.
- 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 the Census. (1998a). Marital status and living arrangements: March 1998 (Update). *Current Population Reports*, Series P20-514.
- U.S. Bureau of the Census. (1998b). *Statistical abstracts of*

the United States (118th ed.). Washington, DC: U.S. Government Printing Office.

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). London: University College of London, Department of Community Medicine, 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.

Appendix

Intraclass Correlation Matrix Estimating the Average Correlation Between Items Within and Across Work-Family Spillover Factors

Measure	1	2	3	4
1. Negative spillover work to family	.55			
2. Positive spillover work to family	-.02	.48		
3. Negative spillover family to work	.32	.08	.50	
4. Positive spillover family to work	-.01	.19	-.04	.43

Note. Data from the 1995 National Survey of Midlife Development in the United States.

Received February 15, 1999
 Revision received August 12, 1999
 Accepted September 1, 1999 ■