



## A longitudinal and multi-source test of the work–family conflict and job satisfaction relationship

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Job satisfaction is one of the most frequently studied outcomes in the work–family conflict literature. This study extends the previous research by examining the unique effects of work interfering with family (WIF) and family interfering with work (FIW) on job satisfaction by (1) controlling for family, personal, and job characteristics of dual-earner couples, (2) employing cross-sectional and longitudinal methods, and (3) predicting job satisfaction with a spousal rating of the target's WIF. Consistent with previous research, WIF was related to job satisfaction cross-sectionally for men and women, and this effect existed beyond negative mood, job autonomy and monotony, and FIW. When predicting a change in job satisfaction a year later, and when using spouse rating of the target's WIF, WIF was predictive of women's job satisfaction but not men's, which is consistent with gender role theory. The fact that WIF predicted job satisfaction for women beyond affective and job characteristic variables, over time, and with non-self reported measures, provides more confidence in this directional relationship than could previously be assumed. Societal and managerial implications are discussed.

The issue of work–family conflict (WFC) has been noted as a particular concern for today's businesses (Bond, Galinsky, & Swanberg, 1997). In demonstrating WFC's relationship with work outcomes, job satisfaction has been the most widely studied correlate (Allen, Herst, Bruck, & Sutton, 2000; Kossek & Ozeki, 1998). Job satisfaction represents the well-being of employees and is predictive of job tenure, counter-productive behaviours, and withdrawal (e.g. Hackett & Guion, 1985; Spector, 1997). Thus, the link between WFC and job satisfaction enables practitioners to support interventions designed to decrease WFC. This is especially important because the evidence that WFC directly predicts 'bottom-line' outcomes like job performance and withdrawal behaviours is weak (Goff, Mount, & Jamison, 1990; Hammer, Bauer, & Grandey, 2003; Thomas & Ganster, 1995).

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Although there is agreement that WFC is related to job satisfaction (e.g. Bruck, Allen, & Spector, 2002; Kossek & Ozeki, 1998), several factors make this relationship contentious. Conceptually, there is debate about how the two directions of WFC (work-to-family and family-to-work) predict job satisfaction, and the role that gender plays in this relationship. Methodologically, several limitations in WFC–job satisfaction research weaken this evidence, such as omission of key variables, cross-sectional designs, and mono-source reporting.

In the current study, we make a theoretical case for why WIF, but not FIW, should predict job satisfaction and why it should be stronger for women than for men. Furthermore, we employ a sample of dual-earner parents to provide a self- and spousal rating of their WFC, and use these variables to predict job satisfaction both cross-sectionally and longitudinally while controlling for mood, family, and job characteristics. Given the importance of job satisfaction in the organizational sciences and the implications for interventions, this paper addresses a need in work–family research and practice.

### **Theoretical approach**

Job satisfaction is ‘an internal state that is expressed by affectively and/or cognitively evaluating an experienced job with some degree of favor or disfavor’ (Brief, 1998, p. 86). There are many known predictors of job satisfaction such as job characteristics and the disposition of the employee. Why should the broader perception of inter-role conflict influence this work attitude? In March and Simon’s (1958) classic model of job satisfaction, they posited that job satisfaction was influenced by the compatibility of the work requirements with other roles. Given that work and family roles are the two most important life roles for most people (Mortimer, Lorence, & Kumka, 1986), an incompatibility between them is likely to create tension and negative feelings. Because attitudes are directed toward a target, the question then becomes why and when would this incompatibility create negative attitudes toward the job?

The extent to which one’s job is appraised as satisfying or dissatisfying may depend on the extent to which the job is seen as threatening to other self-relevant roles. When self-relevant roles (i.e. roles that define our identity) are threatened, we appraise the source of threat in a negative way (Carlson & Kacmar, 2000; Greenhaus & Beutell, 1985; Lazarus, 1991). This suggests that the direction of WFC is important when predicting relationships with job outcomes. Although both directions of WFC may contribute to a sense of stress in both domains, the sense that one role is interfering with the other should produce a negative appraisal of the source of the threat (Lazarus, 1991) provided that the ‘victimized’ role is self-relevant. In light of these ideas, we discuss the bidirectionality of WFC and gender role theory.

### ***Bidirectionality of WFC***

WFC has generally been recognized as bidirectional, that is, work can interfere with family (WIF) and family can interfere with work (FIW). An intriguing idea is that these two roles have differential permeability – family roles tend to be less structured and formalized and, thus, more permeable to other role requirements (Eagle, Miles, & Icenogle, 1997; Frone, Russell, & Cooper, 1992b). The evidence supports this idea. In general, WIF is reported more frequently than FIW (Frone, 2003; Frone, Yardley, & Markel, 1997).

To the extent that the family role is part of the person's identity and is valued, perceiving that work is draining time and energy needed for the family role (WIF) may produce a sense of threat to one's self. WIF suggests that work is attributed as the source of this interference, and so the employee develops a negative attitude toward the job (Weiner, 1985). Should the extent to which family interferes with work (FIW) also predict job satisfaction? We argue that this is less likely because FIW represents a perception that the family is viewed as a threat to work time and energy and, thus, is more likely to be a predictor of attitudes about the family. In this study, we focus on job attitudes, and based on these ideas of attribution and self-threat, we propose that WIF is a stronger predictor than FIW.

Previous researchers have shown mixed support for this bidirectional hypothesis, with some finding that WIF predicts job attitudes and FIW has a comparatively minor role (Adams, King, & King, 1996; Borovsky, 1999; Parasuraman, Greenhaus, & Granrose, 1992), and others finding the reverse (Frone, Russell, & Cooper, 1992a; Frone *et al.*, 1997; Parasuraman, Purohit, Godshalk, & Beutell, 1996; Thompson & Blau, 1993). Still others find that neither WIF nor FIW predicts work outcomes directly (Carlson & Kacmar, 2000; O'Driscoll, Ilgen, & Hildreth, 1992). However, a recent meta-analysis supported that WIF has a stronger correlation ( $r = -.27$ ) with job satisfaction than FIW ( $r = -.18$ ; Kossek & Ozeki, 1998), which is consistent with our theoretical rationale. The current study compares the predictive power of these two types of WFC while taking family and work characteristics into account.

### **Gender role theory**

Consistent with our self-identity ideas above, one of the early WFC theoretical articles proposed that WFC is 'intensified when the work and family roles are salient or central to the person's self-concept and when there are strong negative sanctions for noncompliance with role demands' (Greenhaus & Beutell, 1985, p. 77). According to gender role theory, women are more likely to see the family role as part of their social identity than men do (Bem, 1993; Gutek, Searle, & Klepa, 1991). Moreover, as women's roles in the workplace have increased, the expectations placed upon them in the family role have not diminished (Hochschild, 1999; Schor, 1991). Thus, when work impinges on family demands (WIF), women are more likely than men to develop a negative attitude toward the work because the job is more likely to be viewed as threatening a central social role. On the other hand, men are unlikely to use this information to form work attitudes, according to gender role theory, because they are less likely to experience a threat to self if the job interferes with family time. This is not to say that men do not find WIF unpleasant, but rather that perceptions of WIF are less likely to lead to attributions of blame because the interference is less damaging to social identity and, thus, less self-threatening (Lazarus, 1991).

Alternatively, at the turn of the twenty-first century, when dual-earner couples are common and women make up between 45% and 50% of the workforce in Westernized countries (e.g. US Bureau of Labor Statistics, 2002; UK National Statistics, 2002), we might imagine that the context-specific role expectations for men and women have changed. In the US, where the current study was conducted, college students have been gradually less likely to endorse traditional gender role views about work and family (Sax, Astin, Korn, & Mahoney, 1999). In fact, the extent of WIF and FIW have been found to be similar for men and women, despite gender role theory hypotheses that women experience more WIF and men more FIW (Eagle *et al.*, 1997; Frone *et al.*, 1992b; Gutek

Q2 *et al.*, 1991) In line with the contrasting utilitarian hypothesis, perhaps men and women do not differ in their reactions to WFC – perhaps when both partners are working, they will equally resent their jobs if work interferes with family (WIF) and appreciate their jobs if this is not the case.

Consistent with gender role theory, several studies have supported the proposition that the relationship between global WFC and job satisfaction is stronger for women than for men (Bruck *et al.*, 2002; Greenglass, Pantony, & Burke, 1988; Kossek & Ozeki, 1998). This may be spurious, however, because work characteristics may be different for women than for men on average, influencing both WFC and lower job satisfaction. In fact, other studies have not found any gender difference in the relationship of work–family conflict (WFC) and work outcomes (Frone *et al.*, 1992a; Parasuraman *et al.*, 1992), supporting an instrumental approach rather than gender role theory (Gutek *et al.*, 1991). To test this empirical question, we examine gender as a moderator of the relationship of WIF and job satisfaction, while controlling for job characteristics.

## Methodological approach

We addressed the conceptual questions outlined above with a methodological approach that counters the limitations of previous research. First, we considered other factors that predict job satisfaction: experienced mood and characteristics of the job. Second, we examined whether WIF predicts job satisfaction 1 year later, controlling for previous job satisfaction. Finally, we measure WIF with both self-reports and spousal ratings of the target and use each to predict the targets' job satisfaction.

### Controlling for mood and job characteristics

WFC and job satisfaction studies have not consistently taken into account key personal or situational variables that may spuriously inflate this relationship. Two categories of variables are considered here: (1) the transitory affective state, and (2) the more stable job characteristics. The affective state of the individual at the time of completing a survey may influence both the reported levels of job satisfaction and WFC, creating a spurious relationship between the two. A strong negative mood at the time of a survey makes one more likely to recall events that were negative due to mood-congruent memory effects (Bower, 1981). Affective states have been found to relate to WFC (Necowitz & Roznowski, 1994) and job dissatisfaction (Fisher, 2000; Grandey, Tam, & Brauburger, 2002), which may spuriously increase the correlation if not taken into account.

Two job characteristics that are related to job satisfaction, job autonomy, and job monotony, are included in this study. Job autonomy, or the perception of control over one's work tasks and schedule, has long been viewed as a critical factor for satisfied employees (Hackman & Oldham, 1976; Karasek, 1979; Spector, 1986). Having a job with a wide variety of tasks is a satisfying condition because one feels energized and important to the workplace in comparison to a job where one performs the same tasks over and over (Hackman & Oldham, 1976). It is important to examine whether WIF explains job satisfaction beyond these established predictors. We expect that the degree that work interferes with family roles will contribute uniquely to explaining the variation

in job satisfaction. Given the reasoning of gender role theory stated above, we expect this will be especially true for women.

*Hypothesis 1a.* Cross-sectionally, WIF uniquely predicts job satisfaction beyond FIW, negative mood, and job characteristics.

*Hypothesis 1b.* The effect of WIF on job satisfaction will be stronger for women than for men.

### **Longitudinal approach**

Most WFC and job satisfaction studies assume that WFC precedes job satisfaction. Unfortunately, the majority of studies on the relationship between WFC and job satisfaction have been cross-sectional (Allen *et al.*, 2000). Although WFC can be operationalized as events (Williams & Alliger, 1994), it is typically measured as a perception of general interference such that the reported level of WFC represents the extent that the roles are in conflict on average. We expect that in addition to the perception of WIF predicting job satisfaction at the same point in time, this interference is likely to compound over time to predict work attitudes. This is consistent with research on daily hassles - no single event is expected to have a huge effect on outcomes, but over time an accumulation predicts strain. A previous study found a relationship between WIF and job satisfaction measured 3 months later (Grandey & Cropanzano, 1999). In the current study, not only do we separate these variables in time, we also control for the initial job satisfaction while predicting later job satisfaction. This allows us to determine whether WFC can explain the changes in job satisfaction over time. Because job satisfaction is a fairly stable attitude (Arvey, Bouchard, Segal, & Abraham, 1989; Dormann & Zapf, 2001), it is necessary to examine this compounding effect over an extended period of time to allow for change to occur. We examined the WFC–job satisfaction relationship over a 1-year time lag.

As with our cross-sectional hypotheses, we expected that the strength of the effect of WIF on job satisfaction will be different for men and women. WIF is likely to have a compounding, day-to-day effect for women who regularly cope with juggling the demands of both work and family (Williams, Suls, Alliger, Learner, & Wan, 1991), and over time, this may mean changes in attitudes toward the source of the self-threat, namely, the job. Although men may experience WIF just as frequently as women (Gutek *et al.*, 1991), the experience should be less personally relevant and thus less likely to accumulate and invoke negative appraisals toward the job.

*Hypothesis 2a.* WIF predicts the change in job satisfaction 1 year later, controlling for FIW, mood, job characteristics, and prior job satisfaction.

*Hypothesis 2b.* This longitudinal effect of WIF will be stronger for women than for men.

### **Multi-source approach**

As a work attitude, job satisfaction is, by definition, a personal cognitive and affective response, and thus, a self-reported variable. WFC is typically conceptualized as a perceptual variable, but it is meant to capture some objective circumstance whereby time and energy spent at work keeps one from being available at home and vice versa. Using self-reported measures for both of these constructs may inflate the correlations due to self-reporting biases, such as consistency, social desirability or acquiescence (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Spector, 1994). However, a spouse's

rating of the target's WIF would provide an observed measure of conflict between roles and diminish this mono-source bias. A spouse may determine the other's WIF by recalling times that the person was unable to assist with child care because of work demands. The spouse may also base the level of WIF on direct communication from the target about feelings of WIF, which would represent signs of work demands infiltrating home life. Finding a relationship between a spousal rating of WIF and the target spouse's job satisfaction would demonstrate that a relationship existed between WIF and job satisfaction beyond a self-reporting bias. Finally, we hypothesize that wives' WIF, as rated by husbands, will have a stronger relationship with their job satisfaction than husbands' WIF, as rated by wives. This is consistent with gender role theory and social identity, namely, that women are more likely to feel negatively about their jobs if their husbands believe that work is interfering with the gender-specific family role, whereas it is less likely that wives' perceptions of WIF should induce such reactions in husbands.

*Hypothesis 3a.* Spouse ratings of the target's WIF negatively relate to the self-ratings of the target's job satisfaction, beyond the target's prior job satisfaction, FIW, mood and job characteristics.

*Hypothesis 3b.* Spousal WIF will more strongly predict job satisfaction for women than for men.

### Summary

Job satisfaction is an affective appraisal of one's job. We propose that when a situation seems to threaten an aspect of our self-identity, we attribute our negative response to the perceived source of threat and develop negative attitudes toward that threat. To the extent that family roles are a source of self-identity, we expect that WIF will predict decreased job satisfaction beyond FIW – the more that work interferes with family, the more dissatisfied the employee. Furthermore, we expect this relationship to be stronger for women because gender role theory predicts that women are more likely to value family roles than men. We test these hypotheses controlling for mood, family, and job characteristics, with cross-sectional and longitudinal data, and with WIF measured from two sources.

### Method

#### *Participants and procedure*

Participants were drawn from 201 couples partaking in a larger study on parents with two children where the older child was 9 or 10 years old.<sup>1</sup> In the current study, participants were all heterosexual dual-earner couples, where both were in paid employment for at least 10 hours a week. With this criterion, our final sample was 174 couples (174 men, 174 women). This sample naturally controls for marital, parental, and work status, given that all participants had paid employment, were married, and had two children living at home. All respondents were Caucasian and from working- and middle-class households in small cities, towns, and rural areas in central counties of the state of Pennsylvania, USA. The participants in this study had an average income of \$31,820, making them similar to the regional average (\$26,363) but lower than the state average (\$55,581) for this same time period (US Bureau of Labor Statistics, 2002). The

<sup>1</sup> This project was part of the Pennsylvania State University Family Relationships Project, a longitudinal study examining the development of children aged from middle childhood (see Crouter, Bumpus, Maguire, & McHale, 1999, for more information).



average education attainment was equivalent to a few years of college for both women ( $M = 14.68$ ,  $SD = 2.12$ ) and men ( $M = 14.64$ ,  $SD = 2.34$ ). Jobs were rated in prestige according to the National Opinion Research Council (NORC) prestige codes, which have a theoretical range from 0 (lowest prestige) to 100 (highest prestige). Jobs of respondents represented the full range of occupational prestige, including a janitor, social worker, police detective, and college professor, and the average level of prestige was at the midpoint for this sample ( $M_{women} = 48.15$ ,  $SD = 13.23$ ;  $M_{men} = 49.35$ ,  $SD = 12.82$ ).

The couples were given structured interviews in their homes by trained research assistants. These interviews were performed on the same day and in separate locations to keep the responses confidential. Couples were paid \$100 per year to participate. All variables were gathered at Time 1, and both mood and job satisfaction were gathered again 1 year later.

### **Instruments**

#### *Work–family conflict (Time 1)*

Participants completed the work spillover measure (Small & Riley, 1990) as part of the broader study, which has been found to correlate with job satisfaction ( $r = -.38$ ) (Aryee, 1992). A subset of items (see Appendix) that measured time- and energy-based conflict (Greenhaus & Beutell, 1985) were used in this study to be consistent with current scale development in this area (Carlson, Kacmar, & Williams, 2000). Responses to the six WIF items were made on a Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), and the alpha coefficient was good for both men and women ( $\alpha = .85$ ). Family interfering with work items were adapted from the WIF measures with five items ( $\alpha = .63$  for women and  $.75$  for men). WIF and FIW were correlated, as expected, for women ( $r = .48$ ,  $p < .01$ ) and men ( $r = .29$ ,  $p < .05$ ).

Spouses were given four WIF items similar to the self-reported ones (see Appendix) and asked to describe their spouses ( $\alpha = .79$  for wife rating husband,  $.71$  for husband rating spouse). Self-reported WIF related significantly to spouse-rated WIF for men and women ( $r = .42$  and  $.49$ ,  $p < .01$ , respectively), signifying that they measure similar but unique experiences and, thus, are valuable to examine separately. Because spouses could not be expected to observe directly how much family interfered with work (FIW), this information was not collected.

#### *Job satisfaction (Time 1 and Time 2)*

Participants completed the Job Opinion Questionnaire (Campbell, Converse, & Rodgers, 1976), a 9-item measure that asks participants to ‘think over the last year of your job and use the following words and phrases to describe it’. Pairs of affective terms were provided (e.g. enjoyable - miserable, disappointing - rewarding), and the respondents indicated their responses on a 7-point scale with the word pairs serving as anchors (see Appendix for items). Words referred to both affective states and cognitive appraisals as encouraged by attitude researchers (Brief, 1998; Crites, Fabrigar, & Petty, 1994). Items were scored so that higher numbers represented more positive reactions to work. Cronbach’s  $\alpha$  for this scale was  $.89$  for women’s job satisfaction and  $.91$  for men’s job satisfaction at Time 1, and  $.90$  for both men and women at Time 2.

*Mood (Time 1 and Time 2)*

Respondents completed a shortened version of the Center for Epidemiological Studies Depression (CES-D) scale (Radloff, 1977). Although typically used to measure depression, this scale does not actually measure clinical symptoms. Instead, the items ask about one's affective state over the last week. This is the same time frame used in the organizational sciences to indicate felt mood (Burke, Brief, George, Roberson, & Webster, 1989; George & Bettenhausen, 1990). Respondents were asked how often they felt each of 12 items in the previous week, such as, 'I was happy' (reverse coded) and, 'I felt depressed'. Responses were on a 4-point scale, ranging from 1 (*rarely or none of the time - less than one day*) to 4 (*most or all of the time - 5 to 7 days*), and coded so that a higher value indicated more frequent negative mood. The  $\alpha$  coefficient was .85 for women and .73 for men. Mood was gathered at both times in the data collection. Although the job characteristics are expected to be stable, mood is transient and should be measured at the time the work attitude is gathered.

*Job characteristics (Time 1)*

Scales from the work conditions survey (Lennon, 1994) were used to measure job autonomy and job monotony, each with a 4-point scale ranging from 1 (*not at all*) to 4 (*very much*). An example item from the job autonomy scale is, 'You decide when to come to work and when to leave'. The five items had an  $\alpha$  coefficient for the job autonomy scale of .79 for women and .84 for men. An example item from the 4-item job monotony scale is, 'The job requires doing the same thing over and over'. The  $\alpha$  coefficient was .86 for women and .81 for men.

*Demographic variables*

Parental and marital statuses were naturally controlled in this study. Job prestige codes were included as a control variable, but they were not related to the variables of interest and were not included in further analyses. Men and women were analysed separately to test the gender hypotheses.

**Analyses**

We were interested in whether WIF (whether self- or spouse-rated) influenced job satisfaction beyond other personal and job characteristics. We were not predicting a shared family outcome, which would warrant using a nested modelling approach, nor did we expect crossover effects between a spouse's job characteristics and the other spouse's job satisfaction. To ensure that this was correct, we examined the crossover correlations with the two job satisfaction measures. Out of all possible crossover relationships on Time 1 and Time 2 job satisfaction, only one was significant. Wives' job monotony weakly correlated with husbands' job satisfaction at Time 2 ( $r = .15$ ,  $p < .05$ ). Thus, each hypothesis was tested with separate regression equations for men and women, as the most parsimonious and interpretable method for our purposes. This allows us to examine the moderating effect of gender. Will the effect of WIF on job satisfaction be different for men and women? To test Hypothesis 1, Time 1 job satisfaction was first regressed upon mood, then job characteristics, followed by WIF and FIW. To test Hypothesis 2, Time 2 job satisfaction was regressed upon Time 1 job satisfaction and Time 2 mood, Time 1 job characteristics, and, finally, Time 1 WIF and FIW. For Hypothesis 3, these two analyses were performed again with spousal ratings of WIF as the third entry.



## Results

### Descriptives

The means, standard deviations, and bivariate correlations for the male and female participants are shown in Table 1. Mean level gender differences were tested with *t* tests (two-tailed significance tests) with all variables. As found previously, WIF did not differ significantly between men and women (Eagle *et al.*, 1997; Frone *et al.*, 1992b), and FIW was reported to a greater degree by women than by men ( $p < .05$ ; Gutek *et al.*, 1991). Men and women did not differ in negative mood, but they did differ significantly ( $p < .05$ ) in perceptions of job characteristics and job satisfaction (see Table 1). In particular, women reported lower job autonomy and variety but significantly higher job satisfaction than men. For the same-variable different-source relationships (shown in the diagonal), mild affective spillover is seen between the spouses for negative mood ( $r = .20, p < .05$ ) and job satisfaction ( $r = .17, p < .05$ ), although only at Time 1.

With bivariate correlations, negative mood was positively associated with self-reported WIF and FIW, but not spouse-rated WIF, suggesting that the relationship between WFC and negative mood is due to response biases rather than substantive effects. Mood and job characteristics related to job satisfaction as expected. Time 1 job satisfaction was strongly correlated with Time 2 job satisfaction for women ( $r = .52$ ) and men ( $r = .66$ ), supporting the stable nature of work attitudes over the year. Finally, WIF and FIW were significantly correlated for women ( $r = .48$ ) and men ( $r = .29$ ), and the relationship was stronger for women ( $p < .05$ ). Despite being in the same marital and parental situations with employment status, women who perceived that work was interfering with family were more likely to also report that family was interfering with work, whereas for men these perceptions were less intertwined. These significant associations underline the importance of including both WIF and FIW in our equations when using self-reported WFC measures.

### Regression analyses

All significance tests are two-tailed.

#### Time 1 job satisfaction

The first hypothesis concerned whether WIF predicted job satisfaction at the same point in time when controlling for FIW, mood and job characteristics. Together, mood and job characteristics explained a significant amount of the variance in job satisfaction for both women (15%) and men (25%). The entry of WFC explained an additional 11% ( $p < .01$ ) for women and 3% ( $p < .05$ ) for men (see Table 2). In partial support of Hypothesis 1a, the  $\beta$  coefficients for WIF were significantly larger than FIW for men ( $p < .05$ ).<sup>2</sup> For women, WIF had a significant  $\beta$  coefficient ( $p < .05$ ) but it was not significantly stronger than the coefficient for FIW. Hypothesis 1b stated that the unique relationship of WIF on job satisfaction would be stronger for women than men. Although in the predicted direction, a comparison of the  $\beta$  coefficients for WIF did not support that they were significantly different for men and women ( $p > .10$ ).

<sup>2</sup> To compare the  $\beta$  coefficients, we identified the difference of the non-standardized regression coefficients, and divided the difference by the square root of the sum of the standard errors of the coefficients (Cohen & Cohen, 1983). The result can be interpreted like a *z* score.

**Table 1.** Bivariate correlations of study variables

Study variables	Women		Men		1	2	3	4	5	6	7	8	9
	Mean	SD	Mean	SD									
1. Negative mood (T1)	1.48	1.56	1.45	1.17	.20*	.50**	-.15†	.16*	.21**	.26**	.20**	-.33**	-.22**
2. Negative mood (T2)	1.46	1.36	1.45	1.24	.35**	.00	-.14†	.17*	.12	.19*	.06	-.19*	-.20**
3. Job autonomy	2.62 <sup>a</sup>	1.73	3.09 <sup>a</sup>	1.69	-.07	-.11	.04	-.08	-.30**	-.16*	-.13	.18*	-.01
4. Job monotony	2.79 <sup>a</sup>	1.57	2.43 <sup>a</sup>	1.46	.16*	.09	-.24**	.19*	-.05	.10	-.09	-.24**	-.26**
5. WIF	1.31	1.06	1.35	0.97	.25**	.18*	.05	.09	-.01	.48**	.49**	-.34**	-.34**
6. FIW	2.09 <sup>a</sup>	1.28	1.96 <sup>a</sup>	1.21	.21**	.18*	.06	.03	.29**	.10	.22**	-.34**	-.29**
7. Spouse rated WIF	1.28	0.74	1.34	0.89	.06	-.01	.03	.02	.42**	.00	-.04	-.20**	-.26**
8. Job satisfaction (T1)	5.59 <sup>a</sup>	2.83	5.30 <sup>a</sup>	3.08	-.29**	-.11	.36**	-.32**	-.23**	-.08	-.14†	.17*	.52**
9. Job satisfaction (T2)	5.58 <sup>a</sup>	2.85	5.36 <sup>a</sup>	2.81	-.19*	-.21**	.35**	-.28**	-.16*	-.10	-.02	.66**	.11

Note. Correlations above the diagonal are for women and those below the diagonal are for men. The values in the diagonal in italics are the spouse cross-correlations. WIF = work interference with family. FIW = family interference with work.

<sup>a</sup> Means are significantly different ( $p < .05$ ).

†  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$

**Table 2.** Regression results predicting Time 1 and Time 2 job satisfaction

	Job satisfaction – Time 1				Job satisfaction – Time 2			
	Women		Men		Women		Men	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
Step 1		.11**		.09**		.24**		.45**
Negative mood <sup>a</sup>	–0.19**		–0.21**		–0.01		0	
Job satisfaction (Time 1)	–		–		0.37**		0.60**	
Step 2		.04*		.16**		.04**		.02†
Job autonomy	0.01		0.31**		–0.17**		0.13*	
Job monotony	–0.21**		–0.21**		–0.23**		–0.05	
Step 3		.11**		.03*		.04**		.01
WIF	–0.24**		–0.18**		–0.21**		–0.05	
FIW	–0.18*		–0.01		–0.03		–0.05	
Total R <sup>2</sup>		.25		.28		.32		.47

Note. WIF = work interference with family. FIW = family interference with work.  $\beta$  = the standardized regression coefficients for the total equation.

<sup>a</sup> Negative mood is measured at Time 1 when predicting T1 job satisfaction, and Time 2 when predicting T2 job satisfaction.

† $p < .10$ , \* $p < .05$ , \*\* $p < .01$ .

*Time 2 job satisfaction*

First, bivariate correlations supported that WIF related to job satisfaction 1 year later for both men ( $r = -.23, p < .01$ ) and women ( $r = -.34, p < .01$ ). Hypothesis 2 suggested that WIF would contribute to job satisfaction a year later beyond Time 1 job satisfaction, mood, job characteristics, and FIW. As predicted by Hypothesis 2a, WIF was a significant predictor for women ( $p < .01$ ), while FIW was not. The difference in the  $\beta$  coefficients was in the predicted direction but did not reach traditional levels of significance ( $p < .10$ ). Neither WIF nor FIW were a significant predictor of job satisfaction for men when controlling for the other variables. Thus, WIF was a significant predictor for women but not for men, supporting Hypothesis 2b, although the  $\beta$  coefficients for men (–0.05) and women (–0.21) were not significantly different ( $p > .10$ ).

*WIF spousal ratings with job satisfaction*

To test Hypothesis 3a, the spousal rating of WIF replaced the self-reported work–family predictors in the equations. Job satisfaction at Time 1 and Time 2 were each separately regressed on mood, job characteristics, and the spousal rating of WIF. Predicting Time 1 job satisfaction, spouse’s ratings of WIF was a significant predictor for women ( $\beta = -0.19, p < .01$ ), but the coefficient did not reach accepted levels of significance for men ( $\beta = -0.10, p < .10$ ; see Table 3). Spouse ratings of WIF were a significant predictor of Time 2 job satisfaction, beyond the other variables, for women ( $\beta = -0.14, p < .05$ ) but not for men ( $\beta = 0.02, p > .10$ ). Thus, Hypothesis 3a is partially supported. Although WIF was a significant predictor for women but not for men, the coefficients for WIF for men and women were not significantly different ( $p > .10$ ) for either Time 1 or Time 2 job satisfaction. Thus, Hypothesis 3b was supported cross-sectionally and longitudinally, but the gender differences were weak.

**Table 3.** Regression results for job satisfaction with spouse ratings of the target's WIF

	Job Satisfaction – Time 1				Job Satisfaction – Time 2			
	Women		Men		Women		Men	
	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
Step 1		.10**		.10**	.24**		.47**	
Negative mood <sup>a</sup>	–0.24**		–0.25**		–0.07		–0.14*	
Job satisfaction (Time 1)	–		–		0.41**		0.61**	
Step 2		.04*		.16**	.04**		.01	
Job autonomy	0.06		0.30**		–0.14*		0.11†	
Job monotony	–0.21**		–0.22**		–0.21**		–0.04	
Step 3								
spouse rating of WIF	–0.19**	.03**	–0.10†	.01†	–0.14*	.02*	0.02	.00
Total R <sup>2</sup>		.18		.26	.30		.48	

Note.  $\beta$  = the standardized regression coefficient for the total equation. WIF = work interference with family. FIW = family interference with work.

<sup>a</sup> Negative mood is measured at Time 1 when predicting T1 job satisfaction, and Time 2 when predicting T2 job satisfaction.

† $p < .10$ , \* $p < .05$ , \*\* $p < .01$ .

**Discussion**

Meta-analyses have demonstrated that WFC negatively relates to job satisfaction (e.g. Kossek & Ozeki, 1998), suggesting that decreasing employees' inter-role conflict would enhance employee work attitudes. We have provided more conclusive evidence by demonstrating that this inter-role interference contributed unique information about job satisfaction beyond other predictors of job satisfaction, when predicting a change in job satisfaction over time, and when using an observer's rating of the extent that the target's work seems to interfere with family time and energy. Thus, this is one of the few studies that can demonstrate more causal evidence for the relationship between WFC and job satisfaction and has minimized the criticism that the relationship is due to shared method variance. However, our evidence also shows that one cannot argue that WFC predicts job satisfaction unilaterally. Instead, we have provided further evidence that the strength of the relationship depends on two other factors: (1) the direction of WFC, and (2) the gender of the respondent.

**The role of WIF and FIW**

Although there have been mixed findings and rationale on which direction of WFC should predict job-related outcomes, our results are consistent with the recent meta-analysis (Kossek & Ozeki, 1998) and with our conceptual ideas. In particular, we proposed that when forming an attitude about the job, the employee uses information about the extent that the job interferes with other valued roles. To the extent that the job is viewed as a threat to roles that are part of the one's self-identity, the job is evaluated negatively. Thus, we specified that WIF should be a unique predictor of job satisfaction, beyond personal and job characteristics, and beyond FIW. Generally, this was supported. For women, WIF was a significant and unique predictor of job satisfaction for all four possible equations. FIW was a significant predictor only when predicting women's job satisfaction at the same point in time. Over time, when

controlling for prior job satisfaction, work and family interference still explained significant amounts of variance (4%) for women, and this seemed to be due to the perception of WIF. This supports our theoretical idea that the extent to which work is interfering with the family role accumulates over time for the individual for whom the family role is part of the self-identity. Eventually, this experience creates a negative appraisal of the role that is attributed to be causing the interference - in this case, the job.

We suggest that others may have found different results such that FIW contributes to work outcomes (e.g. Frone *et al.*, 1997; Parasuraman *et al.*, 1996) for two reasons. First, these studies often examine job stress, not work attitudes. We agree that there may be a crossover effect such that both WIF and FIW contribute to job stress, because the perception that family is interfering with work implies that job demands are not being met. However, when predicting attitudes, it makes theoretical sense that the source of the conflict would be the object of a negative appraisal, because that source is viewed as a threat to personal goals and values. Secondly, other researchers have not always controlled for job and family characteristics and mood as we have in this study. They may find that FIW relates to job satisfaction but that relationship may be due to a spurious relationship of FIW with WIF, negative mood or lack of job autonomy. In fact, in this study the bivariate correlations of WIF and FIW were similarly strong with job satisfaction for women. However, when controlling for the mood, job characteristics and prior job satisfaction, the effect of FIW decreased to a non-significant predictor in comparison to WIF. It should be noted, however, that this difference was not significant at traditional values, although it was in the expected direction ( $p < .10$ ). Thus, the data provide some support that WIF is more a factor for work attitude formation than FIW, although the effects are not strong.

### **Gender differences**

We relied on gender role theory to suggest that women's perceptions of WIF would induce negative appraisals of their jobs more frequently than men's given that women tend to identify more with the family role than men do. If men and women are similarly likely to see the family role as part of their identity, a utilitarian perspective would be supported, namely, that men and women should feel similarly threatened and annoyed toward work when it interferes with the family role. Our results support the gender role perspective, but not unequivocally.

When controlling for mood and job characteristics with the cross-sectional data, WIF was a significant predictor of job satisfaction for both men and women. If the current study had been cross-sectional only (like most other WFC studies), then we would have concluded there were no gender differences. However, when examining the longitudinal effects, WIF did not predict changes in job satisfaction over a 11-year time lag for men, but it did for women. We argued that we would not see the longitudinal effect for men because they are less likely to experience the compounding effect of WIF threatening their self-identity, consistent with gender role theory (Pleck, 1977).

An alternative explanation for the longitudinal results is that the stability of men's job satisfaction from Time 1 to Time 2 minimized the variance that WIF could explain. As a follow-up analysis, men's Time 2 job satisfaction was regressed on the predictors without the Time 1 job satisfaction. In this case, WIF had a significant coefficient (standardized  $\beta = -0.15$ ,  $p < .05$ ), demonstrating that men's perception

of WIF relates to job satisfaction a year later beyond mood and job characteristics. Because WIF does not explain changes in job satisfaction for men, this may suggest a reversed relationship for men - when they are satisfied with their jobs they are less likely to find that work drains their time and energy for the family. We were not able to test this direction with our data, however, previous studies have suggested unique processes for men and women. For example, in a cross-sectional study, Rothbard (2001) found that work engagement had depleting effects on women's family roles, but not on men's.

The spousal ratings provide further support for gender role theory. The extent that the husbands reported that their wives' work interfered with family time and energy was significantly related to their wives' job satisfaction. Moreover, husband's WIF perceptions predicted the wives' job satisfaction 1 year later, beyond the wives' own prior job satisfaction and characteristics. The reverse was not supported. Wives' perception of WIF did not predict husbands' job satisfaction at either point in time. Spousal reports were similarly related to self-reported WIF for both husbands and wives. Thus, we interpret this finding as suggesting that when a husband perceives that his spouse is violating the gender-prescribed role (family), this contributes to family conflicts and resentment, which then leads to the wife's attributing blame to the job. Wives were just as likely to recognize that their husband's work drains time and energy for family, but this recognition does not result in the husband disliking his job.

Q4 Together, these results support the notion that when a woman's job is perceived (by oneself or by a spouse) as interfering with the family role, the inter-role conflict predicts how much she likes her job at that point in time and 1 year later. The same pattern does not appear for men. However, in all cases, it is important to note that the coefficients for WIF for men and women were not significantly different. Thus, although WIF was a significant predictor for women's future job satisfaction but not for men, the strength of the gender differences is weak. Optimistically, it may be suggested that, nowadays, men and women not only have not only similar levels of WFC, but that men increasingly value their family role and are dissatisfied by a job that removes them from it. However, our data also showed that women had significantly higher family-to-work conflict, thus supporting that women are still likely to be the caretaker when family interferes with work. In fact, although the majority of US women are working, 90% of the time, the woman is the caretaker when a child of a two-parent family is sick (Maccoby, 1998). Research has shown that despite women's advancement in the work arena, women are still more likely than men to take parental leave and feel responsible for the family and home demands (Hochschild, 1999; Judiesch & Lyness, 1999). Furthermore, because WIF had little effect on men's job satisfaction, it may be that women are becoming more like men (less likely to blame the job if work interferes with family because such interference is expected) rather than the reverse. More longitudinal research is clearly needed to examine the process of attitudinal development over time.

### **Limitations**

As in most studies, the present study may be seen as having limitations with the sample, the measures, and the analyses. The sample was not randomly sampled and is limited to married, working parents living in a certain region of the USA. However, unlike most studies using one organization or one job type, our sample had a wide variety of occupations from multiple companies. Furthermore, this sample is an improvement on previous research that has focused only on middle- to upper-class families. We did not measure role importance or centrality, although we made some



assumptions regarding the centrality of the family role as an explanation for gender differences. Also, the measures are not the most recent scales used in the organizational sciences, but we felt that the scales used here are appropriate for several reasons. The WFC items refer to interference with time or energy consistent with other scales (e.g. Netemeyer, Boles, & McMurrian, 1996), and refers to spouse or children explicitly. The fact that our sample comprised participants who were all married with children was viewed as an improvement over scales that ask vaguely about ‘family’. The Job satisfaction scale was a global measure asking for an affective appraisal of the job rather than a purely cognitive evaluation. The terms used were both cognitive (interesting–boring) and affective (enjoyable–miserable). We agree with prominent researchers in the area (Brief, 1998; Spector, 1997) on the point that job satisfaction includes affective and cognitive components and these should both be measured. Lastly, some may argue that we should use newer analysis methods such as hierarchical linear modelling and examine the couple as the unit of analysis. Our data do present that possibility, but our purpose – to predict individual job satisfaction with personal and job characteristics – did not call for the more complicated analyses. Instead, the married couple data were used to gather a non-self-reported WIF of the spouse, a new approach in this literature.

## Conclusions

In undertaking this study, it was possible that we would be calling into question an established relationship between WFC and job satisfaction. Instead, our results provide support for the effect of WIF beyond other established predictors of job satisfaction, 1 year later, and when using multi-source data. These results support the notion that when work is seen as interfering with the time and energy needed at home, working parents, especially working mothers, become dissatisfied with their jobs. For those organizations that recognize the importance of job satisfaction, these data provide grounds for decreasing the extent that work drains one’s time and energy, perhaps via decreased work hours (Major, Klein, & Ehrhart, 2002) or diminished work role stressors (Williams & Alliger, 1994). However, because this effect only emerged for women, it raises the question of whether such policies would result in improved job satisfaction for men. Given that research has shown that men are unlikely to use parental leave and other policies designed to decrease WFC, more societal-level changes may be needed to influence job satisfaction for both members of a dual-earner couple.

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## Appendix

### Work-family conflict (Small & Riley, 1990)

Instructions: Participants were asked to rate the following items on a 5-point scale, ranging from *strongly disagree* (1) to *strongly agree* (5).

#### Self-report work interfering with family (WIF)

1. My job keeps me from spending time with my spouse or partner.
2. After work, I am often too tired to do things with my spouse or partner.
3. My working hours interfere with the amount of time I spend with my children.
4. When I get home from work, I often do not have the energy to be a good parent.
5. I spend so much time working that I am unable to get much done at home.
6. When I get home from my job, I do not have the energy to do work around the house.

*Self-report family interfering with work (FIW)*

1. My family makes it hard for me to do my job well.
2. The demands of my family life limit the number of hours I'm able to work.
3. Worrying about what's going on at home makes it difficult for me to do my job.
4. I'm so tired from all the things I have to do at home that it's hard to have the energy to do my job.
5. I am a better worker because of my family life (R).

*Spouse-report of target (WIF)*

1. My husband's (wife's) job keeps him (her) from spending time with me.
2. After work my husband (wife) is often too tired to do things with me.
3. My husband's (wife's) working hours interfere with the amount of time he (she) spends with our children.
4. When my husband (wife) gets home from work, he (she) often does not have the energy to be a good parent.

**Job satisfaction (Campbell, Converse, & Rodgers, 1976)**

Instructions: In this scale, participants were asked to think over the last year of their jobs and use the following words and phrases to describe it. Participants were asked to circle a number on a line between the terms that indicated their response, with 1 and 7 anchoring the two adjectives.

1. enjoyable - miserable
2. discouraging - hopeful
3. full - empty
4. friendly - lonely
5. boring - interesting
6. useless - worthwhile
7. disappointing - rewarding
8. brings out the best in me - doesn't give me much chance
9. completely satisfied - completely dissatisfied

## Author Queries

*JOB NUMBER:* 10907

*JOURNAL:* JOOP

- Q1** Please check Spector (1986) reference should 'employes' read 'employees'?
- Q2** Please confirm that 'utilitarian' is the correct word here. 'utilitarian perspective'
- Q3** Please check that Radloff, 1977; Pleck, 1977 are given in text but not in References list.
- Q4** Please confirm this correction. 'Together, these results support that when a woman's job is perceived (by oneself or by a spouse) as interfering with the family role, the inter-role conflict predicts how much she likes her job at that point in time and a year later.'
- Q5** Please confirm that 'children ages' should read 'children aged' as in 'This project was part of the Pennsylvania State University Family Relationships Project, a longitudinal study examining the development of children aged from middle childhood'
- Q6** † is not found in Table 1 but explained in Table foot note