Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work–family effectiveness [☆]

Ellen Ernst Kossek [a,*], Brenda A. Lautsch [b,1], Susan C. Eaton [c,✠]

[a] School of Labor and Industrial Relations, Michigan State University, 433 South Kedzie, East Lansing, MI 48824-1032, USA
[b] Faculty of Business Administration, Simon Fraser University, 8888 University Drive, Burnaby, BC, Canada V5A 1S6
[c] Kennedy School of Government, Harvard University, 79 JFK Street, Cambridge, MA, USA

Abstract

We examine professionals' use of telecommuting, perceptions of psychological job control, and boundary management strategies. We contend that work–family research should distinguish between descriptions of flexibility use (formal telecommuting policy user, amount of telecommuting practiced) and how the individual psychologically experiences flexibility (perceived

control over where, when, and how one works, boundary management strategies regarding separation between work and family roles). Survey and interview data were collected from 245 professionals in two Fortune 500 firms with telework policies. Employees who perceived greater psychological job control had significantly lower turnover intentions, family–work conflict, and depression. Boundary management strategies higher on integration were positively related to family–work conflict. Although we found a main effect for formal policy use and higher depression, an interaction existed where women users with children had lower depression. Formal use positively related to supervisor performance ratings. Future research should distinguish between descriptive use and psychological experiences of flexibility.

1. Introduction

The US Census Bureau (2002) reports that 15% of employed persons work from home at least once a week—a growing figure. Telecommuting is defined as work conducted from home that is often supported by telecommunications technology (telephone, Internet access, or computer) (Nilles, 1998). Despite rising interest in adopting telecommuting, greater understanding is needed on variation in the extent and effects of different types of use; such as formal policy and compared to practice, and psychological experiences with flexibility such as control over job flexibility and boundary management. We examine professionals' use of telecommuting, perceptions of job flexibility control, beliefs about the self-management of work and family boundaries, and linkages to work–family effectiveness. We argue research should distinguish between *descriptions of flexibility use* (formal telecommuting policy user, amount of telecommuting practiced) and the individuals' *psychological experiences with flexibility* (psychological job control over where, when, and how one works, beliefs that one can choose to separate work–family boundaries). Formal permission to use a flexibility policy (telecommuting) should not be confounded with the practice of working from home, or with psychological beliefs about job control or work–family boundaries. These are all different issues that studies should separately assess.

Karasek and Theorell's (1990) demand-control-support (DCS) model of individual stress provides a useful framework for organizing our hypotheses' antecedents. Demands, defined as one's amount of workload and responsibilities, positively predict work distress. Control, the autonomy one has to make decisions about the order and way in which one's work is done, positively predicts well-being. Support, the type and amount of assistance received from one's employer, positively correlates with well-being and productivity. Applying this framework to our study, work–family well-being and effectiveness (performance, work–family conflict, family–work conflict, turnover, and depression) are a function of (1) job demands (work hours); (2) control (psychological job control, beliefs about the separation of work–family boundaries); and (3) employer supports for family (use of formal flexibility (telecommuting), use of other work–family policies, the amount of flexibility practiced). We

extend the framework to consider not only work issues, but also work–family issues. We consider not just control over work, but over the work–family border. We consider job control over not only how job tasks are done, but also psychological control over flexibility in deciding where and when one works. We question whether professionals' increased access to telecommuting is fully beneficial for work and family.

2. Flexibility and work–family effectiveness framework

We propose a multi-faceted understanding of flexibility that distinguishes between descriptive measures of formally using a flexibility policy, the amount of flexibility actually practiced; and psychological experiences with flexibility. Different types of types of flexibility exist and the type of flexibility may relate to specific outcomes.

2.1. Flexibility policy use compared to flexibility practice

Kossek's (2005) recent review differentiates between aspects of work–family policy use that should be unpacked in studies. She argues for research to distinguish between: (1) formal policy availability and access; (2) identifying who uses policies and how much in practice; and (3) the differential effects of actually using different types of policies. Policies can be unevenly implemented across work units by supervisors, have low utilization base-rates, may be selectively available to workers, and disconnected from the way work is done and expectations for work hours. Eaton (2003) further argued the importance of differentiating between the availability of a formal flexibility policy such as a telework policy, and informal flexibility practice, namely the degree of flexibility actually used. The literature is coalescing around the view that the adoption and formal use of family-friendly policies are necessary but insufficient conditions to reduce work–family conflicts (Kossek & Ozeki, 1998, 1999; Thompson, Beauvais, & Lyness, 1999).

Eaton (2003) defines formal flexibility policies as written, officially approved human resource policies that provide flexibility based on the approval of the HR department and supervisor discretion. We extend Eaton by defining *formal flexibility policy use*, as pertaining to an individual formally obtaining permission to use an available written telecommuting policy and the human resource department identifies the individual as a known policy user. Most studies stop here in theorizing. It is not uncommon for research to frame flexibility access as a dichotomous, non-socially constructed variable. If one used a telework policy, work–family writings often seemed to imply that the individual had a flexible job and if they did not, then they had an inflexible job.

It is important to also measure the amount of flexibility actually practiced. Individuals can sign up to use a policy, yet find out that employers may limit flexibility to part of the work week or work day (Eaton, 2003). Also, some employees and their supervisors may be more likely to support publicly signing up to use a policy, while others may be reluctant to go on record as formal policy users or enablers of use. For example, studies show women are more likely to use maternity leave and the Family

Emergency and Medical Leave Act (Block, Malin, Kossek, & Holt, in press). Yet it is likely that use by men is under-reported due to possible fears over negative social stigmatization. Practice also is an indicator of the extent of use of flexibility, both formal policies and informal practices, as sometimes flexible work arrangements are formally available, but the underlying message is employees should not use them or limits are placed on use to specific individuals. Conversely, practice can tap into some employees' informally telecommuting either due to unofficial supervisory permission, or employee self-discretion to telework prior or after work or on weekends. We define *flexibility practice* as the amount of flexibility actually used. We focus on the volume of hours worked at home.

2.1.1. Psychological experiences with flexibility: Control and boundary management

We argue that use of flexibility—either formal policy or informal practice should not be confounded with *psychological flexibility experiences*. We identify and define these as: (1) *psychological job control*, the degree to which an individual perceives that s/he can control where, when, and how s/he works; and (2) *boundary management strategy*, which is the degree to which one strives to separate boundaries between work and home roles. Supporting literature for these concepts follow.

Traditional measures of job control have long shown that higher personal autonomy over how the job is done is linked to higher individual well-being (Hackman & Oldham, 1980). We argue that recent changes in technology that enable greater access of professionals to telework and higher flexibility in work hours are making other forms of psychological control over where and when one works also important for well-being. Apgar (1998) notes that professional work has become increasingly portable due to increasing use of cell phones, email, and laptops. We theorize that individual control over where and when one worked are additional key aspects of job autonomy that should be assessed as more professionals are in jobs that can increasingly be done away from the main workplace at different times of the day.

Recent developments in boundary theory (Ashforth, Kreiner, & Fugate, 2000; Clark, 2000), highlight the fact that integrating work and family in time and space, as in flextime and flexplace job designs, means that borders between the two domains are permeable; work may be more interrupted by family influences and vice versa. For professional workers to really have control over how and when they telework and also manage family demands, they may need to have a boundary management strategy. To organize their varying work and family roles, Nippert-Eng (1996) suggests that individuals construct mental and sometimes physical fences as a means of ordering their work and family environments from integration to separation.

Kossek, Noe, and DeMarr (1999) define boundary management strategy as the principles one uses to organize and separate role demands and expectations into specific realms of home (e.g., dependent care giving) and work (i.e., doing one's job). Some professionals may prefer to follow a segmentation boundary management strategy. They believe that establishing tighter boundaries between work and home is best. They may turn off their cell phone or pager at the end of the day and not check email in the evenings or weekends. When teleworking, they work in a home office with a door closed to shut out family interruptions. Others may prefer to integrate.

They may take personal calls as work. When at home, they may work at the kitchen table and be accessible to their families. They may also let their clients and co-workers know it is acceptable to call them at home.

Preferences for work and family boundaries are socially constructed, and there is some social choice in how individuals define boundaries. Kossek et al. (1999) hold that a boundary management strategy is part of one's preferred approach to work-life role synthesis. Individuals have a preferred, even if implicit, approach for meshing work and family roles that reflects their values and the realities of their lives for organizing and separating role demands and expectations in the specific realms of home and work. This view is consistent with what Zedeck (1992) argued is at the heart of the issue of work/family balance: the way individuals shape the scope and parameters of work and family activities, create personal meaning, and manage the relationships between families and their jobs. More research is needed on the effects of these strategies in the context of telecommuting. Nippert-Eng's (1996) work generally dichotomized boundary management approaches into two extremes: segmentation compared to integration. We extend this research to show that individuals' approaches to boundary management may in fact vary along a continuum.

2.1.2. Formal flexibility policy user and telecommuting volume: Performance and turnover links

Research suggests that higher levels of perceived employer support for family have beneficial effects on employee attitudes and behaviors (Allen, 2001; Thompson et al., 1999). Employer supports for family typically fall into several main categories: flexibility policies and dependent care benefits. Studies indicate that the availability and use of flexibility and other work–family policies is associated with higher commitment, job satisfaction, loyalty, and lower intention to turnover (Allen, 2001; Grover & Crooker, 1995; Roehling, Roehling, & Moen, 2001; Scandura & Lankau, 1997). An explanation for these findings draws on social exchange theory (Blau, 1964), which suggests that individuals who are able to use formal flexibility policies such as telecommuting and general work–family policies are likely to reciprocate with more favorable work attitudes and behaviors. Lambert (2000) also found that employees who use formal work–family benefits were more likely to make suggestions and engage in voluntary organizational citizenship behaviors, which are types of extra-role performance. Individuals who are users of formal telecommuting and other work–family policies, and able to telecommute more, are likely to perceive higher organizational support for family than other employees' perceived organizational support for family. They may feel better able to focus on doing their jobs well, while still meeting family needs, and are grateful. Regarding turnover, research increasingly suggests that employees value flexibility and are willing to stay with employers who provide flexibility formally and in practice (Scandura & Lankau, 1997). Taken together, the literature review suggests that motivational effects of use of a formal flexibility policy and other work–family benefits are likely to lead to higher performance and lower turnover intentions, due to a reciprocity effect and greater perceptions of employer support for family. Given these positive relationships, the more an employee was able to

actually telecommute in practice, the more likely these performance effects would occur and the lower the intent to turnover.

Hypothesis 1. Professional employees who are formal telecommuting policy users and users of other work–family benefits will have higher performance ratings and lower turnover intentions.

Hypothesis 2. The greater the individual's volume of telework, the higher the performance and the lower the turnover intentions.

2.1.3. Interaction effects for women with children, policy use, and practice

Research suggests flexibility policies and work–family benefits are differentially valued by identifiable worker segments. Scandura and Lankau (1997) found that the availability of flexible work arrangements was more highly correlated with organizational commitment and job satisfaction for women with kinship responsibilities. Another study of health care professionals (mostly female) with children found that use of flexibility was correlated with lower depression (Thomas & Ganster, 1995). Studies suggest that women are more likely to restructure work to support family needs and use of w–f policies can reduce turnover intentions (Grover & Crooker, 1995; Kossek & Nichol, 1992).

Research also shows even when working, married women still perform more domestic chores than men (Williams, 2000). They perform an average of 37 h of housework per week compared to 18 h for married men (Bianchi, Milkie, Sayer, & Robinson, 2000). Hammer, Neal, Newsom, Brockwood, and Colton (2005) found that when flexibility policies and other work–family benefits are differentially used by specific employee groups such as women with children compared to other employees, use even can be associated with higher, rather than lower, work–family conflict. They surmised that using work–family policies can increase working wives' work–family conflicts by enabling them to take on greater caregiving and housework responsibilities, instead of increasing their own time for sleep or leisure. Hammer and colleagues did find a positive relationship between being a formal user of flexibility and other work–family policies, and job satisfaction for married women. Building on this research, we expect:

Hypothesis 3. Professional women employees with children who are formal telecommuting policy users and users of other work–family benefits will have higher family-to-work conflict, lower turnover intentions, and lower depression.

Hypothesis 4. Professional women employees with children who have higher volume of telecommuting use in practice will have higher family-to-work conflict, lower turnover intentions, and lower depression.

2.1.4. Amount of work hours and well-being

Professionals tend to have high involvement and identity with their jobs. As a result, while some work–family studies in the general population report negative relationships between long hours and work and family stress (Bond, Thompson, Galinsky, & Prottas, 2003), these relationships do not always carry over to professional

and managerial samples. For example, Brett and Stroh (2003) had the surprising finding that managers who worked longer hours were more satisfied with their family lives than those that worked shorter hours. They surmised that not having a lot of dissatisfaction with their family roles enabled these professionals to work longer hours.

Such previous research suggests that descriptive measures of work hours do not necessarily strongly predict well-being or family to work conflict for professionals (Brett & Stroh, 2003). However, research does suggests that while professional individuals who work long hours may be viewed as productive, the more hours worked, the higher the job demands, and greater work-to-family conflict (Jacobs & Winslow, 2004).

We did not anticipate any relationship between work hours and depression, turnover, or family–work conflict given the previous findings on professionals (cf. Brett & Stroh, 2003).

Hypothesis 5. The more hours that a professional works, the greater the work-to-family conflict.

Given previous research on the positive relationships between perceptions of job control and well-being (Karasek & Theorell, 1990), we contend that the more that an individual perceives control over where when and how s/he works, the greater the work–family effectiveness. Thomas and Ganster (1995) also concluded that employer supportive practices for family, especially flexible work arrangements, favorably and directly increased individuals' sense of control and mastery, which correlated with lower stress. Professionals with greater psychological perceptions of job control namely the process, timing, and location of work are expected to experience lower work–family conflict, since they perceive they have the autonomy to restructure work and family demands as needed. Their depression and stress will be reduced because they will experience fewer work or family interruptions, due to the ability to control the timing and location of role delivery. Turnover intentions will also be lower, since the ability to control work hours is generally highly valued by skilled professional workers (Van Dyne, Kossek, & Lobel, 2004).

Hypothesis 6. Higher perceptions of psychological job control over flexibility will be related to lower work-to-family and family-to-work conflict, turnover, and depression.

Many writings have not sufficiently the mixed effects of particular forms of flexibility in the contexts of specific jobs and occupations. Teleworking is a unique type of flexibility that brings the workplace into the home without reducing the amount of work to be done. For professionals, this may be especially problematic as they are socialized into occupational cultures that often equate long work hours with organizational commitment and productivity (Jacobs & Winslow, 2004). This may mean that individuals employed in professional work and their families, may have heightened ambiguity over work hours, when to turn work on and off, and how to effectively manage the juggling of work and family. Work (and family) is always available to them.

Thus, research on flexible work arrangements should study the effects of policy use in the context of specific occupational cultures and job conditions influencing the perceived ability to separate work and family boundaries. Professionals face unique challenges in managing work and personal life. They typically set their work schedules and do not punch a clock. Many self-manage how they telework, and have high autonomy to make decisions on how to coordinate boundaries between work and home all day long. We believe that this actually may add more psychological complexity to professionals' self-management of work and family boundaries due the greater potential for process losses from switching back and forth between work and home roles.

Limited empirical research has been conducted on the implications of different boundary management strategies for work–family outcomes, in part because the concept is relatively new in the literature. Noting that it is difficult today for growing numbers of employees to perform their jobs without interaction with the caregiving role and vice versa, many work–family theorists argue that greater integration between work and family roles is a way to balance work and family life and even to use one to catalyze positive effects in the other (Friedman, Christensen, & DeGroot, 1998). Yet recent theory on boundaries (Ashforth et al., 2000) suggests that with integration of work and family boundaries, there is the risk of increased process losses, role transitions, and transactions costs associated with role switching. Integrating boundaries may result in more work–family role conflict. The increased cognitive complexity from higher integration of boundaries may relate to higher frustration and depression as well. We do not predict any relationship to performance or turnover, since we believe a boundary management strategy is a measure of personal preferences for one's approach to managing flexibility that will be more strongly related to personal well-being than work outcomes.

Hypothesis 7. A boundary management strategy higher on integration will relate to higher work-to-family and family-to-work conflict, and depression.

3. Method

3.1. Participants and procedure

Respondents were 245 educated professional employees at two large information and financial services organizations geographically distributed across the US. Over the past few years, both of these firms had growing numbers of professionals who were telecommuting during the workday, mornings, evenings, and weekends. The firms were similar in work environments and had similar professional job requirements (e.g., writing, email and use of internet, programming, phone sales, or project management) where many job tasks could be done as easily virtually as in the formal company office. Typical job functions included information technology and systems engineering consultants, communications, finance, marketing, and human resources. The sample was well educated: 80% of these employees held at

least a bachelor's degree. The sample was 57% female and 90% Caucasian. About half (49%) had children under 18 years. Approximately 30% of the sample were 35 years of age or younger, 48% were between 36 and 45, and 22% were 46 years of age or older.

The telework sample was randomly drawn. Three-fourths (72%) were formal users of the telecommuting policy, and we also included a sample of individuals matched in similar jobs who were not policy users. We include both types of employees in our study to countervail the positive response bias to flexibility typically found in previous work. Further, even professionals without formal permission to use telework policy, still did some informal telecommuting such as checking email from home on the weekends or in the evening. Therefore, we felt it was important to include measures of formal policy use and the volume of telecommuting practiced.

Prior to data collection, all individuals signed a voluntary written consent to participate, and a statement ensuring the confidentiality of all individual results. They were then sent a survey (either written or emailed, as they preferred) covering demographics and job and family background. They subsequently participated in a taped telephone interview that was about 45 min in length. The survey and interview data reported here are original data. The goal of the study was to specifically examine relationships between use of telecommuting, other types of flexibility, and work–family effectiveness.

Three months later, interview data on performance ratings were collected from a sub-sample of 90 participants' supervisors. The response rate for both the employee and the supervisor data collections were 50 and 52%, respectively, with similar response rates at both firms. For the employee survey, we contacted 626 people and 316 responded (to both the survey and interview). Our regression analyses are based on the 245 individuals for whom we have complete data for the questions used to form our measures. For the supervisor survey, we tried to contact supervisors for all of the employees we surveyed and interviewed. Because some supervisors manage multiple employees in our sample, the numbers are sample size is smaller than for the employee survey. We contacted 128 supervisors and 67 supervisors responded and provided performance and other data for 90 employees resulting in 90 supervisor and employee matched pairs.

3.2. Independent variables

3.2.1. Formal telecommuting policy user

This was coded a dummy variable. Both companies had official telework policies for professionals. We got data from the Human Resource department as to who was a formal user of the company telework policy, based on actual employee records. This had the psychometric benefit of being non-same source data from our dependent variables. With the formal consent of the human resources department and their supervisor, users were conducting some of their assigned job responsibilities remotely and were technologically wired to have access to internal company networks from home.

3.2.2. Formal use of work–family benefits

This was an open-ended question that was coded a dummy variable. We asked employees, have you used any company policies to support your personal or family needs? If yes, which policy or policies have you used? Responses were varied including such responses as adoption benefits, FMLA use, personal days, flextime, vacation days, dependent care and health care accounts, bereavement policies, car repair center on site, sick days, counseling programs, time off, maternity leave, domestic partner benefits, and tuition reimbursement.

3.2.3. Psychological job control

This measure assessed individual perceptions of one's personal freedom to control where, when, and how one did one's job. Our measure included three items of job autonomy control over how the work is done adapted from the Job Diagnostic Survey (JDS) (Hackman & Oldham, 1980). They were "How much autonomy is on your job? To what extent does your job permit you to decide on your own about how to go about doing the work? (1 = very little; 5 = very much)"; and "The job gives me considerable opportunity for independence and freedom in how I do the work (1 = very inaccurate; 5 = very accurate)." Using the same appropriate responses sets of either very much or very accurate for the questions below, we then constructed 4 items to capture the newer forms of flexibility that professionals have that was noted in the work and family literature: personal flexibility control over work location and scheduling (i.e., time and place autonomy). These were "To what extent does your job permit you to decide on your own about WHERE the work is done?; To what extent does your job permit you to decide about WHEN the work is done?; I have the freedom to work wherever is best for me—either at home or at work.; I do not have control over when I work (reverse)." The items were scored on a 1–5 Likert-type response scale, with higher numbers indicating more psychological job control. Coefficient α reliability for this scale was .74. Since this was scale had some new items, an exploratory factor analysis was done and the results strongly supported a single factor solution including the new items on control over place of work and schedule of work. The eigenvalue for the first factor was: 2.054 with all items primarily loading on the first factor. The eigenvalue for the next factor dropped to .47.

3.2.4. Volume of telecommuting practiced

This measure assesses the amount of telecommuting actually practiced. Respondents indicated the percent of their jobs they currently performed away from their main office or customer.

3.2.5. Work hours

Employees provided their actual work schedule day by day for the proceeding week, assuming it was a typical schedule. This measure was then constructed by totaling these hours. If it was not a typical week, they were asked to provide the schedule for the most recent typical week.

3.2.6. Boundary management strategy

This measure was derived from Kossek et al. (1999) theoretical definition of the construct of boundary management strategy. It ranged from a strategy favoring high separation (1), where one strives to keep their work and personal roles very separate, to a strategy favoring high integration (5), where one strives to let work and family roles blur. Respondents were given the following prompt, "With the increasing demands of work and home, employees may work in different ways to handle these demands," and asked to indicate their agreement with 9 items using a scale ranging from 1 = strongly agree, 5 = strongly disagree and relevant items were reversed coded so that the higher the scale, the higher the integration. Since this is a new scale, the items are reported here. I only take care of personal needs at work when I am "on Break" or during my lunch hour. I prefer to not talk about my family issues with most people I work with. Throughout the work day, I deal with personal and work issues as they occur. It would be rare for me to read non-work related materials at work. I tend to integrate work and family roles through the work day. I tend to handle emails related to my family separate from emails related to my work. I try to not think about my family or friends when at work, so I can focus. I tend to not talk about work issues with my family. I actively strive to keep my family and work-life separate. We also asked individuals three items assessing boundary management behaviors. They were: all in all, do you currently see yourself as someone who tries to keep work and personal roles separated most of the time, or someone who tries to keep them integrated? Separation was coded 0 and integration coded 1. We then asked them this question with this preamble, we now want to ask you about how your workspace is set up at home. Do you use this space in your home only for work? Does your family use the space when you are not there. For each of these questions, yes was coded 0 and no 1. We then followed research procedures illustrated by Zacharatos, Barling, and Iverson (2005) where measures of individual's reports of use of work practice are assessed using a hybrid of Likert, and dichotomous items where it would not make sense to use a Likert scale for some questions that were facts such as the workplace design. All items were standardized to z scores. The α for the 12 items is .7025. The factor analysis shows 1 factor, with an eigenvalue of 2.19 and explains 75% of the variance. The second factor falls to an eigenvalue of .85.

3.3. Dependent variables

3.3.1. Turnover intentions

It was measured with two items developed by Boroff and Lewin (1997). They were: "I am seriously considering quitting this firm for an alternate employer," and "During the next year, I will probably look for a new job outside the firm." These items utilized a 5-point Likert-type response scale with higher responses indicating more agreement. The coefficient α reliability for this scale was .86.

3.3.2. Work–family conflict

We used work-to-family conflict scale and family-to-work conflict scales derived from Gutek, Searle, and Klepa (1991). Sample items include: "My work takes up

time that I'd like to spend with my family and friends," and "My supervisors and peers dislike how often I am preoccupied with my personal life while at work (reversed)." Coefficient α reliabilities for the two subscales were .73 and .71, respectively.

3.3.3. Supervisor performance rating

We conducted phone interviews with supervisors for a subsample of our employee sample, and asked them to respond to eight items developed by Fedor and Rowland (1989) stating, "Please rate employee X's overall performance on the following characteristics:" The list of characteristics included "Overall performance quality," "Avoiding mistakes," and "Performing up to the supervisor's standards." The higher the score on 5-point Likert-type scale, the better the performance. Coefficient α reliability was .91.

3.3.4. Depression

Depression was assessed using the five items forming the depression subscale from the inventory of overall well-being development and mental health by Caplan, Cobb, French, Harrison, and Pinneau (1980). Respondents were asked, "How often have you experienced each of these during the past month?" Items included: "You felt good," "You felt depressed," "You felt cheerful," "You felt sad." "You felt unhappy." Positive items were reversed scored. The higher the scale, the greater the depression. They used a scale from 1,"never," to 5, "almost always." Coefficient α was .80.

3.3.5. Demographic variables

Demographics were included in the analyses. Respondents noted their gender, marital status, and children. We also dummy coded their employing organization in order to control for fixed differences across the two organizations we studied. We created interaction variables of formal telecommuting policy use and women with children, and volume of flexibility and women with children.

4. Results

Table 1 presents the means, standard deviations, and inter-correlations for all variables in this study. We used ordinary least squares regressions to test our hypotheses Table 2 shows the results for the regression with performance as an outcome. Table 3 shows the results for regressions with work–family conflict (both directions), depression, and turnover as dependent variables.

Hypothesis 1 was partially supported showing a reciprocity effect for telework use. Formal users of the telework policy had higher performance ratings. There was no relationship between formal use of the telework policy and turnover intentions. Although there was no relationship between use of work–family benefits and performance, users of work–family benefits did have lower turnover intentions. Hypothesis 2 was not supported. There was no relationship between the amount of teleworking and performance

Table 1
Means, standard deviations and inter-correlations

	Variable	Mean	SD	1	2	3	4	5	6	7	8
1	Work-to-family conflict	2.81	0.75	0.73							
2	Family-to-work conflict	1.78	0.47	0.09	0.71						
3	Turnover intentions	1.95	0.95	0.18**	0.12*	0.86					
4	Depression	1.93	0.57	0.28***	0.2***	0.31***	0.80				
5	Supervisor performance rating	3.91	0.62	0.02	−0.08	−0.16	0.07	0.91			
6	Gender	0.57	0.50	0.03	0.02	−0.10	0.04	0.29**	−0.06		
7	Children	0.48	0.50	0.05	0.16**	0.04	0.00	−0.04	−0.06	0.34***	
8	Married	0.74	0.44	−0.03	−0.03	−0.12*	−0.13*	−0.06	−0.11*	0.34***	−0.05
9	Organization	0.66	0.47	−0.09	0.05	−0.04	−0.15**	0.07	0.07	−0.07	−0.05
10	User of HR policies	0.47	0.50	−0.05	0.10	−0.07	0.04	−0.18	0.08	0.23***	0.08
11	Total work hours	45.11	8.25	0.3***	−0.11*	0.02	−0.04	−0.02	−0.21***	−0.15**	−0.07
12	Formal telework policy user	0.72	0.45	0.01	0.01	−0.16**	−0.14*	0.29**	0.02	0.09	0.15**
13	Telework volume	43.24	39.48	−0.11	−0.05	−0.17**	−0.18**	0.22*	0.00	0.08	0.17**
14	Psychological job control	3.84	0.77	−0.11	−0.17**	−0.29***	−0.28**	−0.01	−0.05	0.09	0.19***
15	Boundary management strategy	−0.01	0.49	0.02	0.16**	−0.04	0.08	−0.05	−0.01	0.15*	0.07
16	Women w/children × telework use	0.21	0.41	−0.03	0.13*	−0.19***	−0.12*	0.15	0.45***	0.54***	0.13*
17	Women w/children × telework volume	13.31	30.19	−0.02	0.06	−0.18**	−0.08	0.09	0.38***	0.46***	0.17**

	9	10	11	12	13	14	15	16
10	−0.10							
11	−0.05	−0.13*						
12	0.23***	−0.06	0.07					
13	0.49***	−0.12*	−0.04	0.54***				
14	0.12*	−0.10	0.06	0.31***	0.36***	0.74		
15	−0.13*	0.14*	−0.16*	−0.03	−0.17**	−0.00	0.70	
16	0.06	0.14*	−0.32***	0.32***	0.22***	0.14*	0.12	
17	0.21***	0.04	−0.23***	0.22***	0.43***	0.14*	0.03	0.8***

Coefficient αs in diagonal where noted.

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 2
Results of regression for linkages between work-life policy use and practice, psychological job control, work hours, and supervisor performance ratings[a]

	Performance[b] (β^*)
Employee demographics	
Gender	.32
Children	.19
Married	−.10
Organization	.00
Work-life policy use, practice, control, and work hours	
Total work hours	.06
Formal telework policy user	.30*
Volume of telework	.24
User of HR policies to support personal or family needs	−.23
Psychological job control	0.01
Boundary management strategy	.15
Interaction effects	
Women w/children × telework policy user	−.06
Women w/children × volume of telework	−.30
R^2	.27
N	62
Model *F* value	2.23***

[a] Standardized coefficient βs reported.
[b] Robust standard errors with Huber-White correction.
* $p < .05$.
*** $p < .001$.

or intentions to turnover. It appears that greater amounts of working at a distance from the main office do not necessarily relate to better performance or lower turnover.

Hypothesis 3 was partially supported. Women with children who were formal users of telework policy had lower depression. This result is particularly interesting given the positive main effect for gender and depression in the overall sample. No other interaction effects were significant. Hypothesis 4 was not supported for any of the interactions. The relationship between volume of telework practiced and work–family outcomes did not significantly differ for women with children compared to other employee groups.

Hypothesis 5 was supported. After the employee demographic variables were entered, work hours were positively related to work-to-family conflict. Hypothesis 6 was strongly supported for three out of the four outcome measure predictions. The higher the psychological job control, the lower the depression, turnover, and family-to-work conflict. Higher psychological job control was also correlated with lower work-to-family conflict in the direction expected, just not to a statistically significant degree. Hypothesis 7 was partially supported. Individuals with boundary management strategies higher on integration tended to have higher family-to-work conflict. Although not statistically significant, higher integration strategies were related to higher work-to-family conflict and depression in the expected directions.

Table 3

Relationships between work-life policy use, practice, and control, work hours and work–family effectiveness[a]

	Work-to-family conflict (β)	Family-to-work conflict (β)	Turnover intentions (β)	Depression (β)
Employee demographics				
Gender	0.11	−0.05	−0.01	0.21*
Children	0.09	0.15	0.27**	.013
Married	0.03	−0.11	−0.07	−0.12
Organization	−0.05	0.14	0.06	−0.23**
Work-life policy use, practice, control, and work hours				
Total work hours	0.36***	−0.04	−0.03	−0.10
User of telework policy	0.06	−0.04	−0.04	0.16*
Volume of telework	−0.09	0.02	−0.04	0.07
Psychological job control	−0.08	−0.27***	−0.21**	−0.32***
User of HR policies to support personal or family needs	−0.09	0.03	−0.15*	−0.03
Boundary management strategy	0.06	0.13*	−0.03	0.09
Interaction effects				
Women w/children × telework policy user	−0.05	0.24	−0.23	−0.40**
Women w/children × volume of telework	0.06	−0.19	−0.06	0.13
Model *F* value	3.53***	3.82***	3.29***	3.82***
R^2	.15	.16	.15	.16
Adjusted R^2	.11	.12	.10	.12
N	245	245	245	245

[a] Standardized coefficient βs reported.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

5. Discussion

Evidence from this study suggests that flexibility is multi-faceted, and that the psychological experience of flexibility—whether individuals' perceive they have job control over when, where and how they work, and can choose to separate boundaries between work and family—predicts individual well-being. The most robust predictors of individual well-being were: (1) higher job control over where, when and how one worked; and (2) a boundary management strategy favoring the separation of work and family boundaries. We have demonstrated that research should differentiate between descriptions of formal flexibility use, flexibility practice, and the psychological meaning of flexibility. We also showed that descriptive measures of flexibility policy use and amount of flexibility practiced do not always predict better work–family outcomes. For example, psychological job control related to lower work–family conflict, while formal policy use did not. Research also needs to distinguish between the types of jobs held by the individuals using the flexibility and their occupational

norms. This study shows that professionals' experiences with flexibility may not be the same as what is commonly reported in the literature, which tends to include more lower level workers or not specifically note the type of job the individual is holding. Formal access to telework may not necessarily predict positive well-being or reduce work–family conflict for many professionals who typically already have some informal job autonomy.

However, we did find some positive work role results related to formal flexibility, with formal telework policy use mattering more for positive outcomes than the amount of actual work practiced at a distance from the main office. In particular, our results showed that formal use of the telework policy was significantly related to higher performance. Without longitudinal data, of course, we cannot be certain that the direction of this relationship is not reversed, with higher performing workers being rewarded by their supervisors with formal permission to telecommute.

We also found that use of formal work–family benefits was significantly related to lower turnover intentions but was unrelated to performance. One explanation for why formal telework use was related to higher performance, while formal use of other family-related benefits was not, is that many work–family benefits even flextime are now established and typically provided as an entitlement for being a member in the organization. Teleworking is still a relatively new way of working desired by many professionals and the permission to use this kind of policy signifies high trust and employer support for family. Partial support for this view stems from the results that professional women with children who were telework users, were significantly less depressed. One explanation for this is that professional women are dual-centric employees—they desire to be involved in their careers, and also with their childrens' lives. Use of a telecommuting policy may enable them to be highly involved in both roles. These results are particularly interesting given a main effect where telework users in general were more depressed, perhaps reflecting the social isolation effects in the literature (Bailey & Kurland, 2002).

What seems to matter most to employee well-being was psychological constructions of flexibility regarding job control and boundary management. Results showed that employees who perceived greater psychological job control had significantly lower turnover intentions, family-to-work conflict, and depression. It is interesting to note that no significant relationships were found between work-to-family conflict and job control. Many professional jobs have rising job demands that are difficult for individuals to exert flexibility control (Jacobs & Winslow, 2004). The study's findings suggest the importance for future research to continue to differentiate between the direction of the work–family conflict that is affected by policy use as well as how using the policy or practice specifically affects work and family outcomes.

5.1. Work and family boundary segmentation and integration

Those with boundary management strategies higher on integration had greater family-to-work conflict. These results are consistent with theory and evidence developed by Ashforth and colleagues (2000) that contrary to the popular press, an integration of work and family boundaries does not necessarily correspond with less

family-to-work conflict. This finding may be due to increased role transitions and process losses from having to switch back and forth and refocus between work and family roles. An integration strategy may also allow for greater permeability between roles. When something good or bad is happening in one domain, it may be more difficult to buffer good or bad things entering the other life space. This suggests that individuals may need to have the opportunity to keep work away from family, particularly when individuals can bring work into the home such as by teleworking. As currently implemented, many flexibility policies can encourage one to adopt an integration strategy (e.g., working at home when a child is sick), which may not support lower family-to-work conflict.

5.2. Future research implications and limitations

In summary, we hope readers of this study will take away several key learnings. First, telecommuting policy use, practice, and psychological job control over flexibility and work–family boundaries are not the same. We demonstrate that the work–family literature needs to more carefully distinguish among these factors. Employees' psychological job control and boundary management may be more important predictors of work and family effectiveness than descriptive measures of telecommuting policies and practices. Second, employee use of formal teleworking policies may be more likely to lead to positive outcomes for specific employee groups. For example, we found that women with children who were formal users had lower depression, even though a positive main effect exists for other general use of telework. Teleworking may be seen as an important means for individuals with heavy job and family demands to be able to manage these dual demands. Third, lower family to work conflict is most likely to occur when an individual also has positive psychological perceptions of job control and the ability to separate work and family boundaries. Sometimes employees such as professionals need an ability to shut work out. It is important for future studies to differentiate between the type of job and occupation such as whether the employees are managers and professionals. Since professionals often can set their own hours, yet are expected to work as many hours as it takes to get the job done, telecommuting may affect the work and family outcomes of these types of employees differently than those of other workers.

Another important finding for future research was that all forms of flexibility are not necessarily good for individual well-being and job performance. We offer new theory on how to conceptualize flexibility as involving both descriptive and psychological forms, as well as differentiating between flexibility practice and policy. These measures and concepts should enable future researchers and organizations to better understand the varied nature of flexibility for employees, employers and families.

Psychological job control over flexibility was the most important aspect of flexibility for positive employee experiences of lower levels of work–family conflict, lower intention to turnover, and lower career movement preparedness. Thus, we build on classic job design theory (Hackman and Oldham, 1980) and the Karasek and Theorell (1990) model which predicts that autonomy or control over the work

process will lead to improved employee attitudes and performance, and show that control over the timing and location of work is also important for positive outcomes.

We have moved the workplace into the home for at least part of the work week for many professionals without enabling workers and managers and families to fully develop new social, cultural, and structural systems to delineate roles and effective coping strategies, supports, and expectations. The work–family literature may have overstated the upsides of flexibility access and "integration" boundary management strategies, and this research has shown they are not a panacea. For example, telecommuting access, policy use and practice are necessary but insufficient conditions for reducing work and family conflict and personal stress.

Future research should build on our research on the constructs of boundary management strategy to further examine how people may shift rhythms over daily, weekly and lifespan changes and how they are associated with different types of flexible job designs. The work–family literature places boundary management on a simple range from segmentation to integration. There may be more complexity to this issue to investigate in future work. For example, if an employee is working at home with the door closed while his/her child is watching television; some could say he/she is physically integrating roles; he/she is working at home and is physically there, but is mentally segmenting as he/she is not interacting with his/her family. People cannot move work into the home without changing their social relationships. Future research should develop additional measures of the various aspects of boundaries that are being integrated/separated—physical, mental, behavioral, and temporal; the implications of integrating on some parts of the boundary, but not others; and the waxing and waning of the process of boundary management over a work day, work week, and the life course.

More research is also needed on coping strategies individuals can adopt to help set boundaries that fit with their preferences. Negotiation skills training might be helpful so that individuals feel empowered to speak up and negotiate flexibility enactment approaches with their families and their supervisors and co-workers that enhance not only their work effectiveness but also their personal and family effectiveness. Supervisors and co-workers also may need additional training on how to better manage and provide more effective support to employees in these transformational work arrangements.

Despite its strengths, there are several limitations to this study. Although we report results on teleworkers and non-teleworkers, and have performance data collected from supervisors, and HR data on policy use, separately from the employee survey and interview data, a study limitation is that it uses cross-sectional self-report data for some measures. Cross-sectional research, of course, cannot demonstrate direction or causality of any effects. For example, integration boundary management strategies may be a result rather than a cause of higher family-to-work conflict. Longitudinal research, measuring both family-to-work conflict and boundary management variables at different points of time would help to clarify this relationship. Future research might also use time diaries and beepers or shadowing to improve the measurement of boundary management strategies and flexible job designs. These methods are very expensive, but may be well worth the

investment. Our measure of telework practice can be improved. Checking email at home if voluntary may be different than being forced by one's employer to work at home as part of one's job. There could also be some self-selection in the use of the telework policy. Also, we mainly examine the specific effects of telecommuting policy and examine other work–family benefits as a cluster. Future research should examine the differential effects of multiple use of different kinds of flexibility policies and practices.

Scholars could also extend our work by considering other populations of workers, and other influences on boundary management strategies. Our sample is solely professional with similar kinds of work—future researchers would surely want to broaden the lens to look at more kinds of employees in a wider variety of jobs at all levels of organizations. A final limitation of our study that further research should address is that this study does not explore fully the interplay in how boundaries are enacted not only on an individual level but also as a culturally driven phenomenon. For example, Poster and Prasad (2003) found differences in how professionals in the US and in India had very different cultural norms about boundary management and that workaholism can be as much a function of societal norms as of individual proclivities.

Despite these potential areas for improvement, this study adds to our knowledge by examining the mixed effects and multi-faceted aspects of flexibility. A clear practical implication of the study is that work–family boundary integration may arise naturally with flexible working arrangements, unless individuals strive to counter this with strategies to segment work and non-work roles, and supervisors and family members allow them to do this. An example of a personal strategy is having a separate door to a home office and hiring a full-time babysitter while working. We have downloaded the office onto some employee's homes, and they, their families and their managers and clients may not yet have learned effective strategies to manage these new work arrangements.

References

Apgar, M. (1998). The alternative workplace: Changing where and how people work. *Harvard Business Review*, 121–136.

Allen, T. D. (2001). Family-supportive work environments: The role of organizational perceptions. *Journal of Vocational Behavior, 58*, 414–435.

Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *Academy of Management Review, 25*, 472–491.

Bailey, D. E., & Kurland, N. B. (2002). Review of telework research, findings, New directions, and lessons for the study of modern work. *Journal of Organizational Behavior, 23*, 383–400.

Blau, P. (1964). *Exchange and power in social life*. New York: Wiley.

Bianchi, S., Milkie, M., Sayer, L., & Robinson, J. (2000). Is anyone doing the housework?. *Social Forces, 79*, 191–228.

Block, R., Malin, M., Kossek, E., & Holt, A. (in press). The legal and administrative context of work and family leaves and related policies in the United States, Canada, and the European Union, In F. Jones, R. Burke, & M. Westman (Eds.), *Managing the work-home interface: A psychological perspective*. Oxford: Routledge Press.

Bond, T. J., Thompson, C. A., Galinsky, E., & Prottas, D. (2003). *Highlights of the 2002 national study of the changing workforce*. New York: Families and Work Institute.

Boroff, K., & Lewin, D. (1997). Loyalty, voice, and intent to exit a union firm: A conceptual and empirical analysis. *Industrial and Labor Relations Review, 51*, 50–63.

Brett, J., & Stroh, L. (2003). Working 61-plus hours a week: Why do managers do it. *Journal of Applied Psychology, 88*, 67–78.

Caplan, R. D., Cobb, S., French, J. R. P. Jr., Harrison, R. V., & Pinneau, S. R., Jr. (1980). Job demands and worker health: Main effects and occupational differences. Technical Report. University of Michigan: Institute for Social Research.

Clark, S. (2000). Work/family border theory: A new theory of work/family balance. *Human Relations, 53*, 747–770.

Eaton, S. (2003). If you can use them: Flexibility policies, organizational commitment, and perceived performance. *Industrial Relations, 42*, 145–167.

Fedor, D., & Rowland, K. (1989). Investigating supervisor attributions of subordinate performance. *Journal of Management, 15*, 405–416.

Friedman, S. D., Christensen, P., & DeGroot, J. (1998). Work and life: The end of the zero-sum game. *Harvard Business Review*, 119–129.

Grover, S., & Crooker, K. (1995). Who appreciates family-responsive human resource policies: The impact of family-friendly policies on the organizational attachment of parents and non-parents. *Personnel Psychology, 48*, 271–288.

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

Hackman, R., & Oldham, G. (1980). *Work redesign*. Reading, MA: Addison-Wesley.

Hammer, L. B., Neal, M. B., Newsom, J. T., Brockwood, K. J., & Colton, C. L. (2005). A longitudinal study of the effects of dual-earner couples' utilization of family-friendly workplace supports on work and family outcomes. *Journal of Applied Psychology, 90*, 799–810.

Jacobs, J., & Winslow, S. (2004). Overworked faculty: Job stresses and family demands. *Annals of the American Academy of Political and Social Science, 596*, 104–129.

Karasek, R. A., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life*. New York, NY: Basic Books.

Kossek, E. E. (2005). Workplace policies and practices to support work and families. In S. Bianchi, L. Casper, & R. King (Eds.), *Work, family health and well-being* (pp. 97–116). Mahwah, NJ: Lawrence Erlbaum Associates.

Kossek, E. E., & Nichol, V. (1992). The effects of employer-sponsored child care on employee attitudes and performance. *Personnel Psychology, 45*, 485–509.

Kossek, E., Noe, R., & DeMarr, B. (1999). Work–family role synthesis: Individual, family and organizational determinants. *International Journal of Conflict Resolution, 10*, 102–129.

Kossek, E. E., & Ozeki, C. (1998). Work–family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior/human resources research. *Journal of Applied Psychology, 83*, 139–149.

Kossek, E. E., & Ozeki, C. (1999). Bridging the work–family policy and productivity gap. *International Journal of Community, Work, and Family, 2*, 7–32.

Lambert, S. (2000). Added benefits: The link between work-life benefits and organizational citizenship behavior. *Academy of Management Journal, 43*, 801–815.

Nilles, J. M. (1998). *Managing telework: Strategies for managing the virtual workforce*. New York: Wiley.

Nippert-Eng, C. (1996). *Home and work: Negotiating boundaries through everyday life*. Chicago: University of Chicago Press.

Poster, W., & Prasad, S. (2003). *Resisting the time bind: A transnational perspective on work–family boundaries from India and the U.S. Working Paper*. Champaign, Illinois: University of Illinois.

Roehling, P. V., Roehling, M. V., & Moen, P. (2001). The relationship between work-life policies and practices and employee loyalty: A life course perspective. *Journal of Family and Economic Issues, 22*, 141–170.

Scandura, T., & Lankau, M. (1997). Relationships of gender, family responsibility and flexible work hours to organizational commitment and job satisfaction. *Journal of Organizational Behavior, 18*, 377–391.

Thomas, L. T., & Ganster, D. C. (1995). Impact of family-supportive work variables on work–family conflict and strain: A control perspective. *Journal of Applied Psychology, 80*, 6–15.

Thompson, C. A., Beauvais, L. L., & Lyness, K. S. (1999). When work–family benefits are not enough. The influence of work–family culture on benefit utilization, organizational attachment, and work–family conflict. *Journal of Vocational Behavior, 54*, 392–415.

US Census Bureau, (2002). *Statistical Abstract of the United States: 2002, The National Data Book, Section 12, Labor Force, employment, and earnings, Table No. 578., Persons Doing Job- Related Work at Home: 2001*. Washington, DC: U.S. Census Bureau.

Van Dyne, L., Kossek, E., & Lobel, S. (2004). Flexible Work Arrangements: The effects of reduced face time on group organizational citizenship behavior. In *Presentation at National Academy of Management meetings*, New Orleans, LA.

Williams, J. (2000). *Unbending gender: Why family and work conflict and what to do about it*. NY: Oxford University Press.

Zedeck, S. (1992). Exploring the domain of work and family concerns. In S. Zedeck (Ed.), *Work, families, and organizations* (pp. 1–32). San Francisco, CA: Jossey-Bass.

Zacharatos, A., Barling, J., & Iverson, R. (2005). High performance work systems and occupational safety. *Journal of Applied Psychology, 90*, 77–93.