Control over Work Time and Work-Family Conflict: Evidence from a Natural Experiment in a White-Collar Workplace [1]

Erin L. Kelly
Phyllis Moen
Eric Tranby

Department of Sociology and Minnesota Population Center
University of Minnesota

PLEASE DO NOT CIRCULATE WITHOUT PERMISSION

[1] Direct correspondence to the first author at kelly101@umn.edu. This research was conducted as part of the Work, Family and Health Network, which is funded by a cooperative agreement through the National Institutes of Health and the Centers for Disease Control and Prevention: National Institute of Child Health and Human Development (Grant # U01HD051217, U01HD051218, U01HD051256, U01HD051276), National Institute on Aging (Grant # U01AG027669), Office of Behavioral and Science Sciences Research, and National Institute of Occupational Safety and Health (Grant # U010H008788). The contents of this publication are solely the responsibility of the authors and do not necessarily represent the official views of these institutes and offices. Special acknowledgement goes to Extramural Staff Science Collaborator, Rosalind Berkowitz King, Ph.D. (NICHD) and Lynne Casper, Ph.D. (now of the University of Southern California) for design of the original Workplace, Family, Health and Well-Being Network Initiative. Persons interested in learning more about the Network should go to http://www.kpchr.org/workplacenetwork. We are grateful to the Alfred P. Sloan Foundation (#2002-6-8) and the Institute for Advanced Studies, University of Minnesota for additional support. We thank Forrest Briscoe, Jerry Jacobs, Alexandra Kalev, Ross Macmillan, and the audience at the 2008 American Sociological Association meetings and the University of Minnesota Sociology Workshop for helpful comments on earlier versions of this paper. Finally, we sincerely thank the employees who participated in this research and the managers who facilitated the study.

Control over Work Time and Work-Family Conflict:
Evidence from a Natural Experiment in a White-Collar Workplace

Does control over work time – the ability to determine when you work, how long you work, and where you work (which affects time away from home because of commuting) – reduce work-family conflict? Evidence suggests that it does, but studies of the relationship between work-time control and work-family conflict are primarily cross-sectional. This study utilizes longitudinal data from 658 employees of a white-collar organization to assess whether 1) a workplace initiative called the Results Only Work Environment (ROWE) increases work-time control, 2) whether ROWE reduces employees' work-family conflict and improves the fit between their work lives and personal lives, and 3) whether the effects of ROWE on the work-family interface are mediated by changes in work-time control. The analysis provides clear and strong evidence that changes in the corporate work environment increased employees' work-time control and that changes in work-time control positively affected the work-family interface. More broadly, this work reminds us that the work environment is malleable. Currently, higher-status workers are much more likely to have flexible schedules and be able to work from home but it is possible and feasible to democratize control over the time and timing of work, at least in a white-collar setting.

Control over Work Time and Work-Family Conflict:
Evidence from a Natural Experiment in a White-Collar Workplace

Introduction

The challenges of combining paid work and family work are well known to most parents and those caring for disabled or ill relatives. These challenges include having too little time to successfully meet expectations in both domains, bringing stress and other negative emotions from work to home or vice versa, and missing out on work or family activities due to schedule conflicts or fatigue. These work-family conflicts are the subject of popular books and movies (e.g. Howard 1989; Pearson 2002; Shyer 1987; Steiner 2007; Williams 2008), regular attention in the mass media (e.g. Belkin 2003, Shellenberger's weekly column in the *Wall Street Journal*), and an active, multi-disciplinary scholarly literature (see Bianchi, Casper, and King 2005; Pitt-Catsouphes, Kossek, and Sweet 2005). In a nationally representative sample, over half of employed Americans (56% of women and 60% of men) reported some conflicts between work life and personal or family life (Jacobs and Gerson 2004; see also Tausig and Fenwick 2001).

Work-family conflicts have likely increased in recent decades because of changes at home and at work. More adults with family care responsibilities, especially mothers and caregivers of infirm or elderly relatives, are employed (Jacobs and Gerson 2004; Mosisa and Hipple 2006; Raley, Mattingly, and Bianchi 2006). Fathers are more involved in routine and regular care work, meaning they too are likely to feel work-family conflicts (Sayer, Bianchi, and Robinson 2004). While average work hours have remained fairly steady over the last 30 years, the percentage of employees who work more than 50 hours per week has increased and the total hours worked *per family* has also increased (Jacobs and Gerson 2004). Most Americans report that they would like to work fewer hours and work-to-family conflict predicts interest in

decreasing work hours net of other variables (Reynolds 2005). Long hours are consistently associated with – and believed to create – work-family conflicts (e.g. Major, Klein, and Erhart 2002; Voydanoff 2005) and with family tradeoffs such as missing family events (Mennino and Brayfield 2002). Long hours are also taken-for-granted as acceptable and expected in many corporate settings (Hochschild 1997, Williams 2000).[2]

Does control over work time – the ability to determine when you work, how long you work, and where you work (which affects time away from home because of commuting) – reduce work-family conflict? Evidence suggests that it does, but studies of the relationship between work-time control and work-family conflict are primarily cross-sectional (Kelly, Kossek, Hammer, Durham, Bray, Chermack, Murphy, Kaskubar 2008; Moen, Kelly, & Huang 2008). Employees with more control over work time tend to be in higher status occupations and/or highly regarded within their organizations (Kelly & Kalev 2006, Weeden 2005). This means that the employees with more work-time control tend to be those who also have more resources for managing work and family responsibilities, including higher incomes and the ability to purchase reliable child or elder care as well as support from managers, co-workers, and spouses or partners who are able to reduce their own work hours. Longitudinal research considering how changes in work-time control affect the work-family interface is needed to clarify the relationship found in previous research. Furthermore, there may be unintended consequences of work-time control and especially the ability to work from home or another remote location. As work becomes less temporally and physically bounded, it may intrude more

[2] While this study investigates a white-collar workplace, work hours have become increasingly stressful in a variety of contexts. Workers in manufacturing increasingly face mandatory overtime (i.e., overtime demanded by the employer under threat of discipline or job loss) while those in the service sector jobs such as retail or restaurant work have unpredictable schedules dictated by daily or even hourly fluctuations in customer demand (Galinsky, Bond, and Hill 2004; Golden and Jorgenson 2002; Lambert 2007). These practices make it difficult to develop the stable routines that are important for children and also create challenges for those coordinating the care of infirm relatives (Chesley and Moen 2006; Henly and Lambert 2005).

on family time and create new conflicts between employees who feel they must attend to work by taking calls or checking emails and their family members (Chesley 2005; cf. Ammons and Markham 2004, Mirchandani 1998 on boundary strategies).

Control over work time is assessed by individuals but produced by the psychosocial work environment, i.e., the policies, practices, interactions, and expectations in a given organization.[3] Traditionally, management has set work hours and other work conditions in bureaucratic organizations, unless there is collective bargaining or individual negotiation for more flexible schedules and work arrangements. Employees in certain managerial positions and professional occupations may assume work-time control, but most employees in bureaucratic organizations accept that there are "normal business hours" when they are expected to be at the workplace. We contend that new management policies and practices can increase employees' sense of control over when and where they work, just as some participatory management initiatives increase workers' sense of control over how their work is done.

This study utilizes longitudinal data from 658 employees of a white-collar organization to assess whether 1) a workplace initiative called the Results Only Work Environment (ROWE) increases work-time control, 2) whether ROWE reduces employees' work-family conflict and improves the fit between their work lives and personal lives, and 3) whether the effects of ROWE on the work-family interface are mediated by changes in work-time control. We treat the phased roll-out of this workplace initiative as a natural experiment, comparing employees before

[3] The term "psychosocial work environment" is common in industrial/organizational psychology and occupational health and similar to organizational culture. For example, Hammer et al. (2004, p. 84) describe the work environment as "a set of norms… that govern members' relation to one another and to the organization" that "evolves" as "result of formal and information interactions and negotiations among employees and between employees and management." These organizational norms are also described as "unwritten rules" and "behaviors, attitudes, and beliefs that give employees a shared meaning or understanding of the workplace and their roles in it" (Hammer et al. 2004, p. 84).

and after their departments participated in ROWE with employees in departments that continued with the organization's status quo policies and practices. The analysis provides clear and strong evidence that changes in the corporate work environment increased employees' work-time control and that changes in work-time control positively affected the work-family interface.

This research extends three distinct scholarly literatures: research on work and health, studies of participatory management regimes, and work-family scholarship. As we detail below, both interdisciplinary research on work and health and sociological studies of participatory management practices have established the value of autonomy, or control over *how* one does one's work, to and for employees. Our analysis investigates whether control over *when and where* one does one's work affects employees' work-family conflict and related measures of the work-family interface. More broadly, we assert that work-time control is an important dimension of job quality and that job quality should be conceptualized broadly to include how work affects family and personal life. Within the field of work-family studies, previous research on flexibility (a broader term that sometimes encompasses our concept of work-time control)[4] and flexible work arrangements points to the importance of work-time control but there has been little longitudinal research that can assess whether and which changes in the work environment create work-time control and/or reduce work-family conflict or improve work-family fit.

Previous Research and the Concept of Work-Time Control

[4] "Flexibility" means many things to organizational scholars, work-family scholars, and practitioners. For some, flexibility refers to a post-Fordist economy that has moved away from mass production and the labor control strategies associated with routinized work (Vallas 1999). Flexibility also refers to management's ability to control labor costs by changing work hours, laying off workers, or utilizing contractors or "contingent" workers rather than regular employees (e.g. Barker and Christensen 1998; Henly, Schaefer, and Waxman 2006; Kalleberg 2001; Smith 1994). Most recently, work-family scholars from a number of disciplines have agreed upon a definition of "workplace flexibility" that mirrors our definition of control over work time (Hill et al. 2008) but we prefer the term control over work time (or, more briefly, work-time control) because of the ambiguity around the broader concept of flexibility. See Kelly and Moen (2007) and Berg, Appelbaum, Thomas, and Kalleberg (2004) for elaborations of this concept under slightly different names.

Our conceptualization and analysis of work-time control contributes to research on the work environment's effects on employees and begins to integrate this broader research tradition with work-family scholarship. First, we extend the Demands – Control model developed by Karasek and colleagues (Karasek 1979; Karasek and Theorell 1990), which has been enormously influential in the fields of occupational health and industrial/organizational psychology.[5] This model claims that psychological and physical strain are more likely when workers face high work demands, when workers have little control over how work is done, and particularly when workers experience the combination of high work demands and low control (Karasek 1979; Karasek and Theorell 1990). Numerous studies find a relationship between job control and mental and physical health, particularly ambulatory blood pressure and cardiovascular disease (e.g., Belkic et al. 2000; Belkic, Landsbergis, Schnall, and Baker 2004; Bosma, Peter, Siegrist, and Marmot 1998; Ganster, Fox and Dwyer 2001; Karasek and Theorell 1990; Schnall et al. 1998; Schnall, Belkic, Landsbergis, and Baker 2000; Van der Doef and Maes 1999). In this literature, the concept of job control has two dimensions: the breadth of skills associated with the job and the authority to make decisions about how the work is done. "Skill discretion" refers to whether the job involves continual learning, creativity, and a high level of skill, whether the job is repetitious or involves a lot of authority, and whether the worker can develop his or her skills in this job (Karasek and Theorell 1990). "Decision authority" incorporates the freedom to make decisions, to choose how the work is performed, having a lot of say about what happens, and taking part in decisions that affect the worker. Sociologists use the terms "skill" and "autonomy," respectively, to describe the same work conditions (e.g. Hodson 1996).

[5] The Demands-Control has been broadened to consider the role of social support at work (Johnson and Hall 1988; Karasek and Theorell 1990; cf. Berkman, 1984) but we focus on the demands and control aspects since we are focusing on another form of control.

While job control describes control over how the work is done, this construct does not attend to control over when and how much one works or where one works. We contend that work-time control can be conceptualized and investigated as complement to job control or autonomy that is increasingly important given changes in family and work outlined above. We hypothesize that work-time control positively affects employees' ability to manage work and family responsibilities, reducing perceived work-family conflict and improving employees' sense of fit between their work lives and the rest of their lives. (See also Moen, Kelly and Huang 2008 for a cross-sectional analysis of similar questions.) Future research will consider whether and how work-time control affects employees' health and health behaviors, as well as their attitudes about work and their organization.

Second, our analysis extends the literature on autonomy at work and, in particular, studies of participatory management practices by examining how changes in the work environment affect the work-family interface. Studies of "empowered," participatory management practices have investigated how these managerial practices affect organizations and employees *as workers*. For example, workplace restructuring that seeks to increase employees' involvement in operational decisions is positively associated with employee engagement and perceived job control, job satisfaction, and organizational commitment (Appelbaum, Bailey, Berg, and Kalleberg 2000; Smith 2001; Wall, Kemp, Jackson, and Clegg 1986).[6] Hodson's (1996) analysis of various management regimes suggests that workers in participatory management systems are more satisfied, proud, and able to use their insider knowledge than those in management systems characterized by direct supervision, assembly line supervision, or bureaucratic rules. This

[6] As is the case with work-family research, studies utilizing longitudinal data, natural experiments, or quasi-experimental designs to capture changes in employees' experiences with the institution of new management practices are quite rare. Wall et al. (1986) is a quasi-experimental study of the implementation of self-managed work teams in a manufacturing plant.

analysis also suggests that employees' ability to use their skills and their sense of autonomy mediates the effects of the participatory management system (Hodson 1996:729 – 731). At the same time, scholars recognize that the autonomy that characterizes participatory management practices is often accompanied by more job insecurity, intensified work demands for the "survivors," and perhaps a pernicious internalization of managerial goals by employees (Smith 1997; Smith 2001; Vallas 2003; see also Sweet, Moen and Meiskins 2006).

This literature has not fully considered how autonomy or participatory management practices may impact employees' lives outside of work or their experience of the work-family interface. Important exceptions include Osterman's (1995) analysis of work-family policies as part of a broader "high commitment" management strategy and Berg, Kalleberg, and Appelbaum's (2003) finding that workers with more opportunity to participate in work decisions are also more likely to report that their organization helps them balance their work and family responsibilities. We investigate a participatory initiative that allows employees to identify and implement new ways of working that may mesh more effectively with their other obligations. We examine the effects of this initiative on changes in employees' perceptions of work-time control, work-family conflict, and other measures of fit between work and personal life. Our focus is specifically on the effects of work-time control -- a potentially important (and malleable) element of job quality – on the quality of life.

Extending Research on Work-Time Control and Flexible Work Arrangements

Previous research suggests that perceived work-time control is associated with less work-family conflict and better work-life balance. Galinsky, Bond, and Friedman (1996) report that employed parents with more control over their schedules have significantly less work-family conflict, while Hammer, Allen and Grigsby (1997) show similar relationships in a sample of

dual-earner couples. In a national sample of employees (not limited to parents or dual-earners), Anderson, Coffey, and Byerly (2002) find that employees with more control over their schedules and those who are able to change their starting and stopping times report less work-to-family conflict and more job satisfaction. Similarly, Tausig and Fenwick (2001) find that employees with more control over their schedules report more work-life balance (see also Hill et al. 2001). Thomas and Ganster (1995) report that a perceived control measure capturing control over both work time and dependent care arrangements was negatively associated with work-family conflict. Mennino, Rubin, and Brayfield (2005) find negative relationships between one aspect of control over work time – ease of taking time for family matters during the workday – and negative job-to-home and home-to-job spillover. The work-time control scale that we detail below has been associated, in cross-sectional analysis, with lower levels work-family conflict and negative work-family spillover and higher levels of perceived time adequacy and fit between work schedules and personal needs at baseline (Moen, Kelly, and Huang 2008). Longitudinal evidence about this relationship is very limited, although a Dutch study found that employees who were able to take a day off when needed and those voluntarily working part-time (two aspects of work-time control) at baseline reported reduced work-home conflict eight months later (Jansen, Kant, Nijhuis, Swaen, and Krsitensen 2004).

While research suggests that work-time control is associated with less work-family conflict and better work-family fit, it is not clear what workplace policies and practices or job conditions foster employees' sense of control over their work time, and, importantly, whether the introduction of new policies and practices alters work-time control. Advocates hope (and sometimes assume) that flexible work arrangements such as flextime, telecommuting, and part-time options give employees more control over work time and help reduce work-family conflict,

but it is an open question whether these changes in workplace policies and practices have the desired effects. Sociologists and organizational scholars have investigated which organizations adopt a variety of work-family policies and benefits (e.g., Davis and Kalleberg 2006; Glass and Fujimoto 1995; Kelly and Dobbin 1999; Kelly 2003; Knoke 1994; Osterman 1995). Recent studies have examined the implementation and utilization of work-family policies and programs (Blair-Loy and Wharton 2002; Eaton 2003; Hochschild 1997; Kelly and Kalev 2006; Ryan and Kossek 2008). Also, some work considers the effects of using work-family policies on U.S. employees' wage growth and promotions (Glass 2004; Judiesch and Lyness 1999; Weeden 2005). But there is limited longitudinal evidence regarding the effects of flexible work options (or other work-family policies) on employees' work-time control or their work-family conflicts (Kelly et al. 2008).

Research on the implementation of flexible work arrangements suggests that these policies may have a limited impact on employees' experience of work-time control or work-family conflict. As they are commonly administered in U.S. organizations, flexible work arrangements are usually conceptualized and administered as individual "accommodations" in which *some* employees are allowed to deviate from the standard work practices by working different hours or from a different location (Kelly and Moen 2007; cf. Lee, MacDermid, and Buck 2000). Managers determine which employees may change their work practices, often doling out these arrangements as a reward to high performers (Kelly and Kalev 2006). At the same time, employees often fear that taking advantage of these arrangements will make them seem less committed and have negative repercussions for their careers (Eaton 2003; Glass 2004). Because flexible work arrangements are administered in these ways, employees may not feel they actually gain much control over their work time even when flextime and telecommuting

policies are formally in place. Those who are not allowed to utilize the policies obviously do not gain work-time control and those who are allowed to utilize the policies see that this option may be withdrawn by management. The few studies linking the availability of flexible work policies and practices to work-time control yield mixed findings. Thomas and Ganster (1995) find that employees who report more flexible schedules report significantly more control over their work time and dependent care arrangements. However, Batt and Valcour (2003) do not find significant associations between the number of work-family policies (including flexible work options) available and employees' sense of work-time control.

The longitudinal data and natural experiment design of this study extends the work-family literature by addressing the question of whether changes in workplace policies and practices increase employees' work-time control and whether increased work-time control is a mechanism for reducing work-family conflicts and improving work-family fit.

The Case of ROWE at Best Buy

This study analyzes a corporate workplace initiative to assess its impact on employees' control over work time, work-family conflict, and other measures of the work-family interface. The ROWE initiative (for Results-Only Work Environment) was developed and implemented at the corporate headquarters for Best Buy, a Fortune 500 retail company with approximately 3500 employees at its headquarters.[7] ROWE is implemented through participatory training of teams, i.e. immediate work groups of employees and their managers. Managers participated in a leadership orientation lasting about 1.5 hours. Employees and managers then attended four additional training sessions lasting approximately five hours; these sessions were scheduled over approximately 8-12 weeks. The sessions first oriented employees to the ROWE philosophy and

[7] ROWE was developed and piloted by two Best Buy employees, Cali Ressler and Jody Thompson, who now run an organizational development firm called Culture Rx. (See Ressler and Thompson [2008] and www.culturerx.com for more information on ROWE and efforts to implement it in other organizations.)

then guided them through a critical assessment of current organizational culture and the way it affected their work practices and interactions. Employees were also prompted to clarify the outcomes (the "results") they are tasked with and to identify "low-value" work activities that do not contribute to the team's performance. Employees were encouraged to identify strategies for meeting business goals that would simultaneously give employees more control over their work time. For example, we observed teams begin cross-training each other so that one or two people could work remotely and know that any questions that came up would be handled by co-workers. Another team we observed began sending one or two representatives to meetings in another department rather than having everyone attend. A final session brought together employees from multiple teams to brainstorm about any problems they had encountered and to publicize new practices that were working well. This participatory initiative was both highly scripted and highly interactive, with teams discussing their particular concerns and identifying new work practices that were sensible from their perspective.

ROWE differs from the more common flexible work arrangements in several important ways. First, rather than allowing a select few employees to ask supervisors for permission to deviate from the standard work hours and routines, ROWE attempts to shift the culture so that the norm is now flexibility regarding when, where, and to some extent how employees do their work. Second, ROWE directly targets employees' control over work time. In fact, the desired work environment is defined as one in which "people have complete autonomy. They are free to do whatever they want, whenever they want, as long as the work gets done" (quote from fieldnotes; see also Moen, Kelly, and Chermack 2009; Ressler and Thompson 2008). Employees are told they do not need permission to modify their work schedules or their work location. Instead, employees can routinely change when and where they work based on their individual

needs and job responsibilities (including a need to coordinate work within a team, for some). Third, ROWE is understood as a collective enterprise to change the organizational culture rather than an individual option. Creating a "Results-Only Work Environment" is presented as an on-going effort to change the organizational culture that involves employees who prefer to work fairly traditional hours in the office, as well as those who want to work at different times and places. Therefore, work groups are described as "a ROWE team" or "in a ROWE" or "ROWEing," rather than individuals being labeled as telecommuters or users of flextime. The focus on teams is very different from most flexible work programs, and it would seem to reduce the risk that individual employees will be penalized—in evaluations of their work and their assumed commitment to the organization—for bucking the dominant corporate culture.[8] Indeed, ROWE sessions teach employees that they are creating a "counterculture" within the organization and that they are now part of a "smart mob" that is changing the face of corporate America. This participatory, collective approach is similar in some ways to the small-scale "work redesign" experiments that Lotte Bailyn and colleagues have carried out to help work groups improve productivity and gender equity while addressing work-family conflicts (Rapoport, Bailyn, Fletcher and Pruitt 2002; see also Perlow 1997).

Methods

Study Design and Data

This study exploits the phased implementation of ROWE by using the departments that began the initiative during the study period as a "treatment" group and using other departments

[8] Future research should empirically examine whether employees who fully embrace the ROWE philosophy and practices (or similar initiatives) have similar promotion prospects and wage trajectories, or whether there are career penalties in this case as well. We do not have data to fully investigate this question at this time.

as a comparison group.[9] Unlike a true experiment, we were not able to randomize departments or teams to the two conditions. Importantly, though, individual employees did not select themselves into the initiative. Instead, the decision to participate in ROWE was made by executives (vice-presidents or directors, in conjunction with other senior managers) and then entire teams either participated in the ROWE initiative or did not. The departments and teams that transitioned to ROWE included employees in a wide variety of occupations within this white-collar workplace.

We conducted a longitudinal web survey in 2006 to compare the experiences of employees in departments beginning ROWE with those in departments that continued to operate under the status quo management practices of this organization. The first wave of the survey was completed in the month before ROWE sessions began and the second wave of the data collection occurred six months after a department's first ROWE session and about three months after they completed the ROWE training sessions. Comparison groups were surveyed simultaneously. The survey sample was drawn from non-contingent employees working in nine business units at the Best Buy corporate headquarters. Email addresses and some demographic information was provided to the research team by the company's human resources department. Executives from each department notified employees in their units that the University of Minnesota was conducting a study of the corporate work environment and would soon email them directly. The research team then invited employees to participate in the web survey and provided a unique user code to each employee. This invitation described the study as an investigation of "how your work environment affects your effectiveness at work, your health and well-being, and your personal life." The invitation did not mention ROWE. The invitation and consent materials also made it clear that the survey was designed and implemented, and would be analyzed, by the

[9] In one case, several teams within a larger department signed on to ROWE as that business unit's pilot of the initiative. The pilot teams were exposed to ROWE and the remaining teams within that department participated in the study as comparison groups.

research team; employees were assured that no individual or identifying information would be shared with the organization. Employees had three to four weeks to complete the web survey (which required about 45 minutes of their time) and were sent customized reminders with their unique user code by email. Participants were offered a $20 gift card that could be redeemed at either a chain of coffee shops or a chain of movie theaters.

Wave 1 of the survey had an 80% response rate and 92% of those who completed the first survey also completed Wave 2. All analyses are done on an analytical sample that is limited to those who completed both survey waves and have non-missing information on all independent variables, for a total of 608 employees. Analyses not shown here reveal no substantive differences between this analytical sample and the sample that completed both survey waves. 302 participants were in departments undergoing ROWE, while 306 participants were in comparison departments. The 608 white-collar respondents are, on average, about 32 years old. They report working an average 48.15 hours per week and mean organizational tenure is 4.31 years. The vast majority are well educated (86% have a college degree or more) and 33% are in a managerial position. According to self-reports, 91.53% (n=551) of our sample is white, 4.98% (n=30) is Asian, 2% (n=12) is African American, 1% (n=6) is American Indian, and .5% (n=3) reported "other." 50% of the sample is female, 69% is married or cohabiting with a partner, 35% have at least one child under age 18 at home, and 12% care for an adult relative (usually a parent). Because this sample clearly represents an educated, Midwestern population, additional research is needed to determine whether ROWE or similar changes in workplace policies and practices would produce similar effects in a more diverse or less privileged sample.

Using human resources data on the population of non-contingent employees in the participating departments, we examined potential response bias. Respondents were significantly

younger, with less tenure and lower incomes, than non-respondents and women were more likely than men to complete the first survey. Executives (at the director or officer level) were significantly less likely to participate. Employees in ROWE and comparison departments were equally likely to complete both surveys.

There were some baseline differences between the ROWE group and comparison group. Bivariate differences between the ROWE and comparison groups are reported in Table 1. Logistic regressions estimating participation in a ROWE team or department using the all independent and dependent variables used in subsequent models demonstrate that individuals in ROWE teams and departments were slightly older, on average, than individuals in comparison teams and department. (Full results available upon request.) Other baseline differences between the samples in these regression models may stem from this age gap; employees in ROWE departments are more likely, on average, to be salaried and have more work-time control at baseline. Employees in ROWE departments also work slightly fewer hours, have significantly more work-family conflict and less work-schedule fit, and are less likely to believe that the organization has a culture that is supportive of family responsibilities. Models adjust for these baseline differences as described below.

Variables

Table 1 presents descriptive statistics for the dependent and independent variables in Wave 1 and Wave 2 for the full sample, the ROWE sample, and the comparison sample. Detailed information on the scales used as dependent variables, including the source of that scale, the variables used to create the scale, and various measures of fit are presented in Appendix 1, while information on the scales used independent variables are presented in Appendix 2. Control over work time measures employees' ability to decide about the time and

timing of their work. The work-time control scale is derived from Thomas and Ganster (1995) and has categories ranging from 1 to 5, where 1 indicates low work-time control and 5 indicates high work-time control. Our measure includes one item related to where the work occurs. In this white-collar setting, there is a close relationship between control over the timing of work, the amount of work performed, and the location of that work, but this may not be the case in other settings. The analyses were robust to other specifications that omitted the question about control over work location.

The dependent variables include several established measures of the work-family interface. The work-to-family conflict scale was developed and validated by Netemeyer, Boles, and McMurrian (1996). It is a five-item scale with scores ranging from 1 (strongly disagree) to 5 (strongly agree), with a higher score indicating more work interference with family or personal life.[10] See also Appendix 1. We analyze negative spillover from work to family life with a scale that includes four items ranging from 1 (never) to 5 (all the time). Work-family conflict and negative work-family spillover are similar constructs but negative work-family spillover emphasizes emotional transmission of stress (i.e. bringing worries home) and energy depletion rather than time strains or conflicts. Two additional measures capture perceived fit between the demands or needs faced by an employee and the resources available to the employee (Moen, Kelly and Huang 2008; Voydanoff 2004). A time adequacy scale assesses employees' subjective sense of having enough time to pursue a variety of personal and family activities. Response possibilities range from 0 ("not at all adequate") to 10 ("almost always adequate"). This scale was modified from Van Horn, Bellis, and Snyder (2001). The work-schedule fit scale measures

[10] Work-family conflict is conceptualized as bi-directional, including work interfering with family life and family interfering with work life (Frone, Russel and Cooper, 1992; MacDermid, 2005; Netemeyer et al., 1996). However, we focus on work-to-family conflict because this direction is more common (Frone et al. 1992) and because we are analyzing organizational changes, not changes in family life. Models of the effects of ROWE on family-to-work conflict found no effect of the initiative on this outcome.

employees' assessment of how well their work schedules are working for themselves and their families. It is a two-item scale developed by Barnett, Gareis and Brennan (1999) with answer categories ranging from 1 (extremely poorly) to 7 (extremely well) where a higher score indicates greater fit.

Employees were coded as part of the ROWE group if they reported (in the wave 2 survey) attending any of the ROWE training sessions *and* they were assigned to a team or department that participated the initiative during the study period.

Our models also include a variety of personal characteristics and job characteristics that may affect changes in the work-family interface, as well as some potential moderators of effects. We analyze differences by gender and parental responsibilities by comparing women with one or more children at home, women without children at home, and men with one or more children at home to the reference category of men without children at home. This variable was created from a household inventory where respondents indicated at least one member of the household was a child or stepchild aged 18 or younger. The categories of men without children and women without children include employees who have not had children, those with non-residential children, and those whose children are grown. We also include a categorical measure of age. Because our analysis investigates whether ROWE changes control over work time, work-family conflict, and perceived fit between work and personal life, it was also important to include other changes in respondents' lives in the models. We use a dummy variable indicating whether the respondent answered yes, at Wave 2, to any of a list of changes in their personal lives experienced in the last six months. The list included whether respondents had bought a home, moved, experienced the birth or adoption of a child, got married or begun cohabiting, got separated, or divorced or ended a cohabiting relationship. We also include a dummy variable

indicating whether the respondent changed jobs within the organization during the six months between surveys.

Since ROWE and comparison groups differed on certain measures at wave 1, as described above and in Table 1, we included them in our models: whether the respondent's job is a salaried position ("exempt" from Fair Labor Standards Act) or an hourly position ("non-exempt"), years of tenure with the organization, and a job level variable distinguishing those with no supervisory duties (termed "non-supervising employee") from managers and senior managers, directors, and officers.[11] An 8-level categorical variable captures household income, with 1 indicating less than $25,000, the mean category of 4 indicating $75,000-$99,999, and 8 indicating $250,000 or more.

Our analysis of work-time control also includes measures of job demands and job control. We expect that employees with more job control, i.e. control over how they do their job, will have more control over their work time as well since flexible schedules are more likely to be available to those in higher-status occupations in traditional work environments (Batt and Valcour 2003; Swanberg, Pitt-Catsouphes, and Drescher-Burke). Job control includes measures developed by Karasek (1985) of decision authority (autonomy over what happens on the job and how work is performed), and skill discretion (breadth of skills required). We measure psychological job demands using a scale based Karasek's work (1979) and additional items developed by Belkic, Landsbergis, Schnall, and Baker (2004) and Siegrist, Starke, Chandola, Godin, Marmot, Niedhammer, and Peter (2004). We also measure hours worked with a question asking "How many hours a week do you usually work at your Best Buy job? Please include all

[11] A small number of respondents have the title of "manager" but do not supervise any employees. They are categorized as managers in our analysis.

hours worked at all locations." The mean hours reported is 48.25 hours per week in this white-collar, largely-salaried sample.

Our analysis also incorporates measures of support from one's supervisor or manager and perceived "family-friendliness" of the organization to investigate alternative explanations of work conditions affected work-family conflict. Previous research has shown that employees with more supportive supervisors report less work-family conflict, as do those who view their organizations as more supportive of their family and personal life (e.g. Allen 2001; Mennino, Rubin, and Brayfield 2005; Thompson et al. 1999). We measure manager support with four questions asking respondents whether how supportive their manager is of them regarding work and career development. This scale ranges from 1 to 4, where higher scores indicate greater support from one's manager. Respondents evaluate whether the organizational culture is supportive of families by agreeing or disagreeing with 9 statements about "the philosophy of Best Buy" such as "Employees who take time off to attend to personal matters are not committed to their work" (Allen 2001). The scale ranges from 1 to 5, with 5 indicating more a more supportive culture.

Analysis

We use ordinary least squares regression with a lagged dependent-variable strategy to investigate the effects of ROWE on employee's work-time control and experiences of work-family conflict in Wave 2.[12] In particular, we first use a series of nested regressions to investigate the effects of ROWE on employee's work-time control in Wave 2, including employee's work-

[12] Reported standard errors are individual-level Huber-White sandwich estimates of variance, more commonly referred to as robust estimators. Huber-White sandwich estimates of variance yield more consistent estimates of the variance in the parameter estimates even in the presence of model misspecification. Because ROWE was instituted at the team/department level, we also tested various cluster-level sandwich estimates. These cluster-level estimates were substantively similar to the individual-level estimates and yielded identical interpretations of our focal parameter estimates. We choose used the individual-level estimates because the cluster-level estimators require errors to be non-heteroskedastic between clusters, which is unlikely to be true in this sample.

time control in Wave 1 and other covariates that might influence the relationship between ROWE and our dependent variables. We next use a series of nested regressions to investigate the effects of ROWE and employee's change in work-time control on employee's experiences of work-family conflict in Wave 2, again including employee's experiences of work-family conflict in Wave 1 and other covariates that might influence the relationship between ROWE, the employee's work-time control change, and our dependent variables. We included the Wave 1 measure of the dependent variable in order to account for Wave 1 differences in the dependent variables, for persistent heterogeneity between waves, and to describe the effects of changes in the work environment between waves. We choose this strategy because it is consistent with our theoretical expectations regarding the impact of ROWE on work-time control and work-family conflict.[13]

In these models, we test whether changes in work-time control mediate the effects of ROWE on the work-family interface using the framework proposed by Baron and Kenny (1986). Baron and Kenny (1986) define a mediating variable as "the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest" (p. 1173). As recommended by Judd and Kenny (1981), a series of regression models should be estimated to test for mediation effects: (1) Regressing the mediator on the independent variables; (2) regressing the dependent variable on the independent variables; and (3) regressing the dependent variable on both independent variables and on the mediator.

[13] An alternative analytical strategy is to directly model the change score between Waves 1 and 2 as the dependent variable while including the Wave 1 measure in order to account for persistent heterogeneity (Allison 1990). We decided against using this strategy because, with the inclusion of the Wave 1 measure as an independent variable, it models *growth* in work-time control or work-family conflict between the waves. Unlike models of educational or economic attainment or development, there is no theoretical reason to assume "natural" growth between waves in work-time control or work-family conflict. Additionally, removing the Wave 1 measure as an independent variable in the change model is not a viable solution because our limited sample size does not allow us to directly model all of the factors that lead to Wave 1 differences in the dependent variables .

$$M = w_1 + \sum_{i=1}^{k} a_i X_i + e_1 \quad (1)$$

$$Y = w_2 + \sum_{i=1}^{k} c_i X_i + e_2 \quad (2)$$

$$Y = w_3 + \sum_{i=1}^{k} c_i' X_i + bM + e_3 \quad (3)$$

Here X_i (i=1…k) are independent variables, Y is a dependent variable, M is the mediator variable, w_1-w_3 are intercepts, a_i, b, c_i and c_i' are unstandardized regression coefficients. The *mediated effect* is the product of coefficient a_i and b, which is also called *indirect effect* since it is the part of the model that indirectly affects the outcome through the mediator. c_i' is the *direct effect* of X_i on Y when taking the mediator into account. In our context, the main independent variable of interest is participation in ROWE, the dependent variables are the four measures of work-family conflict and fit, and the mediator variable is change in work-time control between Waves 1 and Wave 2. In particular, we estimate equation (a) by regressing the mediator of work-time control on participation in ROWE in model 1 of Table 2, with subsequent models adding additional covariates that might moderate the relationship between work-time control and ROWE. We estimate equation (b) by regressing our four measures of work-family conflict and fit on participation in ROWE in model 1 of Tables 3-6. We estimate equation (c) by regressing our four measures of work-family conflict and fit on participation in ROWE and change in work-time control between Waves 1 and 2 in model 2 of Tables 3-6. Subsequent models in Tables 3-6 add additional covariates that might explain the mediating effects of work-time control change on ROWE.

Based on Sobel's (1982) work, MacKinnon and Dwyer (1993) showed that the significance of mediation path can be tested by the "Sobel test,"

$$Z_{ab} = \frac{a*b}{se_{ab}}$$

where:

$$se_{ab} = \sqrt{(a^2 * se_b^2) + (b^2 * se_a^2)}$$

We calculate Sobel test statistics for each nested regression to test whether the mediation pathways are statistically significant. In other words, a significant Sobel test indicates that the indirect effect of the independent variable on the dependent variable through the mediator variable is significant. The test statistic is calculated using the our four measures of work-family conflict and fit as dependent variables, ROWE as the independent variable, and work-time control change as the mediator variable, with all other variables in the model being considered covariates. We also present the percentage of the total effect of ROWE that is mediated by the inclusion of the variable capturing change in work-time control.

All regressions that test for the mediating effects of work-time control change also include work-time control in Wave 1 because the ROWE and comparison group differed in work-time control at baseline (see Table 1). Various specifications of the mediating effect of work-time control on ROWE produce similar results. Alternative mediation pathways through changes in organizational supportive culture and manager support, rather than through work-time control, are presented in Appendix 3.

For all regressions, we performed a series of diagnostics to test for violations of the assumptions of linear regression, along with testing for omitted variable bias and the presence of influential outliers. In particular, we tested for violations of the assumption of a linear relationship between the independent and dependent variables by examining a scatterplot of the residuals and found no evidence of a non-linear pattern in the data. We tested for multicollinearity by examining the correlation matrix of the independent variables as well as

variance inflation factors for each model and, again, found no evidence of multicollinearity that influences our results.

We tested the assumption of homoscedasticity using a variety of statistical tests, including the including the Breusch-Pagan test, Cameron & Trivedi's decomposition of Information Matrix test, and Szroeter's test for homoskedasticity for each independent variable. We found no evidence of heteroscedasticity in the models estimating work-time control, work-family conflict, or negative work-family spillover, but we found weak evidence of heteroscedasticity in the models estimating work-schedule fit and time adequacy. We therefore use Huber-White sandwich estimators of the standard errors, which relax the assumption of homoscedasticity. We tested the assumption that the error variance is normally distributed by examining histograms of the standardized residuals and found no evidence of violations of this assumption. Moreover, the use of Huber-White sandwich estimators of the standard errors relaxes the assumption of a normally distributed error variance.

We examined the models for omitted variable bias using the Ramsey RESET test and a "link test" for model specification. We found no evidence of omitted variable bias using these tests. Finally, we examined the models for outlier cases that unduly influence the results by examining plots of the "fit" of each case to the regression line. Cases with extreme values were removed from each model, with at most 5 cases removed. Removing these cases does not alter the magnitude or significance of any of our focal variables. The results of these diagnostic tests lead us to believe that our models are producing consistent, efficient, and robust estimates.

Findings

Our analysis investigates whether the ROWE workplace initiative increases employees' control over the time and timing of their work, whether these changes in the workplace reduce

work-family conflicts and improve work-family fit, and whether work-time control mediates the relationship between participation in the ROWE initiative and employees' experience of the work-family interface. We begin with the question of the proximate effect of ROWE on employees' control over the time and timing of their work. Table 2 presents the nested regression models estimating work-time control in Wave 2. Model 1 uses work-time control in wave 1 and ROWE to estimate Wave 2 values of control over work time. These results clearly indicate those with high levels of work-time control in Wave 1 had high levels of work-time control in Wave 2. ROWE predicts an increase in work-time control by Wave 2, net of Wave 1 levels of work-time control. The magnitude of this effect is relatively large. Participation in the ROWE initiative increases work-time control in Wave 2 by, on average, about a half a standard deviation when accounting for baseline levels of work-time control. Model 2 adds personal and family characteristics and job characteristics and significantly improves the fit of the model. However, the only variable that is statistically significant is managers, with managers reporting less of an increase in work-time control by Wave 2 than non-supervisory employees. Model 3 adds job demands and job control and Model 4 adds life change variables. The addition of these variables does not significantly improve model fit, but we see that higher levels of decision authority (i.e., autonomy regarding how work is done) at Wave 1 are associated with larger increases in work-time control by Wave 2. Employees with more control over their work decisions at baseline may be able to fully exploit the opportunity to have more control over the time and timing of their work as well.

In Model 5 in Table 2, we investigate whether there are differential effects of ROWE by our combined gender/parental status. (Recall that our measure of parental status is whether there is one or more child in the home, so "empty nesters" and non-residential parents are counted in

the "without children" categories.) Figure 1 provides estimated values of work-time control based on Model 5. The comparisons across groups indicate that ROWE benefits women without children, women with children, and men without children in a similar way, while men with children have work-time control levels similar to men in the comparison group. Additional analyses (not presented here) reveals that men with children have the highest baseline level work work-time control and ROWE is most effective at increasing work-time control among employees that had lower baseline levels of work-time control.

Tables 3 through 6 contain the results of the nested OLS regression estimating, respectively, the work-family conflict scale, negative work-family spillover, work-schedule fit, and time adequacy in Wave 2. Model 1 in each table uses both the Wave 1 measure of the dependent variable and participation in the ROWE initiative to estimate the dependent variable at Wave 2. Model 2 in each table adds change in work-time control between waves (as a potential mediating variable) and baseline work-time control as a control variable. Models 3 and 4 in each table adds demographic measures, life changes in the past 6 months, and manager support and family-supportive organizational culture. These latter variables capture two competing explanations for employees' experience of the work-family interface. The Sobel test for mediation and the percent of the total effect that is mediated are separately calculated for the later models in order to assess whether the strength and significance of the mediated effect of interest (change in work-time control) is influenced by the addition of independent variables.

There is a clear and consistent pattern across Tables 3-6 predicting work-family conflict, negative work-family spillover, work-schedule fit and time adequacy at Wave 2. The lagged dependent variable in Wave 1 and ROWE are always significant in model 1. ROWE decreases negative work-family spillover and work-family conflict while increasing work-schedule fit and

time adequacy in Wave 2, controlling for the employee's "starting point" on each of the dependent values in Wave 1. However, when we add work-time control measures to the models (model 2), ROWE becomes non-significant. Sobel tests for mediation are always significant and the percent of the total effect that is mediated is very high for all outcome variables, indicating that ROWE works largely through its effect on work-time control, with changes in work-time control completely mediating the effect of ROWE on these four measures of work-family fit. The magnitude of the effect varies, but is generally large, with a one standard deviation increase in work-time control between Waves 1 and 2 leading to, on average and controlling for the dependent variable and work-time control in Wave 1 and ROWE, a half a standard deviation decrease in work-family conflict in Wave 2 and increase in work-schedule fit in Wave 2, and a quarter of a standard deviation decrease in negative work-family spillover in Wave 2 and increase in time adequacy in Wave 2. Effects are larger for outcomes that more directly measure the relationship between work time and family time (i.e. work-to-family conflict in the Netemeyer et al. scale and work-schedule fit), as compared to the spillover measure that focuses more on the transmission of emotions across domains and the time adequacy that captures a broader range of personal goals beyond caring for family members.

Models 3 and 4 add personal and job characteristics as well as variables for life changes, manager support, and a family-supportive organizational culture. Some of these variables are significant (as outlined below), but they have only a minimal effect on the coefficients for change in work-time control, the Sobel tests for mediation, or the percent of the total effect that is mediated, improving the fit of the models only minimally. Recall that ROWE produced less change in *control over work time* among men with children. However, interactions between gender/parental status and ROWE were not significant, indicating that change in work-time

control has similar effects on work-family conflict, negative work-family spillover, and time adequacy across the gender and parental status categories.

Most of the personal and job characteristics in Tables 3-6 are not significant, once we account for the respondent's Wave 1 response, exposure to ROWE, change in work-time control, and the Wave 1 level of work-time control. However, some of these independent variables do predict these measures of work-family conflict and fit. Tables 3 and 4 show that senior managers are significantly more likely to report increased work-family conflict and (along with managers) negative work-family spillover, as compared to non-supervisory employees. Also, employees who rated the organization as more supportive of family and personal life have lower levels of work-family conflict and negative work-family spillover. Table 4 reveals that those with higher household incomes report significantly smaller increases in negative work-family spillover. The analysis of work-schedule fit in Table 5 indicates that exempt (i.e. salaried) employees report significantly better fit between their work schedules and their non-work needs, even net of perceived control over work time in Wave 1 and changes in work-time control. Job changes are also associated with decreased work-schedule fit and time adequacy (cf. Reynolds 2005). Finally, respondents who had a change in their personal life (such as a move, a marriage or new cohabitation, or the birth of a child) were significantly more likely to report a decrease in time adequacy by Wave 2, as seen in Table 6. The findings about job changes and life changes in the last six months indicate that employees may still be adjusting and determining how best to manage their new work and/or family responsibilities.

Recall that ROWE is aimed at changing the work environment and previous research on the work-family interface has shown that employees who view their organizations as more supportive of family and personal life report less work-family conflict, as do those with more

supportive supervisors (see Kelly et al. 2008 for a review). Therefore, it is possible that increases in the employee's belief that the organizational culture is family supportive or in manager support may also mediate the pathway between ROWE and changes in work-family conflict and fit, or they may even be stronger mediators than work-time control change. We examine this possibility in Appendix 3. In all cases, change in work-time control is by far the strongest mediator, with the coefficient for ROWE becoming non-significant when change in work-time control is added to the model, the Sobel test statistic being large and significant, and the percent of total effect that is mediated ranging from 77% to 147%. In contrast, the coefficient for ROWE stays significant when change in organizational supportive culture or manager support is added to the model (indicating partial mediation by these variables), the Sobel test statistic is weak and barely significant for organizational supportive culture and non-significant for manager support, and the percent of total effect that is mediated is never above 25%.

In sum, our results demonstrate that ROWE increases employee's sense of work-time control in Wave 2 (except for men with children who see no increase). We also find that ROWE, again on average and accounting for baseline levels of work-family conflict and fit, decreases work-family conflict and increases work-family fit. Finally, we find that the ROWE effect on work-family conflict and fit is fully mediated by increases in work-time control.

Conclusion

"Flexibility" is all the rage in the management and popular press and previous cross-sectional research suggests that employees with more control over the time and timing of their work have fewer work-family conflicts and better work-family fit. However, because of design limitations, the academic research has not been able to address 1) whether and which workplace

policies, practices, or initiatives foster employees' sense of control over their work time and 2) whether changes in the work environment and work-time control change employees' experience of the work-family interface. We utilize a natural experiment in a white-collar workplace to address these limitations and find clear and strong evidence that the ROWE initiative increases work-time control and positively affects the work-family interface. Our meditational analysis also demonstrates that allowing employees to claim more control over their work time is an important mechanism for alleviating work-family conflicts. More broadly, this work reminds us that the work environment is malleable. Currently, higher-status workers are much more likely to have flexible schedules and be able to work from home but it is possible and feasible to democratize control over the time and timing of work, at least in a white-collar setting.

The limitations of this study include the fact that we utilize data from employees in one large organization and were not able to randomize groups to the ROWE initiative or the status quo management practices. Certainly, future research is needed to replicate the workplace innovation and its positive effects in other settings with a more diverse employee population, different types of work, and different managerial practices at baseline. It would also be useful to examine effects on employees' job quality as measured by job satisfaction, turnover intentions, and other measures, to directly measure the impacts of changes in the work environment on physical and mental health, and to investigate the work-family interface from the perspective of spouses and children of employees exposed to new workplace initiatives. Follow-up research by the Work, Family, and Health Network will address all of these limitations. Scholars have documented that the restructuring of management practices is "a negotiated phenomenon" influenced by employees from a variety of occupations, rather than simply imposed in a top-down manner by management (Vallas 2003, p. 227; Vallas 2006). Qualitative data from this

study and the follow-up research can also investigate how employees responded to and reshaped the workplace initiative as it was implemented.

Research that identifies changes in the work environment that reduce work-family conflict has broad implications for health, family well-being, and gender equity. A burgeoning literature indicates that work-family conflict affects employees' health. Employees with higher levels of work-family conflict report more psychological distress (Burke and Greenglass 1999) and depressive symptoms or depression (Allen, Herst, Bruck and Sutton 2000; Frone, Yardley and Markel 1997; Frone 2000; Grzywacz and Bass 2003; Netemeyer, Boles and McMurrian 1996; Thomas and Ganster 1995). Work-family conflict is also associated with anxiety disorders (Frone 2000; Grzywacz and Bass 2003), lower reports of vitality (Kristensen, Smith-Hansen and Jansen 2005), and lower levels of general well-being (Grant-Vallone and Donaldson 2001; Moen and Yu 2000). Work-family conflict has been linked to problem drinking, including heavier drinking and an increased likelihood of drinking to cope with stress (Frone, Russell and Barnes 1996; Frone et al.1997; Grzywacz and Marks 2000). Work-family conflict also seems to affect physical health, although the evidence of this relationship is weaker in longitudinal studies than in cross-sectional research (Allen et al. 2000). For example, work-family conflict is related to minor physical complaints (such as headaches and insomnia), to poor appetite, and to lower self-reports of overall health (Allen et al. 2000; Thomas and Ganster 1995). Finally, research shows a relationship between work-family conflict and unhealthy eating habits, obesity, elevated cholesterol levels, and hypertension (Allen and Armstrong 2006; Grzywacz and Bass 2003; Thomas and Ganster 1995).

Work-family conflict also affects family life. Time spent together – which is determined in part by employees' work hours and control over those hours – positively predicts the quality

of relationships reported between spouses, between siblings, and between parents and first-born children (Crouter, Tucker, Head, and McHale 2004). Work pressures also affect the quality of parent-child interactions. For example, on stressful days, mothers are more withdrawn with their preschool children (Repetti and Wood 1997; see also Larson and Almeida 1999, and Schneider and Waite 2005, on the transmission of emotions between family members). Crouter and colleagues (1999; 2001) find that parents' work pressures predict role overload and conflict with adolescents, which in turn predict negative developmental outcomes for the adolescents. There is mixed evidence on whether work-family conflict is related to marital satisfaction and whether these links are stronger for women or men (Crouter et al 2001; Kinnunen and Mauno 1998; Netemeyer et al. 1996;).

In addition to the consequences of work-family conflict for employees' health, well-being, and family life, work-family conflict is consequential for broader patterns of gender inequality. Sociologists and economists have often argued that a desire to avoid work-family conflicts by specializing in either paid work or family work explains gender differences in labor force participation (e.g. Becker 1991; Blau, Ferber, and Winkler 1998; Hakim 2001). Others eschew arguments that look to "women's choices" but agree that women have been more likely to respond to the work-family conflicts that arise from the structure of contemporary work by reducing work hours or exiting the labor force, given the absence of other options (Ammons and Edgell 2007; Gerson 1985; Moen and Roehling 2005; Reynolds 2005; Stone 2007). Gender differences in labor force participation and work hours are a crucial part – although obviously not the full story – of understanding the gender wage gap and differences in men's and women's occupational attainment. Among employed adults, there are some gender differences in work-family spillover but these differences are reduced after adjusting for the work environment

(Mennino, Rubin and Brayfield 2005). Also, analyses of work "trade-offs" such as cutting back at work, refusing promotions, and refusing extra hours due to family responsibilities find similarities between men and women and between married mothers and married fathers, with the important caveat that men are more likely to take on extra work because of their family responsibilities (Mennino and Brayfield 2002). Our analysis considers the effects of the work environment on employed adults and investigates whether gender and parental status jointly to see whether ROWE has similar effects for men and women with children in the home and for men and women without primary parenting responsibilities.

References

Allen, Tammy D. 2001. "Family-Supportive Work Environments: The Role of Organizational Perceptions." *Journal of Vocational Behavior*. 58: 414-435.

Allen, Tammy D., and Jeremy Armstrong, 2006. "Further Examination Of The Link Between Work Family Conflict And Physical Health." *American Behavioral Scientist*. 49:1204-1221.

Allen, Tammy D., Davidl E.L. Herst, Carly S. Bruck, and Martha Sutton. 2000. "Consequences Associated With Work-To-Family Conflict: A Review And Agenda For Future Research." *Journal of Occupational Health Psychology.* 5:278–308.

Ammons, Samantha and Penny Edgell. 2007. "Religion and Work-Family Tradeoffs. *Journal of Family Issues*. 28(6):794-826.

Ammons, Samantha K. & William T. Markham. 2004. Working at Home: Experiences of Skilled White Collar Workers. Sociological Spectrum,24: 191-238.

Barker, Kathleen and Kathleen Christensen. 1998. *Contingent Work: American Employment Relations in Transition*. Ithaca: Cornell University Press.

Batt, Rosemary and Monique Valcour. 2003. "Human Resources Practices As Predictors Of Work-Family Outcomes And Employee Turnover." *Industrial Relations*. 42(2):189-220.

Becker, Gary. 1991. *A Treatise on the Family.* Cambridge: Harvard University Press.

Becker, Penny Edgell, and Phyllis Moen. 1999. "Scaling Back: Dual-Career Couples' Work-Family Strategies". *Journal of Marriage and the Family*, 61:995-1007.

Belkin, Lisa. 2003. "The Opt-Out Revolution." *New York Times Magazine*. Oct. 26th.

Berg, Peter, Eileen Appelbaum, Thomas Bailey, and Arne L. Kalleberg. 2004. "Contesting Time: International Comparisons of Employee Control of Working Time." *Industrial and Labor Relations Review*. 57 (3): 331-349.

Bielby, William and James N. Baron. 1985. "Organizational Barriers to Gender Equality: Sex Segregation of Jobs and Opportunities." in *Gender and the Life Course* ed. Alice Rossi. New York: Aldine de Gruyter.

Bielby, Denise, and William Bielby. 1988. "She Works Hard For the Money: Household Responsibilities And The Allocation Of Work Effort." *American Journal of Sociology* 93: 1031-1059.

Bielby, William T. and Denise D. Bielby. 2002. "Telling Stories about Gender and Effort: Social Science Narratives About Who Works Hard for the Money." Pp. 193-217 in Mauro F. Guillen, Randal Collins, Paula England, and Marshall Meyer (eds.), *The New*

Economic Sociology: Developments in an Emerging Field. New York: Russell Sage Foundation.

Bianchi, Suzanne M., Lynne M. Casper, and Rosalind Berkowitz King. 2005. *Work, Family, Health, and Well-Being.* Mahwah, NJ: Lawrence Erlbaum Associations, Inc.

Blau, Francine D., Marianne Ferber, and Ann E. Winkler. 1998. *The Economics of Men, Women, and Work.* New York: Prentice Hall.

Bond, James T., Galinsky, Ellen., Kim, Stacy S., and Brownfield, E. 2005. *National Study of Employers.* New York: Families and Work Institute.

Budig, Michelle J. and Paula England. 2001. "The Wage Penalty of Motherhood" *American Sociological Review* 66:204-225.

Burke, Ronald J. and Esther Greenglass. 1999. "Work-Family Conflict, Spouse Support, And Nursing Staff Well-Being During Organizational Restructuring." *Journal of Occupational Health Psychology.* 4(4):327-336.

Chelsey, Noelle. 2005. "Blurring Boundaries? Linking Technology Use, Spillover, Individual Distress, and Family Satisfaction" *Journal of Marriage and Family* 67: 1237–1248.

Chesley, Noelle, Moen, Phyllis. 2006. "When Workers Care: Dual-Earner Couples' Caregiving Strategies, Benefit Use, and Psychological Well-Being" *American Behavioral Scientist* 49:1248-1269.

Cohen, Philip N. and Suzanne M. Bianchi. 1999. "Marriage, Children, and Women's Employment: What Do We Know?" *Monthly Labor Review* Dec. 22-31.

Crouter, Ann. C., Matthew F. Bumpus, Martha C. Maguire, and Susan M. McHale. 1999. Linking Parents' Work Pressure To Adolescents' Well-Being: Insights To Dynamics In Dual Earner Families. *Developmental Psychology, 35*:1453-1461.

Crouter, Ann C., and Matthew F. Bumpus. 2001. Linking Parents' Work Stress To Child And Adolescent Psychological Adjustment. *Current Directions in Psychological Science. 10:*156-159.

Crouter, Ann C.; Melissa R. Head, Susan M. McHale, Corinna Jenkins Tucker. 2004. "Family Time and the Psycho-Social Adjustment of Adolescent Siblings and Their Parents" *Journal of Marriage and Family.* 66(1)147-162.

Frone, Michael R, Marcia Russell, and M. Lynn. Cooper. 1992.

Frone, Michael R., Marcia Russell, and Grace M. Barnes. 1996. "Work-Family Conflict, Gender, And Health-Related Outcomes: A Study Of Employed Parents In Two Community

Samples." *Journal of Occupational Health Psychology.* 1(1): 57-69.

Frone, Michael R., Marcia Russell, and M. Lynn. Cooper. 1997. "Relation Of Work–Family Conflict To Health Outcomes: A Four-Year Longitudinal Study Of Employed Parents." *Journal of Occupational Health Psychology, 70*(4), 325–335.

Frone, Michael R., John K. Yardley, Karen S. Markel. 1997. "Developing and Testing an Integrative Model of the Work-Family Interface" *Journal of Vocational Behavior.* 50(2): 145-167.

Frone, Michale R. 2000. "Work-Family Conflict and Employee Psychiatric Disorders: The National Comorbiity Survey." *Journal of Applied Psychology.* 85(6): 888-895.

Galinksy, Ellen, James T. Bond, and E. Jeffrey Hill. 2004. *When Work Works: A Status Report on Workplace Flexibility, Who Has It?, Who Wants It? What Difference Does It Make?* New York: Families and Work Institute.

Galinsky, Ellen, James T. Bond, Kelly Sakai, with Stacy S. Kim and Giuntoli. 2008. *National Study of Employers.* New York: Families and Work Institute.

Glass, Jennifer and Valerie Camarigg. 1992. "Gender, Parenthood, and Job-Family Compatibility." *American Journal of Sociology* 98(1):131-157.

Gerson, Kathleen. 1985. *Hard Choices: How Women Decide about Work, Career, and Motherhood.* Berkeley: University of California Press.

Golden, Lonnie and Helene Jorgensen. 2002. "Time after Time: Mandatory Overtime in the U.S. Economy." *Briefing Paper, Economic Policy Institute.*

Gorman, Elizabeth A. and Julie A. Kmec. 2007. "We (Have to) Try Harder: Gender and Required Work Effort in Britain and the United States" *Gender and Society* 21(6): 828-856.

Grant-Vallone, Elisa J. and Stweart I. Donaldson. 2001. "Consequences of Work-Family Conflict on Employee Well-Being Over Time. *Work and Stress.* 15(3):214-226.

Grzywacz, Joseph G. and Nadine F. Marks. 2000. "Family, Work, Work-Family Spillover, and Problem Drinking During Midlife." *Journal of Marriage and Family* 62:336-348.

Grzywacz, Joseph G. and Brenda L. Bass. 2003. "Work, Family, and Mental Health: Testing Different Models of Work-Family Fit." *Journal of Marriage and Family.* 65:248-262.

Hakim, Catherine. 2001. *Work-Lifestyle Choices in the 21st Century: Preference Theory*. Oxford: Oxford University Press.

Heley, Julia R. and Susan Lambert. 2005. "Nonstandard Work and Child-Care Needs of Low-Income Parents." Pgs. 473 492 in *Work, Family, Health, and Well-Being,* Eds. Bianchi, Suzanne M., Lynne M. Casper, and Rosalind Berkowitz King. Mahwah, NJ: Lawrence Erlbaum Associations, Inc.

Howard, Ron. 1989. *Parenthood.* Universal Studios.

Jacobs, Jerry A. and Kathleen Gerson. 2004. *The Time Divide: Work, Family, and Gender Inequality*. Cambridge, MA: Harvard University Press.

Kalleberg, Arne. 2001. "Organizing Flexibility: The Flexible Firm in the New Century." *British Journal of Industrial Relations*. 39: 479-504.

Kelly, Erin L. and Phyllis Moen. 2007. "Rethinking the Clock Work of Work: Why Schedule Control May Pay Off at Work and at Home." *Advances in Developing Human Resources*, 11(9): 487 - 506.

Kelly, Erin L., Kossek, Ellen Ernst, Hammer, Leslie B., Durham, Mary, Bray, Jeremy, Chermack, Kelly, Murphy, Lauren A. and Kaskubar, Dan. 2008. "Getting There from Here: Research on the Effects of Work-Family Initiatives on Work-Family Conflict and Business Outcomes." *The Academy of Management Annals*, 2(1):305-349

Kinnunen, Ulla and Sija Mauno. 1998. "Antecedents and Outcomes of Work-Family Conflict Among Employed Women and Men in Finland." *Human Relations* 51(2):157-177.

Kristensen, Tage S., Lars Smith-Handsen, and Nicole Jansen. 2005. "A Systematic Approach to the Assessmetn of the Psychological Work Envionment and the Associations with Work-Family Conflict. Pgs. 433-452 in *Work, Family, Health, and Well-Being,* Eds. Bianchi, Suzanne M., Lynne M. Casper, and Rosalind Berkowitz King. Mahwah, NJ: Lawrence Erlbaum Associations, Inc.

Larson, Reed W. and David M. Almeida. 1999. "Emotional Transmission in the Daily Lives of Families: A New Paradigm for Studying Family Process." *Journal of Marriage and Family.* 61(1): 5-20.

MacDermid, S. 2005. "(Re)Considering Conflict Between Work And Family". Pages 19-40 in *Work and Life Integration*, edited by E.E. Kossek and S.J. Lambert. Mahwah, NJ: Lawrence Erlbaum Associates.

Mennino and Brayfield 2002

Mennino, Sue Falter, Beth A. Rubin and April Brayfield. 2005. "Home-To-Job And Job To-Home Spillover: The Impact of Company Policies And Workplace Culture" *The Sociological Quarterly.* 46(1):107-123.

Mirchandani, Kiran. 1998. "Protecting the Boundary Teleworker Insights on the Expansive Concept of 'Work.'" Gender & Society 12(2): 168-187

Moen, Phyllis. and Yu, Y. 1999. "Having It All: Overall Work/Life Success In Two-Earner Families." *Sociology of Work* 7:109-139.

Moen, Phyllis and Stephen Sweet. 2003. "Time clocks: Work-Hour Strategies". Pgs. 17 34 in *It's About Time* Ed. Phyllis Moen. Ithaca, New York: Cornell University Press.

Moen, Phyllis and Patricia Roehling. 2005. *The Career Mystique: Cracks in the American Dream.* New York: Rowman and Littlefield.

Moen, Phyllis, Erin L. Kelly, and Reiping Huang. 2008. "'Fit' Inside The Work-Family Black Box: An Ecology Of The Life Course, Cycles Of Control Reframing." *Journal of Occupational and Organizational Psychology*. 81: 411-433.

Moen, Phyllis, Erin L. Kelly, and Qinlei Huang. 2008. JVB.

Moen, Phyllis, Erin Kelly and Kelly Chermack. (forthcoming 2009). "Learning From A Natural Experiment: Studying A Corporate Work-Time Policy Initiative." In *Work-Life Policies That Make A Real Difference For Individuals, Families, And Organizations*. Edited by Ann C. Crouter and Alan Booth. Washington, DC: Urban Institute Press.

Mosisa, Abraham and Steven Hipple. 2006. "Trends in Labor Force Participation in the United States." *Monthly Labor Review* Oct.

National Alliance for Caregiving and AARP. June, 1997. *Family Caregiving in the U.S.: Findings From a National Survey*, Bethesda, MD: National Alliance for Caregiving and Washington, DC: AARP.

Netemeyer, Richard G., James S. Boles, and Richard McMurrian 1996. "Development And Validation Of Work–Family Conflict And Family-Work Conflict Scales." *Journal of Applied Psychology*. 81:400–410.

Pearson, Allison. 2002. *I Don't Know How She Does It: The Life of Kate Reddy, Working Mother.* New York: Knopf.

Perlow, Leslie. 1997. *Finding Time: How Corporations, Individuals, and Families Can Benefit from New Work Practices*. Ithaca, NY: Cornell University Press.

Pitt-Catasouphes, Marcie, Ellen Ernst Kossek, and Stephen Sweet, editors. 2006. *The Work and Family Handbook: Multi-Disciplinary Perspectives and Approaches.* Mahwah, NJ: Lawrence Erlbaum Associations, Inc.

Pixley, Joy E. and Phyllis Moen. 2003. "Prioritizing Careers." Pgs. 183-202 in *It's About*

Time Ed. Phyllis Moen. Ithaca, New York: Cornell University Press.

Raley, Sara B., Marybeth J. Mattingly, and Suzanne M. Bianchi. 2006. "How Dual Are Dual-Income Couples? Documenting Change from 1970 to 2001." Journal of Marriage and Family 68:11-28.

Rapoport, Rayna, Lotte Bailyn, Joyce Fletcher, and B. Pruitt. 2002. *Beyond Work-Family Balance: Advancing Gender Equity and Work Performance.* London: Wiley.

Repetti, Rena L. and Jenifer Wood. 1997. "Effects of Daily Stress at Work on Mothers Interactions with Preschoolers." *Journal of Family Psychology.* 11(1): 90-108.

Reynolds, Jeremy. 2005. "In the Face of Conflict: Work-Life Adjustments and Desired Work Hour Adjustments." *Journal of Marriage and Family* 67:1313-1331.

Sayer, Bianchi, and Robinson.

Schneider, Barbara and Linda J. Waite. 2005. *Being Together, Work Apart: Dual Career Families and the Work-Life Balance.* Cambridge: Cambridge University Press.

Shyer, Charles. 1988. *Baby Boom.* MGM Films.

Steiner, Leslie Morgan. 2007. *Mommy Wars: Stay-at-Home and Career Moms Face Off on Their Choices, Their Lives, Their Families.* New York: Random House.

Stone, Pamela. 2007. *Opting Out? Why Women Really Quit Careers and Head Home.* Berkeley, CA: University of California Press.

Tausig, Mark and Rudy Fenwick. 2001. "Unbinding Time: Alternate Work Schedules And Work–Life Balance." *Journal of Family and Economic Issues, 22,* 101–119.

Thomas, Linda T., and Daniel C. Ganster. 1995. "Impact of family-supportive work variables on work-family conflict and strain: A control perspective." *Journal of Applied Psychology*, 80: 6-15.

Thompson, Cynthia A., L.M. Beauvais, and Karen S. Lyness. 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.

Weedon, Kim. 2004.

Williams, Polly. 2008. *The Yummy Mummy.* New York: Hyperion.

Voydanoff, Patricia. 2004. "The Effects of Work Demands and Resources on Work-to Family Conflict and Facilitation." *Journal of Marriage and Family.* 66:398-412.

Table 1: Descriptive Statistics of Dependendent and Independent Variables in Wave 1 and Wave 2

	Wave 1							Wave 2						
	Full Sample		ROWE		Non-ROWE			Full Sample		ROWE		Non-ROWE		
Variable:	Mean or %	S.D.	Mean or %	S.D.	Mean or %	S.D.	? R-N	Mean or %	S.D.	Mean or %	S.D.	Mean or %	S.D.	? R-N
Dependent Variables														
Work-Time Control	3.222	(0.736)	3.411	(0.731)	3.035	(0.693)	0.376 ***	3.422	(0.825)	3.733	0.737	3.116	(0.793)	0.616 ***
Change in Work-Time Control	--	--	--	--	–	--	--	0.200	(0.702)	0.321	0.742	0.081	(0.638)	0.240 ***
Work-Family Conflict	2.916	(0.651)	3.194	(0.969)	3.097	(0.952)	0.097	2.983	(0.957)	2.920	0.944	3.046	(0.966)	-0.127
Negative Work-Family Spillover	3.145	(0.961)	2.994	(0.667)	2.838	(0.626)	0.157 **	2.879	(0.647)	2.875	0.640	2.882	(0.654)	-0.007
Work-Schedule Fit	5.279	(1.285)	5.233	(1.287)	5.325	(1.282)	-0.092	5.317	(1.290)	5.570	1.203	5.067	(1.326)	0.503 ***
Time Adequacy	5.083	(1.902)	4.973	(1.959)	5.192	(1.841)	-0.219	5.232	(1.873)	5.337	1.939	5.127	(1.802)	0.210
Personal and Family Characterstics														
Women with Children	16.9%	--	21.5%	--	12.4%	--	9.1% **	--	--	--	--	--	--	–
Women without Children	32.4%	--	27.2%	--	37.6%	--	-10.4% **							
Men with Children	18.4%	--	20.2%	--	16.7%	--	3.5%							
Men without Children	32.2%	--	31.1%	--	33.3%	--	-2.2%							
Age														
Age 20-29	45.6%	--	36.4%	--	54.6%	--	-18.2% ***	--	--	--	--	--	--	–
Age 30-39	39.3%	--	44.0%	--	34.6%	--	9.4% *	--	--	--	--	--	--	–
Age 40-60	15.1%	--	19.5%	--	10.8%	--	8.8% **	--	--	--	--	--	--	–
Job Characterstics														
Exempt	95.4%	--	97.7%	--	93.1%	--	4.5% **	--	--	--	--	--	--	–
Income	4.202	(1.517)	4.348	(1.484)	4.059	(1.537)	0.289 *	--	--	--	–	--	--	–
Tenure	4.306	(3.198)	4.716	(3.303)	3.902	(3.042)	0.814 **	--	--	--	–	--	--	–
Job Level														
Non-Supervising Employee	67.3%	--	61.9%	--	72.5%	--	-10.6% **	--	--	--	--	--	--	–
Manager	19.4%	--	20.5%	--	18.3%	--	2.2%	--	--	--	--	--	--	–
Senior Manager and up	13.3%	--	17.5%	--	9.2%	--	8.4% **	--	--	--	--	--	--	–
Competing Explanations and Changes														
Total Hours	48.151	(6.807)	47.977	(7.045)	48.324	(6.570)	-0.347	--	--	--	--	--	--	–
Job Demands	2.95	(0.498)	2.989	(0.487)	2.910	(0.506)	0.080	--	--	--	--	--	--	–
Decision Authority	2.91	(0.518)	2.922	(0.525)	2.903	(0.512)	0.019	--	--	--	--	--	--	–
Skill Discretion	2.92	(0.456)	2.975	(0.434)	2.866	(0.470)	0.109 **	--	--	--	--	--	--	–
Manager Support	3.54	(0.914)	3.507	(0.941)	3.579	(0.887)	-0.072	--	--	--	--	--	--	–
Organizational Supportive Culture	3.40	(0.622)	3.342	(0.622)	3.464	(0.616)	-0.122 *	--	--	--	--	--	--	–
Life Change within 6 months	--	--	--	--	–	--	--	16.0%	--	12.9%	--	19.0%	--	-6.0% *
Job Change within 6 months	--	--	--	--	–	--	--	13.3%	--	10.9%	--	15.7%	--	-4.8%

* p<.05; ** p<.01; *** p<.001

Total N=608, Non-ROWE N=306, ROWE N=302

Table 2: OLS Regressions Results Estimating Work-Time Control in Wave 2

	Model 1		Model 2		Model 3		Model 4	
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Work-Time Control in Wave 1	0.606 ***	(0.037)	0.614 ***	(0.039)	0.566 ***	(0.045)	0.561 ***	(0.046)
ROWE	0.388 ***	(0.054)	0.377 ***	(0.056)	0.386 ***	(0.056)	0.396 ***	(0.090)
Women with Children			0.075	(0.088)	0.083	(0.089)	0.068	(0.125)
Women without Children			0.075	(0.063)	0.089	(0.063)	0.026	(0.086)
Men with Children			0.051	(0.079)	0.071	(0.079)	0.246 *	(0.112)
Age 30-39			0.067	(0.069)	0.067	(0.069)	0.066	(0.070)
Age 40-60			-0.028	(0.087)	-0.007	(0.087)	0.000	(0.088)
Exempt			-0.060	(0.126)	-0.095	(0.129)	-0.093	(0.132)
Income			0.028	(0.022)	0.024	(0.023)	0.024	(0.023)
Tenure			0.015	(0.009)	0.016	(0.009)	0.016	(0.009)
Manager			-0.230 **	(0.074)	-0.203 **	(0.074)	-0.196 **	(0.074)
Senior Manager and up			-0.159	(0.091)	-0.116	(0.095)	-0.090	(0.095)
Total Hours					-0.007	(0.004)	-0.009	(0.004)
Job Demands					-0.075	(0.059)	-0.074	(0.059)
Decision Authority					0.106	(0.063)	0.108	(0.063)
Skill Discretion					0.023	(0.075)	0.015	(0.076)
Life Change within 6 months					0.014	(0.067)	0.018	(0.067)
Job Change within 6 months					0.000	(0.074)	-0.002	(0.074)
Women with Children*ROWE							0.017	(0.157)
Women without Children*ROWE							0.151	(0.129)
Men with Children*ROWE							-0.324 *	(0.146)
Constant	1.277 ***	(0.117)	1.078 ***	(0.138)	1.415 ***	(0.289)	1.518 ***	0.299
N	608		608		608		608	
R-squared	0.413		0.428		0.438		0.447	

* p<.05; ** p<.01; *** p<.001

Figure 1: Estimated Values of Work-Time Control in Wave 2 for Men and Women, with and without Children, by ROWE

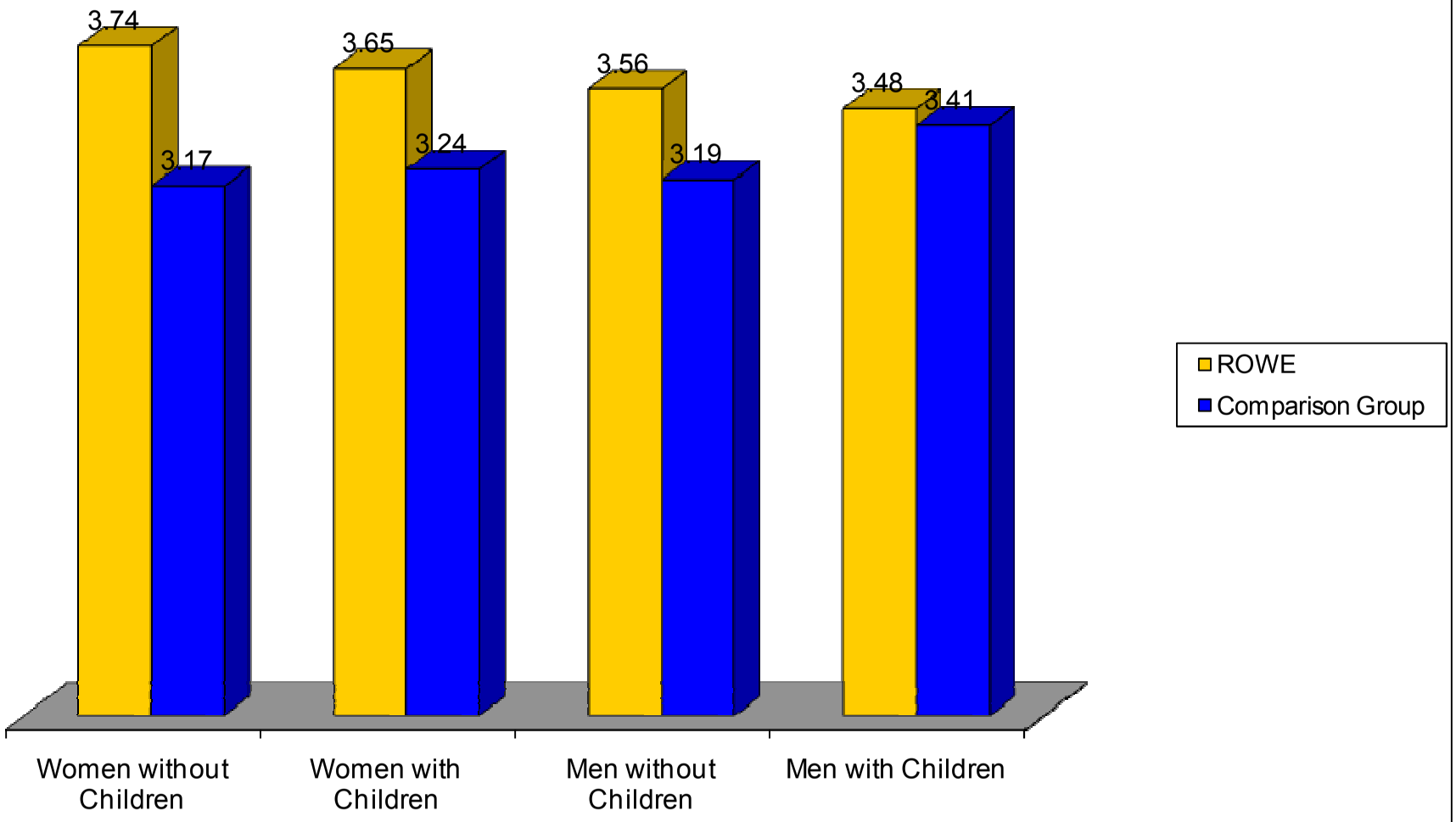

Table 3: OLS Regressions Results Estimating Work-Family Conflict Scale in Wave 2

	Model 1		Model 2		Model 3		Model 4	
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Work-Family Conflict Scale in Wave 1	0.651 ***	(0.030)	0.606 ***	(0.031)	0.554 ***	(0.036)	0.526 ***	(0.037)
ROWE	-0.220 ***	(0.060)	0.002	(0.060)	-0.024	(0.060)	-0.056	(0.061)
Work-Time Control Change			-0.477 ***	(0.041)	-0.478 ***	(0.041)	-0.465 ***	(0.041)
Work-Time Control in Wave 1			-0.273 ***	(0.044)	-0.337 ***	(0.047)	-0.282 ***	(0.048)
Women with Children					-0.022	(0.087)	-0.054	(0.087)
Women without Children					-0.112	(0.068)	-0.117	(0.067)
Men with Children					-0.008	(0.086)	0.002	(0.086)
Age 30-39					0.148 *	(0.070)	0.123	(0.069)
Age 40-60					0.067	(0.085)	0.045	(0.086)
Exempt					-0.184	(0.117)	-0.177	(0.114)
Income					-0.021	(0.021)	-0.025	(0.021)
Tenure					0.001	(0.009)	0.000	(0.009)
Manager					0.142	(0.081)	0.153	(0.080)
Senior Manager and up					0.247 *	(0.098)	0.269 *	(0.097)
Life Change within 6 months							0.037	(0.079)
Job Change within 6 months							0.084	(0.084)
Manager Support							-0.051	(0.030)
Organizational Supportive Culture							-0.138 **	(0.049)
Constant	1.043 ***	(0.099)	2.054 ***	(0.194)	2.441 ***	(0.223)	3.029 ***	(0.294)
N	590		590		590		590	
R-squared	0.432		0.532		0.552		0.562	
Sobel Test for Mediation	--	--	-0.194 ***	(0.031)	-0.186 ***	(0.031)	-0.188 ***	(0.031)
Percent of Total Effect that is Mediated	--	--	100.8 %		88.8 %		77.1 %	

* p<.05; ** p<.01; *** p<.001

Table 4: OLS Regressions Results Estimating Negative Work Family Spillover in Wave 2

	Model 1		Model 2		Model 3		Model 4	
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Negative WF Spillover in Wave 1	0.641 ***	(0.034)	0.597 ***	(0.033)	0.583 ***	(0.035)	0.567 ***	(0.034)
ROWE	-0.098 *	(0.039)	0.034	(0.040)	0.030	(0.041)	0.012	(0.042)
Work-Time Control Change			-0.243 ***	(0.029)	-0.235 ***	(0.030)	-0.229 ***	(0.029)
Work-Time Control in Wave 1			-0.167 ***	(0.029)	-0.178 ***	(0.032)	-0.148 ***	(0.033)
Women with Children					-0.008	(0.062)	-0.021	(0.061)
Women without Children					0.029	(0.048)	0.027	(0.047)
Men with Children					-0.102	(0.060)	-0.093	(0.059)
Age 30-39					0.032	(0.047)	0.021	(0.048)
Age 40-60					0.045	(0.063)	0.050	(0.065)
Exempt					0.064	(0.091)	0.058	(0.088)
Income					-0.027	(0.015)	-0.030 *	(0.015)
Tenure					0.002	(0.006)	0.002	(0.006)
Manager					0.166 **	(0.053)	0.159 **	(0.054)
Senior Manager and up					0.164 *	(0.068)	0.168 *	(0.067)
Life Change within 6 months							0.076	(0.053)
Job Change within 6 months							0.012	(0.060)
Manager Support							0.007	(0.022)
Organizational Supportive Culture							-0.110 **	(0.036)
Constant	1.056 ***	(0.099)	1.707 ***	(0.146)	1.819 ***	(0.157)	2.130 ***	(0.202)
N	586		586		586		586	
R-squared	0.429		0.492		0.507		0.518	
Sobel Test for Mediation	--	--	-0.106 ***	(0.019)	-0.099 ***	(0.019)	-0.100 ***	(0.019)
Percent of Total Effect that is Mediated	--	--	147.3 %		142.8 %		113.3 %	

* p<.05; ** p<.01; *** p<.001

Table 5: OLS Regressions Estimating Work Schedule Fit in Wave 2

	Model 1		Model 2		Model 3		Model 4	
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Work-Schedule Fit in Wave 1	0.556 ***	(0.040)	0.469 ***	(0.037)	0.448 ***	(0.037)	0.450 ***	(0.039)
ROWE	0.540 ***	(0.085)	0.097	(0.080)	0.122	(0.081)	0.102	(0.082)
Work-Time Control Change			0.819 ***	(0.066)	0.824 ***	(0.066)	0.831 ***	(0.065)
Work-Time Control in Wave 1			0.615 ***	(0.065)	0.643 ***	(0.068)	0.648 ***	(0.069)
Women with Children					-0.109	(0.115)	-0.094	(0.115)
Women without Children					-0.104	(0.092)	-0.106	(0.091)
Men with Children					-0.100	(0.108)	-0.084	(0.110)
Age 30-39					-0.028	(0.096)	-0.075	(0.096)
Age 40-60					-0.133	(0.125)	-0.219	(0.128)
Exempt					0.364 *	(0.162)	0.409 *	(0.165)
Income					-0.004	(0.030)	-0.005	(0.030)
Tenure					-0.018	(0.013)	-0.021	(0.013)
Manager					-0.104	(0.111)	-0.085	(0.110)
Senior Manager and up					0.178	(0.132)	0.195	(0.134)
Life Change within 6 months							-0.235 *	(0.102)
Job Change within 6 months							-0.268 *	(0.108)
Manager Support							-0.036	(0.046)
Organizational Supportive Culture							-0.003	(0.069)
Constant	2.105 ***	(0.236)	0.641 **	(0.216)	0.824 ***	(0.249)	1.046 ***	(0.326)
N	599		599		599		599	
R-squared	0.341		0.523		0.534		0.544	
Sobel Test for Mediation	--	--	0.331 ***	(0.051)	0.322 ***	(0.051)	0.338 ***	(0.051)
Percent of Total Effect that is Mediated	--	--	77.4 %		72.6 %		76.7 %	

* p<.05; ** p<.01; *** p<.001

Table 6: OLS Regressions Results Estimating Time Adequacy in Wave 2

	Model 1		Model 2		Model 3		Model 4	
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Time Adequacy in Wave 1	0.685 ***	(0.028)	0.653 ***	(0.028)	0.611 ***	(0.031)	0.603 ***	(0.031)
ROWE	0.360 ***	(0.109)	0.001	(0.108)	0.046	(0.108)	0.050	(0.110)
Work-Time Control Change			0.716 ***	(0.088)	0.733 ***	(0.088)	0.733 ***	(0.085)
Work-Time Control in Wave 1			0.456 ***	(0.084)	0.555 ***	(0.091)	0.514 ***	(0.087)
Women with Children					-0.215	(0.174)	-0.177	(0.172)
Women without Children					0.223	(0.131)	0.237	(0.129)
Men with Children					-0.157	(0.162)	-0.153	(0.162)
Age 30-39					-0.135	(0.134)	-0.182	(0.132)
Age 40-60					-0.125	(0.181)	-0.256	(0.182)
Exempt					0.090	(0.200)	0.169	(0.204)
Income					0.013	(0.042)	0.017	(0.042)
Tenure					-0.019	(0.019)	-0.022	(0.019)
Manager					-0.078	(0.145)	-0.038	(0.145)
Senior Manager and up					-0.107	(0.198)	-0.069	(0.200)
Life Change within 6 months							-0.311 *	(0.141)
Job Change within 6 months							-0.464 ***	(0.141)
Manager Support							-0.076	(0.058)
Organizational Supportive Culture							0.162	(0.096)
Constant	1.562 ***	(0.161)	0.284	(0.255)	0.272	(0.317)	0.282	(0.476)
N	596		596		596		596	
R-squared	0.491		0.552		0.566		0.581	
Sobel Test for Mediation	--	--	0.298 ***	(0.051)	0.298 ***	(0.051)	0.312 ***	(0.051)
Percent of Total Effect that is Mediated	--	--	99.8 %		86.6 %		86.2 %	

* p<.05; ** p<.01; *** p<.001

Appendix 1: Description of Scales Used as Dependent Variables in Analysis

Scale	Source	Variable Description	Wave 1 Item Factor Loadings	Wave 2 Item Factor Loadings	Cronbach's Alpha	KMO Sampling Adequacy	Sphericity Test Chi-Sq.	Sphericity Test D.F.	Goodness Chi-Sq.
		How much choice do you have over when you take vacations or days off?	0.410	0.607					
		…when you can take a few hours off?	0.572	0.750					
		…when you begin and end each workday?	0.794	0.802	Wave 1:	Wave 1:	Wave 1:		Wav
		…over doing some of your work at home or at another location?	0.648	0.725	0.783	0.764	1196.86 ***	21	263.39
		…the amount or times you take work home with you?	0.457	0.603					
	Thomas and	…shifting to a part-time schedule if you wanted to do so?	0.368	0.465	Wave 2:	Wave 2:	Wave 2:		Wav
Work-Time Control Scale	Ganster 1995	…the total number of hours you work each week?	0.764	0.744	0.850	0.826	1722.29 ***	21	250.99
		The demands of my work interfere with my home and family life.	0.874	0.892	Wave 1:	Wave 1:	Wave 1:		Wav
		The time my job takes up makes it difficult to fulfill my family responsibilites	0.905	0.913	0.929	0.892	2400.98 ***	10	31.31
	Netermeyer,	Things at home do not get done because of the demands of my job.	0.865	0.869					
	Boles, and	My job produces strain that makes it difficult to fulfill family duties.	0.858	0.837	Wave 2:	Wave 2:	Wave 2:		Wav
Work-Family Conflict Scale	McMurrian 1996	Due to work, I have to make changes to my plans for family activities.	0.747	0.788	0.934	0.900	2425.27 ***	10	20.24
		Has your job reduced the effort you can give to activities at home?	0.572	0.606	Wave 1:	Wave 1:	Wave 1:		Wav
		Has stress at work made you irritable at home?	0.826	0.800	0.829	0.773	985.38 ***	6	39.6
Negative Work-Family	Grzywacz and	Has your job made you too tired to do things that need attention at home?	0.781	0.835	Wave 2:	Wave 2:	Wave 2:		Wav
Spillover	Marks 2000	Have job worries or problems distracted you when you are at home?	0.803	0.761	0.833	0.785	944.07 ***	6	26.41
		Taking into account your current work hours and schedule, how well is your work arrangement working for you?	0.842	0.835	Wave 1: 0.859	Wave 1: N.A.	Wave 1: 562.11 ***	1	Wav N.A.
	Barnett, Gareis, and Brennan	Taking into account your current work hours and schedule, how well is your			Wave 2:	Wave 2:	Wave 2:		Wav
Work Schedule Fit	1999	work arrangement working for your family or personal life?	0.833	0.824	0.866	N.A.	569.44 ***	1	N.A.
		To what extent is there time to get enough sleep/rest?	0.696	0.693					
		...Be by yourself?	0.735	0.752					
		…Socialize?	0.748	0.802					
	Van Horn, Bellis,	…Keep in shape?	0.691	0.692	Wave 1:	Wave 1:	Wave 1:		Wav
	and Snyder	…Prepare or eat healthy meals?	0.684	0.733	0.902	0.904	2140.58 ***	36	223.13
	2001 & Becker,	…Participate in civic groups or be active in your community?	0.715	0.710					
	Stuifbergen, Soo	…Nurture your spiritual and/or creative side?	0.769	0.743					
	Oh, and Hall	…Complete housework and chores?	0.715	0.728	Wave 2:	Wave 2:	Wave 2:		Wav
Time Adequacy	1993	…For your family to be together?	0.607	0.628	0.911	0.906	2060.77 ***	36	213.38

Appendix 2: Description of Scales Used as Independent Variables in Analysis

Scale	Source	Variable Description	Wave 1 Item Factor Loadings	Wave 2 Item Factor Loadings	Cronbach's Alpha	KMO Sampling Adequacy	Sphericity Test Chi-Sq.	Sphericity Test D.F.	Goodness Chi-Sq.
		I do not have enough time to get my job done.	0.694	0.687					
		My job requires very fast work.	0.531	0.572	Wave 1:	Wave 1:	Wave 1:		Wav
	Belkic,	My job requires very hard work.	0.548	0.572	0.759	0.799	741.24 ***	15	56.67
	Landsbergis,	My job requires excessive work.	0.704	0.639					
Psychological Job	Schnall, and	My job involves conflicting demands.	0.520	0.529	Wave 2:	Wave 2:	Wave 2:		Wav
Demands	Baker 2004	I have many interruptions and disturbances in my job.	0.517	0.492	0.755	0.807	719.15 ***	15	52.74
		On my job, I have very little freedom to decide how			Wave 1:	Wave 1:	Wave 1:		Wav
		I do my work.	0.466	0.441	0.643	0.629	244.86 ***	3	244.86
		I have a lot of say about what happens on my job.	0.650	0.616	Wave 2:	Wave 2:	Wave 2:		Wav
Decision Authority	Karasek 1985	My job allows me to make a lot of decisions on my own.	0.729	0.707	0.609	0.619	204.84 ***	3	204.84
		My job requires that I learn new things.	0.593	0.647					
		My job involves a lot of repetitive work.	0.470	0.366	Wave 1:	Wave 1:	Wave 1:		Wav
	Appelbaum,	My job requires me to be creative.	0.720	0.711	0.756	0.809	781.16 ***	15	49.19
	Bailey, Berg,	My job requires a high level of skill	0.600	0.570					
	and Kalleberg	I get to do a variety of different things on my job.	0.680	0.675	Wave 2:	Wave 2:	Wave 2:		Wav
Skill Discretion	2000	I have an opportunity to develop my own special abilities.	0.495	0.593	0.755	0.815	804.87 ***	15	46.95
		To what extent does your manager… Really care about your well-being?	0.707	0.682	Wave 1:	Wave 1:	Wave 1:		Wav
		...Taken the time to learn about my career goals and aspirations?	0.954	0.935	0.871	0.760	1377.61 ***	6	79.56
	Cameron and	...Has actively helped me prepare for my next career move.	0.842	0.873	Wave 2:	Wave 2:	Wave 2:		Wav
Manager Support	Quinn 1999	... Listens to me and considers my opinion?	0.649	0.695	0.877	0.776	1356.22 ***	6	57.01
		Work should be the primary priority in a person's life.	0.500	0.515					
	Allen 2001 &	The way to advance is to keep nonwork matters out of the workplace.	0.332	0.397					
	Patterson, West,	Employees who take time off for personal matters are not committed to work.	0.545	0.556					
	Shackleton,	Employees have opportunity perform their job and their personal	0.452	0.389	Wave 1:	Wave 1:	Wave 1:		Wav
	Lawthorn,	It is assumed that productive employees are those who put work before family	0.803	0.782	0.802	0.847	1439.58 ***	36	204.83
	Maitlis,	The ideal employee is one who is available 24 hours a day.	0.656	0.614					
	Robinson,	Managers pay more attention to the quality of work than to how many hours	0.406	0.459					
Organizational Supportive	Dowson, and	You are considered a more valuable employee if management sees you	0.670	0.726	Wave 2:	Wave 2:	Wave 2:		Wav
Culture	Wallace 2004	Employees who prioritize their families can still do well here.	0.668	0.599	0.804	0.825	1505.27 ***	36	311.39

Appendix 3: Examining Alternative Mediation Pathways

	Baseline		Work-Time Control		Organizational Supportive Culture		Manager Support	
Panel A: Work-Family Conflict Scale in Wave 2								
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Work-Family Conflict Scale in Wave 1	0.651 ***	(0.030)	0.606 ***	(0.031)	0.581 ***	(0.033)	0.631 ***	(0.031)
ROWE	-0.220 ***	(0.060)	0.002	(0.060)	-0.196 ***	(0.057)	-0.222 ***	(0.059)
Change	–	--	-0.477 ***	(0.041)	-0.354 ***	(0.056)	-0.165 ***	(0.036)
Wave 1	–	--	-0.273 ***	(0.044)	-0.355 ***	(0.057)	-0.171 ***	(0.037)
Constant	1.043 ***	(0.099)	2.054 ***	(0.194)	2.456 ***	(0.265)	1.694 ***	(0.185)
Sobel Test for Mediation	–	--	-0.194 ***	(0.031)	-0.041 *	(0.016)	0.002	(0.011)
Percent of Total Effect that is Mediated	–	--	100.8 %		17.5%		0.9%	
Panel B: Negative Work-Family Spillover in Wave 2								
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Negative Work-Family Spillover in Wave 1	0.641 ***	(0.034)	0.597 ***	(0.033)	0.577 ***	(0.032)	0.630 ***	(0.034)
ROWE	-0.098 *	(0.039)	0.034	(0.040)	-0.082 *	(0.038)	-0.098 ***	(0.039)
Change	–	--	-0.243 ***	(0.029)	-0.218 ***	(0.038)	-0.125 ***	(0.025)
Wave 1	–	--	-0.167 ***	(0.029)	-0.241 ***	(0.040)	-0.078 ***	(0.025)
Constant	1.056 ***	(0.099)	1.707 ***	(0.146)	2.052 ***	(0.186)	1.351 ***	(0.142)
Sobel Test for Mediation	–	--	-0.106 ***	(0.013)	-0.027 *	(0.010)	0.001	(0.009)
Percent of Total Effect that is Mediated	–	--	147.3 %		24.4%		1.1%	
Panel C: Work-Schedule Fit in Wave 2								
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Work-Schedule Fit in Wave 2	0.556 ***	(0.040)	0.469 ***	(0.037)	0.503 ***	(0.042)	0.521 ***	(0.042)
ROWE	0.540 ***	(0.085)	0.097	(0.080)	0.504 ***	(0.085)	0.572 ***	(0.085)
Change	–	--	0.819 ***	(0.066)	0.517 ***	(0.082)	0.261 ***	(0.057)
Wave 1	–	--	0.615 ***	(0.065)	0.358 ***	(0.089)	0.180 ***	(0.061)
Constant	2.105 ***	(0.236)	0.641 **	(0.216)	1.194 ***	(0.335)	1.664 ***	(0.283)
Sobel Test for Mediation	–	--	0.331 ***	(0.052)	0.055 *	(0.024)	-0.006	(0.018)
Percent of Total Effect that is Mediated	–	--	77.4 %		9.8%		1.0%	
Panel D: Time Adequacy in Wave 2								
Variable:	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Time Adequacy in Wave 2	0.685 ***	(0.028)	0.653 ***	(0.028)	0.650 ***	0.030	0.673 ***	0.029
ROWE	0.360 ***	(0.109)	0.001	(0.108)	0.327 **	0.108	0.361 ***	0.109
Change			0.716 ***	(0.088)	0.551 ***	0.097	0.214 **	0.068
Wave 1			0.456 ***	(0.084)	0.496 ***	0.112	0.130	0.076
Constant	1.562 ***	(0.161)	0.284	(0.255)	0.071	0.355	1.182 ***	0.288
Sobel Test for Mediation	–	--	0.298 ***	(0.051)	0.061 *	0.026	-0.023	0.021
Percent of Total Effect that is Mediated	–	--	99.8 %		15.7%		-40.6%	

* p<.05; ** p<.01; *** p<.001