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Does Enhancing Work-Time Control and Flexibility Reduce Turnover? A Naturally Occurring Experiment

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We investigate the turnover effects of an organizational innovation (ROWE—Results Only Work Environment) aimed at moving away from standard time practices to focus on results rather than time spent at work. To model rates of turnover, we draw on survey data from a sample of employees at a corporate headquarters (N = 775) and institutional records of turnover over eight months following the ROWE implementation. We find the odds of turnover are indeed lower for employees participating in the ROWE initiative, which offers employees greater work-time control and flexibility, and that this is the case regardless of employees' gender, age, or family life stage. ROWE also moderates the turnover effects of organizational tenure and negative home-to-work spillover, physical symptoms, and job insecurity, with those in ROWE who report these situations generally less likely to leave the organization. Additionally, ROWE reduces turnover intentions among those remaining with the corporation. This research moves the "opting-out" argument from one of private troubles to an issue of greater employee work-time control and flexibility by showing that an organizational policy initiative can reduce turnover. Keywords: turnover, opting out, work-time control, flexibility, organizational change.

Turnover is increasingly a fact of contemporary working life, as job shifts and layoffs become the norm. What used to characterize the paths of white, middle class men in the middle of the twentieth century—a career mystique of continuous employment with the same employer—is no longer the case for even that privileged group (Moen and Roehling 2005). Contemporary employment paths are often marked by turnover in light of global economic forces and job conditions impelling employees out of particular jobs and even out of the workforce. Myriad forces, including low job satisfaction, insecurity, poor health, and low tenure, can contribute to turnover.

Time pressures and overloads also infuse the new reality of American employment. Most employees live in households where all adults are in the workforce, meaning that most can't off-load (to another household member) the multiple nonwork demands of their lives. The pace of work is escalating in light of a competitive, global labor market and economic turbulence, with

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Social Problems, Vol. 58, Issue 1, pp. 69–98, ISSN 0037-7791, electronic ISSN 1533-8533. © 2011 by Society for the Study of Social Problems, Inc. All rights reserved. Please direct all requests for permission to photocopy or reproduce article content through the University of California Press's Rights and Permissions website at www.ucpressjournals.com/reprintinfo/asp. DOI: 10.1525/sp.2011.58.1.69.

employees expected to do more with fewer resources. Escalating work-time demands, in turn, ratchet up the strains on employees in managing all aspects of their lives (Moen and Yu 2000).

These two aspects of contemporary work—turnover and time pressures—come together in the concept of *opting out* (Stone 2007; Stone and Lovejoy 2004). Members of the media frequently depict employees with high family obligations (especially mothers raising children) as enjoying their jobs but unable to meet high job demands, and, hence, more apt to leave their jobs and even the workforce (Belkin 2003; Hewlett and Luce 2005; Kuperberg and Stone 2008; Williams, Manvell, and Bornstein 2006). In support of this argument, high levels of negative spillover from work to home or from home to work have been shown to predict turnover and turnover intentions (Armstrong et al. 2007; Grandey and Cropanzano 1999; Greenhaus, Parasuraman, and Collins 2001; Jones et al. 2007; Moen and Q. Huang 2010). But the *opting-out* framing blames the victim, implying working mothers are not managing their multiple roles effectively. In doing so it neglects the ratcheting up of workloads and work-time expectations that increase time pressures on all workers, not just women or mothers. It also neglects the fact that jobs were designed for workers without family responsibilities, even as most workers now live in households where all adults are employed. What can employers do to retain and support their employees in this uncertain and demanding work environment, even if they are unable to guarantee secure employment?

Some argue that greater employee *flexibility* can promote retention, especially for employees with chronic overloads and time strains (Armstrong et al. 2007; Glass and Riley 1998; Hill et al. 2006; Kelly and Moen 2007). And Pamela Stone (2007) has shown that married middle class women feel pushed out precisely because of the inflexibility and overwhelming demands of their jobs. However, flexibility policies are too often simply “on the books” but not widely available; in other instances, flexibility policies are too minimal to provide much relief from time pressures (Kelly and Moen 2007; Schieman and Glavin 2008). Scholars increasingly suggest broad changes in the structure and culture of *time at work* (Bailyn 1993; Bianchi, Casper, and King 2005; Kelly et al. 2008; Kelly and Moen 2007; Kossek and Lambert 2005; Moen 2003; Pitt-Catsouphes, Kossek, and Sweet 2006) as key to employee and family well-being. This means making concrete changes in the temporal organization of work, not simply placing policies “on the books.” Could offering employees real flexibility in terms of the time and timing of their work reduce turnover?

This study seeks to answer this question by examining just such an organizational innovation rolled out at the headquarters of a large high performance corporation (Appelbaum et al. 2000),¹ Best Buy Co., Inc., located near Minnesota’s Twin Cities.² Drawing on two waves of survey data collected from this primarily white, middle class sample of employees as well as administrative data provided by the company, we assess the effects on turnover and turnover intentions of the Results-Only Work Environment (ROWE) initiative. This organizational change focuses on employees effectively accomplishing their tasks, not the time they spend at work (Ressler and Thompson 2008). This structural and cultural change aims to increase employees’ productivity as well as enhance their control over where and when they do their work by focusing on results, not on simply being visibly present (face time).

A Natural Experiment

Prior to the implementation of ROWE, Best Buy, like most corporations, equated commitment and productivity with long hours spent at one’s desk or in meetings. The ROWE initiative reoriented employees and managers towards measurable results while deemphasizing when

1. High performance work systems are workplaces where employees are encouraged to participate in organizational decision making and to develop their skills, typically having high demands and expecting employees to put in long hours.

2. Best Buy Co, Inc. granted us permission to use their name, thereby further contextualizing our results. The ROWE innovation at Best Buy Co, Inc. has been widely reported in the media, making it impossible to mask the research site.

and where work is completed and the amount of time spent accomplishing tasks. Employees in the ROWE rollout participated in a series of team-level workshops that encouraged them to challenge existing face-time and productivity norms. Supervisors and employees alike were asked to let go of established expectations (about long hours and face time) to permit employees greater work-time control to do whatever they want, wherever they want *as long as the work gets done* (Kelly et al. 2010; Kelly, Moen, and Tranby forthcoming; Moen, Kelly, and Chermack 2009; Ressler and Thompson 2008). Specifically, the leaders of the ROWE innovation held four participatory workshops for employees and an additional session for managers that in total lasted approximately six hours spread out over several weeks. The first session introduced the ROWE innovation and the training process. The second session critically examined the current work culture and practices and asked teams to develop an alternative work culture. For example, participants were asked to role-play and discuss assumptions made about workers arriving “late” or leaving “early,” and encouraged those doing so to redirect any disparaging comments away from the breaking of time norms towards results (e.g., asking, “Is there something you need?”). The third session encouraged participants to identify practices they could change, such as sending a single team representative to larger meetings and reporting back necessary information rather than having everyone attend all meetings. During this session, employees were also asked to identify one concrete step they would take to implement ROWE for themselves or their team. Finally, team members attended a concluding session where they shared concerns, successes, and strategies for working in a ROWE environment.

The goal of this article is to move from the usual practice of comparing the turnover of employees with different attributes to a natural experiment in order to assess the turnover impacts of actually *changing the rules* around the time and timing of work. This moves the argument from the private troubles of employees (who may opt out given time demands) to actually changing the temporal conditions of work (that may be pushing them out). Richard Sennett (1998) describes the “time cages” of lives that constrain options at every turn. By time cages we mean the invisible scaffolds—taken-for-granted rules and regulations, norms and practices—shaping the clocks and calendars of work days, workweeks, and work years, such as being “at work” by a certain time and working a certain number of hours each day or week. Other time cages are even more subtle, such as the culture of equating long hours with productivity and commitment. In the context of a deliberate organizational change (ROWE) challenging these time cages, we address two sets of questions, investigating potential direct as well as contextual (moderator) effects on turnover of the ROWE innovation. First, does employees’ participation in the ROWE initiative reduce the odds of their turnover as well as lower their turnover intentions? Second, are typical factors shown previously to affect turnover and turnover intentions (such as low job satisfaction, poor health, high job insecurity or low organizational tenure) moderated by participation in the ROWE initiative? In other words, does ROWE change employees’ calculations regarding turnover such that those who would normally be more likely to leave the organization are now less likely to do so?

A Life-Course Approach to Rowe and Turnover

The life course as both a concept and theoretical approach is well suited to understanding the distribution of effects of ROWE on turnover. In addition to patterned life events and transitions, the life course can be thought of as systems of age- and time-related policies and practices, rules, and regulations (Settersten 2003) that serve to organize the temporal rhythms of daily lives. The life course is also a *gendered* institution, assigning meaning to conditions and events in distinctive ways for women and men (Moen 2001; Moen and Spencer 2006). As such, the life course has both a material and a symbolic aspect: it captures workforce transitions such as turnover, but also provides the framework of meaning employees apply to these transitions and to expectations of future transitions (Kohli 1986) often based on the intersection of

age, gender, and parental stage that captures employees' temporal locations in both work and family (such as their career stage and their family stage).

The concept of "opting out" that is often linked to a particular gendered family stage (i.e., married middle class mothers with young children) implies a sense of choice as to whether to leave or remain with an organization. Life-course scholars understand individuals as agents in the construction of their own lives (Elder 1974; Heinz 2002), but limited by available structural and cultural frameworks (Clegg 1989; Swidler 1986). Agency thus remains bounded by existing institutions, even as these institutions are changing. For example, ROWE is a corporate-level organizational change aimed at altering the temporal structure of work, seeking to dismantle the clocks and calendars dictating when and where work is done, *and* the engrained cultural beliefs and practices around work time and face time as indicators of work commitment, productivity, and quality. This increased ability to anticipate and manage family and work demands through greater work-time control and scheduling flexibility lead us to hypothesize that the rate of turnover and the level of turnover intentions will be reduced for those in the ROWE redesign but not for those in the comparison group, net of traditional predictors of turnover and turnover intentions.

Prior reviews of studies examining turnover have focused on the effects of age, organizational tenure, turnover intentions, available employment alternatives, job satisfaction, and commitment (Barak, Nissly, and Levin 2001; Cotton and Tuttle 1986; Griffith, Hom, and Gaertner 2000; Mobley et al. 1979; Mobley, Horner, and Hollingsworth 1978). Turnover has thus been theorized as employees' choices to leave an employer given their objective social location (such as age or tenure) or their subjective assessments of their situations³ (such as job satisfaction or turnover intentions; for examples see Bridges, Johnston, and Sager 2007; Crossley et al. 2007; Donnelly and Quirin 2006; Mobley et al. 1978; Mobley et al. 1979). Therefore, in addition to assessing any direct effects of ROWE on turnover, our life-course model proposes that ROWE may moderate the effects of two sets of predictors of turnover capturing both employees' social structural location and their subjective assessments of life-course fit or misfit.

Social Structural Location

Any ROWE effects on turnover could well be dependent on employees' location in the gendered life course as captured by the intersection of their age, gender, and parental status (see also Erickson, Martinengo, and Hill 2010). This argument is commonly invoked in theorizing one form of turnover, women's "opting out" of valued and desired jobs, with such turnover seen as a strategic adaptation in the face of high demands at work and at home (Belkin 2003; Moen 2007; Stone 2007; Stone and Lovejoy 2004). Thus, we hypothesize that ROWE may have different effects on turnover depending on whether the employee is a man or woman at different ages/family stages⁴, with mothers of young children especially benefiting from the increased flexibility offered by ROWE. This is because of the cultural expectations associated with the (gendered) lock-step career mystique (of continuous, full-time employment throughout "prime" adulthood) that perpetuates men's roles as breadwinners and the primacy of caregiving in women's lives (Moen 2003; Moen and Roehling 2005), thereby legitimating women's but not men's employment exits. Thus, formal and informal norms and opportunity structures are not only class and race dependent (contingencies we cannot address given the homogeneity of our sample, but see Kmec 2007), they are also age, gender, and family stage dependent (contingencies we do address). We hypothesize that ROWE will be especially beneficial in reducing actual turnover and turnover intentions for employees in the active parenting stage of the life course, particularly mothers. Further, this may be especially the case for married women with an employed spouse, who presumably can better afford to leave their jobs.

3. Turnover can also reflect the decisions of employers, of course, but much extant research models the relationship between employee characteristics and job exits, thus focusing implicitly on employees' decisions to exit their jobs.

4. Age can also be a rough marker of employees' career stage, as can their tenure in the organization.

ROWE should also benefit employees who are working in “extreme jobs,” such as managers and senior executives in high performance organizations (Appelbaum et al. 2000) like Best Buy that expect total employee commitment. There is, however, an alternative hypothesis that we see as less likely. James Baron, Michael Hannan and M. Burton (2001) demonstrate that there is a tendency for management to exit in the face of organizational change due to “old guard disenchantment.” From this perspective, managers and leaders (who may be more invested in the status quo) would be more apt than other employees to exit the firm. Organizational tenure is another factor previously found to predict turnover; whether and how ROWE may moderate any tenure effects is an open question. Therefore, we hypothesize interactions between ROWE and other social-locational factors (such as job level and organizational tenure) in predicting turnover and turnover intentions, but do not hypothesize the direction of effects.

Life-Course Fit

The life course perspective not only emphasizes employees’ structural locations (such as their organizational tenure, occupational level, gender, and family stage) associated with distinctive sets of practices, it also captures individuals’ *assessments* of the quality of their lives, what we term employees’ sense of *life-course fit* or *misfit* (Moen, Kelly, and R. Huang 2008). Life-course fit is an umbrella term capturing respondents’ cognitive appraisals of the degree of match or mismatch between their resources and the claims upon them, with both resources and claims varying at different points in the adult course (see also Elder and Shanahan 2006 on control cycles). Achieving life-course fit can be especially problematic in light of escalating time demands at work and at home; the resulting misfit may push employees to opt out of their jobs or to perform so poorly as to be let go. This concept of life-course fit builds on a long tradition of scholarship on the fit between employees and their jobs (Kahn 1981) and scholarship on the gendered life course, which emphasizes the intersectionality of age, family stage, and gender (Moen and Chesley 2008; Moen, Kelly, and R. Huang 2008; Moen, Kelly, and Q. Huang 2008; Moen and Q. Huang 2010). ROWE should benefit those with subjective assessments of poor life-course fit, especially in terms of high negative spillover between home and work. Studies, such as that by Ngur Yavas, Emin Batakus, and Osman Karatepe (2008), show that employees with greater levels of negative work-to-home spillover and home-to-work spillover tend to have greater levels of emotional exhaustion and turnover intentions. ROWE may well buffer these effects. A sense of income inadequacy is yet another aspect of life-course misfit that might contribute to turnover but be moderated by ROWE if people feel they are trading income for greater work-time control and flexibility. We theorize that ROWE is likely to moderate the effects of negative spillover and income inadequacy on turnover and turnover intentions by giving employees greater ability to manage what are often competing demands, thereby increasing their sense of life-course fit. We hypothesize that employees with poor fit in the form of greater levels of negative spillover between home and work and/or poor income adequacy will be *less* likely to leave the organization and will be *more* likely to lower their turnover intentions following the implementation of the ROWE initiative.

Research also shows that seeing one’s employer as “family friendly” reduces turnover (Raskin 2006). We hypothesize that ROWE will even further enhance the effects of perceived organizational supportiveness (regarding family life) in reducing the odds of employees leaving Best Buy or anticipating doing so at some point in the future.

Job satisfaction is another subjective assessment that has been negatively linked to both turnover (Barak et al. 2001; Cotton and Tuttle 1986; Mobley et al. 1979) and turnover intentions (Barak et al. 2001; Mobley et al. 1978). We propose that ROWE participation will buffer the effects of job dissatisfaction on turnover and turnover intentions.

Work-family scholars often ignore job insecurity, and yet it is a major source of worry and misfit that can lead to employee turnover. Using successive cross-sectional national surveys, Charles Manski and John Straub (2000) found that quitting one’s job might actually be a preemptive move when employees perceive the risk of job loss to be high. Rosemary Batt

and Monique Valcour (2003) found that job security was negatively associated with intention to quit, echoing Manski and Straub's (2000) evidence that job quits are sometimes preemptive strikes in response to insecurity. In a climate of rising risk and constraint, voluntary/involuntary turnover distinctions are increasingly blurred. Some women or men might exit their jobs (and even the workforce) because of parenting obligations and/or poor life-course fit (such as high negative spillover from work to home and/or vice versa), while others quit in anticipation of being let go at some point in the future, or else are encouraged to leave "voluntarily." Even when layoffs are due to large-scale economic downturns, employers often choose which employees (often those they see as less effective) to let go. Some workers may be unable to be productive given the time constraints of their work combined with the time requirements of the rest of their lives, and therefore are at a greater risk of being laid off. While these are clearly "involuntary" exits, they could also be an indication of the absence of policies and practices aimed at fostering better fit between work and home needs/demands and resources, especially if layoffs do not occur across the board. A meta-analytic examination of the relationship between performance, turnover intentions, and actual turnover by Ryan Zimmerman and Todd Darnold (2009) shows a direct relationship between poor performance and turnover; this research indicates that employees often make unplanned, voluntary exits from their employment in response to receiving poor supervisor evaluations. Based on these findings and the potential relationship between poor fit and supervisor evaluations of poor performance, we examine whether an initiative aimed at improving that fit (ROWE) alters the odds of turnover, regardless of whether employees are opting out, being pushed out, or some combination of the two.

Intentions—whether measured as expectations to stay or expectations of leaving—are powerful predictors of subsequent employee behavior. Meta-analytic studies of turnover (see Cotton and Tuttle 1986 as well as Griffeth, Hom, and Gaertner 2000) confirm that yet another cognitive assessment, intention to leave one's employer, is one of the strongest predictors of quit behavior. Turnover intentions also reflect the absence of life-course fit—planning to leave a job with extreme demands can be a strategy to increase one's sense of fit (see also Stone 2007). Charles Mueller and colleagues (1994) find a strong negative relationship between intent to stay and voluntary employee quits. We hypothesize that ROWE will moderate the effects of turnover intentions, reducing the odds of turnover among those who would otherwise be predicted to leave because they reported higher turnover intentions at baseline.

Due to the strength of this relationship, it is not only important to include turnover intentions in models predicting the rate of actual turnover, it is also useful to model *change in turnover intentions* following the implementation of ROWE. Doing so provides a means to examine whether this initiative may influence future turnover. Accordingly, we also assess whether participation in the ROWE innovation reduces *turnover intentions* among those remaining in the sample by the second survey (six months following their exposure to ROWE).

Summary of Hypotheses

To summarize, we hypothesize first that participating in the ROWE organizational change should reduce actual turnover. Second, we hypothesize that ROWE will interact with social-locational factors, especially the age, gender, life-stage intersection but also occupational level and organizational tenure, in predicting turnover. We propose, in particular, that mothers raising children who are participating in ROWE should be less likely to leave their jobs than mothers in the comparison group. We do not hypothesize the direction of effects of ROWE in moderating either occupational level or organizational tenure. Third, we hypothesize that ROWE will moderate the effects of cognitive appraisals of low life-course fit on turnover—in the form of reducing the turnover effects of employees' assessments of a high degree of negative work-family spillover, low job satisfaction, low sense of income adequacy, low job security, and whether they see Best Buy as offering a less than supportive organizational culture. Fourth, we hypothesize that participating in ROWE will reduce employees' subsequent turnover intentions.

Method

Sample

This analysis includes pre- and post-ROWE surveys (six months apart) of a sample of 775 employees from Best Buy Co., Inc., conducted in 2006, as well as corporate administrative data tracking organizational turnover (for eight months). Best Buy implemented ROWE sequentially through the corporate headquarters, enabling us to treat those at the end of the line—who maintained their previous business practices—as a comparison group, thereby creating the opportunity for a “natural experiment.” Specifically, we collected data both before and after this organizational change (ROWE) was rolled out to employees in several divisions, permitting us to use employees in the later adopting divisions for a comparison of ROWE with usual (pre-ROWE) practices. Senior managers (at the VP or director level) signed on to ROWE based on their interest in the initiative and the facilitators’ capacity to take on new groups at that time. These data represent the middle groups in the roll-out of ROWE, with the earliest groups excluded from the study and the later groups serving as the comparison group. There are some initial differences between the ROWE and comparison groups (for example, more mothers with children and more managers in ROWE) but these factors are included as covariates in the multivariate analysis. All ROWE participants and comparison group members completed two surveys, conducted prior to (Wave 1) and six months following the implementation of ROWE for employees participating in the initiative (Wave 2). We draw on administrative data to track whether or not employees in the sample left Best Buy during an eight-month observation period following the ROWE implementation as well as data from the follow-up survey to capture change in turnover intentions of those who remained at Best Buy.

The initial sample included 1,026 individuals from Best Buy of which 825 responded to the survey, an 80 percent response rate. We dropped 50 cases having missing values on four or more of independent variables. Further examination of these cases showed that all but one stopped taking the survey prior to completion. Dropped cases were similar to those completing the surveys, with two exceptions: they were less likely to live with a child and less likely to be married. Of the 825 participants, 775 have sufficiently complete records and are included in the event history analysis. Supplementary analysis of turnover intentions following the implementation of ROWE included 612 cases. Only cases with matched responses from both waves of the survey were included in the turnover intentions analysis.

During the eight months for which we have records, 8.6 percent ($N = 67$) of the 775 in the analytic sample left Best Buy. Extrapolating this out to one year results in a fairly high turnover rate of 12.3 percent; this high rate is common among young workforces similar to Best Buy. We imputed the missing values for independent variables using the hot deck method in Stata (Mander and Clayton 1999). (Hot deck imputation matches respondents on key characteristics to impute missing data from complete cases [Ford 1983]. Multiple imputation was not considered appropriate for these analyses due to concerns about regressing to the mean.) Additional analyses (not shown) compared the results of the Cox event history analysis using values imputed from variable means and hot deck; results are similar across the two methods.

Survey respondents include individuals employed at all levels at Best Buy’s headquarters. The mean age for respondents is 32; women constitute 49.3 percent of the sample; 7.2 percent are racial minorities (African American, Asians, American Indians, etc.); 68.9 percent are married or cohabitating; and 35.8 percent have children under 18 at home. As evidenced by these statistics, Best Buy’s workforce is young and many do not have children at this point in their lives. It can be argued that the disproportionate number of single individuals or married couples without children will influence our results. However, because we are interested in the turnover effects of a shift to a Results Only Work Environment (ROWE), as well as the effects of ROWE as moderated by age/gender/parental status and/or work-home spillover measures, a higher proportion of individuals without families or partners/spouses will make our estimates more conservative and therefore increase our confidence in the likelihood of an effect.

Variables

We group the independent variables included in the analysis into objective social-locational variables and subjective life-course fit variables, as well as a dummy variable capturing participation in ROWE (see Appendix for survey items included in each group).

Social Location. We constructed a gendered age/life-stage variable to capture their intersectionality and, hence, the variability that women and men experience throughout the life course. We created three categories separately for both men and women, including employees under age 40 without children, parents with children under the age of 18, and employees aged 40 or more without children, including those who are empty nesters (employees with children older than 18). Given Best Buy's young workforce, there are fewer older employees without children at home in our sample. These six gender life-stage categories are coded as dummy variables in the analysis, with men age 40 or under without children as the reference category. In analyses not shown here we also entered age, gender, marital status, spouse's employment status, and presence or age of children in separate models, but none of these predicted turnover. Neither did another family stage variable including whether partnered or not, or a dummy variable capturing marital/partner status and employment of partner/spouse. Estimating models separately by gender did not improve model fit. Race is excluded from the analysis because there was literally no variation in the race of those turning over during the time period under study.

Also included in the social structural location variables are respondents' occupational level and their tenure at Best Buy. We divide employees into three occupational categories: individual contributors (employees without supervisory responsibilities), middle managers, and senior managers. Each category is coded as a dummy variable for the analysis, using senior managers as the reference group. Organizational tenure is measured as a continuous variable, calculated in years.

Life-Course Fit. Under the rubric of life-course fit, we estimate the effects of four work-life interface variables, including negative work-to-home spillover, positive work-to-home spillover, negative home-to-work spillover, and positive home-to-work-spillover (drawn from the Midlife in the United States study [MIDUS 2006]). Each scale consists of four items. Spillover questions include: "Has your job reduced the effort you can give to activities at home?" (negative WH spillover-alpha = .823); "Have the skills you use on your job been useful for things you have to do at home?" (positive WH spillover-alpha = .691); "Have responsibilities at home reduced the effort you can devote to your job?" (negative HW spillover-alpha = .763); "Has your home or personal life helped you relax and feel ready for the next day's work?" (positive HW spillover-alpha = .549). The five Likert scale responses are "all the time," "most of the time," "sometimes," "rarely," and "never" with a higher score indicating higher spillover.

Six additional variables capture employees' other cognitive appraisals: their assessments of job satisfaction, a scale measuring whether employees see Best Buy as offering a family supportive culture, their sense of income adequacy, a count of physical health symptoms, a job security assessment scale, and a turnover intentions scale. Job satisfaction is a single item asking respondents, "How satisfied are you with your job?" The family supportive company culture scale (alpha = .795) includes nine items such as agreement or disagreement with "Work should be the primary priority in a person's life," and "Employees who prioritize their families can still do well here" (modified from Allen 2001). Perceived income adequacy is a single item that asks, "On a scale of 0 to 10 (where 0 is very inadequate and 10 is more than adequate), how well does your current household income meet your financial needs?" The count of physical symptoms asks respondents to select those symptoms they experienced in the last four weeks including but not limited to headaches, muscle soreness, shortness of breath, and trembling or shaking (drawn from the Midlife in the United States study [MIDUS 2006]). The majority of employees report experiencing no (15.27 percent) or few (1 to 3; 40.85 percent) symptoms over the four weeks prior to the survey; however 111 employees (14.32 percent) report seven or more symptoms.

Job security is assessed with a two-item scale: “My job security is poor,” and “It is always difficult to predict what will happen in this economy, but what do you think the chances are that you will lose your job (be laid off or terminated) at Best Buy in the next few years?” (correlation = .614). The turnover intentions scale includes three items about choosing to leave Best Buy, such as “I think a lot about leaving Best Buy” (alpha = .905). This scale at Wave 1 is used as a predictor variable for estimating the odds of exiting the corporation; the same scale from Wave 2 is used as an outcome following the ROWE innovation among those who did not turn over.

Participation in ROWE. Participation in ROWE is included in the model as a dummy variable, capturing those in our sample who were part of the ROWE innovation. These employees were not self-selected, but rather received the ROWE “treatment” as part of departments that moved through the initiative during the study period (Kelly et al. forthcoming). Employees in departments not yet beginning ROWE constitute our comparison group. Recall that all respondents are middle class, white-collar workers employed at the organization’s large headquarters.

Procedure

We predict turnover for an eight-month period from the onset of exposure to ROWE using Cox event history modeling, a partial likelihood method incorporating the timing of events (in this case, turnover) as well as data from cases that are right censored (in this case, not yet exited by the end of the eight-month observation period) to predict outcomes (Box-Steffensmeier and Jones 2004). The advantage of this technique is that it uses partial likelihood estimation that does not require that the researcher specify the hazard rate as a function. Cox event history modeling assumes a proportional hazards model. We investigated the appropriateness of this assumption by graphing the hazard function, evaluating proportionality through a test using Schoenfeld residuals and testing the significance of participating in ROWE across time as an interaction (Box-Steffensmeier and Jones 2004). Graphs of the hazard estimates, the test of the proportional hazards assumption, and the interaction by time indicate that neither our model nor the variables included are significantly disproportional to violate the assumption. We therefore determined that it is appropriate to continue using the Cox models without corrections. The hazard rate estimated by Cox event history modeling for the i th individual is

$$h_i(t) = h_0(t) [\exp(\beta'x)]$$

where $h_0(t)$ is the baseline hazard function and $\beta'x$ are the covariates and regression parameters (Box-Steffensmeier and Jones 2004).

We have the exact date of turnover for the 67 individuals who left Best Buy during the maximum observation period of 256 days. The exact partial method is the best choice for our analysis given its accuracy and assumptions regarding the timing of overlapping exits. Though the exact partial method is computationally difficult, it is more accurate than other methods, making the assumption that tied events actually occur at the same discrete point in time (Box-Steffensmeier and Jones 2004). We estimate three nested models of turnover, including clusters of variables (described below) in each step.

The initial analysis predicts respondents’ actual turnover, including measures of social location in terms of age/gender/life stage, job level, and tenure characteristics, along with Wave 1 measures of life-course fit—work-home interface, job satisfaction, health symptoms, job security, and turnover expectations—all commonly discussed in the literature as being associated with turnover. Next, we estimate a model including participation in the ROWE innovation. Finally, we test possible moderators, including interactions between participation in ROWE and age/gender/parental status, occupational level, organization tenure, and the range of life-course fit measures. We also estimated the models separately by gender, finding, to our surprise, no differences (as gauged by Chow tests of significance).

Because of the relationship between turnover intentions and actual turnover as demonstrated in existing research (Cotton and Tuttle 1986; Griffeth, Hom, and Gaertner 2000; Mueller et al. 1994), and to further corroborate evidence from the turnover models, we additionally analyze shift in turnover *intentions* among the group who did not leave Best Buy, using ordinary least squares regression to model any change in turnover intentions by Wave 2 (six months following the roll out of ROWE). In doing so, we draw on the full model used to estimate turnover while also controlling for employees' baseline measure of turnover intentions and the predicted propensity to actually turnover. To estimate the propensity to turnover, we use a method similar to propensity score matching, but forgo matching respondents on similar propensities (Rosenbaum and Rubin 1983). In particular, we use the Cox event history model from the first stage of the analysis to calculate a hazard of turning over for each individual. Values are calculated based on each employee's reported characteristics, the equation derived from the observed turnover, and specified covariates used in the full model. We then use this value to control for unobservable characteristics of those respondents who experience turnover in comparison to those who do not.

Results: Actual Turnover

Descriptive statistics for the variables included in the turnover analysis are shown in Table 1. Note that the sample is about evenly divided between those participating in ROWE and those in the comparison group. Note as well that 8.6 percent of the sample left the organization in the roughly eight months after ROWE was rolled out to part of the workforce. Those in the ROWE and non-ROWE groups differ on the distribution across gender/life stage categories, the distribution across job level, organizational tenure, negative work-to-home spillover, negative home-to-work spillover, positive home-to-work spillover, job security, and turnover intentions—all of which are included in the model.

We find (data available from authors) that individual contributors (those not supervising others) have a higher rate of turnover than senior managers in the organization. Those who left Best Buy scored higher (than did those remaining) on Wave 1 measures of negative home-to-work spillover, physical symptoms, and turnover intentions. They also scored lower on Wave 1 job satisfaction and in rating Best Buy as a family-supportive culture. Most important for this analysis, participants in the ROWE innovation have a significantly lower turnover rate (6.1 percent) than do the comparison group (11.1 percent).

Using Cox event history modeling techniques, we estimated the odds of employees leaving Best Buy during the observation period. Table 2 shows the hazard ratios for each of the independent variables in the models (the exponentiated coefficients produced by Cox event history modeling). Hazard ratios are interpreted like odds ratios, where values between zero and one mean a reduced likelihood of turnover, and values over one mean an increased likelihood of turnover. The Wave 1 social-locational and life-course fit variables in Table 2 reveal greater turnover rates among employees who are individual contributors, but not among women with children or (in other models not shown) mothers of preschoolers, mothers with several children, wives, wives married to employed husbands, or women more generally. This raises further doubt about the opting-out thesis. Turning to life-course fit, we find greater turnover among those who at Wave 1 reported higher levels of negative home-to-work spillover, greater numbers of physical symptoms, and higher scores on the turnover intentions scale. This argues for the importance of various assessments of life-course fit, including subjective health status (Griffeth et al. 2000), as important predictors of turnover. (Note that these effects are net of turnover intentions, which is also included in the model. For example, negative work-to-home spillover and job satisfaction predict turnover intentions, and it is through those intentions that they predict turnover; data not shown.)

As hypothesized, Model 2 in Table 2 shows that employees participating in the ROWE innovation are less likely to leave, net of the other independent variables, with ROWE reducing

Table 1 • Variable Descriptives

| | Full Sample | | Total | ROWE | | Comparison | |
|---|---------------------|----------|-------|---------------------|----------|---------------------|----------|
| | Mean/ Percentage | St. Dev. | | Mean/ Percentage | St. Dev. | Mean/ Percentage | St. Dev. |
| Social location | | | | | | | |
| <i>Gender/life stage</i> | | | | | | | |
| Women younger than 40 no children | 29.7% | — | 230 | 25.3% | — | 33.9% | —*** |
| Women with children | 16.4% | — | 127 | 22.6% | — | 10.4% | — |
| Women older than 40 no children | 3.2% | — | 25 | 3.2% | — | 3.3% | — |
| Men younger than 40 no children | 28.6% | — | 222 | 25.3% | — | 31.9% | — |
| Men with children | 19.4% | — | 150 | 19.7% | — | 19.0% | — |
| Men older than 40 no children | 2.7% | — | 21 | 3.9% | — | 1.5% | — |
| <i>Job level</i> | | | | | | | |
| Individual contributors | 65.9% | — | 511 | 60.3% | — | 71.4% | —** |
| Middle managers | 18.8% | — | 146 | 20.5% | — | 17.2% | — |
| Senior manager and leaders | 15.2% | — | 118 | 19.2% | — | 11.4% | — |
| <i>Organizational tenure</i> | 4.40 | 3.26 | 775 | 4.73 | 3.32 | 4.09 | 3.18** |
| Life course fit—expectations and assessments | | | | | | | |
| Negative work-to-home spillover scale | 2.95 | .65 | 775 | 3.02 | .66 | 2.87 | .62*** |
| Negative home-to-work spillover scale | 2.27 | .59 | 775 | 2.33 | .61 | 2.21 | .57** |
| Positive work-to-home spillover scale | 2.97 | .63 | 775 | 2.96 | .65 | 2.99 | .61 |
| Positive home-to-work spillover scale | 3.31 | .59 | 775 | 3.26 | .57 | 3.35 | .60* |
| Job satisfaction | 3.97 | .93 | 775 | 3.94 | .93 | 4.01 | .93 |
| Family supportive company culture scale | 3.39 | .62 | 775 | 3.34 | .63 | 3.43 | .62† |
| Income adequacy | 6.47 | 1.87 | 775 | 6.53 | 1.96 | 6.40 | 1.78 |
| Count of physical symptoms | 3.58 | 2.54 | 775 | 3.42 | 2.49 | 3.74 | 2.57† |
| Job security assessment scale | 2.93 | .64 | 775 | 2.76 | .67 | 3.09 | .55*** |
| Turnover intentions scale | 2.57 | 1.48 | 775 | 2.80 | 1.51 | 2.35 | 1.42*** |

(continued)

Table 1 • (Continued)

| | Full Sample | | | ROWE | | | Comparison | | |
|---|---------------------|----------|-------|---------------------|----------|-------|---------------------|----------|-------|
| | Mean/ Percentage | St. Dev. | Total | Mean/ Percentage | St. Dev. | Total | Mean/ Percentage | St. Dev. | Total |
| ROWE exposure vs. comparison | | | | | | | | | |
| Comparison | 51.0% | — | 395 | — | — | — | — | — | — |
| ROWE | 49.0% | — | 380 | — | — | — | — | — | — |
| Outcome variables | | | | | | | | | |
| <i>Turnover-exit employment at Best Buy</i> | | | | | | | | | |
| No | 91.4% | — | 708 | 93.9% | — | — | 88.9% | — | —*** |
| Yes | 8.6% | — | 67 | 6.1% | — | — | 11.1% | — | — |
| Wave 2 turnover intentions scale | 2.830 | 1.578 | 614 | 2.87 | 1.63 | — | 2.79 | — | 1.52 |
| Variables not in final model | | | | | | | | | |
| <i>Gender</i> | | | | | | | | | |
| Female | 49.3% | — | 382 | 51.0% | — | — | 47.6% | — | — |
| Male | 50.7% | — | 393 | 49.0% | — | — | 52.4% | — | — |
| <i>Parental status</i> | | | | | | | | | |
| Child at home | 35.7% | — | 277 | 42.4% | — | — | 29.4% | — | —*** |
| Age of youngest child | 4.83 | 4.54 | 262 | 4.64 | 4.41 | — | 5.10 | — | 4.73 |
| <i>Marital life stage</i> | | | | | | | | | |
| Under 40, single, without children | 26.1% | — | 202 | 23.4% | — | — | 28.6% | — | —*** |
| Under 40, married/partnered, no children | 32.0% | — | 248 | 26.6% | — | — | 37.2% | — | — |
| Married/partnered with children | 33.4% ^a | — | 259 | 39.7% | — | — | 27.3% | — | — |
| Single with children | 2.3% | — | 18 | 2.6% | — | — | 2.0% | — | — |
| Older than 40 no children | 6.2% | — | 48 | 7.6% | — | — | 4.8% | — | — |
| <i>Marital status/spouse's employment</i> | | | | | | | | | |
| Single | 31.1% | — | 241 | 28.7% | — | — | 33.4% | — | — |
| Married/partnered with spouse at home | 8.0% | — | 62 | 9.5% | — | — | 6.6% | — | — |
| Married/partnered with spouse employed | 60.9% | — | 472 | 61.8% | — | — | 60.0% | — | — |

^a $p < .10$ * $p < .05$ ** $p < .01$ *** = $p < .001$ (two-tailed tests)

Table 2 • Multivariate Predictors of Turnover

| | <i>Model 1</i> | | <i>Model 2</i> | | <i>Model 3</i> | |
|---|---------------------|-------------|---------------------|-------------|---------------------|-----------|
| | <i>Hazard Ratio</i> | <i>S.E.</i> | <i>Hazard Ratio</i> | <i>S.E.</i> | <i>Hazard Ratio</i> | <i>SE</i> |
| Social location | | | | | | |
| <i>Gender/life stage</i> | | | | | | |
| Women younger than 40 no children | 1.491 | .483 | 1.505 | .489 | 1.528 | .496 |
| Women with children | .640 | .286 | .745 | .337 | .761 | .347 |
| Women older than 40 no children | .771 | .588 | .669 | .513 | .590 | .457 |
| Men younger than 40 no children (ref.) | | | | | | |
| Men with children | 1.308 | .533 | 1.361 | .560 | 1.457 | .604 |
| Men older than 40 no children | 1.967 | 1.530 | 2.146 | 1.683 | 1.587 | 1.333 |
| <i>Job level</i> | | | | | | |
| Individual contributors | 3.698* | 2.328 | 3.703* | 2.347 | 4.376* | 2.805 |
| Middle managers | 2.803 | 1.838 | 2.794 | 1.835 | 3.368 [†] | 2.256 |
| Senior manager and leaders (ref.) | | | | | | |
| <i>Organizational tenure</i> | | | | | | |
| | 1.048 | .049 | 1.055 | .049 | 1.112 [†] | .061 |
| Life course fit—expectations and assessments | | | | | | |
| Negative work-to-home spillover scale | .754 | .181 | .798 | .194 | .805 | .203 |
| Negative home-to-work spillover scale | 1.640* | .394 | 1.638* | .393 | 1.195 | .354 |
| Positive work-to-home spillover scale | 1.281 | .307 | 1.259 | .306 | 1.305 | .315 |
| Positive home-to-work spillover scale | .861 | .206 | .840 | .203 | .821 | .203 |
| Job satisfaction | .847 | .114 | .875 | .119 | .910 | .121 |
| Family supportive company culture scale | .886 | .184 | .920 | .193 | .975 | .212 |
| Income adequacy | 1.018 | .068 | 1.027 | .069 | .990 | .069 |
| Count of physical symptoms | 1.137** | .054 | 1.120* | .053 | 1.004 | .060 |
| Job security assessment scale | 1.186 | .263 | 1.065 | .247 | .610 | .186 |
| Turnover intentions scale | 1.425*** | .137 | 1.465*** | .143 | 1.547*** | .150 |
| ROWE exposure vs. comparison | | | | | | |
| ROWE | | | .545* | .157 | .001*** | .002 |
| Comparison (ref.) | | | | | | |
| Interactions | | | | | | |
| ROWE*tenure | | | | | .807* | .082 |
| ROWE*negative family-to-work spillover scale | | | | | 2.447 [†] | 1.164 |
| ROWE*count of physical symptoms | | | | | 1.384*** | .133 |
| ROWE*job security assessment scale | | | | | 3.059* | 1.398 |
| Log likelihood | -400.027*** | | -397.703*** | | -382.232*** | |
| Number of cases (df) | 775 | | 775 | | 775 | |
| Number of failures | 18 | | 19 | | 23 | |
| | 67 | | 67 | | 67 | |

[†] = $p < .10$ * = $p < .05$ ** = $p < .01$ *** = $p < .001$ (two-tailed tests)

the rate of leaving Best Buy by 45.5 percent. This is a key finding. It supports the observational literature finding that employees with greater flexibility policies are less likely to leave than those in less flexible arrangements, as well as the proposition that an actual change in the temporal organization of work could lead to reduced turnover. Previous research has compared employees in organizations or jobs with flexible work arrangements to those without; here we are able to see how employees in the same setting respond to increased flexibility in the organization of the time and timing of work.

We then tested interactions between participation in ROWE and independent variables, to examine the hypothesis that ROWE would moderate the influence of other variables on turnover. We find no statistically significant effect of ROWE moderating age, gender, or presence/number of children, whether included separately or as a gender/life stage variable (estimated in separate models not shown). Neither did ROWE moderate job-level effects. However, we find statistically significant interactions between ROWE and organizational tenure, negative home-to-work spillover, health symptoms, and job security when included separately ($\alpha < .05$). The impact of ROWE on these common predictors of turnover is discussed and depicted below. When all four interactions are included in the full model, tenure, health symptoms, and job security interactions remain statistically significant below the .05 alpha level, while the effects of negative home-to-work spillover as a moderator decline somewhat but remain weakly significant ($\alpha < .10$).

Note that ROWE does *not* moderate the effects of gender/family status, contrary to our hypothesis about mothers with children at home being the most advantaged by ROWE. Neither are there statistically significant effects on turnover of ROWE in interaction with age or gender, or by age of youngest child or presence of children of different ages (estimated in separate models, available from the authors on request). We also estimated a model including whether or not the respondent was married and whether or not the spouse was employed, estimating the effects separately by gender and/or controlling for gender, but these had no statistically significant effects on turnover.

To depict the moderating effects we did find, we constructed each of the following graphs by setting the variables of interest (i.e., organizational tenure and participation in ROWE) to the values indicated in the figure and holding the remaining independent variables at the mean. Figure 1A shows that, during the study period, ROWE employees with longer organizational tenure at Best Buy have a declining rate of turnover, while those not participating in ROWE have an increasing rate of turnover. There is little difference by ROWE participation in turnover rates for employees with low tenure.

Figure 1B illustrates the moderating effects of (pre-ROWE) negative home-to-work spillover on the relationship between ROWE and turnover. Specifically, although few scored high (4 or 5) on negative spillover from home to work at the initial (pre-ROWE) survey, those who do have these high scores also have higher rates of turnover regardless of whether or not they participate in the ROWE initiative. However, at lower levels of (Wave 1) negative home-to-work spillover, those participating in ROWE have a considerably lower rate of turnover than do the comparison employees. Thus, as hypothesized, those with some negative home-to-work spillover are less apt to turn over in conjunction with ROWE but, contrary to our hypothesis, ROWE does not moderate the turnover effects of very high negative home-to-work spillover.

Figure 1C depicts the interaction between ROWE and number of health symptoms in predicting turnover. Contrary to our expectations, ROWE employees reporting a high number of symptoms (prior to ROWE) have a *higher* rate of turnover than do non-ROWE employees with a similarly high symptom count. It could be that those with serious health problems come to see that no amount of flexibility will permit them to work effectively in this high performance organization.

Figure 1D captures the moderating effects of ROWE on job security in predicting turnover. ROWE employees with low values of job security (in other words, high insecurity) before the initiative have considerably lower rates of turnover, compared to non-ROWE employees with similarly low job security/high insecurity. However, the ROWE/non-ROWE

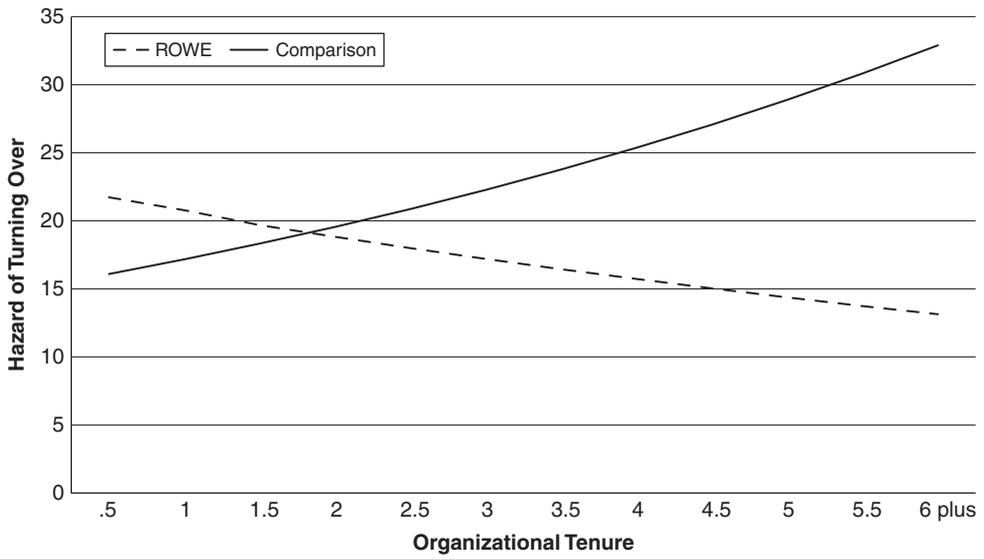


Figure 1A • Estimated Interaction Between Participating in ROWE and Organizational Tenure on Turnover Rate

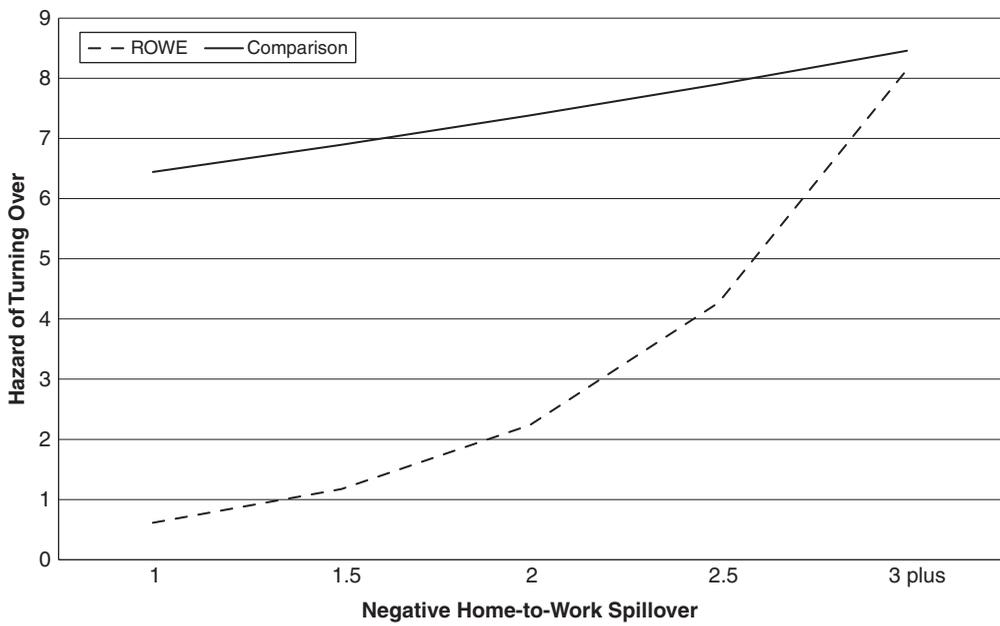


Figure 1B • Estimated Interaction Between Participating in ROWE and Negative Home-to-Work Spillover on Turnover Rate

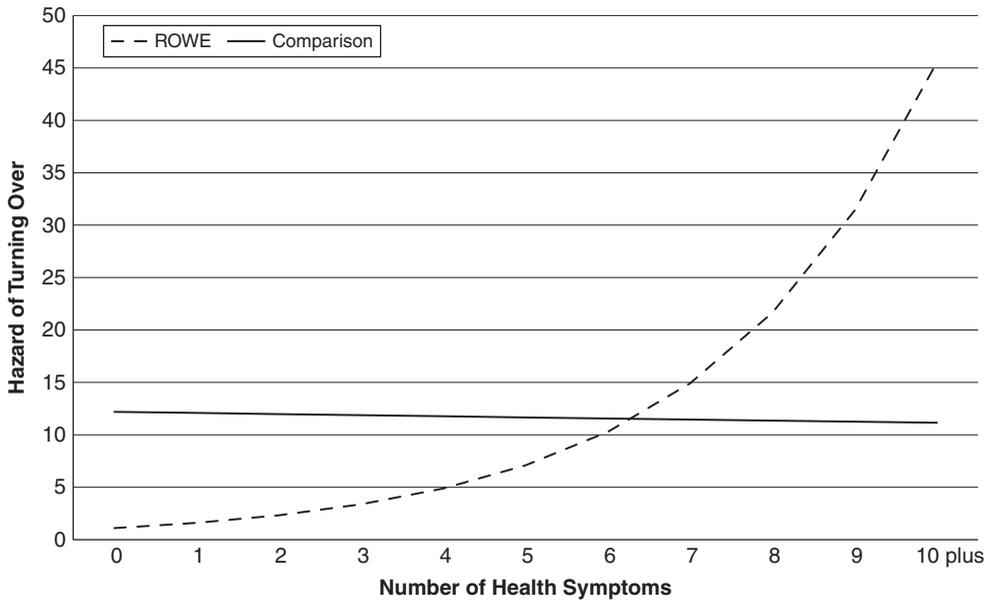


Figure 1C • Estimated Interaction Between Participating in ROWE and Number of Symptoms on Turnover Rate

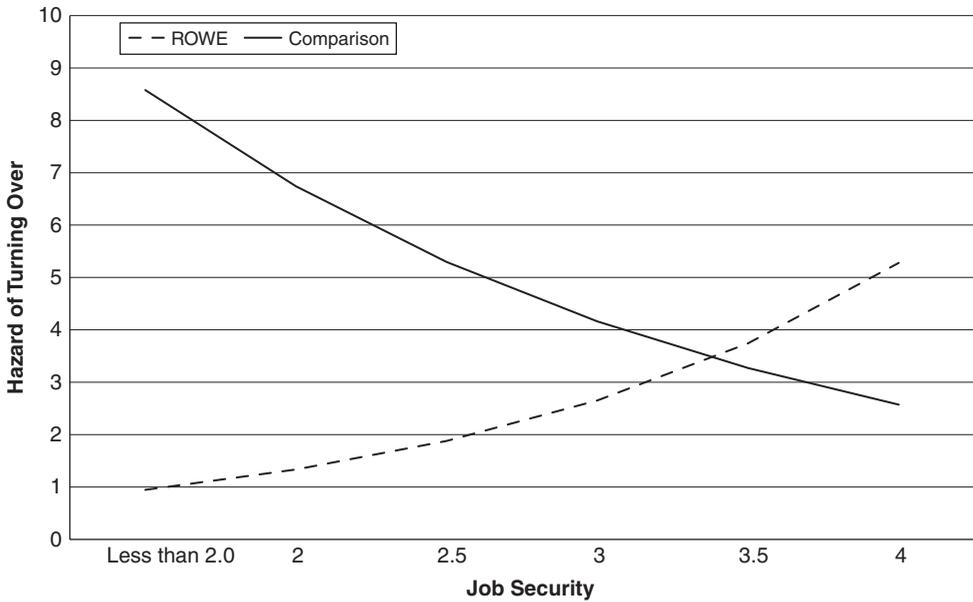


Figure 1D • Estimated Interaction Between Participating in ROWE and Job Security on Turnover Rate

Table 3 • Multivariate Predictors of Turnover Intentions at Wave 2

| | Model 1 | | Model 2 | |
|---|--------------------|------|--------------------|------|
| | Coef. | S.E. | Coef. | S.E. |
| Social location | | | | |
| Turnover intentions at Wave 1 | .637*** | .054 | .678*** | .056 |
| Predicted hazard of turnover between Waves 1 and 2 | -.003 | .004 | -.007 [†] | .004 |
| <i>Gender/life stage</i> | | | | |
| Women younger than 40 no children | -.025 | .136 | .003 | .136 |
| Women with children | -.330* | .161 | -.312 [†] | .160 |
| Women older than 40 no children | .152 | .300 | .131 | .298 |
| Men younger than 40 no children (ref.) | | | | |
| Men with children | -.372* | .157 | -.353* | .157 |
| Men older than 40 no children | .477 | .327 | .586 [†] | .328 |
| <i>Job level</i> | | | | |
| Individual contributors | .161 | .179 | .204 | .179 |
| Middle managers | .296 | .183 | .324 [†] | .183 |
| Senior manager and leaders (ref.) | | | | |
| <i>Organizational tenure</i> | | | | |
| | -.008 | .017 | -.003 | .017 |
| Life course fit—expectations and assessments | | | | |
| Negative work-to-home spillover scale | -.001 | .095 | -.004 | .095 |
| Negative home-to-work spillover scale | .235* | .103 | .284 ** | .105 |
| Positive work-to-home spillover scale | .001 | .090 | .028 | .090 |
| Positive home-to-work spillover scale | .127 | .095 | .082 | .096 |
| Job satisfaction | -.134 [†] | .068 | -.140* | .068 |
| Family supportive company culture scale | -.261** | .089 | -.273** | .088 |
| Income adequacy | -.059* | .030 | -.049 [†] | .030 |
| Count of physical symptoms | .018 | .024 | .024 | .024 |
| Job security assessment scale | .055 | .089 | .006 | .090 |
| ROWE vs. comparison | | | | |
| ROWE | | | -.314** | .118 |
| Comparison (ref.) | | | | |
| Constant | 1.954* | .759 | 2.123** | .758 |
| Number of cases | 612 | | 612 | |
| R-Squared | .421 | | .428 | |
| (df) | 19 | | 20 | |

[†] = $p < .10$ * = $p < .05$ ** = $p < .01$ *** = $p < .001$ (two-tailed tests)

difference in turnover narrows and its significance disappears with increasing job security. Thus, our hypothesis about ROWE moderating the effects of job insecurity is supported.

Change In Turnover Intentions

We also conducted analyses to examine the effect of the ROWE innovation on changes in turnover intentions following its implementation, modeling Wave 2 turnover intentions while including Wave 1 turnover intentions as a lagged variable and simultaneously controlling for the predicted propensity to leave Best Buy (described in methods section). Model 1 in Table 3 shows that, as expected, Wave 1 turnover intentions (measured before the implementation of the ROWE innovation) are a strong and highly significant predictor of Wave 2 turnover intentions. We see a decline in the turnover intentions of parents (both men and women with children under 18), but an increase in the turnover intentions by Wave 2 among those who previously reported higher negative home-to-work spillover. Both a family-supportive company culture and a greater sense of income adequacy predict reduced turnover intentions by Wave 2.

In Model 2 of Table 3 we find that, as hypothesized, participation in ROWE predicts lower levels of turnover intentions by Wave 2. This again is a key finding. Not only does ROWE negatively predict actual turnover, it also reduces turnover expectations of those who remain at Best Buy. Other variables, such as being a father (with children still at home) and two positive life-course fit measures—assessing the company culture as family supportive and higher levels of job satisfaction—predict lower Wave 2 turnover intentions, while a measure of life-course misfit—the negative home-to-work spillover scale—predicts higher Wave 2 turnover intentions. Being a mother with children still at home and having a greater sense of income adequacy trend toward lower turnover intentions, but are only weakly significant. Both older men without children at home and managers trend toward having higher Wave 2 turnover intentions. ROWE does not moderate the effects of any of these social-locational or life-course fit impacts on turnover intentions.

Discussion and Conclusions

We began by asking the question whether a deliberate organizational change aimed at loosening the time cages of paid work could lower the risks of turnover. This is a question fundamental to theorizing the business case for flexibility and moving toward demonstrating the efficacy of an organizational change. Drawing on data from a natural experiment of a temporal innovation (ROWE) designed by and rolled out at Best Buy's corporate headquarters, our evidence suggests the answer is yes: changing time-based practices *can* reduce both turnover and turnover intentions. Participating in ROWE means focusing on *results*, not on *time* norms and practices regulating the amount and timing of time spent at one's desk or in the office. We find that ROWE participants are considerably *less* apt to leave Best Buy during the study period than are employees in a comparison group, supporting the argument that a broad change opening up the clockworks of work may help retain employees (see also Bailyn 1993; Kelly and Moen 2007; Moen et al. 2009). The ROWE effect remains when estimating a Cox model of turnover that includes a variety of measures theorized to predict turnover such as age/gender/parental stage, occupational level, tenure, and various appraisals of life-course fit (work-home spillover appraisals, self-reported health symptoms, and assessments of job satisfaction, income adequacy, organizational culture and job security, as well as expectations of turnover). This suggests that the ROWE redesign offering employees greater flexibility and control over the time, timing, and even location of their work enables and encourages employees to stay with Best Buy. This is significant both scientifically (because scholars are rarely able to study employees as their work environments change) and substantively. Decision makers are concerned about the business case for flexibility initiatives, and clearly turnover is an objective outcome that does impact the bottom line.⁵

We theorized that ROWE might moderate the effects of location in the organizational hierarchy on turnover, but find that while nonsupervisory employees do have a higher rate of turnover than senior management, ROWE does not moderate these effects. However, ROWE employees with longer tenure at Best Buy are less apt to leave than similarly long-tenured comparison employees. (Apparently ROWE does not negate the turnover effects of those with little tenure and, hence, little seniority.)

We also theorized that ROWE would moderate the effects of life course location in terms of the age/gender/parental stage intersection, with mothers raising children hypothesized to be most apt to benefit from ROWE. To our surprise, the combined measure of age/gender/family stage did not predict turnover, did not moderate the effects of ROWE, and did not predict turnover net of the other variables in the model. We also estimated different models

5. It is noteworthy that Best Buy has continued the ROWE program in its headquarters, suggesting that this corporation believes in the value of the program.

separately by gender, as well as models including separate measures of age, gender, and parental stage, but none were statistically significant. We then tested a life stage model including marital status as well as the effects of being married and having an employed spouse on turnover and turnover intentions, again finding no statistically significant effects. Neither did estimating these models separately by gender improve their predictive value. The absence of gender, age, or family effects (marriage, spouse employed, presence or age of children) separately or combined runs contrary to our hypothesis grounded in theories about the gendered life course. It is entirely possible that the sample has too few employees raising children at different ages and stages to detect any such effects. Given the young labor force at Best Buy, many do not yet have children. Or there could be something about selection into employment in a high performance organization like Best Buy that might dampen any differential effects of ROWE by gender and life stage. There might also have been greater buzz among working mothers about ROWE, reaching into the comparison group, such that they too might anticipate eventually benefiting from ROWE. The fact that working mothers' turnover intentions declined over the six months between interviews regardless of whether or not they were in ROWE (Table 3) offers some suggestive evidence this might be the case.

Alternatively, one could view the absence of gender or family stage effects as speaking to the wide efficacy of ROWE in reducing turnover rates by offering real flexibility as the corporate norm for employees regardless of their age, gender, marital, or parental status (Kelly et al. forthcoming). It is noteworthy that ROWE was established as a broad initiative, not one geared to women, mothers, or parents (Kelly et al. 2010), and that ROWE institutionalizes employee work-time control as the rule, not the exception, and not as a special benefit for certain segments of the workforce. Thus, in retrospect, it is less surprising that this initiative apparently reduces the turnover rates of employees regardless of their gender, age, or life stage. This is an important finding in that many flexible work programs rolled out in U.S. organizations are implicitly or explicitly targeting women or parents. As such, they can create a backlash in which employees who seek more flexibility are penalized in their careers and some interested employees do not even pursue flexible options out of fear of career penalties (Glass 2004; Kelly and Moen 2007). This is further evidence of the paucity of the opting-out thesis, with married mothers in this high performance organization in the Midwest no more or less apt to leave the corporation during the observation period than men or women in other life stage circumstances. These mothers have secured good jobs in a fairly supportive organization, and they and others in the headquarters benefit from the flexibility ROWE provides and from the other rewards of these jobs, including good salaries, good benefits, and a positive work environment (as gauged by their responses to our survey and our observations in this work site).

Whereas social location (such as age and gender) has to do with structural aspects of the life course, many other predictors are about employees' cognitive assessments of their situations, what we term life-course fit. These represent how employees define their situations, from the work-family axis to their sense of job security. We theorized ROWE would moderate the turnover effects of these life-course fit variables, such that those with the most strain (for instance, those with negative work-to-home or home-to-work spillover) might benefit the most from policies challenging standardized time arrangements and expectations; hence, their participation in ROWE would reduce their turnover. The question we addressed is whether ROWE moderates the effects of these cognitive assessments on turnover outcomes. We found no moderating effects on turnover of ROWE in relation to negative work-to-family spillover, job satisfaction, income adequacy, or organizational culture. This suggests that ROWE is no panacea; it does not eliminate or even moderate all factors that may push employees to exit their jobs.

However, ROWE does moderate the turnover effects of negative home-to-work spillover, health symptoms, and job security, but not in any linear way. Specifically, employees reporting extremely high negative home-to-work spillover have similarly high exit rates regardless

of whether they are in ROWE or the comparison group. In other words, those with extreme spillover tend to exit their jobs regardless of ROWE, again suggesting that ROWE is no panacea for those with very high home demands spilling over into their work. But for those with less than extreme levels of negative home-to-work spillover (95 percent of the sample), the turnover rate of ROWE employees is lower than that of the comparison group. Note that this is negative *home-to-work* spillover; it could be that ROWE offers employees a greater buffer, especially from mild negative spillover from their personal lives to their jobs. At the same time, those employees with a tremendous amount of home-to-work conflict may find that even ROWE is unable to improve the challenges they face, and, hence, they are more apt to leave their jobs.

ROWE also alters the effects of health symptoms on the odds of turning over in unanticipated ways. We theorized that those with health difficulties might benefit from the temporal flexibility offered by ROWE. We find this to be partially the case: employees participating in ROWE who reported at baseline up to six health symptoms are less apt to exit than comparison group employees with a similar number of symptoms. But ROWE employees with more than six symptoms (7 percent of the total sample reports this high level) are *more* likely to exit the corporation. Though ROWE may act as a buffer for those with moderate levels of health concerns (and thereby increase the chances of their staying with the company), ROWE might be providing the opportunity for those with high levels of health problems to recognize that no “fix” at work is going to ease their challenges in light of the range of their health difficulties, pushing them toward a decision to leave.

Another important measure of life-course misfit is assessments of job insecurity. We hypothesized that ROWE might moderate the effects of job insecurity on actual turnover, but did not theorize the direction of the effect. We find that ROWE employees with little baseline job security are more apt to remain at Best Buy than are comparison employees with similarly low job security. Though previous research (cf Manski and Straub 2000) has demonstrated that leaving an insecure workplace can be a preventative measure in the face of an unplanned job transition, employees exposed to the ROWE initiative are less likely to exit the corporation than those in the comparison group. It is unclear if this is due to changing perceptions of job security due to ROWE or a greater desirability of staying in a firm offering greater work-time control, but nevertheless ROWE moderates the turnover effects of job insecurity.

In analyses of turnover *intentions* of those who did not exit the corporation and were therefore in the second survey wave (six months following the implementation of ROWE), we find that, even after controlling for prior intentions and the propensity to leave between survey waves, participation in ROWE predicts lower turnover intentions. This is particularly noteworthy given the significantly higher turnover intentions for the ROWE group than the comparison group prior to its implementation (see Table 1). These results lend further credence to the proposition that ROWE participants are more interested in staying following the introduction of this corporate work-time initiative. Turnover can both reflect life-course risk (insecurity) *and* be a deliberate strategy for managing risks, pressures, and overloads (opting out) at different points in the life course. While ROWE can't directly reduce the risk of layoffs (but may enhance productivity and thereby increase the value of an employee), this innovation does offer an alternative strategy to opting out by enabling better coordination of and control over the time and timing of job demands.

The ROWE innovation might also generate a greater sense of planning. Theoretical (Beck 1986; Giddens 1991) and empirical scholarship (Li et al. 2002) suggest that the capacity to anticipate and plan has become an important factor in shaping life-course outcomes. Prior research has shown that flextime policies that give employees some limited control over the start and end times of work reduce turnover, even though they do little to change the organizational culture or the constraints around work time (Dalton and Mesch 1990; Yanadori and Kato 2009). We argue that the extreme flexibility through control over work time offered by ROWE should further enhance employees' capacity to anticipate and adapt to the ebb and

flow of their paid work, their unpaid family work, and their personal needs. ROWE should also permit employees to better plan around likely events on the job (such as big deadlines) or at home (such as children's doctor appointments).

Contributions

The research reported here makes three important theoretical and policy contributions. First, this study is groundbreaking in that it moves beyond the large body of evidence on turnover (who leaves, who doesn't) and flexibility (who has it, with what consequences) to investigate the effects of an effort to actually *change the way work is temporally organized* to focus on results not time. Most studies investigate differences between employees, not whether actually *changing practices* might impact the lives of employees. This natural experiment research design removes the selection effects that are always present in comparing employees working under different conditions and in different organizations; it does so by changing those conditions for half the study group (all hired into the same organization) and observing subsequent outcomes.

Second, most organizational as well as social policies and practices are adopted with little or no evidence as to their potential efficacy. We find that the ROWE focus on results, not time, tends to lower the objective turnover rate and subjective turnover intentions of all employees in the study, not just mothers of young children or other subgroups. This is powerful evidence of a change that has potentially wide applicability for women and men in all career and family stages. Turnover is costly to businesses, which have to search for, hire, and train employees to replace those who leave, and so reduced turnover means lower labor costs. We have shown that ROWE alters actual turnover behavior, as well as turnover intentions.

Third, the boundedness of working time is evaporating (Moen et al. 2010), with information technologies, job pressures, and mounting expectations expanding many jobs across space and time such that they spill over into weeknights and weekends, further contributing to employee stress. This means that the kind of flexibility and work-time control reflected in ROWE may be especially consequential for today's and tomorrow's workforce.

Limitations

There are a number of important limitations. Is this something of a Hawthorne effect, in that simply being in the "change" group precipitates change? That is, of course, always a possibility in any natural experiment. However, there are instances where we have found no ROWE effects (including no moderation of negative work-to-home spillover, job satisfaction, income adequacy, supportive organizational culture). Neither do we believe such a consequential decision as actually exiting a job would result from a simple treatment effect.

Another important limitation is that this is a young, mostly middle class, white, and white-collar sample in the Twin Cities area of Minnesota, not a sample from which one can generalize broadly. The evidence reported here makes the case for the need for other experimental or quasi- (natural) experiments of innovations in other settings, with other occupational groupings, and for longer time periods. It also makes the case for normalizing flexible ways of working as the new standard, rather than the current widespread practice of treating flexibility as the exception not the rule.

The time frame during which we could observe actual turnover—only eight months—is a major limitation; having a longer follow-up period would only strengthen the evidence. Given the absence of funding, we were simply unable to continue the study for a longer period of time. Neither were we able to follow those who left Best Buy to see what proportion remained out of the workforce or took another job elsewhere. While we cannot assess whether those leaving Best Buy over the study period did so to move to less demanding jobs (as found in another sample, see Moen and Q. Huang 2010) or simply moved out of the workforce, the findings do support differences by ROWE participation in the odds of turnover.

Turnover and Time Cages as Social Problems

Turnover is expensive. Employers know the costs of recruitment and training, especially among an educated, skilled workforce, and strive to retain the workforce they have. Turnover is also costly for employees, disrupting their lives in anticipated and unanticipated ways in the short term and having long-term costs in earnings and occupational mobility. Workers (especially women) exiting the workforce find it difficult to “opt back in” at commensurate job levels, thereby perpetuating and exacerbating gender inequalities (Arun, Arun, and Borooah 2004; Budig and England 2001; Felmler 1995; Waldfogel 1997; see also Moen and Roehling 2005). Our findings offer tantalizing evidence that worksite innovations loosening the temporal organization of work *can* reduce employee turnover. Further tantalizing and requiring further study on different populations, this appears to be the case regardless of employees’ gender, age, or life stage, and regardless of their occupational level, at least among this white-collar headquarters workforce.

Still, the interactions of ROWE with health symptoms, home-to-work spillover, tenure, and job security, and the absence of moderating effects on other factors point to the complexity and contingency of decisions to remain or to stay with an employer, as well as circumstances pushing employees out of their jobs. The absence of hypothesized moderating turnover effects of ROWE on negative work-to-home spillover, job level, gender, and family stage also calls for further research in different types of workplaces to better parse the circumstances under which different types of flexibility innovations affect different types of outcomes, including productivity, health, and well-being, as well as turnover. Our evidence suggests that an innovation like ROWE, one that shifts expectations away from face time and toward results, may not be the solution for all conflicts between work and personal life, especially for those experiencing the greatest challenges from home-to-work spillover, negative spillover from work to home, or health difficulties. However, our results are congruent with Stone’s (2007) finding that what others have called opting out is really a consequence of being pushed out, given the inflexibilities around when and where to work. The ROWE innovation appears to render the extreme solution of opting out less necessary.

This research moves away from the opting-out rhetoric of personal choices to focus on the rising *time pressures and time cages of work* as the “problem” leading to unsustainable working arrangements. It has implications for challenging existing time-based rules, regulations, and expectations—and for creating public-and private-sector policies promoting new ways to work. Initiatives like Georgetown University’s *Flexibility 2010* (Georgetown Law 2010), the government’s *Economics of Workplace Flexibility* (Executive Office of the President Council of Economic Advisors 2010), and the Alfred P. Sloan Foundation’s effort to advance policies increasing employees’ control over the time and timing of work (Christensen and Schneider 2010) are challenging the legitimacy of existing inflexible work-time arrangements and promoting the need for work-time redesign.

The Fair Labor Standards Act of 1938 aimed to protect workers from too much work by requiring overtime (time and a half) to be paid for putting in over 40 hours of work each week. This legitimated the eight-hour, five-day work week as the norm at a time when the workforce was seen as mostly men with homemaking wives. But 72 years later, everything has changed. Women now constitute half the workforce. Most workers—women and men—lack full-time homemakers. Two out of every five workers are now “exempt” from the Fair Labor Standards Act and working for a salary, meaning that many are expected to work long hours with no additional pay. Information technologies and a global risk economy have unbounded and escalated work-time pressures. Despite the body of research (see review by Kelly et al. 2008) suggesting the minimal impact of limited flexibility policies already “on the books,” we find that a major work-time innovation that focuses on what employees accomplish (results), not on any fixed amount of time they spend at their desks or in a particular location, is a promising path to reducing turnover. This, in turn, suggests the potential for a new policy approach to and redesign of time and work in the twenty-first century.

Appendix • Description Variables Used in the Analysis

| Scale | Source | Variable Description | Cronbach's Alpha/Corr | Scale | Range |
|---|----------------------------|---|-----------------------|---|--------|
| Gender | | Female Male | | | |
| Parental status | | Respondent lives with a child Respondent does not live with a child | | | |
| Age of youngest child | | Respondents' youngest child's age | | | .1-18 |
| Marital life stage | | Under 40, single, no children Under 40, married/partnered, no children Married/partnered with children Single with children Older than 40, no children | | | |
| Marital status/ spouse's employment | | Single Married/partnered with spouse at home Married/partnered with spouse employed | | | |
| Gender/life stage | | Women younger than 40 no children Women with children Women older than 40 no children Men younger than 40 no children Men with children Men older than 40 no children | | | |
| Job level | | Individual contributors Middle managers Senior manager and leaders | | | |
| Job tenure | | How long have you worked at Best Buy? If less than a year, how many months have you worked for Best Buy? | | | .08-21 |
| Negative work- to-home spillover | Grzywacz and Marks 2000 | Has your job reduced the effort you can give to activities at home? Has stress at work made you irritable at home? Has your job made you too tired to do things that need attention at home? Have job worries or problems distracted you when you are at home? | .823 | 1 = Never 2 = Rarely 3 = Sometimes 4 = Most of the time 5 = All of the time | 1-5 |

(continued)

Appendix • (Continued)

| Scale | Source | Variable Description | Cronbach's Alpha/Corr | Scale | Range |
|---------------------------------|-------------------------|--|-----------------------|--|-------|
| Negative home-to-work spillover | Grzywacz and Marks 2000 | Have responsibilities at home reduced the effort you can devote to your job? Have personal or family worries and problems distracted you when you were at work? Have activities and chores at home prevented you from getting the amount of sleep you needed to do your job well? Has stress at home made you irritable at work? | .763 | 1 = Never 2 = Rarely 3 = Sometimes 4 = Most of the time 5 = All of the time | 1-5 |
| Positive work-to-home spillover | Grzywacz and Marks 2000 | Have the skills you use on your job been useful for things you have to do at home? Have the things you do at work helped you deal with personal and practical issues at home? Have the things you do at work made you a more interesting person at home? Has having a good day on your job made you a better companion when you get home? | .691 | 1 = Never 2 = Rarely 3 = Sometimes 4 = Most of the time 5 = All of the time | 1-5 |
| Positive home-to-work spillover | Grzywacz and Marks 2000 | Has providing for what is needed at home made you work harder at your job? Has your home or personal life helped you relax and feel ready for the next day's work? Has the love and respect you get at home or in your personal relationships made you feel confident about yourself at work? Has talking with someone at home helped you deal with problems at work? | .549 | 1 = Never 2 = Rarely 3 = Sometimes 4 = Most of the time 5 = All of the time | 1-5 |
| Job satisfaction | Taylor & Bowers 1972 | How satisfied are you with your job? | | 1 = Very unsatisfied 2 = Somewhat unsatisfied 3 = Neither satisfied nor dissatisfied 4 = Somewhat satisfied 5 = Very satisfied | 1-5 |

| | | | | | |
|---|----------------------|---|------|---|------|
| Family supportive company culture scale | Allen 2001 | <p>Work should be the primary priority in a person's life. The way to advance is to keep nonwork matters out of the workplace. Employees who take time off to attend to personal matters are not committed to their work.</p> <p>Employees are given ample opportunity to perform both their job and their personal responsibilities well.</p> <p>It is assumed that the most productive employees are those who put their work before their family life.</p> <p>The ideal employee is one who is available 24 hours a day.</p> <p>Managers pay more attention to the quality of work than to how many hours an employee puts in.</p> <p>You are considered a more valuable employee at Best Buy if senior management sees you working long hours.</p> <p>Employees who prioritize their families can still do well here.</p> | .795 | <p>1 = Strongly agree 2 = Agree 3 = Neither agree or Disagree 4 = Disagree 5 = Strongly disagree</p> | 1-5 |
| Income adequacy | | <p>On a scale of 0 to 10 (where 0 is very inadequate and 10 is more than adequate), how well does your current household income meet your financial needs?</p> | | <p>0 = Very inadequate 10 = More than adequate</p> | 0-10 |
| Job security assessment scale | Siegrist et al. 2004 | <p>It is always difficult to predict what will happen in this economy, but what do you think the chances are that you will lose your job (be laid off or terminated) at Best Buy in the next few years?</p> <p>My job security is poor.</p> | .614 | <p>1 = Very likely 2 = Somewhat likely 3 = Not very likely 4 = Not likely at all 1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree</p> | 1-4 |

(continued)

Appendix • (Continued)

| Scale | Source | Variable Description | Cronbach's Alpha/Corr | Scale | Range |
|----------------------------|---------------------|---|--|--|--------------|
| Count of physical symptoms | MIDUS 2006 | In the last 4 weeks, did you experience any of the following physical symptoms? headache constipation/diarrhea muscle soreness shortness of breath tightness in chest trembling/shaking backache cold/flu symptoms heart pounding nausea/upset stomach hot or cold flashes congestion poor appetite sore throat dizziness none of the above | | | 0-15 |
| Turnover intentions scale | Cammann et al. 1979 | I think a lot about leaving Best Buy. I am actively searching for an alternative to Best Buy. As soon as it is possible, I will leave Best Buy. | Wave 1: .905 Wave 2: .916 | 1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree 4 = Neither agree or disagree 5 = Slightly agree 6 = Moderately agree 7 = Strongly agree | 1-7 |
| ROWE | | Participated in ROWE Comparison Group | | | |
| Turnover | | Left Best Buy Stayed at Best Buy | | | Date of exit |

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