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USING DAILY DIARIES TO ASSESS TEMPORAL FRICTION BETWEEN WORK AND FAMILY

David M. Almeida
University of Arizona

Over the past several decades the temporal nature of work life has undergone a transformation. The movement toward a service economy, combined with an increase in the number of mothers with young children in the labor market and improved technology enabling instant global communication, have created a 24/7 economy (Presser, 1999). Such macro-level changes should most certainly have consequences for workers and their families. This same economy that boosts profits and increases consumer convenience may at the same time push employees to work evenings, nights, and weekends. Presser refers to these non-traditional working hours as nonstandard schedules or “fringe time”. In her chapter (this volume), Presser draws our attention to the importance of investigating the impact of fringe time working by carefully elucidating various types of nonstandard schedules (e.g., weekend vs. late hours), documenting the prevalence of these work schedules, and describing their potential consequences for the family.

The timing of work hours has received less attention than the total amount of work hours (Jacobs & Gerson, 2001). In fact, some diary research has indicated that we may be working less for pay. Robinson and Godbey (1997) show that from 1965–1985, employed men and women have decreased the number of hours in the labor market by approximately 7 hours per week and that this decrease in work hours has not been met with a similar increase in time with family. Furthermore, Putnam (2000) argues that this increase in discretionary time is spent primarily on leisure pursuits rather than family and civic engagement. We learn from Presser’s work (this volume), however, that simply assessing the number of hours at work does not paint a complete temporal picture of work life. Her chapter clearly documents that *when* a person works has certainly changed over the past twenty years. In 1997, only a slight majority of U.S. workers (54%) worked for pay between the hours of 9–5. At some point during their workweek, 20% of American workers worked during the evening or late night and 40% worked on the weekend. Working during this fringe time may quickly become the norm for certain members of our society, such as single mothers with young children.

What are the potential consequences of nonstandard schedules for family life? According to Presser’s review, research unfortunately has not provided a clear answer. Some studies report positive consequences, such as increased income and involvement with children inside the home, while others report decreased

extracurricular activities and marital tension. It appears that one key potential consequence of nonstandard work schedules is a reduction in the ability to coordinate family schedules, thus creating a temporal friction between work and family (Mott et al., 1965). To understand this friction, one needs to take into account the temporal nature of family life as well as work life. Work by Crouter and Maguire (1998) and by Larson and Crouter (1998) shows that children's activities follow a weekly schedule typically scripted by school and extracurricular activities. For parents and children with "standard" schedules, weekdays are devoted to work and school and evenings and weekends are available for family time. Crouter and Maguire (1998) refer to this available family time as "windows of socialization". The general question I would like to pose is, to what extent do nonstandard work schedules create temporal friction by disrupting this synchrony between work and family schedules?

Weekly Rhythm of Work and Family Time

One way to assess this temporal friction is to examine work and family experiences on a day-to-day basis. Although Presser's work and the studies she cites go a long way toward establishing a link between work schedules and family life, these studies presume that work schedules are a relatively static phenomenon. In my work I have tried to show how activities fluctuate on a daily, weekly, and seasonal basis to create rhythms of individual and family experiences (Almeida & McDonald, 1998, in press; Almeida et al., 2002). Rhythm is the measured repetition of recurring events happening in a regular, sequential, and predictive pattern over time (Fraenkel, 1994). In music, rhythm is the organizing and energizing structure through which tone and pitch find expression. Notes exist in measured time and space, buttressed by beat and tempo, and are arranged within an infrastructure of measures, phrases, and movements. Musical rhythm, in the form of beats, measures, phrases, and movements, synthesizes with notes of tone and pitch to create music. Likewise, social temporal rhythms of days, weeks, months, seasons, and years provide the score for daily life to be performed.

Weekly work schedules are one such temporal rhythm that powerfully influences how we structure our time (Zerubavel, 1985). In a previous set of analyses, I examined how temporal characteristics of the work week (i.e., workdays vs. non-workdays) were associated with time devoted to family and community. On days that respondents did not work, they spent up to twice as much time with children and providing informal help to family members as compared to workdays. Similarly, respondents spent significantly more time giving volunteer and informal help to community members on non-workdays (Almeida & McDonald, in press). It appears that when workers are not working they will spend time fulfilling obligations to those around them. The underlying assumption of this interpretation

is that available time outside of work coincides with the available time of others. Presser contends, however, that such synchrony may not be present for workers with nonstandard schedules.

One way to examine this synchrony of work and family activities among standard- and fringe-time workers is to study the ebb and flow of work and family time on a daily basis. The use of innovative research tools such as time diaries and event sampling methodology has permitted researchers to obtain detailed accounts of how people spend their time. This daily approach to examining the work-family interweave affords the researcher several benefits that cannot be easily achieved through the use of standard designs. First, daily measurement helps resolve retrospective recall problems by allowing respondents to report about experiences in various domains of life much nearer to the time that they occur (Robinson & Godbey, 1997). Second, the daily design is especially useful in capturing information about the dynamics of daily experiences that appear static in traditional cross-sectional designs. By establishing within-person covariation of time spent in paid work with time contributing to family over several days, this intra-individual approach allows the researcher to rule out temporally stable personality and environmental variables as third variable explanations for these associations (Larson & Almeida, 1999).

Using data from a U.S. national study of daily experiences, I assess here the impact of nonstandard work schedules, specifically weekend work, on time spent with children by addressing the following questions. First, do weekend workers spend fewer hours taking care of their children than workers with solely weekday schedules? Second, are the weekly rhythms of time devoted to work and childcare different for weekend versus weekday workers? Access to daily information on time use permits us to assess whether individuals spend less time with children on workdays compared to non-workdays. Third, our final analyses then explore whether family demands may cause more work disruptions for weekend workers than weekday workers. The lack of synchrony between work and family schedules may create disruptions at work, especially when family members need assistance.

National Study of Daily Experiences

Data for the present analyses are from the National Study of Daily Experiences (NSDE), one of the in-depth studies that are part of the National Survey of Midlife in the United States Survey (MIDUS) carried out under the auspices of the John D. and Catherine T. MacArthur Foundation Research Network on Successful Midlife (Orville Gilbert Brim, Director). Respondents in the NSDE were randomly selected from the MIDUS sample and received \$20 for their participation in the project. Of the 1,242 MIDUS respondents we attempted to contact, 1,031 agreed to participate, yielding a response rate of 83%. Over the course of eight consecutive

evenings, respondents completed short telephone interviews about their daily experiences. Respondents completed an average of 7 of the 8 interviews, resulting in a total of 7,221 daily interviews. The present analyses used the 451 respondents (223 men and 229 women) who reported working for pay at least four hours per week and had at least one child in the household. Respondents for the present analysis were on average 43 years old, with 2 children in the household and an average family income between \$50,000 and \$55,000. Men were slightly older than women but had similar levels of education.

Data collection spanned an entire year (March 1996–March 1997) and consisted of 40 separate flights of interviews with each flight representing the eight-day sequence of interviews from approximately 38 respondents. The initiation of interview flights was staggered across the day of the week to control for the possible confounding between day of study and day of week.

The daily telephone interview included questions about daily experiences in the past 24 hours concerning mood, physical symptoms, productivity, cutbacks, and daily stressors and time use. The following analyses focus primarily on both the time respondents spent each day at paid work and the time spent each day doing things with children. Based on their daily reports of work hours we classified respondents into weekend workers (any work hours on Saturday or Sunday) or weekday workers (work hours solely on weekdays). The prevalence of weekend work in our sample (41%) is very close to that found in Presser's study. Because respondents were interviewed over eight days, we averaged the first and last days of the interviews before computing the mean across the rest of the interviews to eliminate day-of-week bias in the average daily estimate.

Results

The first set of analyses tested differences between weekend workers' and weekday workers' average amount of time spent at work and taking care of their children each day. Table 8.1 shows that male weekend workers spent on average one hour more per day at paid employment and 30 minutes less per day with their children than did male weekday workers. Working weekends did not make a difference in how much time women spent at work or with their children. How does this translate into daily rhythms of work and family time? Figures 8.1 and 8.2 show how work and childcare hours were distributed across the days of the week. Weekday workers show a synchronous crossover rhythm of time devoted to work and children where time with children dramatically increases on the weekend. These workers spent an average of two and one half hours with children on weekdays and four hours on the weekend. A different pattern emerged for weekend workers. Time with children remained relatively constant over the entire week and at no point during the week did parents spend more time with children than they did at work.

Table 8.1
Description of Childcare and Paid Work Hours by Gender and Type of Work Schedule

	Weekday Workers (n = 268)		Weekend Workers (n = 184)		Work Schedule
	Mean	(SD)	Mean	(SD)	F
Daily Work Hours					
Total	6.55	(1.50)	7.53	(1.96)	33.5*
Men	6.80	(1.44)	8.02	(1.95)	28.9*
Women	6.34	(1.51)	6.90	(1.79)	3.2
Daily Childcare Hours					
Total	2.78	(2.18)	2.16	(1.95)	9.3*
Men	2.43	(2.01)	1.75	(1.42)	8.8*
Women	3.07	(2.59)	2.69	(2.36)	1.0

N = 452.

*p < .01.

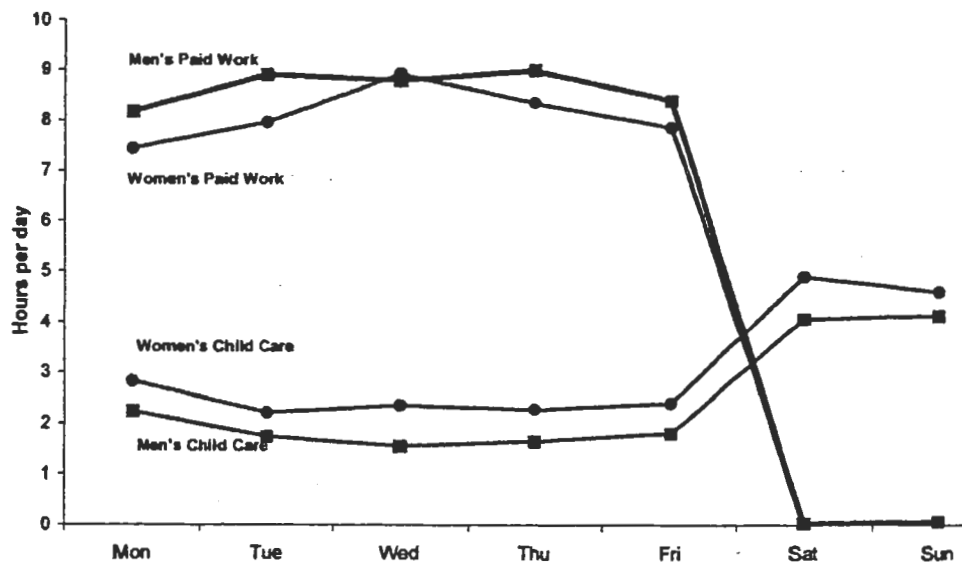


Figure 8.1. Weekly rhythms of paid work and child care hours: Weekday workers.

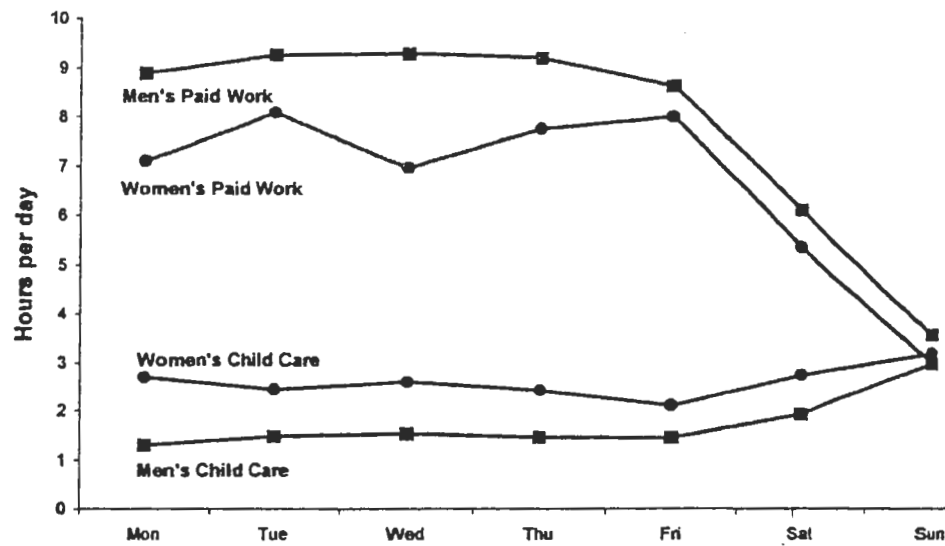


Figure 8.2. Weekly rhythms of paid work and child care hours: Weekend workers.

These findings support Presser's contention that parents' work schedules can create alterations in activities of family life. In our sample, weekend workers spent two fewer hours on the weekend with their children than did weekday workers. Obviously, weekend workers do not have as much available time on the weekend to spend with children. Perhaps these weekend workers are making up child time on days that they are not working. This does not appear to be the case. Figure 8.3 shows the amount of time parents spent with their children on workdays and non-workdays, stratified by work schedule. Results of a 2 X 2 (workday X work schedule) mixed model ANOVA indicated that, on average, parents spent more time with children on non-workdays ($F(1, 440) = 107.4, p < .01$). However, this difference was greater for weekday workers ($F(1, 440) = 4.4, p < .05$). While there was no difference on workdays, weekday workers spent one hour more with children on non-workdays than did weekend workers. One interpretation for these findings is that working on the weekend may limit the time on those days when children are most available.

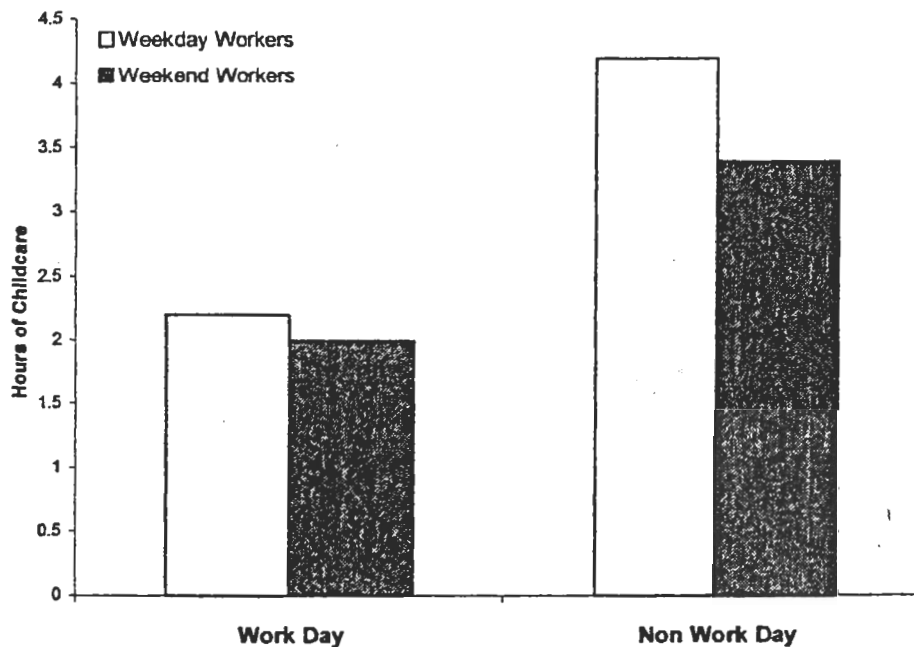


Figure 8.3. Childcare hours on work days and non-work days.

So far these analyses support the contention that weekend work schedules may disrupt rhythms of family life by being out of sync with children's schedules, resulting in decreased time with them. It is possible that lack of synchrony between work schedules and family schedules may also be disruptive to working conditions. Children's structured (e.g., sporting events) or unstructured (e.g., hanging out with friends) activities may create obligations for parents to fulfill, such as attending a game, shuttling children from one activity to another, or tending to minor accidents and/or illness. Fulfilling these obligations may have consequences for work activities.

In my final set of analyses I explore how family demands may disrupt daily work activities and whether such disruptions are more likely to occur for weekend workers. Each day during our study respondents indicated whether they had to "cutback at work because a family member needed their help". Affirmative responses were followed by a series of open-ended probes. The most common reasons for cutting back were child-related schedules followed by family illnesses.

On average, 26% of our respondents reported having to cutback at work at least once during the study week because a family member needed them. Figure 8.4 shows this prevalence broken down by gender and work schedule. Although women were more likely than men to experience family-related disruptions, work schedules were not related to women's work disruption. Among men, weekend workers were almost twice as likely to experience a job disruption as were weekday workers ($\chi^2 = 4.78, p < .01$). Consider the following week described by a 45-year-old male weekend worker in our study.

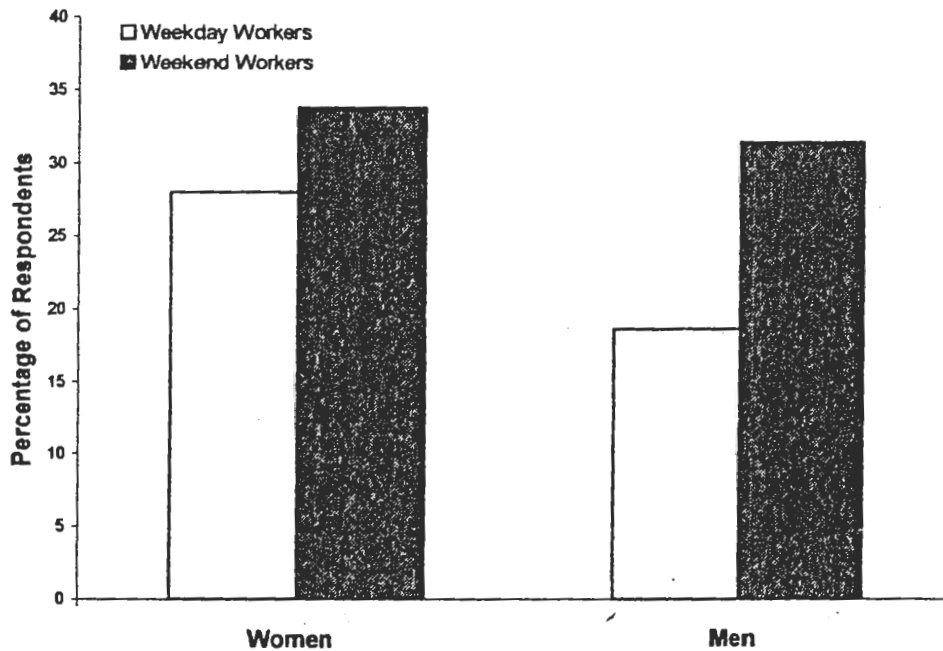


Figure 8.4. Percentage of family-related job disruption by type of work schedule.

Saturday:

"I had to leave work about an hour earlier because my daughter had a softball game that she had to get to. So I had to drive her there."

Sunday:

"My daughter left home without my permission and it interfered greatly with my activities. She said she was going to have dinner at a friend's house and I was to pick her up at a certain time and when I called to let her know I was on my way, she said, don't bother I'm not coming home tonight."

Tuesday:

"For about a half hour I had to leave the office and go over to pick up my daughter from high school and bring her home. Normally I don't have to do that. It was an interruption to my business day. She stayed late to do some extra work in one of her classes and did not take the bus."

Thursday:

"There was a scheduling conflict with picking my children up from their after-school sports activities so I cut back on my work time."

Friday:

"My 17-year-old son is on spring break and he was at a party on the river last night and I happened to have on the scanner and I heard that the police were about to go down and check out this party and so I went down there and told them they needed to go home. So, they all came to my house. About 15 boys and 3 or 4 girls were here at my house until 4 o'clock in the morning. I had to get up for work at 7."

These examples suggest that the temporal friction of out-of-sync schedules also may affect work life.

Conclusions

Presser calls on researchers and policy makers to recognize how social trends alter the fabric of our daily lives by seriously considering the import of nonstandard work schedules for family life. The trend of such fringe-time working suggests that most U. S. families will be faced with adapting to this form of work schedule. Therefore, we need to continue to develop new methods to assess how temporal characteristics affect families. The aim of my chapter is to provide an example of how a daily diary design can help inform this agenda. These analyses show that the family-related time deficit that occurs for weekend workers takes place on the weekend and that weekend workers are not able to make up this lost time on their days off. It appears, however, that weekend workers are still attempting to fulfill family obligations. Female weekend workers spent as much time with children as did female weekday workers. Male weekend workers were almost twice as likely to experience some type of work disruption because of family obligations.

The major benefit of a diary approach is that we can better examine the process of temporal friction as it occurs. There are obvious shortcomings in these analyses that are worth mentioning. First, we only assessed one type of nonstandard schedule—weekend work. It would be interesting to assess temporal friction with evening and late-night work as well. Second, nonstandard work has a variety of potential consequences including individual health and well-being. The impacts of sleep disruption, mood, and physical symptoms not only affect the worker but have implications for the quality of family life. Finally, these analyses did not assess the social demography of the effects of weekend work. Presser's chapter shows that single mothers may be at most risk for the effects of a nonstandard schedule. In order to better understand families in a 24/7 economy, we need to address both how and for whom temporal frictions occur.

Acknowledgments

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