Temporal Aspects of Telework and its Impact on Work-Family Conflict

Research-in-Progress

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Abstract

Telework is the engagement in work outside of a regular office setting by means of the use of information and communication technology (ICT). Findings reported in the literature are mixed with some studies having argued that telework provides workers the opportunity to better balance work and private roles. In contrast others have argued telework blurs the boundaries between work and private life thus creating competing objectives and conflict. This research in progress seeks to examine these inconsistencies by distinguishing between telework activity before and after office working hours. We predict that increased engagement in telework outside of office hours will contribute to stronger perceptions of work-family conflict, while greater engagement in telework during office hours will lessen perceptions of work overload and work-family conflict.

Keywords

Telework, Work-Life Balance, Telecommuting, Temporality, Work Overload, Work Exhaustion, After Hours Work.

INTRODUCTION

Telework is the use of information and communication technology (ICT) to support work activities away from the traditional office environment. Rapid advances in information and communication technology (ICT), and the availability of low cost high speed Internet in particular, has contributed to a rise in the popularity of telework practices (Kenny and Kenny 2011; Bayrak 2012). However, for many professionals, telework can blur the time and place boundaries that have traditionally separated work from private life (Baard and Thomas 2010; Davis 2002). While ICT can enable individuals to organize work tasks in ways that can create more private time, in practice, telework adoption is more complicated and paradoxical (Pyöriä 2011). At one extreme, individuals can use technology in a way that maximizes the amount and quality of time allocated for private activities. At the other extreme, telework might create a situation in which work becomes a dominant feature of private life.

While prior research has examined the impact of telework on professional roles and identity (Gajendran and Harrison 2007), the impact of telework on non-work social relationships has not been investigated as extensively. To address this issue, we draw on the concept of work-life balance, as an important theoretical construct for understanding the nature and impact of virtual work practices, and as a consequence, the barriers to adoption of telework (Brough and O'Driscoll 2010). Earlier research argued that telework provided employees with greater flexibility and autonomy, thereby facilitating a better balance between work and family commitments (Donnelly 2006; Gajendran and Harrison 2007; Kanellopoulos 2011; Ranghuram and Wiesenfeld 2004).

However, the increased use of mobile and communication technologies is emerging as a key concern with claims by some that the pervasiveness of technology has reduced an employee's ability to detach themselves from their work commitments (Davis 2002; Igbaria and Guimaraes 1999; Mann and Holdsworth 2003; Olson-Buchanan and Boswell 2004; Standen et al. 1999). Our research makes a significant contribution to this debate by examining the temporal nature of telework, and importantly, exploring its impact on work overload, exhaustion, and work-family conflict. All of these factors have potentially significant impacts on individuals as well as their families, organisations and society more broadly.

We posit that the mixed findings in the literature are contingent on a temporality effect and we therefore seek to provide, through empirical examination, why results regarding the effect of telework on work-family conflict

were inconclusive in earlier research. In particular, we argue that the temporality of telework has a latent impact on perceptions of work overload and work-family conflict, and can provide an explanation for why some studies reported positive outcomes, while others reported negative outcomes. Thus we predict that telework activity during regular office hours may directly reduce perceptions of work-family conflict and decrease perceptions of work overload. Furthermore, we predict that telework activity after office hours will contribute to stronger perceptions of both work overload and work-family conflict.

To position this contribution, we begin with a discussion of the theoretical background as it applies to our understanding of telework. This discussion provides the foundation for our conceptual model and hypotheses regarding the interplay between the key constructs in our study. The fourth section of this paper presents the method employed to test the hypotheses, before concluding with a discussion of the results and a consideration of the implications, limitations and opportunities for future research.

THEORETICAL BACKGROUND

The concept of teleworking, variously known as 'remote work', 'virtual work' and 'telecommuting,' (Gajendran and Harrison 2007), came into prominence during the 1970s as firms looked for ways to reduce travel costs because of rapidly increasing energy costs (Nilles et al. 1976; Pyöriä 2011). At the time ICT was seen by many as a tool for reducing the need for workers to commute to their offices, which in turn, could be used to unlock economic benefits at a national level by reducing energy consumption and dependence on fossil fuels.

At its core, telework is concerned with overcoming spatial boundaries in work practices via ICT. However, the idea of overcoming spatial and temporal boundaries in working with others as part of a distributed work approach predates telework and modern ICT (O'Leary et al. 2002). As such, telework can be considered to be one branch of research within the wider field of distributed work approaches (Gajendran and Harrison 2007; Pyöriä 2011). Telework is based on the idea of working with others from home via ICT, whereas distributed work is defined more broadly as work involving collaboration with others via ICT. This includes, for instance computer-supported collaborative work (Carroll at al. 2009), virtual teams (Schweitzer and Duxbury 2010), virtual work (Watson-Manheim et al. 2012), and collaboration across offices, countries or time zones (Pyöriä 2011; Sarker et al. 2010).

Research examining the effects of telework began to emerge in the early 1980s (Gajendran and Harrison 2007; Ramsower 1983). Despite the rhetoric regarding the advantages of telework at societal, organizational and individual levels; the adoption of virtual work arrangements was much slower than expected (Pyöriä 2011). Possible reasons for this lag have been attributed to a lack of clear strategies for the implementation of telework by business, and the absence of guidance on deployment, and concerns regarding the legal responsibilities of firms for employees engaged in telework (Pyöriä 2011).

The idea of greater flexibility through telework, and hence the ability of employees to better balance work and private roles, is in stark contrast with the emerging concerns about work-life blurring (Baard and Thomas 2010; Gajendran and Harrison 2007; Olson-Buchanan and Boswell 2004; Raghuram and Wiesenfeld 2004). While some scholars continue to argue for the benefits of telework for both work and personal life (e.g. Donelly 2006; Duxbury et al. 1998; Kanellopoulos 2011; Ranghuram and Wiesenfeld 2004), others assert that telework contributes to conflict between work and private life roles (e.g. Davis 2002; Igbaria and Guimaraes 1999; Standen et al. 1999; Mann and Holdsworth 2003; Olson-Buchanan and Boswell 2004).

The empirical evidence thus far is inconclusive. A recent meta-analysis by Gajendran and Harrison (2007) found a bi-directional effect between work-life balance and telework suggesting that telework reduces work-family conflict. However, Gajendran and Harrison (2007) did not investigate whether the timing of telework had any appreciable effect on work-family conflict. An unresolved question remains regarding the impact of different telework patterns on perceptions of work-life balance, and on perceptions of overloading, exhaustion and conflict in non-work relations.

MODEL DEVELOPMENT

Drawing on social-identity theory (Scott and Timmerman 1992), we examine the extent to which differences in telework patterns impact detrimentally on an employee's filial relationships, and in particular, their capacity to engage meaningfully with family members as a necessary pre-requisite for reducing stress and conflict (Adams et al. 1996). It is noteworthy that in a comprehensive review of the telework literature, Bailey and Kurland (2002) alluded to the value of social-identity theory as one possible avenue for building a stronger theoretical foundation for telework research. Social-identity theory posits that an individual's sense of identity and social belonging is based on group membership. The intrusion of telework on out-of-hours time potentially brings into conflict an individual's personal and work relationships (Scott and Timmerman 1999; Tajfel 1978). Thus, drawing on social-identity theory, we examine the extent to which differences in telework patterns impact their capacity to engage meaningfully with family members as a necessary pre-requisite for reducing stress and conflict.

Our research model, as depicted in Figure 1, seeks to build on the work of Ahuja et al. (2007) who examined the impact of technology within a highly mobile workforce, which they defined as 'road warriors.' This aspect of working away from a company's office is something that is also characteristic of telework arrangements. We extended Ahuja et al.'s (2007) work in two ways. First, as we will not be examining an extreme group of mobile workers, we added a telework construct to their original model. Although telework is gaining in popularity we expect to find great variability in the level of adoption amongst professional knowledge workers. Second, as the original model focused on an organizational perspective (i.e., turnover intention and organizational commitment) we have recast their model to focus on the personal impact of telework on work-family conflict. Ahuja et al. (2007) argued that work-family conflict is a source of occupational stress. However, there is ample evidence in the literature to the contrary which shows that occupational stress is in fact an important antecedent to Work-Family conflict (see Kinnunen and Mauno 1998; Schaffer et al. 2011). Importantly, in our study 'family' refers broadly to an employee's life outside of work including responsibilities and commitments to friends and significant others as well as personal leisure time. A detailed definition of each of the constructs used in our model is provided in the Appendix.

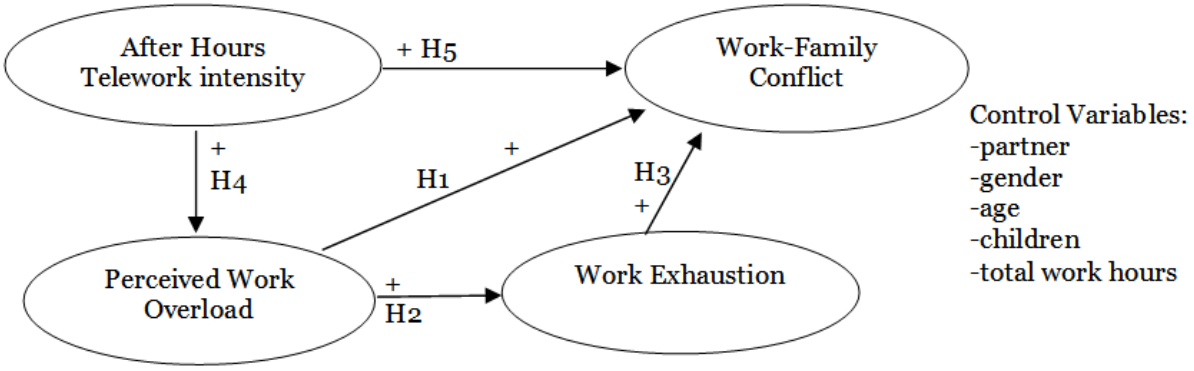

Figure 1. Telework temporality and work-family conflict

To assist in the generalization of our model, we introduce a number of control variables. In doing so, we consider relationship status (having a partner or not), gender, children at home, total hours worked and age as variables that may have the potential to confound the results of our research. The selection of these controls reflects an intuitive belief that employees in a close relationship may have obligations to a partner that may influence the potential for conflict. Similarly, it is possible that differences in age and gender may also account for different levels of obligation, and accordingly expose employees to different levels of conflict (e.g. Hilbrecht et al. 2008; Huws et al. 1996; Sullivan and Lewis 2001).

Perceived work overload

Perceived work overload can be described as the perception by employees that there are too many things to do in the time available (Leiter and Schaufeli 1996). Perceived work overload is thus associated with the perception of an employee that one is under pressure to cope with the amounts of tasks that one is required to do. Perceived work overload is then, on the one hand, associated with higher levels of work-family conflict as employees are increasingly struggling to simultaneously cope with demands from their workplace and their private life (Ahuja et al. 2007). On the other hand, increased levels of perceived work overload is expected to lead to increased levels of work exhaustion as employees are subject to increased levels of fatigue, exhaustion and potentially burnout (Ahuja et al. 2007). Therefore, we hypothesize that perceived work overload will positively influence work-family conflict as well as work exhaustion:

H1: Individuals with stronger perceptions of work overload will have stronger perceptions of work-family conflict.

H2: Individuals with stronger perceptions of work overload will have stronger perceptions of work exhaustion.

Work exhaustion

In accordance with Moore (2000) work exhaustion for IT professionals can be associated with mental, physical and/or emotional depletion, with the latter being of particular relevance. In general, the concept of work exhaustion is thus associated with the feeling of fatigue and exhaustion towards ones work (Ahuja et al. 2007;

Moore 2000). Workers subjected to high levels of work exhaustion are under considerable emotional pressure which, in turn, can affect their family and personal life. Hence, work exhaustion is expected to positively influence work-family conflict:

H3: Individuals with stronger perceptions of work exhaustion will have stronger perceptions of work-family conflict.

Telework

In our study telework is defined as: *the use of information and communication technology to support work activities away from the traditional office environment, either during or outside of normal office working hours.* This understanding of telework is consistent with other definitions of telework used throughout the literature (see Gajendran and Harrison 2007; Pyöriä 2011). However, it explicitly includes ICT as the means through which such work is conducted which is often taken for granted in definitions of telework. One aspect overlooked in earlier studies is the temporality of telework. That is, the different impacts for employees who engage in telework during regular office hours (Monday to Friday from 9am to 5pm) versus outside regular office hours.

These temporal effects may help explain the conflicting results reported in the telework literature. For example, One important aspect of telework is the potential flexibility it can provide to employees in regard to when and where they engage with their work (Hill et al. 2001; Kelliher and Anderson 2009; Masuda et al. 2012). This flexibility can allow employees to adjust their engagement with work in accordance to current work demands and hence may enable them to cope dynamically with their current workload. Moreover, telework enables employees to save time spent on commuting to and from work which can instead be used more productively in work related tasks (Baard and Thomas 2010). Both of these aspects may enable teleworkers to better cope with work overload during normal working hours and also act to reduce the need for work activity after hours thereby reducing work-family conflict. However, telework after hours is likely to be associated with opposite effects: greater work overload leading to increased work exhaustion and work-family conflict. Thus a major focus for our study is to engage in a closer investigation of the temporality of telework to see if engagement in telework outside usual office hours leads to different effects in comparison to telework activity during office hours.

This leads us to conceptualize the temporal duality of telework activity in an innovative way. Instead of conceptualizing telework after hours and telework during office hours as two distinct constructs, we use a single construct representing the percentage of telework activity after office hours in relation to the total hours spent teleworking both during and after office hours. We argue that the available working hours per day is finite and that a change in the number of hours worked during office hours would to some extent affect the number of working hours available after office hours. We propose that proportionally higher levels of telework outside office hours will increase perceptions of work overload.

H4: Individuals with a higher proportion of telework activity after office hours will have stronger perceptions of work overload.

As discussed earlier, investigations of the relationship between telework and work-family conflict have also produced mixed findings. For example, in some studies telework was seen as beneficial to employees as it provides increased flexibility that can help individuals to structure their workload in ways that help reduce work-family conflict (e.g. Donelly 2006; Duxbury et al. 1998; Kanellopoulos 2011; Ranghuram and Wiesenfeld 2004). In contrast, others studies have found that telework can lead to a blurring of boundaries between work and private life thus leading to increased work-family conflict (e.g. Igbaria and Guimaraes 1999; Standen et al. 1999; Olson-Buchanan and Boswell 2004; Tietze and Musson 2002). Considering the potential temporal consequences, higher levels of telework activity outside of office hours is likely to interfere with personal commitments more than telework during office hours. Thus we predict that proportionally higher levels of telework intensity outside office hours will increase perceptions of work-family conflict:

H5: Individuals with a higher proportion of telework activity after office hours will have stronger perceptions of work-family conflict.

The total number of hours worked is a constraint on telework hours, and also likely to have a direct bearing on perceptions of work-family conflict, work overload and work exhaustion. Therefore, total hours worked is added to the model as a control variable.

METHODOLOGY

The sample frame for the research was drawn from the membership of Certified Practicing Accountants (CPA) Australia. CPA Australia is one of the world's largest accounting profession bodies with more than 144,000 members located around the world working in finance, accounting and business professions. The questionnaire consists of measurement scales and contextual questions. Measures for the different latent constructs represented in the conceptual model items are mainly adapted from existing scales provided by Ahuja et al. (2007) and

Moore (2000). In particular, the questions are adapted for the telephone survey from first person to third person (see Appendix). As part of the survey development process, the face validity of these items was established through a focus group consisting of three practitioners and two academic researchers who were all involved with telework practice and familiar with the process of survey design. A total of 600 surveys have been collected and data analysis has commenced. The final survey will include more than 200 practitioners engaged in telework to ensure high reliability of our results.

Partial least square (PLS) and the SmartPLS program will be used to analyse the resulting data. Our use of PLS is informed by the procedures and recommendations of Fornell and Bookstein (1982). The choice of PLS over alternative structural equation modelling approaches is based on the following reasons. First, the use of PLS is well suited to exploratory research. This is consistent in accordance with the main objective of this study which is to better understand the nature and impact of telework. Second, PLS is a variance-based structural equation modelling technique that has identified advantages over covariance based approaches when using new or modified measures. In the case of this research, it is appropriate because we use several adapted measures. Last, PLS provides for efficiency in analysis because it allows for simultaneous examination of both the measurement model (outer model) and the theoretical or structural model (inner model). That is, PLS can be used to assess constructs, measures and relationships between the observed indicators and the latent constructs they measure at the same time as we assess the hypothesized relationships of interest.

DISCUSSION

The relationship between telework and work-family conflict remains not well understood, with earlier research reporting both positive and negative outcomes for work-family conflict. We posit one possible explanation for these contradictory outcomes by examining the temporality of telework (telework during office hours versus telework outside office hours), and its impact on perceptions of work overload and work family conflict. This paper reports an ongoing study of the temporal nature of telework and discusses a model for empirically testing its effect on work overload, work exhaustion, and work-family conflict. Further, we propose an innovative means of measuring the temporality of telework by creating a construct that reflects the proportion of telework activity performed after hours in relation to the total time spent teleworking.

We anticipate that the results will show that the time during which telework is undertaken and duration will add an important dimension for understanding the effects of telework on work-family conflict and perceptions of work overload. Thus we seek to provide supporting evidence for why telework can be perceived as having both positive and negative outcomes by employees. We therefore engage in an important debate at a time where mobile devices increasingly enable engagement in telework (Hislop and Axtell 2007).

An additional contribution relates to the modelling of the relationship between work exhaustion and work-family conflict. Unlike Ahuja et al. (2007) who specified work-family conflict as an antecedent of work exhaustion, we relied on findings in the literature which showed that a contrary causal relationship exists (Kinnunen and Mauno 1998; Schaffer et al. 2011). Our model thus more accurately defines the association between variables.

Implications for research, limitations and future research

A major implication of our findings for future research is to consider temporality more thoroughly when investigating the effect of telework on work-family conflict and other factors including job satisfaction, autonomy and organizational commitment. Our approach suggests further opportunities to investigate different aspects of temporality. In our study we only differentiated between telework undertaken outside or during office hours. A finer granularity of work undertaken outside of office hours, such as at night or on weekends, may enable a deeper understanding of the importance of temporality in the context of telework thereby providing greater insight into what is a very complex phenomenon.

In addition, the difference between telework and mobile telework, was not considered by our research and is worthy of further investigation. Technological advances have made ICT more portable allowing the use of ICT beyond home or office. Thus there is a need to more closely examine mobile telework, also labelled 'nomadic telework' or 'multi-location telework' (Hislop and Axtell 2007). The distinction thus becomes a triad between home, office and mobile settings. Importantly, engagement in mobile telework may affect work-life balance differently than telework, thus implications of telework and mobile-telework may differ for different groups of workers. For instance, there are indicators that mobile telework away from home may interfere less with family life and thus work-life balance than 'traditional' telework done from home (Hislop and Axtell 2007). Future research should therefore look into the differentiation between telework and mobile telework (Hislop and Axtell 2007).

Furthermore, some limitations of our research apply. As our survey is undertaken with CPA members we have to caution against interpreting our results to teleworkers in general beyond accounting professionals. It is possible that other groups of teleworkers differ in their engagement with telework as part of their work and that telework

thus manifests itself in a different way in regards to work-family conflict. For instance accounting professionals may be more engaged in telework arrangements than mobile telework arrangements. Thus our results may not be readily applicable to groups of teleworkers engaging in mobile telework.

Potential Implications for practice

From a practice perspective our research underscores that telework can have negative consequences for organizations by contributing to increased work-family conflict among employees. However, telework can also potentially contribute to relieving the perception of work overload among employees. As earlier research showed both aspects of work-family conflict and work overload can be associated with turnover intention among employees (e.g. Ahuja et al. 2007). Telework can therefore play an important aspect for organizations in retaining staff and in maintaining higher levels of job satisfaction.

The provision of telework arrangements to employees is also one aspect that can be facilitated by managers. Contrary to the argument of telework contributing to increased work-family blurring and therefore its potential negative consequences for work-family conflict in general, it may actually provide workers the ability to better cope with their workload and thus to manage work and family commitments more effectively. This may be in particular helpful during periods of high work load where telework enables workers to make more efficient use of their time. To summarize, engagement in telework can be beneficial for both organizations and employees as it enables an alternative for engaging with work by means of ICT. Nevertheless, the benefits of the flexibility enabled by telework may revert if ICT contributes to working outside of usual office hours.

Concluding remarks

Current research on telework postulates both, that telework is enabling better work-family balance and that it is contributing to decreasing work-family balance. Our research engages with this apparent contradiction in the literature. We argue that temporality is an important dimension that was overlooked in earlier research. The time when employees are engaging in telework can, therefore, provide one explanation why earlier findings regarding the effect of telework on work-family balance are contradictory and inconclusive. The research design introduced here will shed light on this contradiction by providing conclusive evidence for the effect of engagement with telework outside of office hours.

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APPENDIX: CONSTRUCT MEASUREMENT

Telework

The use of information and communication technology to support work activities away from the traditional office environment, either during or outside of normal office working hours (normal office working hours are Monday to Friday 9am-5pm).

Hours Worked

1. On average, how many hours per week do you work?
2. On average, how many hours per week would you telework during normal office working hours?
3. How many hours per week on average would you telework outside of normal office working hours?

Work–Family Conflict (Adams et al. 1996; Ahuja et al. 2007)

If you are not married and/or do not have children, you can choose to respond to these questions in terms of your life outside of work in general (for example, replace "family" with "friends" and think of your other commitments, such as gymnasiums, book clubs, or any other hobbies).
(1 = Strongly agree; 2 = Moderately agree; 3 = Uncertain; 4 = Moderately disagree; 5 = Strongly disagree)

1. The demands of your work interfere with your home/family life.
2. The amount of time your job takes up makes it difficult to fulfil home/family responsibilities.
3. Things you want to do at home do not get done because of the demands of your job.
4. Your job produces strain that makes it difficult to switch off and enjoy home/family life.
5. You often end up making changes to your plans for home/family activities because of work related duties.

Work Exhaustion (Ahuja et al. 2007; Moore 2000)

(1 = Daily; 2 = weekly; 3 = monthly; 4 = a few times a year; 5 = never)

6. You feel emotionally drained from your work.
7. You feel 'spent' at the end of the work day.
8. You feel fatigued when you get up in the morning and have to face another day on the job.
9. You feel burned out from your work.

Perceived Work Overload (Ahuja et al. 2007; Moore 2000)

(1 = Daily; 2 = weekly; 3 = monthly; 4 = a few times a year; 5 = never)

1. The number of requests, problems, or complaints you deal with is more than expected.
2. The amount of work you do limits how well it can be done.
3. You feel busy or rushed.
4. You feel under pressure.

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