

Article

New Telework, Time Pressure, and Time Use Control in Everyday Life

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Abstract: This study explores how changing conditions for home-based telework affect the quality of life and social sustainability of workers in terms of time pressure and time use control in everyday life. Changing conditions concern the spread of telework to new types of jobs of a more routine character, involving new practices of unregulated work and anytime smartphone access. Empirically, we draw on survey data from a sample of 456 home-based teleworkers employed by six governmental agencies in Sweden. Results indicate that subjective time pressure is not associated with job type in terms of distinguishing between bounded case work and more independent analytical work. Time pressure is intensified by family-related factors, telework performed outside of working hours, and part-time work, and is moderated by the private use of smartphones. We find no significant associations between subjective time use control, job qualifications, and teleworking practice. Family situation and having small children at home reduce time use control. Also, high levels of smartphone use for work-related purposes are associated with reduced control.

Keywords: telecommuting; remote work; quality of life; social sustainability; time pressure; work–life balance; everyday life; job qualifications; telework practice; smartphone

1. Introduction

The conditions for home-based telework are changing drastically in many industries, offices, and homes. The absolute number of remote workers is increasing, teleworking practices are spreading to new categories of employees, and employers are increasingly willing to allow work out of sight and colocated control [1,2]. New mobile online technologies, virtual offices, and smart devices in principle enable employees in the service sector—information workers broadly conceived—to be accessible and to perform work anywhere and anytime [3]. These intertwined changes raise questions about whether many of the often anticipated outcomes of telework are transforming. In this study, our aim is to explore the extent to which the changing conditions for home-based telework are affecting employees' perceived time pressure and time use control in everyday life, outcomes clearly important for broader issues of well-being and work–life balance.

In doing so, we account for three important changes going on in contemporary telework. One of these primary changes concerns the spread of telework to new groups, as workers with relatively routine and deskbound tasks increasingly have the opportunity to work from home. Telework is no longer an option available only to highly qualified workers with relatively autonomous, creative, and flexible work tasks and schemes. A second tendency considered is that telework is increasingly expanding into free time, i.e., being performed outside regular working hours, in the evening, on weekends, and on holidays, thus competing with private life. Thirdly, this is facilitated by the work-expanding trend of ongoing digitalization, as more and more employees (together with their work tasks and contacts) are

perpetually accessible online via mobile information and communication technologies (ICTs). We pay particular attention to the latest in the line of work-extending technologies—the smartphone.

In the analysis, we concentrate on what these tendencies imply for the new teleworkers—for their basic motives for engaging in telework—and for related outcomes in terms of perceived overall time use control and perceived time pressure in everyday life. Current research suggests that new forms of telework (that have spread to new groups and comprise new practices and new smart technologies) are increasingly driven by employers' demands, expectations, and interests, rather than by individual workers' own needs and motives [4]. Furthermore it has been suggested that classical "gains" of telework, such as increased autonomy and reduced time pressure, will increasingly be counterbalanced by negative implications and drawbacks, with increased work-related ties and intrusions into private life [5,6]. The "privilege" of telework might then more often become a burden and an obligation. This highlights, more generally, that an individual's own control over time use and associated pressures are essential constituents of quality of life and a sustainable working life.

As knowledge of the "new" and more divergent groups of teleworkers in the era of smartphones is still limited, there is a need of continued research. Hence, in this study, we adopt an explorative approach to specifically examine three related research questions (RQs):

- RQ1: Are there basic differences in teleworking practices, motives, and smartphone usage depending on work qualifications and job type? Using bivariate comparison, we contrast civil servants conducting routine administrative work ("case workers") with civil servants conducting analytical work of an autonomous character ("analytical workers").
- RQ2: How are work qualifications, teleworking practices, and smartphone usage associated with perceived time pressure in everyday life? We perform multivariate analysis controlling for important sociodemographic characteristics to explore existing relationships.
- RQ3: To what extent are work qualifications, teleworking practice, and smartphone usage associated with perceived time use control in everyday life? Again, multivariate analysis is used to identify influencing factors.

Empirically we draw on data from a recent survey of home-based telework among a sample of 456 employees of six governmental agencies in Sweden. Since "telework" is a generic term that encompasses a range of remote work types, work durations, and technological facilities, it needs a clear definition. In this study, we concentrate on home-based telework, defining teleworkers as employed people (not self-employed) who report often/regularly working at home during regular working hours for shorter or longer periods. We also take account of information concerning their overtime work (outside regular working hours) and use of mobile ICTs and smartphones (making it important also to take account of shorter/intensive episodes of work when defining work at home). Even though regular work is increasingly performed at nonworkplace locations (e.g., while commuting and in public spaces or cafes), home-based telework is still far more common and also more profoundly interacts with private life.

2. Literature Review and Conceptual Framework

2.1. Extending Telework: New Groups, New Practices, and New Technologies

The current literature profiles telework in transition, expanding in several important respects. In recent years, there has been clear expansion in the numbers of teleworkers. Telework is moving from the phase of "early adoption" to that of "early majority" [3], before arguably further expanding to a phase of massive use and engagement [6]. In Sweden, telework has become routine for a sizeable fraction of the population. After decades of slow growth, regular teleworkers now comprise a quarter of all gainfully employed [1,7], and similar tendencies are observed in other Western countries [8–11]. Research suggests that various factors explain this recent "take-off" [3]. These factors concern the ongoing digitization and rapid spread of advanced ICTs as the basic facilitators of flexible work, but

also include several other restructuring tendencies in society and the labor market [12–15]. For example, employers' willingness to permit telework has increased, and more work tasks are now suitable for telework [2,16,17]. This implies that essential constraining features associated with managers' trust, power, and control have been eased [18]. Furthermore, telework is increasingly attractive in the struggle to combine and balance work and private life [12,19–21].

An important part of this development is that telework is expanding into "new" professions, work tasks, and employee categories. Traditionally, telework has been closely associated with privileged, highly educated, well-paid workers in knowledge-based services [14,22], more often men than women, living in urban areas [13,23] and likely having families with young children. Current studies find that while growth continues among these traditional groups (with relatively self-governing and flexible work tasks), telework is also expanding among employees with routine tasks previously inflexibly tied to the office desk, for example, case workers at the Social Insurance Agency or Public Employment Service in Sweden [1]. This trend is assumed to be caused by employer interests, and is related to findings indicating positive effects as regards efficiency, reduced premises costs, reduced absence, and more efficient recruitment of competent staff [24]. Technological innovation and change, introduction of new work tasks, massive digitization of existing work tasks [25], and enhanced monitoring and control at a distance [26] are also important drivers [27]. Most of the telework literature has so far focused on the group of highly qualified workers, while studies are still lacking of the underlying motives and perceived work and nonwork implications of telework among newer categories of teleworkers [5,6]. In this study, we therefore distinguish between those belonging to the established category of "old" teleworkers with more autonomous and investigative tasks and "new" teleworking groups with more administrative and routine tasks that only recently have become possible to perform remotely from the home; we call these two categories analytical and case workers, respectively.

The current literature also identifies important expansions as regards the basic practices of telework and the associated use of ICTs. In the earliest phase of adoption, telework was largely considered full-time employment and a substitute for office work on the particular day of teleworking [14,28,29]. It was highly place bound in that it was almost exclusively tied to home (i.e., a home office with stationary computer and landline phone). Gradually, more part-time and irregular telework arrangements have been added, and teleworking for parts of a day and intermittently is found to be the most widespread [1,12]. Telework is far from being a full-time endeavor shaping the worker's overriding identity [12]. While the private home has continued to be the most common place for teleworking, other places have also become sites of teleworking practice, largely thanks to the spread of mobile ICTs such as laptops and mobile phones [8]. This especially applies to work during the commuting trip, when buses and trains often serve as important extensions of the workplace [30–32].

Recent telework literature pays attention to how additional forms of flexible work arrangements are added to the menu of options, further extending the concept and reach of telework [3,6,23,33–35]. At the heart of this debate lie ongoing digitalization and the growth of new smart and portable ICTs. Wi-Fi, virtual offices, cloud technology, and smart devices in principle enable access to and work outside the office from any place and at any time. In particular, this new wave of ICTs is assumed to support new forms of "occasional" telework [3,36], referring to work activities that are sporadic, momentary, instantaneous, and distributed in time and space. Occasional telework includes activities that occur every now and then (e.g., typically involving email, messages, news, and calls) regardless of location and time of day, interrupting and going on between other activities and in intermediate places (e.g., while riding the elevator, waiting, and walking to the bus). This development is assumed to support teleworking activity that is unregulated and informal and that takes place outside regular working hours (e.g., in the evening after work, on weekends and vacations, while on sick leave, and while taking care of sick children) [3,6,23]. In the literature, work that takes place outside regular working hours is rarely included in definitions and empirical investigations of telework. However, some studies have indicated that this practice is extensive and even more common than regular forms of telework [6,23,34]. In this study, this aspect is further explored by distinguishing between teleworking

practices taking place during and outside regular working hours. Furthermore, the role of occasional forms of telework is considered by exploring different intensities of smartphone use in the contexts of working life and private life.

2.2. Potential Gains and Drawbacks in Extended Telework as Regards Time Pressure and Control

A large body of research, mainly based on earlier phases of telework adoption, has investigated the role and outcomes of telework with regard to aspects such as job satisfaction [8], work–life balance and conflict [33,37–40], and individual well-being and happiness [41,42]. Though rarely focusing directly on time pressure and personal control over time use, time-related issues and outcomes are considered fundamental drivers of telework adoption and development. Time and time use are usually denoted by compound concepts such as work satisfaction and efficiency, work–life balance and quality of life [42,43], and social sustainability [44]. It is found, for example, that people telework for reasons linked to work time efficiency (e.g., to work undisturbed and avoid interruptions) [12], to avoid costly commuting and save travel time [45,46], and to cope with and more easily coordinate daily work and non-work commitments (e.g., work time vs. family time and leisure) [46–49]. Family-related motives are emphasized by the fact that individuals with children are overrepresented among teleworkers [1].

Concerning the actual outcomes of telework, an extensive literature presents contradictory evidence and conclusions [5]. Several studies find telework to be “successful” insofar as it correlates with desired, positive effects in the lives of teleworkers, particularly as regards perceived job satisfaction and effectiveness, but also as a facilitator of the effective arrangement of work/nonwork commitments and work–life balance [33,38,39,50,51]. On the other hand, research has also repeatedly found that some people working from home encounter new problems [5] and unintended consequences that counterbalance or even outweigh the expected gains (e.g., ineffective work due to household distractions, private life intrusions, workaholism, and professional and personal isolation) [43,52,53].

The few studies more explicitly looking at time pressure have presented divergent findings. For example, Peters and van der Lippe [54] found that while telework can be a strategy for reducing time pressure among some individuals, it can also be associated with drawbacks that may actually enhance feelings of being time-pressed. This is partly dependent on the nature of the specific teleworking practice and whether it is regarded as an ad hoc crisis response or a long-term (premeditated) commitment [55]. Similarly, Mazmainian et al. [56] reported contradictory findings in their study on the relationship between telework and time control. They found reported gains from telework in terms of enhanced peace of mind and time use control in the short run. In the long run telework intensified collective expectations of availability and reduced ability to disconnect, which for some was associated with reduced feelings of being in control.

Furthermore, some previous literature has been focusing on time use implications from work-related use of mobile devices. Mobile ICTs have often been associated with negative implications, for example, in terms of accelerated and intensified work activity that intrudes into private life, resulting in greater time pressure in daily life [57]. Whereas some studies support such expectations [56,58,59] other studies find them to be exaggerated and that total work load, private life intrusions and subjective time pressure are not drastically changed due to technology [60,61]. In contrast it has been found that mobile phones encourage family contact and maintenance while working rather than extending work into private life [60,62].

A summarized conclusion from our review of existent literature is that research into the overall implications of telework for the individual’s everyday life has so far been inconclusive and replete with disagreement, with telework being seen as both good and bad [5]. As discussed by, for example, Boell et al. [5], a better understanding of this “telework paradox” should attend to and expose the inherent differences between types of telework, not only in relation to the preconditions of various groups of employees, but also as regards the actual and divergent teleworking practices and technologies involved. For example, previous studies have found important differences in terms of gender and family situation, finding that telework usually enhances the work–life balance of families with children,

that women more often than men experience negative effects in the family sphere [63,64], and that men more often than women experience positive effects in relation to work and work performance. Previous research has indicated that teleworking practices that entail work outside ordinary working hours are more strongly connected to negative implications, especially in relation to the family sphere [34,35]. As regards technology, studies of the use of pre-smart mobile phones found expectations of enhanced time pressure and private life intrusion to be exaggerated [60,62]. Yet, there is still a lack of comparable research examining smartphones.

Another important conclusion, referring to the current tendencies for telework expansion as discussed above, is that this complexity of possible “outcomes” is likely to increase even more. New groups of teleworkers call for new research perspectives that take into account qualification level, types of work tasks, and the nature of jobs. As telework expands to encompass less qualified types of workers, for example, it has been suggested that telework will become less voluntary on the part of the individual teleworker, but instead be initiated and forced by employer interests [3,4,35,54]. Furthermore, emerging and increasingly widespread forms of occasional and “smart” telework may have divergent implications. For some workers smart telework will mean more flexibility and autonomy, while for others it will be part of a process of greater work-related ties, expectations, and control, reducing individual autonomy to decide when and where to work [5]. Taken together, such tendencies could rebalance and have unequal and unfair consequences for the everyday lives of different teleworkers.

In the present study, issues concerning time and telework are explored in terms of individuals’ perceived time pressure and control of time use in everyday life. Overall time pressure and personal control over time use are arguably crucial indicators of social sustainability, individual life satisfaction, and well-being [42,54,65–67]. In our ongoing exploration of telework, we recognize two crucial aspects: First, there is a need to adopt a nuanced approach that affirms differences between groups and in relation to the actual teleworking practices and technologies involved. In this paper, we take into account a set of crucial divergences as regards job qualifications, teleworking practices in relation to working hours, and smartphone usage for work and in private life.

Second, we recognize a need to problematize the notion of telework outcomes as such, and how they should be understood in relation to daily time use and decisions about it. This applies not least to our focus on the relationships between telework, time pressure and time use control. These relationships can be viewed from two perspectives as regards selectivity, motives, and causality. One suggests that “time-pressed people do telework,” meaning that telework is a response and can be regarded as an individual coping strategy. Telework does not in itself induce time pressure, but rather is a work arrangement selected by time pressured people. For example, employees with small children telework to maintain or even enhance time use control over daily commitments and obligations in both working life and family life. Another perspective is that “telework causes people to be time-pressed,” a suggestion clearly found in current theories of ICT-induced work acceleration, work intensification, and family life intrusion and conflict (see, e.g., Wajcman [57]). The focus is then on the drawbacks of telework, that is, the indirect and mostly unintended implications of telework, including the individual’s lack of control over daily time use.

3. Data and Method

3.1. Sample

With the aim to explore potential associations between telework, type of job, and aspects of time use, a web-based survey was performed in March 2016. A questionnaire was sent to a sample of 1141 employees (civil servants) at six regional government agencies in Östersund, a city located in sparsely populated parts of central Sweden. The following agencies/workplaces were included in the survey: Arbetsförmedlingen (Swedish Public Employment Service) (N = 39), Tillväxtanalys (The Swedish Agency for Growth Policy Analysis) (N = 22), Trafikanalys (The Swedish Agency for Transport Analysis) (N = 6), Försäkringskassan (The Swedish Social Insurance Agency) (N = 246),

Folkhälsomyndigheten (The Public Health Agency of Sweden) ($N = 42$), Naturvårdsverket (The Swedish Natural Protection Agency) ($N = 45$) och Mittuniversitetet (Mid Sweden University) ($N = 56$). The selection of respondents at offices in the actual city was intentional (nonrandom) and found suitable to ensure (i) that the sample would comprise both employees with highly qualified (nonroutine) as well as employees with less qualified (routine) work tasks and (b) that the workplaces had established routines for teleworking among their employees. The latter was dependent on their contact intensity in relation to head office in Stockholm and in relation to clients and citizens. Further, a well-informed contact person at each agency was asked to select the departments to be included in the survey and to ensure that both employees with specialized tasks and with more routine administrative tasks were recruited. A total of 456 people completed the survey, for a response rate of 40% of the contacted employees. The number of observations was sufficient to carry out adequate statistical analyzes, yet the sample is obviously affected by bias due to purposeful selection procedures. The results from this case study must thus be interpreted with caution and may only indicate possible relationships and trends. From the questionnaire data file, we extracted sets of outcome, research, and background variables for the analyses (see Table 1).

3.2. Outcome (Dependent) Variables

The primary outcomes of the analyses are the participants' perceived time pressure and time use control. Time pressure was measured by asking the participants to respond to the question "Do you experience time pressure in everyday life?" on a four-point scale. For time use control, the participants were to respond to "Do you feel that you can decide how to use your time in everyday life (as you wish)?" using a similar four-point scale. When performing logistic regression analyses, the responses were coded in binary terms, i.e., no = 0, yes = 1. Note that the questions posed in the survey relate to perceived time pressure and time use control in everyday life in general. This means that the responses are not specifically linked to certain working times and places, or to situations in which people work remotely from home. This makes it possible to infer whether telework influence is so strong that it affects experienced everyday time pressure and time use control more generally (as argued by, e.g., Peters et al. [55]).

3.3. Research Variables

The primary research variables of the analyses concern the three basic distinctions of the study: employees' job qualifications/type of work assignments, their teleworking practices, and their smartphone usage. Of the total participants investigated, 70% ($n = 312$) reported doing telework on a regular basis, with teleworking defined as an affirmative answer to the survey question: "Do you sometimes work remotely from home during and/or outside your regular working hours?" Of those who telework from home, 128 persons were classified as civil servants conducting case work (hereafter "case workers") and 184 as civil servants conducting analytical and management work (hereafter "analytical workers"). Classification and coding were done based on the job tasks as reported by the interviewees in their own words. We thus distinguish between civil servants with more autonomous and investigative tasks (the analytical workers), who have long had the opportunity to perform regular telework, and those having more routine case control tasks (the case workers), who have only more recently been allowed to work remotely from home. Telework content was considered to involve everything from intermittently checking emails and making calls to performing larger tasks. Smartphone use was measured in terms of frequency of use for work-related and private social purposes during the day independent of location.

Table 1. Outcome, research, and background variables derived from the survey ($n = 456$); % of sample.

Variables		
<i>Outcome Variables—Time Pressure and Time Control</i>		
Experience time pressure in everyday life	Yes, always	15.6%
	Yes, quite often	45.8%
	No, not very often	31.4%
	No, very rarely/never	6.1%
	No opinion	0.9%
Experience control over time use in everyday life	Yes, to a very great extent	18.6%
	Yes, to a great extent	57.7%
	No, to a small extent	21.9%
	No, not at all	0.2%
	No opinion	1.3%
<i>Research Variables—Qualification, Telework Practice, and Smartphone Usage</i>		
Qualification: job type	Administrator (case worker)	54.6%
	Investigator (analytical worker)	28.5%
	Researcher (analytical worker)	10.5%
	Manager (analytical worker)	6.4%
Teleworks from home, regularly	Yes	68.4%
- within regular working hours only	Yes	65.4%
- within and/or outside regular working hours	Yes	48.7%
Smartphone use during the day, work-related purposes	All the time	22.4%
	Often	21.5%
	Seldom	14.3%
	Never	41.9%
Smartphone use during the day, private social purposes	All the time	48.9%
	Often	42.5%
	Seldom	3.1%
	Never	5.5%
<i>Sociodemographic and Other Background Variables</i>		
Gender	Women	70.6%
Married or living with partner	Married/cohabiting	71.3%
Age	20–29 years	10.9%
	30–39 years	28.0%
	40–49 years	30.4%
	50–59 years	21.8%
	60–70 years	8.9%
Age	Mean years (St. dev.)	43.2 (10.9)
Children 0–12 years old	0	60.5%
	1	15.8%
	2	16.9%
	3	5.5%
	4+	1.3%
Employment	Full-time	85.7%
	Part-time	14.3%
Telework experience	Years (St. dev.)	3.2 (5.1)

3.4. Sociodemographic and other Background Variables

Previous research has shown that demographic characteristics such as gender and the presence of children at home are significantly related to teleworking from home. Therefore, in addition to the primary research variables, particular sociodemographic variables were considered, i.e., gender, marital status, age, and presence of children in the home. Employment characteristics—besides qualification/job type—were also used as controls, including whether the participant reported working full-time, years of teleworking experience, and total weekly time spent teleworking.

3.5. Methods of Analysis

We used cross-tabulation in describing and comparing the characteristics of the employment groups and binary logistic regression models to explore the implications of telework for perceived time pressure and time use control.

4. Results

4.1. Teleworking Practices, Motives, and Smartphone Usage among Case Workers and Analytical Workers

4.1.1. Teleworking Practice

RQ1 concerns whether there are differences in teleworking practices, teleworking motives, and smartphone usage depending on worker qualification and job type, more specifically, in relation to the basic distinction between case workers and analytical workers. Results confirm that remote work is increasingly common among civil servants with comparatively routine and standardized work tasks previously tightly tied to the regular workplace but now becoming digitalized and possible to carry out from the home. In this case, 53% of the case workers regularly perform home-based telework (see Table 2). Yet it is still considerably more common among the analytical workers, 90% of whom perform such work, indicating that it is a normal and expected part of everyday life. However, case and analytical workers practice telework somewhat differently. From the survey, we distinguish three basic types of work practices regarding those who (i) never perform telework from home, (ii) perform telework only during regular working hours, and (iii) perform telework both during and outside regular working hours. Analytical workers are much more inclined to belong to the third category, ~75% of them engaging in such unregulated and occasional forms of teleworking, while the corresponding share among case workers is 29% indicating an initial divergence. Case workers are more inclined to adopt to regulated teleworking practices.

Table 2. Telework practices among case workers and analytical workers ($n = 446$).

Teleworking Practice	Case Workers		Analytical Workers	
	<i>n</i>	%	<i>n</i>	%
Never perform telework from home	116	47.5	18	8.9
Perform telework within regular working hours only	58	23.8	32	15.8
Perform telework during and outside regular working hours	70	28.7	152	75.2
All	244	100	202	100

Differing practices are also reflected in how much time people spend working remotely from the home every week and how long they have been working remotely in terms of years of experience (see Table 3). The case workers telework on average six hours per week, of which slightly less than one hour is outside regular working hours. Analytical workers telework 7.6 hours per week, spending almost two hours per week doing so outside regular working hours. The case workers have not generally teleworked for as long as have the analytical workers, having on average 2.5 years of experience versus six years for the analytical workers. This difference in experience confirms that teleworking has become possible for case workers only in the last few years, which of course contributes to explaining other differences in adaptation and practice.

Conclusively, we see that, as regards type of work, practice and experience differ as expected and are aligned with the general discussion of telework expansion. Telework is now also established among a large fraction of routine case workers who perform it regularly. They are not as experienced in telework as the analytical workers are, and are less likely to telework during overtime hours and to let work spill over into normally free times of day.

Table 3. Time spent teleworking and years of telework experience among teleworking case workers and analytical workers ($n = 312$).

Teleworking—Time Use and Experience	Case Workers ($n = 128$)			Analytical Workers ($n = 184$)		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Teleworking time total (hours per week)	6.1	5	4.9	7.6	7	5
Teleworking time, <i>within</i> regular working hours (hours per week)	5.3	4.5	4.5	5.9	4.75	4.5
Teleworking time, <i>outside</i> regular working hours (hours per week)	0.8	0	1.6	1.7	1.5	1.8
Telework experience, years	2.5	1	4.4	5.9	5	5.6

4.1.2. Smartphone Usage

Portable online ICTs are integrated into current teleworking practices. In this study, we highlight the role of smartphones, since they will likely transform the conditions for managing, coordinating, and integrating a distributed working life and private life in new ways, with particular implications for individual time pressure and time use control in everyday life. Table 4 confirms that the use of smartphones is extensive among both case workers and analytical workers. Job-related use is more intense among the analytical workers, while private use is at the same level.

Table 4. Smartphone use for work and private purposes (“How often do you use your smartphone at work/in private life”); all respondents ($n = 456$).

Smartphone Use		Case Workers	Analytical Workers
Smartphone use for work purposes	Never	56.2%	24.6%
Chi ² ***	Seldom	11.2%	17.9%
	Often	15.3%	29.0%
	All the time	17.3%	28.5%
		100%	100%
Smartphone use for private purposes	Never	7.2%	3.4%
Chi ² , n.s.	Seldom	3.6%	2.4%
	Often	39.0%	46.9%
	All the time	50.2%	47.3%
		100%	100%

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.1.3. Motives for Teleworking

Respondents who stated that they were regular teleworkers gave a number of reasons for practicing home-based telework that are important for understanding the perceived outcomes. As regards motives for performing telework during ordinary working hours, case workers and analytical workers do not differ significantly in ranking and assigned weight (see Table 5). Both groups emphasize motives of being able to work more undisturbed, work more efficiently, avoid commuting, and facilitate everyday life. Analytical workers are somewhat more inclined to specify job efficiency reasons.

However, there are notable differences between case workers and analytical workers regarding teleworking outside regular working hours (see Table 6). Analytical workers more often state that they work remotely to meet deadlines, prepare for ongoing work at the office, and prepare for meetings. They also telework because they find it hard to draw a line between work and leisure time, because it is satisfying and challenging, and for career reasons—that is, for overall positive and gratifying reasons. Among the case workers, meeting deadlines and preparing for office work are the most reported motives, although these are less common than among analytical workers. For the case workers, telework is often a matter of mandatory overtime, while gratifying reasons are much less reported.

Table 5. Reasons for teleworking within regular working hours ($n = 298$); a maximum of three reasons can be stated.

Teleworking Motives, within Regular Working Hours	Case Workers	Analytical Workers	Difference/Chi ²
Work undisturbed	57.7%	60.2%	-2.5%
Work more efficiently	43.1%	54.5%	-11.4% *
Avoid work trips	34.1%	30.1%	4.0%
Keep up with private life/leisure activities	20.3%	22.2%	-1.9%
Facilitate everyday life	57.7%	48.9%	8.8%
Caring for children and relatives	15.4%	23.9%	-8.5%
When mildly ill (e.g., a cold)	22.0%	24.4%	-2.4%
Do not know	0.8%	0.6%	0.2%

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6. Reasons for teleworking outside regular working hours ($n = 222$); a maximum of three reasons can be stated.

Teleworking Motives, outside Regular Working Hours	Case Workers	Analytical Workers	Difference/Chi ²
Meet deadlines, prepare for meetings, etc.	54.3%	81.6%	-27.3% ***
Income	8.6%	4.6%	4.0%
Career	4.3%	13.8%	-9.5% *
Fun/personal development	7.1%	20.4%	-13.3% **
Mandatory overtime	30.0%	7.9%	22.1% ***
Difficult to draw a boundary between work and leisure	15.7%	32.9%	-17.2% ***
Do not know	2.9%	1.3%	1.6%

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.2. Time Pressure and Time Use Control in Everyday Life—Multivariate Analyses

4.2.1. Time Pressure

RQ2 concerns teleworkers' perceived time pressures in everyday life. It is reasonable to believe, in view of previous studies, that telework can affect the overall experience of daily time pressure in different ways, both reducing and reinforcing pressure depending on the context. At the group level, there are only minor differences when comparing case workers and analytical workers. Analytical workers experience somewhat more time pressure than do case workers. Among those teleworking only during regular working hours, 52% of the case workers and 56% of the analytical workers feel time-pressed constantly or quite often; among those also teleworking outside regular hours, the corresponding figures are 71% and 74%. Since several factors are involved and within-group variations are great, it is important to conduct analyses at the individual level and take other contributing factors into account. To further analyze the factors affecting perceived time pressure, logistic regression analysis was carried out accounting for job type, teleworking practice, and smartphone usage, controlling for sociodemographic factors (see Table 7).

Results indicate that differences in perceived time pressure cannot be linked to whether the individual carries out routine/administrative or investigative/analytical work tasks, though there is a connection to varying teleworking practice. Employees who never work remotely or who do so only during regular working hours experience less time pressure compared to those who (also) do it outside regular working hours. In other words, those who regularly perform home-based telework outside working hours experience more time pressure than others. We further observed that working full-time (and not part-time) reduces the press. Social factors are found to be significant: having children at home and being a woman (weak significance) increase perceived time pressure, while increasing age decreases it.

Table 7. Logistic regression: response variable, perceived time pressure in everyday life (0 = no, 1 = yes); all employees ($n = 446$).

		B	Sig.
<i>Qualification (ref. = Case workers)</i>			
	Analytical workers	0.108	0.697
<i>TW practice (ref. = TW within and outside regular working hours)</i>			0.014
	Never TW	-0.644 **	0.048
	Only TW within regular working hours	-0.866 ***	0.005
<i>Gender (ref. = Female)</i>			
	Male	-0.407 *	0.094
<i>Age</i>	Years	-0.032 ***	0.005
<i>Children in the home</i>	Number 0–12 years old	0.406 ***	0.004
<i>Marital status (ref. = Single)</i>			
	Married or partnered	0.379	0.147
<i>Employment (ref. = Part-time)</i>			
	Full-time	-0.806 **	0.026
<i>TW experience</i>	Number of years TW	0.034	0.223
<i>Smartphone usage, work purposes (ref. = Never)</i>			0.431
	Seldom	0.334	0.361
	Often	0.249	0.455
	All the time	0.550	0.111
<i>Smartphone usage, private purposes (ref. = Never)</i>			0.075
	Seldom	0.186	0.831
	Often	-1.115 **	0.041
	All the time	-1.089 **	0.049
<i>Constant</i>		3.209	0.000

Nagelkerke R² = 0.221; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Concerning the role of new ICTs in teleworking, the influence of the constant presence of smartphones is notable. Extensive smartphone use for work-related purposes does not affect perceived time pressure, and neither does private use. Private smartphone use is significantly related to time pressure, with increased use being related to reduced time pressure.

Overall, the perceived everyday time pressure in this sample is not associated with job type in terms of a distinction between bounded case work and more independent and analytical work, the former representing the more recent type of teleworkers and the latter the traditional type of more flexible teleworkers. Rather, even with this consideration taken into account, time pressure was found to be influenced by social- and family-related factors when telework was performed outside of working hours, when working part-time, and when moderated by the private use of smartphones.

4.2.2. Time Use Control

RQ3 concerns the implications of teleworking for people's ability to control and independently decide on their everyday use of time. It is reasonable to believe that the case workers perceived less time use control than did the analytical workers, because they to a much lesser extent associate telework with positive values and are more often ordered to telework overtime from home. However, at the group level, there appears to be no differentiating evidence: 77% of the case workers and 79% of the analytical workers state that they can to a very large or large extent control and decide on their daily time use. This aggregated outcome may partly be due to differences in the composition of the groups as regards, for example, gender, family situation, and teleworking experience. To control for this, a logistic regression was performed to see whether job qualifications, teleworking practice, and smartphone usage affected perceived time use control in daily life (see Table 8).

Table 8. Logistic regression; response variable: perceived time use control in everyday life (0 = no, 1 = yes); all employees ($n = 446$).

		B	Sig.
<i>Qualification (ref. = Case workers)</i>			
	Analytical workers	0.384	0.229
<i>TW practice (ref. = within and outside regular working hours)</i>			0.636
	Never TW	-0.239	0.532
	Only within regular working hours	0.133	0.717
<i>Gender (ref. = Female)</i>		0.299	0.315
	Male		
<i>Age</i>	Years	0.001	0.965
<i>Children in the home</i>	Number 0–12 years old	-0.503 ***	0.000
<i>Marital status (ref. = Single)</i>			
	Married or partnered	-0.442	0.186
<i>Employment (ref. = Part-time)</i>		0.499	0.134
<i>TW experience</i>	Number of years TW	0.016	0.649
<i>Smartphone usage, work purposes (ref. = Never)</i>			0.082
	Seldom	-0.350	0.402
	Often	-0.785 **	0.030
	All the time	0.095	0.811
<i>Smartphone usage, private purposes (ref. = Never)</i>			0.057
	Seldom	1.524	0.116
	Often	1.433 **	0.011
	All the time	1.010 *	0.073
<i>Constant</i>		0.429	0.673

Nagelkerke R² = 0.160; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The analysis shows that, in this case, there are no significant relationships between time use control and type of work tasks, telework practice, or selected sociodemographic factors. An important exception is linked to private life and family situation: the more young children one has at home, the more often one experiences unsatisfactory control of everyday time use.

Notably, as in the case of time pressure, the analysis finds significant relationships between perceived time control and the intensity of smartphone use, with increased smartphone use for private purposes being positively associated with increased time use control. The opposite applies to extensive smartphone use for work-related purposes, which is associated with reduced control over one's daily time use.

The results thus encapsulate the importance of family situation and having small children for everyday time use control, while in this sample we could not find any significant influences of factors related to working life as measured here. Perhaps the time use requirements of working life are taken for granted as fixed constraints and as such are perceived as "under control" and thus as conditions to which the rest of the day (being more or less in control) must adapt.

5. Conclusions

In a recent article on how mobile devices change work extension practices, Mullan and Wajcman [61:4] conclude that "there is remarkably little empirical research on the way in which individuals organize their daily working time, and feelings of subjective time pressure, in recent decades of rapid technological change." We contribute to filling this research gap by exploring how the changing conditions for home-based telework are affecting employees' perceived time pressure and time use control in everyday life. Specifically, we enhance the understanding of how new telework—incorporating less qualified types of jobs, fostering working practices outside regular

working hours and under strong influence of smart ICTs—structures employees' everyday life differently. Overall, it is indicated that telework among qualified workers is often an individual and voluntarily chosen strategy, while for routine workers, the drivers are more often involuntary and controlled by employer interests. This and associated findings discussed below have important implications for policies and measures seeking to promote a sustainable working life and organizations managing telework.

In our study, we concentrated on the implications of new tendencies in telework for overall time pressure and time use control in everyday life, outcomes considered vital to work–life balance, quality of life, and social sustainability in general [42,44,54,65]. We did so by exploring the ongoing expansion of telework and how it might transform, rebalance, and bring about divergent and unequal outcomes in everyday life. In the empirical examination, we considered how home-based telework has come to involve less qualified jobs by comparing newer groups of teleworkers ("case workers") with established ones ("analytical workers") by examining the emergence of more unregulated telework practices and engagement in occasional telework enabled by smartphones.

First, the results confirm and add nuance to identified tendencies in the expansion of telework. As expected, home-based telework is a more dominant practice among the analytical workers. They represent the kind of highly qualified autonomous workers who have long been closely associated with the telework option. Almost all workers in this group telework regularly, confirming findings by Ojala et al. [34] that telework now, among qualified workers, should be regarded as the rule rather than the exception. We also find that about half of the case workers engage in home-based telework, illustrating an ongoing expansion of telework to jobs comprising more routine tasks, previously inflexible and tightly bound to the workplace, but now becoming increasingly digitalized. Furthermore, the results indicate emerging divergences in teleworking practices. In particular, unregulated and occasional forms of teleworking being discussed in recent telework literature [3,34] are more employed by the established teleworkers, with the analytical workers more often teleworking outside regular working hours and using smartphones for work purposes to a greater extent. In contrast, the "new" teleworkers—the case workers—are more inclined to adopt traditional (regulated) teleworking practices and technologies.

Second, the results indicate that the spread of telework to new groups and practices is associated with divergences in the basic drivers of teleworking, particularly as regards telework outside regular working hours. Both new and established teleworkers emphasize that telework is primarily motivated by time pressure: to meet deadlines and prepare for future work and meetings. These are motives commonly cited within the telework literature [1,12]. However, while the analytical workers primarily cite positive and gratifying reasons for unregulated telework (being satisfying and challenging, for career reasons, and because of difficulties separating work from leisure), for the case workers, it is more often a matter of mandatory overtime. This indicates that telework among analytical workers is often an individual and voluntarily chosen strategy, while for case workers, the drivers are more often involuntary and controlled by employer interests. This illustrates the argument (e.g., made by Anttila and Nätti [35]) that telework, when spreading to less qualified groups of workers, will increasingly be associated with external demands, control, and constraints rather than with work–life flexibility. Still, it is important to note that both the analytical and case workers cite similar motives for teleworking within regular working hours, such as being able to work undisturbed and more efficiently and to coordinate everyday life commitments more easily. Such key motives have been strongly confirmed by previous telework literature [8,33,38].

Third, the study builds our scant knowledge of how telework affects time pressure and time use control in everyday life. The results indicate that overall perceived time pressure and control over time use are clearly associated with social factors. Women and workers with children experience the highest levels of time pressure in everyday life, regardless of telework practice. Workers with small children also experience the lowest levels of time use control. These findings are in line with previous research into time pressure, noting the decisive role of family situation and gendered expectations [65,68].

However, aside from decisive social factors, we find that engagement in telework also has important implications for unregulated telework. People who regularly engage in telework outside ordinary working hours are more pressed for time than are other groups, and women to a greater extent than men. Somewhat surprisingly, we find no differences between analytical workers and case workers as regards overall time pressure, contrasting expectations due to the observed dissimilarities in teleworking by own choice or by employers order. This accentuates the need for a nuanced approach attending to situated contexts when measuring and discussing the implications of telework for work–life balance, as also argued by, for example, Boell et al. [5].

An important issue concerns how this finding should be interpreted in relation to daily time use and decision making in households. These relationships are rarely clear-cut and often involve complex interactions between advantages and disadvantages [5]. One possible interpretation, often stated in the literature on mobile ICTs and flexible work, is that teleworking itself makes people time-pressed, for example, by expanding and intruding on free time, with negative implications for the family sphere [54,57]. A few previous studies have also found that negative telework implications are pronounced among those teleworking outside regular working hours [34,35]. However, our results concerning overall control over daily time use indicate no significant relationships between individuals' perceived time control and teleworking practice or type of employment (as defined and measured here). This suggests that telework can also be understood as a response, a coping strategy selected by time-pressed people in order to maintain control over daily commitments and obligations in work and family life [54]—and that in this case they are rather successful in doing so.

Our findings also build our so far scant knowledge of the work and everyday life influences of smartphones, which supposedly support more occasional forms of teleworking. Our findings indicate that work-related smartphone use has no implications for perceived time pressure. This observation is in line with the previous literature on the implications of pre-smart mobile phone use for time pressure [60,62]. However, we do find that work-related smartphone use negatively affects perceived time use control, indicating an unintended drawback of such use. The relationship is not very strong, but given that work-related smartphone use can be expected to increase, issues of how “smart” work accessibility and attachment at a distance may control, intrude on, and rearrange daily time use is an important issue for continued research.

Finally, it is important to note the limitations of this study, which is cross-sectional, cannot establish causal relationships, and included only a limited sample of civil servants selected on purpose in a systematic way. We analyzed factors that were partly chosen with reference to previous research and discussion, and partly selected a priori, for example, regarding smartphone usage. These limitations call for further research in this area.

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