Caregiving Time Costs and Tradeoffs with Paid Work and Leisure: Evidence for Sweden, the UK and Canada

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**Caregiving time costs and tradeoffs with paid work and leisure:
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Abstract
Population ageing places pressure on pensions and health care services, creating an imperative to extend working lives. Alongside this, there has been increased political emphasis in Europe and elsewhere on the provision of care in the home. Many older people will increasingly be challenged by the responsibilities of caring for the sick, disabled and elderly, and participating in the labor market. In this paper, we investigate the conflicts that arise from this. We explore time costs of unpaid care and how caregiving time is traded off against time in paid work and leisure among men and women in three distinct policy contexts. We use time diary data from Sweden, the UK and Canada from 2000 to 2011 and conduct multivariate analyses. Results indicate that women provide more informal care across country contexts, net of other factors. However, the impact of informal care on labor supply is not gendered. We find differences by country, with caregivers in the UK and Canada, particularly those involved in intensive caregiving, reducing paid work in order to provide unpaid care. Though caregivers in Sweden do not trade off time spent in paid work with time in caregiving, they do decrease leisure. Our findings support the idea that the more extensive social infrastructure for caring in Sweden may diminish the labor market effects of intensive unpaid care, but highlight that throughout contexts, respite care policies are an important support for caregivers who are decreasing leisure time to provide unpaid care.

Introduction

Population ageing places increased pressure on pensions and health and caring services, creating an imperative to extend working lives through policies such as increasing the statutory pension age. Alongside this, a long-term structural increase in women's participation in the labor market has reduced the amount of time that women, who were the primary caregivers in the past, can provide for unpaid care. Other demographic changes over the past century have also increased structural and ideological pressures on men and women to provide care as more elderly live longer. As divorce has become more common and families have become smaller, fewer partners and siblings exist amongst whom caregiving for parents can be shared. Many older people are therefore likely to be challenged by the twin responsibilities of caring for the sick and elderly and participating in the labor market. The aim of this paper is to investigate the potential time-related conflicts that arise from these competing demands and to understand how these conflicts differ and how time devoted to caregiving and paid work is traded off depending on country context.

The tradeoff between employment and caring is supported by international evidence of substitution between provision of care and labor supply (Spiess & Schneider 2003; Lilly et al. 2007; Bolin et al. 2008; van Houtven et al. 2013) and a tendency for lower earners and those on flexible work schemes to take on time-intensive caring responsibilities (Stone & Short 1990; Carmichael & Charles 1998; Carmichael & Charles 2003; Sarkisian & Gerstel 2004; Carmichael et al. 2010), both which are likely to intensify with increased demand for informal care. These conflicts are important since unpaid informal care has been found to substitute for some types of formal long-term care (Van Houtven & Norton 2004; van den Berg & Hassink 2008) and will likely accentuate negative health and well-being impacts of caregiving (Hughes et al. 1999; Pinquart & Sorensen 2003; Hirst 2005; Phillips et al. 2009; Bobinac et al. 2010).

There has been an increased emphasis on the provision of in-home care in Europe and North America, as informal care is economically important for both individuals and nations. Estimates of its value are often staggeringly high[1], although the net economic impact of caregiving is nuanced and dependent on the type of care and the relationship between employment and caregiving (Jacobs et al. 2013). The prevalence of informal care varies from country to country (around 10% of the UK population (White 2011), whereas estimates are lower for Sweden, and higher for Canada (OECD 2011ab)). However, common features of informal care exist across countries, e.g. women are disproportionately involved in caregiving (Arber & Ginn 1997, 1999; Carmichael & Charles 1998); half of all carers balance employment and caring responsibilities (Yeandle et al. 2006; Sinha 2013); older people supply large amounts of unpaid care (Jegermalm & Jeppsson Grassman 2009); roughly 40 percent of all adults will provide informal caregiving during their lifetime (Carmichael & Ercolani, 2016).

The literature aimed at understanding the caring contribution of older adults is growing (Carmichael & Ercolani 2014; see Bauer & Sousa-Poza 2015 for a review). In general there has been limited attention paid to the impact of longer working lives on the supply of care. Whilst the demographic context for caring is similar across Europe, the policy contexts have important differences (Esping-Andersen 1999; Bettio & Plantegna 2004; Simonazzi 2009) concerning private versus public spending and policies targeting caring and the labor market, carers' well-

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[1] Recent estimates from Canada showed average care-related costs of $3,300 CAD per caregiver annually, equating to 6 billion total direct costs plus 27 billion of lost income due to taking time off from work (Tal & Mendes, 2017).

being, and financial assistance to carers. In Canada, private spending on home care outstrips public spending, and public supports for caregivers are limited to tax credits and paid and unpaid leaves (Coyte & McKeever 2001). In the UK, support for carers is limited to a means-tested allowance for full-time carers, although since 2014 most employees have had the right to request flexible working. Sweden provides an interesting contrast to the UK. The Swedish welfare state is egalitarian, generous and universal where services are available for all based on need rather than purchasing power (Esping-Andersen 1990; Szebehely 2005). A cornerstone of the Swedish system is that responsibilities previously assumed by the family are taken over by the state. As such, care for older people is considered to be primarily a public responsibility (Anxo & Fagan 2005; Johansson et al. 2011). Care allowances are available through public contracts and kin caregivers are paid through the public sector. There is some evidence to suggest that relatively low rates of unpaid care may not persist because with population ageing, public care of older people has undergone reforms reducing the scope of services. While there is evidence of a negative relationship between intensive caregiving and labor market outcomes in Anglo-Saxon contexts (Lilly et al. 2007; Bolin et al. 2008), less is known about the Swedish context where we might expect institutional factors to mediate the relationship between caregiving and work status (Spiess & Schneider 2003; Bolin et al. 2008; Kotsadam 2011).

The distinction between welfare state regime types is also indicative of varying degrees of gender equality across contexts. Sweden and its Nordic neighbors were early adopters of gender-neutral policies and the so-called dual-earner/dual-carer model, which eases work-family conflicts across the life cycle by reducing constraints through leave programs with high levels of income replacement, reduced working hours for caregivers (notably parents but also more generally), family income support and publicly provided (highly subsidized) care facilities for children and the elderly (Gornick & Meyers 2003; Bettio & Plantegna 2004). These policies can not only increase female employment but they can also affect men's involvement in unpaid domestic activities (Hook 2006). Other welfare states types, particularly the Anglo-Saxon, are more selective and less oriented towards reducing gender inequalities. They are more committed towards male breadwinning, resulting in a stricter gender division of labor with lower levels of female labor force participation and less involvement of men in unpaid domestic activities (Neilson & Stanfors 2014). This has implications for the role of the family in care and the extent to which informal care services are relied upon (Bettio & Plantegna 2004).

Against this backdrop, the present paper explores gender differences in caregiving across Sweden, the UK, and Canada. It contributes to the small yet growing literature on gender disparities in caregiving and provides a better understanding of informal caregiving and associated costs, conflicts and tradeoffs from a gender perspective.

Aim and objectives
The overarching aim of this paper is to investigate the time-related conflicts that arise from men and women being challenged by caring responsibilities and labor market participation, and how time devoted to caregiving is traded off against time in other activities. More specifically we ask: 1) Who cares? We provide a descriptive overview of individuals who are providing unpaid care. 2) How large are the gender gaps with respect to unpaid care and caregiving intensity? 3) To what extent is time in caregiving traded off against time in other activities among men and women, and is the impact of caregiving similar or different on their daily activities?

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We focus on gender differences, first by estimating gender gaps in caregiving among older adults. We assess the raw as well as the standardized gaps. We also assess the extent to which gender differences are associated with gender differences in education, paid work and other resources/family commitments that may affect time availability, and the ability to provide care to others. We explore how caregiving responsibilities affected men's and women's time use in Sweden, the UK, and Canada in 2000- 2011. We perform multivariate OLS regressions independently on five cross-sectional waves of time use data, pooling 2000/2001 and 2010/2011 for Sweden (SWETUS), pooling 2000 and 2005 from the UK (MTUS harmonized simple file), and for Canada we use the 2010 General Social Survey (GSS) Cycle 24 time use module. Our aim is to compare results from three different welfare state contexts, believing this will enhance our understanding of the spatial, temporal and contextual development of how caregiving affects time allocation among older adult men and women.

Theoretical considerations and previous findings
The relationship between gender, caregiving and, particularly, paid work has been studied in the related literatures on caregiving, labor supply, and home production. The first literature is closely connected to demographic change, notably ageing and changing family structure, which determines gender and caregiving relationships through pushes and pulls. With people living longer, there is more need for both formal and unpaid care; with smaller and less stable families, there are fewer spouses and children to shoulder unpaid care needs. And with an increasingly large share of women being employed throughout the life course, the traditional pool of caregivers is reduced, though some researchers have predicted more gender-neutral roles at higher ages (Moen & Spencer 2006). The second strand of literature examines tradeoffs between employment and unpaid activities, whereby both economic and sociological studies have identified that various aspects of men's and women's employment is related to their involvement in home work, broadly defined, including childcare as well as housework. The gender gap in domestic work is, however, not fully explained by differences in employment (see Coltrane 2000; Shelton & John 1996). Thus, research provides some support for structural theories of gender gaps but also opens up for alternative explanations, including gender theory.

Theoretical considerations
Our research is guided by economic time allocation theory. Time allocation models consider decisions on labor supply and care as interrelated because they compete for the caregiver's time, which is limited to a maximum of 24 hours per day. It has long been understood that the standard labor/leisure model is inadequate for understanding the choice function for women with family responsibilities even when their involvement in paid work is extensive (Oi 1992; Jacobsen 2007; Kimmel & Connelly 2007). Hence, those who have family and household responsibilities must trade off among three uses of time instead of two (Becker 1965; Gronau 1977; Graham & Green 1984). These are work, leisure, and home care, which make the choice about how to spend time, given opportunities and preferences, more complex, if more consistent with reality. What the best choice is depends on context and changes with economic conditions (e.g. relative earnings or transfers) and the life cycle (Becker & Ghez 1975).

How men and women with caregiving responsibilities allocate their time between paid work, caregiving and other activities depends on options which vary according to individual,

household, and contextual factors. In economic models, individuals are assumed to rationally choose the optimal amount of time for different activities and the resources they need to maximize their utility subject to various constraints. They derive utility from different activities. Paid work render individuals earnings, status, self-esteem and independence. Individuals also derive utility or emotional satisfaction from household-produced goods and services including health and well-being of self and others (cf. Becker 1974, 1981). The model predicts that individuals allocate their time so that an extra hour (on the margin) renders the same utility irrespective of whether it is spent in paid work, leisure or home care. All else equal, an increase in the marginal utility of paid work leads to a reduction of leisure time and unpaid work and vice versa. The value of an hour of the caregiver's time spent in paid work can be measured by the wage rate or be proxied by the individual's level of education as a predictor of his/her earnings potential. The higher the earnings potential, the higher the opportunity cost of caregiving. Within this framework, individuals are rational and unrestricted in their choices. In the case of caregiving one may suspect that individuals react emotionally and not necessarily fully rational when a need for care arises (for example in connection to an accident or a health shock), but that they in the long run adjust as they gain information about the costs and benefits of caregiving compared to other activities and various care arrangements at hand. It is also unlikely that individuals who face the choice between paid work, leisure and caregiving can realize any combination of these activities. This may be related to lack of flexible work hours, income replacement programs, lack of affordable and trustable care services, and help from others.

Time allocation decision-making is often captured in models which treat households as firm-like production units that pool resources through exchanges and efficiently allocates them to optimize its outputs.[2] Spouses are assumed to rationally choose the optimal amount of time for different activities, such as care and paid labor and the resources they need to maximize their utility subject to various constraints. Gender differences and gendered impacts of caregiving responsibilities are in line with economic theories of specialization and bargaining, related to differences in men's and women's earnings potential. According to Becker's theory on comparative advantages, decisions on how to allocate family members' time in paid work or home work are taken by comparing the partners' marginal productivity in the labor market and in the home (Becker 1981). The fundamental assumption is that the production and use of these outcomes requires purchases of goods and services from the market and time specifically devoted to their transformation; families as firms face alternatives regarding how inputs of goods and time are combined to generate the desired outcomes. Spouses can deploy different strategies to promote well-being ranging from large time inputs servicing and caring to benefit from the services of full-time professional care workers, whilst being constrained with respect to financial resources and time, and this is captured in the framework of specialization and trade. The typically higher male wage rate makes men specialize in paid work and women in unpaid work, of which routine housework and care for others make up considerable portions. Marriage/cohabitation allows the pooling of time and money resources, which can be allocated to caregiving, purchase of care services, or both (Becker 1973, 1985). Specialization, however, increases the productivity of individuals in both paid work and caregiving – often in a gendered way – and thus the tradeoff between caregiving and other activities will depend on gender and individual experiences of work and caregiving.

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[2] The primary conceptual framework that economists use to analyze people's allocation of time is Becker's (1965) household production model.

Becker's theories focused on the importance of differences in earnings potential, which accounts for the mid-20th century dominance of the male-breadwinner family model. In line with the growing participation of women in education and employment, later contributions resulted in more gender-neutral accounts of specialization theory (e.g. bargaining theory, Manser & Brown 1980, Lundberg & Pollak 1996, but also Oppenheimer 1997). The division of unpaid labor within the family has been explained in terms of other processes as well (e.g. doing gender). The bottom line is that women as a group typically specialize in unpaid work while men specialize in paid labor.[3] While the neoclassical framework has been criticized, not least from a gender perspective (e.g. Folbre 2001, Folbre & Bittman 2004), it is nevertheless considered useful (Wooley 1996; Jacobsen 2007). It allows for tradeoffs between several activities, and does not only focus on a bivariate relationship in a unidirectional way. It predicts how changes in one activity affect time use in other activities, and how that varies across genders, which is what we explore in this paper.

Gender is commonly neglected in international research as caring is considered women's work (Gerstel & Gallagher 2001; Kramer 2004). It is, however, important to consider both men and women in order to better understand gender differences. Similarly, when it comes to the study of time allocation it is important to extend the original economic models to include unpaid work (Jacobsen 2007) and to make a distinction between different unpaid activities and even different caregiving activities; some which are of consumption or investment character (e.g. childcare) and others that are different in character. It is also important to distinguish between caregiving activities because some are easily linked to routine activities (cooking, cleaning) while others involve altruism and emotions vis-à-vis the individual needing care (Becker 1976), or else differential skill sets or levels of effort (e.g. medical care or personal care). From a time organization perspective it is also important to have access to measures of a variety of activities in order to properly assess whether working time is gendered time (cf. Sirianni & Negrey 2000), and to this end time use data are suitable (Michelson & Tepperman 2003).

Care in context
The above-mentioned theoretical considerations should be considered in context. Whilst the socio-demographic context for caring is similar across Europe and Canada, the policy contexts have important differences concerning private versus public spending and policies targeting caring and the labor market, carers' well-being and financial assistance to carers (Esping-Andersen 1999; Bettio & Plantegna 2004; Simonazzi 2009). The welfare state regimes impact the costs, conflicts and tradeoffs relating to decisions on caring and labor supply as well as the degree of gender inequality associated with regime type. Thus we relate to comparative welfare state analysis and take recourse to the famous taxonomy of welfare state regime types, in which Esping-Andersen (1990) divides welfare systems into three social models: a Conservative model (comprising Continental Europe), a Liberal model (made up of Anglo-Saxon countries, e.g. the UK and Canada) and a Social Democratic model (including the Nordic countries, e.g. Sweden). In Conservative countries social rights are selective, and the family, together with the church and

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[3] Although strict specialization has become less common over the past 50 years, women still is shouldering the major part of domestic and care-related responsibilities. Gender-neutral specialization, as proposed by Oppenheimer (1997) is not a prevalent phenomenon even in contemporary Sweden (Eeckhaut, Stanfors & van de Putte 2014).

the workplace, are important welfare providers; in Liberal countries state provision of welfare is minimal, social rights are modest with strict entitlement rules, market dependence is high and the individual's position in the labor market is central in this respect; in Social Democratic countries the state is the main provider of general and universal welfare.

The welfare state regime typology is also a useful framework for exploring gender relations across contexts. The Social Democratic countries were early adopters of gender-neutral policies and the so-called dual-earner/dual-carer model. This model eases work-family conflicts across the life cycle by reducing constraints through leave programs with high levels of income replacement, reduced working hours for caregivers (notably parents but also more generally), family income support and publicly provided (highly subsidized) care facilities for children and the elderly (Gornick & Meyers 2003; Bettio & Plantegna 2004). These policies can increase female employment while also increasing men's involvement in unpaid domestic activities (Hook 2006). Conservative and Liberal welfare states are more selective and less oriented towards reducing gender inequalities. They are more committed towards male breadwinning, resulting in a stricter gender division of labor with lower levels of female labor force participation and less involvement of men in unpaid domestic activities (Neilson & Stanfors 2014). Compared to the Social Democratic countries, policies are restrictive in Liberal welfare states and generous yet gendered in Corporatist countries.

This has implications for the role of the family and the extent to which informal care services are relied upon (Bettio & Plantegna 2004). While there is an extensive literature on welfare state typology and care strategies for children, those for the elderly have received less attention. Welfare state policies may support and/or supplement the family in different ways and to varying extents. Care for children, the sick, the disabled and the elderly is considered to be primarily a public responsibility, limiting family responsibilities, in the Social-Democratic welfare states. There is more reliance on family, the church and other communal institutes in Conservative states while market mechanisms are primarily used in the Liberal welfare states where the role of family is extensive but operates through different mechanisms than in the Conservative states in Continental Europe. It should be noted that the reliance on women for caregiving activities is universal. In the Social-Democratic states, many women provide formal care through public sector employment while in other states care workers providing health and caring services are often employed in the private sector (cf. Ungerson 2003). In all countries women provide much unpaid caregiving, but in the Nordic welfare states, most women are relieved from much care responsibilities through the public organization of care and subsidized fees.

Previous findings
Studies commonly focus on the tradeoff between employment and caregiving (Wolf & Soldo 1994; Pavalko & Artis 1997; Lilly et al. 2007 for reviews). The tradeoff between employment and caring is supported by international evidence of substitution between provision of care and labor supply (Johnson & Lo Sasso 2000, 2006; Spiess & Schneider 2003; Lilly et al. 2007; Lilly et al. 2010; Bolin et al. 2008; van Houtven et al. 2013). Recent research indicates that caregiving intensity (i.e. the amount of time spent on unpaid care) is of significant relevance for the employment of working-aged caregivers (Heitmueller 2007; Lily et al. 2010; van Houtven et al. 2013). This tradeoff regarding time allocation is determined by personal characteristics, family situation and institutional context (Arber & Ginn 1997; Vlachantoni 2010) but also through

sorting and gender segregation in the labor market with women earning lower wages and being over-represented in jobs with flexible work schemes that enable them to take on caring responsibilities throughout their careers (Stone & Short 1990; Carmichael & Charles 1998; Carmichael & Charles 2003; Sarkisian & Gerstel 2004; Carmichael et al. 2010).

Studies also commonly focus on women, highlighting gender-specific processes that operate among women more than among men. Few studies attempt to explain gender gaps though such studies are becoming more common. A handful of studies have explored the differential effect of caregiving on men's and women's employment outcomes. In Canada, Lilly et al. (2010) found a similar effect of intensive (i.e. primary) caregiving for both men and women. In the UK, Carmichael and Charles (2003) had similar findings for both men and women providing at least 10 hours of care per week, but found divergent explanations for this negative association. They concluded that for women the association was due to a dominant substitution effect (i.e. women substituting unpaid for paid care), while for men the association was due to an indirect effect of a lower ability to earn.

Among studies that look at the role of employment in the supply of caregiving, some have found that differences in the amount of help men and women provided to parents remained significant when they controlled for employment status, and that this status did not affect help to parents (Finley 1989; Stern 1995). Laditka and Laditka (2001) found that gender differences in the likelihood of providing help to parents persisted on both the extensive and the intensive margin when controlling for paid work hours. On the other hand, Gerstel and Gallagher (1994) find that a broader set of employment characteristics taken together, significantly reduced the gender gap, and in line with this, Sarkisian and Gerstel (2004) found that much of the gender gap in help to parents was explained by gender differences in employment patterns. These results suggest that gender differences in caregiving to other adults may be decreasing over time as men's and women's work lives become more similar, and that gender differences in caregiving to other adults may be smaller in more gender equal contexts where men's and women's labor force participation rates are similar.

It is important to note that even when a negative association is found between caregiving and labor supply, it is difficult to establish a causal direction for this association. Relatively few studies have been able to disentangle whether caregivers tend to have lower labor force participation because caregiving duties have caused them to exit the labor force, or because individuals who already have a lower opportunity cost of time are more likely to take on the caregiver role (Carmichael and Charles 2003). The endogeneity of caregiving and labor supply has been explored in different contexts (e.g. Crespo 2006; Heitmueller 2007; van Houtven et al. 2013), with some finding that an assumption of exogeneity underestimates the effect of unpaid care on labor supply (Crespo 2006), while others find the opposite (Heitmueller 2007). In instances where there is an overestimation of this effect, it has been found to be minimal for higher intensity caregivers (Heitmueller 2007).

National context
We investigate the way caregiving responsibilities affect older (age 50+) men's and women's time use in Sweden, the UK and Canada. Each country ranks highly on the Human Development Index and received low values on the Gender Inequality Index, which indicate very high levels of

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human development and little inequality in achievements between women and men in the dimensions of reproductive health, empowerment and the labor market (UNDP 2015). While this mainly reflects similarity with respect to general advancements in economic development, the Global Gender Gap Index (GGI) better targets gender equality (World Economic Forum 2015). The GGI benchmarks national gender gaps on economic, political, education and health criteria, and provides country rankings that allow for effective comparisons across regions and income groups. The Nordics (with the exception of Denmark) are among the top four performers (with values ranging from 0.881 (Iceland) to 0.823 (Sweden)).[4] The UK is among the top 20 (with a score of 0.758), while Canada ranks 30th (score of 0.740). For comparison with Sweden – a forerunner when it comes to gender equality, female labor force participation, and demographic change (including population ageing) – we choose the UK and Canada, which provide one Anglo-Saxon liberal welfare state model from both Europe and North American, the latter with closer geographic proximity to Sweden.

The countries investigated possess distinguishable macro-level policy mixes, especially considering the generosity and design of policies that reconcile work-family conflicts, not only during childbearing years but also at older ages, which facilitate female employment throughout the life course and encourage men's caregiving. Table 1 lists country-specific indicators that describe caregiving contextual factors during our study period.

In comparison to the UK, Canada and the OECD average, Sweden stands out as more advanced when it comes to female labor force participation, both in absolute terms and in relation to male labor force participation. This is the case for all working ages (25-64 years), and especially for older ages (55-64 years). Of relevance, among the working age population typically not studying (25-64 years), female labor force participation rates are trending upwards in the UK and Canada during our study period, but not in Sweden where it was high and stable. Among older men and women, labor force participation rates are trending upwards in a consistent manner across all countries, yet remain lower than that of the larger working age population. The gender gap in labor force participation is closing, but it is still generally larger among older men and women, especially in the UK, then Canada, with smaller gender gaps in Sweden. Women make up the majority of part-time workers and are still more likely to work part-time than men. This tendency is declining marginally in Sweden, and is at lower level (19% in 2010) compared to the UK (around 40%) and Canada (27%). The UK has larger gender gaps in labor force participation, as well as more female part-time work comparatively with Canada and Sweden.

Table 1 also indicates that the demographic context for caring is similar across our three study countries, including trends of longer life expectancy for men and women, large shares of the population past retirement age (65+), and high dependency ratios. Sweden stands out as having a greater share of the population aged 65+, followed by the UK and then Canada, the latter of which is below the OECD average. The challenge of an ageing population is met by various degrees of public spending expenditures on health care and caring across Europe. Again, Sweden is making headway regarding public rather than private spending and policies targeting caring and the labor market, carers' well-being and financial assistance to carers. In 2010, a larger share of the elderly was in care facilities in Canada and the UK than in Sweden, where between 2000 and 2010 the share was reduced through a shift towards in-home caregiving in the early 2000s.

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[4] Denmark ranks as number 14, which is substantially lower than the other Nordics, at a score of 0.767.

While the share of elderly in care facilities (public and private) is generally low, the figures are decreasing over time in Sweden, and increasing in the UK. The number of beds in nursing and care facilities, per capita population aged 65+, show higher levels in Sweden comparatively, with each country showing a declining trend between 2000 and 2010.

Table 1 about here

Hypotheses
We expect women to be more likely to be caregivers and also more likely to provide more time-intensive care than men, across the contexts studied. However, higher female labor force participation (i.e. Sweden) should increase women's relative bargaining power, leading men to increase their inputs within the domestic sphere, including unpaid caregiving (cf. Treas & Tsui-o 2011). Countervailing factors such as low shares of elderly in care facilities, low employment among (older) women, taxation disincentives and norms of unpaid family-based caregiving suggest that caregiving responsibilities may impact women more than men across other contexts compared to Sweden.

Previous research suggests that the division of labor is trending towards gender convergence across developed nations (Gershuny 2000) – a convergence developing along regime type lines with Social Democratic countries showing relatively faster and earlier trend convergence than their Liberal counterparts (cf. Kan, Sullivan & Gershuny 2011). Given this, we anticipate that despite population-wide convergence trends, our 50+ aged study population will still exhibit gender differences in line with what specialization and bargaining theories predict, but that there will be more signs of convergence in Sweden, compared to the other contexts studied.

We expect that caregiving responsibilities will strengthen a traditional gender division of labor in each country. More specifically, men with caregiving responsibilities will not perform less paid work than men without such responsibilities, nor will they do more housework[5]. In contrast, women with caregiving responsibilities will take on additional housework and work less for pay than women without such responsibilities. To the extent that women take on more intensive caregiving than men, their caregiving responsibilities will also be traded off against leisure and personal needs. The impacts of caregiving responsibilities will be less articulate in Sweden than elsewhere. We expect caregiving responsibilities to strengthen a traditional division of labor in the UK and Canada, due to their stronger emphasis on male breadwinning and lower female employment. The impact of caregiving responsibilities is expected to differ between weekdays and weekends in each country, being less gendered on weekends. If a new pattern with respect to older men's domestic activities is emerging on weekends, we expect it to be emerging in Sweden rather than in the UK or Canada.

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[5] It should, however, be noted that intensive male caregivers may be less likely to be in the labor force, though the rationale behind this may be different than for women (i.e. not driven by a substitution effect as it is likely for women) (see Carmichael & Charles 2003; Lilly, Laporte & Coyte 2010).

Data and methods
We use data from five waves of time diary surveys from Sweden (SWETUS 2000/01 & 2010/11), the UK (MTUS 2000 & 2005) and Canada (GSS Cycle 24 – 2010).[6] Each sample is nationally representative and includes weights to control for over- and under-sampling of certain population groups.[7] The UK surveys were undertaken at the household level whereas the Sweden and Canada surveys were taken at the individual level. We analyze both weekday and weekend entries for each country.[8]

We restrict our sample to persons aged 50+[9] with 1,440 minutes of daily activity recorded. Our total sample size is 23,795 individuals (14,227 on weekdays and 9,568 weekends[10] – see Table 2). The weekday and weekend sample characteristics are highly similar in each country.

Table 2 about here

Our analyses focus on gender disparities in caregiving and the way gender, either in itself or in connection with caregiver status/caregiving intensity, affects a number of activities simultaneously. This contrasts with other works that have only focused on one type of time use in isolation (e.g. caregiving, paid work, housework). We believe our approach is better than such a narrow focus, which obscures that the major consequence of gender and caregiver status/caregiving intensity is how time is allocated across various activities. Moreover, the full-day approach enables us to test more hypotheses of relevance at the same time. We estimate gender-specific regressions and pooled regressions including women and men in the same models, using interactions to provide a more robust statistical test of gender differences.

We estimate OLS models predicting individuals' time in different activities during weekdays and weekends. Because of the high frequency of zeros in the data (i.e. that no time is allocated to the activity under consideration), Tobit estimates have been employed in time use research. Whether the Tobit model better accommodates left-censored data containing a non-insignificant number of zero observations than the OLS is, however, debated (Foster & Kalenkoski 2013; Stewart 2013). The general conclusion from these studies is that the results are usually very similar to OLS estimates, suggesting the latter are robust in cases with a high number of zeros in the data.

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[6] There exist several merits of the time diary methodology. It does not suffer from lengthy recall periods, and studies show that time use data is more accurate than retrospective surveys, especially concerning paid work hours, where people seem to exaggerate their weekly hours of paid work in retrospective surveys in a somewhat linear fashion (Robinson & Bostrom 1994). Time use data feature less heaping since activities are recorded in ten-minute intervals and are not based on retrospective estimations. Commonly the data, as in the case of SWETUS waves, feature similar numbers of observations throughout each month of the year and day of the week to account for seasonal and day-typical effects which may be present.

[7] Immigrant status is missing from the harmonized MTUS data sets. Nationally representative means that we do not examine divergences that exist between areas within a country.

[8] In the case of Sweden we have subsets of true couples which implies that two individuals per couple participate in the survey. In the multivariate analyses we calculate standard errors clustered by individual to account for non-independence.

[9] Due to differences regarding sample survey frames the age range of surveyed individuals varies across data waves. The Sweden 2000/01 and 2010/11 surveys included individuals aged 50 up to 88 and 84, respectively. The UK and Canada data also included ages 50 and up, but top-coded 80+ aged individuals at 80.

[10] Respondents in Sweden 2000/01 & 2010/11 and the UK 2005 completed one weekday and one weekend day time diary, while respondents in UK 2000 and Canada 2010 completed one time dairy on a randomly assigned day.

In addition, Stewart (2013) shows that the underlying process producing the zeros is important for the presence of biases in the two estimation methods. If no time is spent on a particular activity on a diary day, it could be because the individual never spends any time in the activity or that there exists some kind of fixed cost in spending time on the activity, implying that some days, time is spent on the activity and other days not. According to Stewart's simulations, OLS appears to be the most robust method in handling differences in the assumptions about the processes generating the zeros. This taken together with reasons of simplicity and ease of interpretation of results led us to choose OLS over Tobit.[11] For robustness, we estimated our analyses using the Tobit, but it did not alter our results in any meaningful way.[12]

In all calculations and estimations we account for the survey design (stratified random sample) by using individual sampling weights. An alternative would be to estimate regressions without weights, assuming that the control variables assure that the expected value of the error term is zero, which would make the OLS estimates consistent regardless of the weights used. Such a control-function approach yields similar but not identical estimates with the same substantive conclusions being reached regardless of estimation approach.

We estimate gender gaps in caregiving and caregiving intensity and how time in caregiving is traded off against time in other activities using OLS multivariate regression models. Our outcome variables are minutes reported per day in caregiving, paid work, routine housework and leisure, estimated separately by country and type of day, all of which we anticipate differ in their relation with caregiver status/intensity. Our primary independent variables are gender and caregiver status/intensity, which we interact as to test for the impact of caregiving.

Caregiving time includes activities and tasks such as providing care to other adults, in the household as well as outside the household, as well as hospital visits, but excludes activities and tasks related to the care of children. We also exclude commuting time related to caregiving to avoid overstating this activity for individuals who do very little of it.[13] We define high intensity caregivers as those who provide at least 90 minutes of caregiving time daily. *Paid work* is the daily minutes spent performing work for pay outside or within the home and includes overtime and secondary jobs. We exclude commuting time to avoid disproportionately overstating work hours for part-time workers who are predominantly female. *Routine housework* includes daily tasks such as cooking/washing, cleaning, laundry, shopping and domestic travel (for performing duties), activities more often performed by women (Coltrane 2000). *Individual leisure* time includes indoor and outdoor sporting and leisure activities (e.g. walking, cycling, exercise), outings such as attending cinema, sporting events, theatre, or other public events, social meetings with friends, artistic or music activities, crafts and hobbies, and restaurant visits. We also create four other categories including maintenance housework, personal care, sleep and a residual category (consisting mostly of TV viewing). These analyses are not included here since they are not considered core for the present topic (results available from authors). Control variables for

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[11] OLS results are easily interpretable in minutes, which is more straightforward than dealing with latent dependent variables as in the case of Tobit. We also believe that zero minutes performing an activity represents real behavior.
[12] This is in line with Stewart (2013). Results are available from authors upon request.
[13] We have made every attempt to harmonize our Sweden and Canada variables based on the MTUS (UK data) coding. This should not have implications for within-country gender differences, but it should be kept in mind when comparing level differences in dependent variables across countries.

socio-demographic characteristics and life cycle stages of potential importance for caregiving and other time use include: age, household type, education and labor market activity of interview person.[14] We also include a dummy variable for individuals who live with at least one child under the age of 18. Variables are listed and described in Table 2.[15]

Results

Who cares?

Table 3 provides a descriptive overview of individuals who are providing unpaid care for adults in Sweden, the UK and Canada. Women are more likely to provide unpaid care than men, particularly in Canada. The majority of caregivers are identified as being low-intensity caregivers. Most caregivers are partnered. In Sweden, the majority of partnered caregivers live alone as a couple – likely an effect of age, as only a small share of older adult caregivers have children living at home. In Sweden, looking at our two waves of data independently, we can observe the average age of caregivers has increased somewhat in 2010/11 compared with 2000/01 (results not shown). Co-residence is more common among caregivers in the UK and especially Canada, than in Sweden. Most caregivers are not involved in paid work, but among those who are, the majority work full-time. Our sample of caregivers is not very different from our total sample when it comes to education and income.[16]

Table 3 about here

We performed logistic regressions to see whether controlling for individual level characteristics altered our descriptive findings. The results displayed in Table 4 confirm that women are significantly more likely to be caregivers than men in Canada. In Sweden and the UK, however, gender is not a significant determinant of being a caregiver. Work status is more strongly associated with caregiver status, with those working part-time and those not working being more likely to be involved in unpaid caregiving than those working full-time. There are, however, cross-country differences in how employment status is associated with caregiving. While not working is significant and positively related to being a caregiver compared to working full-time in the UK and Canada, part-time work is more important in the case of Sweden, indicating different degrees of work-family compatibility through flexible work schemes across the contexts studied. We uncover no educational pattern concerning the odds of being a caregiver in Sweden or the UK, and weekend days do not affect the likelihood of being a caregiver in Sweden, the UK, and Canada.

Table 4 about here

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[14] We do not include for income because it is highly endogenous with time use. In our sensitivity analysis, we re-estimate all models with income included as a regressor (see below) and note that it does not affect the results by much.

[15] We do not explore the respondent's health in our regression models, though it is a determinant of both labor force participation (and paid work hours) and caregiver status. We do not want to include it because caregiving responsibilities also can impact the caregiver's health. Furthermore, time use surveys rarely include indicators of respondents' physical health, but rather focus on well-being indicators such as experiences of stress and insufficiency.

[16] For the UK and Canada, roughly a quarter of their overall samples lack income data, thus we cannot determine how caregivers differ regarding income.

Gender gaps
Table 5 establishes gender differences in the time allocation of men and women aged 50+ in line with expectations. Descriptive results show that men consistently perform more paid work and women perform more housework and caregiving. Weekdays are more gendered than weekends. Gender differences in paid work are smaller in Sweden and Canada than in the UK, and the differences in housework are greater in Canada, while women do more caregiving in all cased except the UK on weekends. To qualify this, Table 6 shows these results in minutes, expressed as raw gender gaps, and confirms that the differences are statistically significant in the case of paid work and housework. The gender differences in leisure were not statistically significant on weekdays in Sweden, although in all other cases women enjoyed less free time than men. Of note, while women performed relatively more caregiving than men, the absolute differences expressed in minutes are small. There is almost no gender gap in caregiving to other adults; on average men and women performed similar amounts of it across the contexts studied. Compared to housework, the gender gaps in caregiving are very small. While women devoted an hour or more than men per day to routine housework, the raw difference in caregiving amounts to a few minutes per day, and this is the case across the contexts studied. Partly, but not solely, this is related to big differences in participation rates in the two activities.

Tables 5-6 about here

The gender gaps are generally reduced, yet remarkably stable regarding pattern, when standardized (see Table 7). Weekday gender differences in minutes are adjusted more than weekend estimates indicating that time allocation on weekdays is more determined by gender differences in other factors than weekend time use. Quite surprisingly, the gender gaps in leisure stand out, being profoundly changed by adding controls. The result is distinctly increased gender gaps throughout the week.

Table 7 about here

To what extent is time in caregiving traded off against time in other activities?
Table 8 presents OLS estimates of the impact of caregiver status on time use for Sweden, the UK and Canada. The coefficients for caregiver represent the base effect for men and the interaction coefficients represent the additional effect for women. We analyze weekdays and weekends independently because weekend behavior is less constrained by paid work.

In Sweden, amongst those aged 50+, women performed less paid work, and more routine housework than men on weekdays and weekends (see Table 8a). Women generally have less leisure than men, particularly on weekends (about 50 minutes per day). Time in caregiving is traded off against time in other activities. Interestingly, we find no evidence that men or women with caregiving responsibilities in Sweden work less than those with no such responsibilities. Caregiving responsibilities affect men's and women's housework (positively) and leisure (negatively), but only on weekends. The sole interaction effect for the main activities of interest was reduced weekday leisure for women, indicating that women had less than men, but that being a woman with caregiving responsibilities was associated with a further reduction in weekday leisure time. There were no real gender differences stemming from being a caregiver on

either paid work or housework in Sweden.[17] In sum, there were gender differences in time allocation that were real, but paid work differences were not related to caregiving responsibilities, and the sole additional caregiving impact on women's time use related to weekday leisure time.

Table 8a about here

In the UK, as expected, women performed less paid work and more routine housework and they also had less leisure than men on both weekdays and weekends (see Table 8b). Compared to the Swedish estimates, the magnitude of the UK gender differences (estimated in minutes) are generally stronger. There were significant and strong associations with caregiving throughout the week, decreasing men's and women's time in paid work and increasing time devoted to housework. There were also negative impacts on time in the residual categories personal care and other activities, which caregivers spent less time during weekdays (results not shown). Caregivers also clearly experienced less leisure than non-caregivers on weekdays and weekends. The UK paid work pattern for men and women is strikingly different from that in Sweden; in the UK those with caregiving responsibilities worked less than those with no such responsibilities. Similar to the case of Sweden, there is not much evidence of gendered caregiving effects in the UK either. However, it's worth noting that the additional positive effect for women caregivers in paid work on weekends indicates that it is men's weekend work that is disrupted by caregiving in the UK case. The additional housework effect for caregivers in the UK is also only statistically significant for men. Again, there are gender differences in time allocation, and caregiving impacted time allocation, but gender differences in time allocation are not related to caregiving responsibilities.

Table 8b about here

In Canada, we also find that women perform less paid work and leisure than men, and do more housework, on both weekdays and weekends (see Table 8c). Like in the UK, we find that caregivers tradeoff a considerable amount of time in paid work compared to those without caregiving responsibilities, on both weekdays and weekends. We however don't find caregiving tradeoffs concerning routine housework or leisure. We are also unable to uncover any statistically significant interaction effects in Canada concerning paid work, housework or leisure, illustrating that despite clear gender differences in time allocation, caregiving responsibilities did not have any additional impact on women's time use on weekdays or weekends.

Table 8c about here

Turning to the intensity of caregiving, which, may impact time allocation more than caregiver status *per se,* we get at another dimension of caregiving responsibilities, which also may interact more with gender, especially in contexts less oriented at gender equality and work-family support. Table 9 presents OLS estimates of the impact of caregiver intensity on time use for

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[17] The only significant interaction was that for the residual category 'Other', which women with caregiving responsibilities spent significantly less time on than otherwise similar women without caregiving responsibilities but this effect was not consistent. While it was negative on weekdays in 1990/91, it was positive throughout the week in 2000/01 only to have disappeared in 2010-11.

Sweden, the UK and Canada, comparable to those in Table 8. The coefficients for caregiving intensity represent the base effect for men and the interaction coefficients represent the additional effect for women.

For Sweden, we find that the base effect of being a caregiver for men is mainly driven by high intensity caregiving, with low intensity caregiving only being positively associated with increased weekend routine housework (see Table 9a). Men with high intensity caregiving duties do have less paid work time (weekdays and weekends) as well as less weekend leisure time, compared to men without caregiving responsibilities. Weekend time allocation is more affected by caregiving intensity, with men with caregiving responsibilities spending less time on paid work and leisure than otherwise similar men without caregiving responsibilities if they are pressurized by high intensity caregiving, yet also doing more housework even when their caregiving load is lighter. Interestingly, there are no significant interaction effects of gender and caregiving intensity, with the exception of weekday paid work, confirming that men and women are similarly affected by not only caregiving responsibilities but also by caregiving intensity. Of note, women with low intensity caregiving performed more weekend routine housework than otherwise similar women without caregiving demands, while women with high intensity caregiving spend less time on paid work than otherwise similar women without such a burden, while at the same getting significantly less time for weekend leisure. This suggests that both men and women are increasingly pressurized by caregiving responsibilities in contemporary Sweden, especially when working and that the main tradeoff is taking place through reduced paid work and especially weekend leisure time.

Table 9a about here

In the UK, we find more salient significant impacts of caregiving on weekdays and weekends than we uncovered for Sweden. For men, low and high intensity caregiving demands are associated with reduced paid work as well as increased housework throughout the week and less weekend leisure. The negative relationship with paid work is more clearly demonstrated than in the Swedish case, but like the Swedish case, there are not many additional effects for women. Again, there are significant gender differences, but as men were significantly impacted by both caregiving responsibilities and their time intensity, we find evidence that overall men and women aged 50+ are affected by caregiving in quite similar ways in the UK.

Table 9b about here

In Canada, the significant negative impact of caregiving on weekday paid work applies to men and women with both low and high intensity caregiving demands, a pattern which resembles the UK more so than Sweden. On weekends this applies only to high intensity caregivers in Canada, a pattern which again resembles the UK pattern. Men's housework is not impacted by caregiving, but on weekdays women with low intensity caregiving perform additional housework while women with high intensity caregiving perform less. High intensity caregivers in Canada forfeit leisure time on the weekdays and weekends, and on weekdays women with low intensity caregiving face a further reduction in leisure time, comparatively. Like Sweden and most similar to the UK pattern, we find significant gender differences, with caregiving intensity impacting both men and women, the latter who experience an additional leisure reduction on weekdays.

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Sensitivity analysis
For sensitivity analysis, we re-estimate all regressions, but include a household income categorical variable to determine whether any results are sensitive to the inclusion of this variable and investigate whether gender differences are driven by economic incentives or income constraints. If gender differences remain after controls for income, and within subgroups defined by caregiving intensity, we will take this as indirect evidence that time use is cultural rather than reflecting economic incentives/constraints. Across the board, the results are unaffected by the inclusion of household income into our models, as no coefficient signs change, and most coefficient values remain largely unaltered. This applies to the logistic results (Table 4), the standardized gender gaps (Table 7), as well as the regressions interacting gender and caregiving responsibilities (Tables 8-9). Income categories in general improve model fit in a very marginal way. This robustness exercise reveals that gender differences in caregiving responsibilities across multiple activities are not explained or driven by economic incentives or income constraints to any significant degree for Sweden, the UK or Canada, but instead, to the extent that they are to be found, are rather behavioral or culturally determined. There is, however, a more general tendency to perform more care work and housework.

We also re-estimate our entire study on two sub-samples, the first being those who are in employment at the time of survey only, and secondly, on those aged 50-64 exclusively. In general, most results are unaffected by this, with the exception of the paid work raw and standardized paid work gender gaps increasing in the UK (Tables 6 and 7)[18]. This exercise reduces our sample sizes (and number of caregivers) enough that our multivariate estimates become less reliable, and they do not alter the coefficients of interest in any meaningful way.

Discussion
This paper contributes to a growing literature on gender disparities in unpaid caregiving, during a period where population ageing is placing increased pressure on pension systems, as well as health and caring services. Our case study takes a cross-country comparative approach, examining Sweden from 2000/01 and 2010/11, the UK from 2000 and 2005, and Canada for 2010, using comparable time use surveys, focusing on the population aged 50 and older. We are motivated by concerns that an ageing population which is being encouraged to increase their labor supply will lead to a greater share of the population facing competing demands of paid work and unpaid caregiving. Our aim is to better understand who provides unpaid caregiving, measure gender gaps relating to caregiving intensity, and to determine to what extent caregiving time is traded off against other activities for men and women, respectively.

Our examination of who provides caregiving shows that controlling for other factors, women are more likely to be caregivers only in Canada, but this is not the case in the UK or Sweden, in line with our hypothesis that gender differences in caregiving would be smaller in Sweden. We instead found work status a more predictive determinant of being a caregiver, but a different pattern emerges between countries. In Sweden, part-time work is more strongly associated with caregiving, whereas in the UK caregiving is associated with both part-time and not working, while for Canada the association applies to not working exclusively, indicating different degrees

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[18] We have included sensitivity results in Tables 6-9, but only for regressions of employed individuals on paid work, which was the only dependent variable which showed any changes.

of work-family compatibility. This is also an indication that older workers in Sweden have greater access to flexible (and reduced) work hour arrangements. For Sweden, we uncover an increasing average age of caregivers between 2000 and 2010, reflective of population ageing.

With respect to gender differences in time use, we found that in line with expectations, men provided more paid work than women, while women devoted more time to caregiving and housework. Weekdays tended to be more gendered than weekends. There were some contextual differences when it came to time tradeoffs between caregiving and other activities though. In Sweden, we found no evidence that male caregivers worked less in paid work than non-caregiving men. This was the case with high intensity caregivers as well, who were more likely to trade caregiving time with leisure time and residual categories. In the UK and Canada however, male caregivers spent less time in paid work than did comparable men who were not caregivers, both on weekdays and weekends. This was the case with high intensity male caregivers in all countries as well, who provided unpaid care through varying tradeoffs with time spent in paid work and leisure, being negatively associated with reduced weekend leisure in Sweden, reduced weekday leisure in the UK, and weekday and weekend leisure in Canada. These findings could indicate that individuals in the UK and Canada have less flexibility in terms of the type and timing of the unpaid care provided, forcing them to take time off of paid work to provide this care. Additional supports in Sweden, through public paid care for instance, could enable greater flexibility in terms of when unpaid care is provided. In each context, intensive unpaid care is being traded off with leisure time. In Sweden, especially, where time in paid work is not decreasing as a result of caregiving, this caregiving-leisure tradeoff highlights the importance of respite policies to support caregivers and decrease potential caregiver burnout.

There was no widespread evidence of a gendered effect of caregiving on time traded off with other activities in any country, although exceptions existed, such as in Sweden and Canada on weekdays concerning leisure. This indicates that holding all other factors constant, both men and women experience similar tradeoffs with respect to time spent in caregiving, in line with earlier findings from Canada (Lilly et al., 2007) and the UK (Carmichael and Charles, 2010), although exceptions exist.

It is important to take into consideration study limitations when interpreting our findings. One limitation is the potential endogeneity between caregiver status and time spent in paid work. As noted previously, some have found that an assumption of exogeneity underestimates the effect of unpaid care on labor supply (Crespo 2006), while others find the opposite (Heitmueller 2007). In instances where there is an overestimation of this effect, it has been found to be minimal for higher intensity caregivers (Heitmueller 2007). As such, any bias introduced by this assumption of exogeneity is likely to be minimal in our regressions which control for caregiving intensity. We also note that potentially different definitions of caregiving between the surveys may have made our results less comparable across contexts.

References

Anxo D & Fagan C. 2005. The family, the state and now the market: the organization of employment and working time in the home care services for the elderly. In G Bosch & S Lehndorff (Eds.) *Working in the Service Sector. A Tale from a Different World*. London: Routledge.

Arber S & Ginn J. 1997. Informal care-givers for the elderly people. In C Ungerson & M Kember (Eds.) *Women and Social Policy: A Reader*. London: Macmillan.

Arber S & Ginn J. 1999. Gender differences in informal caring. In G Allan (Ed.) *The Sociology of the Family: A Reader*. Oxford: Blackwell.

Bauer, JM & Sousa-Poza A. 2015. Impacts of informal caregiving on caregiver employment, health and family. *Journal of Population Ageing*, 113-45.

Becker G. 1965. A theory of the allocation of time. *Economic Journal*, 493-515.

Becker G. 1973. A Theory of marriage: Part I. *Journal of Political Economy*, 813-46.

Becker G. 1974. A theory of social interactions. *Journal of Political Economy*, 1063-93.

Becker G. 1976. Altruism, egoism and genetic fitness: economics and socio-biology. *Journal of Economic Literature*, 817-26.

Becker G. 1981. Altruism in the family and selfishness in the market place. *Economica*, 1-15.

Becker G 1985. Human capital, effort, and the sexual division of labor. *Journal of Labor Economics*, S33-58.

Becker G & Ghez G. 1975. *The Allocation of Time and Goods Over the Life-Cycle*. New York: Columbia University Press.

Bettio, F & Plantegna J. 2004. Comparing care regimes in Europe. *Feminist Economics*, 85-113.

Bobinac A. 2010. Caring for or caring about: Disentangling the caregiver effect and the family effect. *Journal of Health Economics*, 549-56.

Bolin K, Lindgren B & Lundborg P. 2008. Your next of kin or your own career? Caring and working among the 50+ of Europe. *Journal of Health Economics*, 718-38.

Carmichael F & Charles S A. 1998. The labor market costs of community care. *Journal of Health Economics*, 747-65.

Carmichael F & Charles S A. 2003. The opportunity costs of informal care; does gender matter? *Journal of Health Economics*, 781-803.

Carmichael F, Charles S & Hulme CT. 2010. Who will care? Employment status and willingness to supply informal care. *Journal of Health Economics*, 182-90.

Carmichael F & Ercolani MG. 2014. Overlooked and undervalued: the caring contribution of older people. *International Journal of Social Economics*, 397-419.

Carmichael, F., & Ercolani, M. G. (2016). Unpaid caregiving and paid work over life-courses: Different pathways, diverging outcomes. *Social Science & Medicine*, *156*, 1-11.

Coltrane S. 2000. Research on household labor: Modeling and measuring the social embeddedness of routine family work. *Journal of Marriage and the Family,* 1208-1233.

Coyte PC & McKeever P. 2001. Home care in Canada: Passing the buck. *Canadian Journal of Nursing Research*, 11-25.

Crespo L. 2006. *Caring for parents and employment status of European mid-life women*. Working Paper No. 0615. Madrid: CEMFI.

Eeckhaut M, Stanfors M & van de Putte B. 2014. Educational heterogamy and the division of paid labour in the family: A comparison of present-day Belgium and Sweden. *European Sociological Review,* 64-75.

Esping-Andersen G. 1990. *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.

Esping-Andersen G. 1999. *Social Foundations of Postindustrial Economies*. Oxford: Oxford University Press.

Finley NJ. 1989. Theories of family labor as applied to gender differences in caregiving to elderly parents. *Journal of Marriage and Family*, 79-86.

Folbre N. 2001. *The Invisible Heart: Economics and Family Values*. New York: New Press.

Folbre N & Bittman M. 2004. *Family Time: The Social Organization of Care*. New York: Routledge.

Foster G & Kalenkoski C. 2013. Tobit or OLS? An empirical evaluation under different diary window lengths. *Applied Economics*, 2994-3010.

Gershuny J. 2000. *Changing times: Work and leisure in post-industrial societies*. Oxford: Oxford University Press.

Gerstel N & Gallagher SK. 1994. Caring for kith and kin: Gender, employment, and the privatization of care. *Social Problems*, 519-38.

Gerstel N & Gallagher SK. 2001. Men's caregiving: Gender and the contingent character of care. *Gender & Society*, 197-217.

Gerstel N & Gallagher SK. 2004. Explaining the gender gap in help to parents: The importance of employment. *Journal of Marriage and Family*, 413-51.

Gornick JC & Meyers M. 2003. *Families That Work: Policies for Reconciling Parenthood and Employment*. New York: Russell Sage.

Graham J & Green C. 1984. Estimating the parameters of a household production function with joint products. *Review of Economics and Statistics*, 277-83.

Gronau R. 1977. Leisure, home production and work: The theory of the allocation of time revisited. *Journal of Political Economy*, 1099-124.

Heitmueller A. 2007. The chicken or the egg? Endogeneity in the labor market participation of informal carers. *Journal of Health Economics*, 536-59.

Hirst M. 2005. Carer distress: a prospective, population-based study. *Social Science & Medicine*, 697-708.

Hook JL. 2006. Care in context: Men's unpaid work in 20 countries, 1965-2003. *American Sociological Review*, 639-60.

Hughes SL et al. 1999. Relationship between caregiver burden and health-related quality of life. *Gerontologist*, 534-45.

Jacobs JC et al. 2013. The fiscal impact of informal caregiving to home care recipients in Canada: How the intensity of care influences costs and benefits to government. *Social Science & Medicine*, 102-9.

Jacobsen J. 2007. *The Economics of Gender*. New York: Wiley-Blackwell.

Jegermalm M & Jeppsson Grassman E. 2009. Patterns of informal help and caregiving in Sweden: A thirteen-year perspective. *Social Policy & Administration*, 681-701.

Johansson L, Long H & Parker MG. 2011. Informal caregiving for elders in Sweden: An analysis of current policy developments. *Journal of Aging & Social Policy*, 335-53.

Johnson R & Lo Sasso A. 2000. *The Tradeoff between Hours of Paid Employment and Time Assistance to Elderly Parents at Midlife*. Washington DC: The Urban Institute.

Johnson R & Lo Sasso A. 2006. The impact of elder care on women's labor supply. *Inquiry: A Journal of Medical Care Organization, Provision and Financing*, 195-210.

Kan M, Sullivan O & Gershuny J. 2011. Gender convergence in domestic work: Discerning the effects of interactional and institutional barriers from large-scale data. *Sociology,* 234-51.

Kimmel J & Connelly R. 2007. Mothers' time choices. Caregiving, leisure, home production, and paid work. *Journal of Human Resources*, 643-81.

Kotsadam A. 2011. Does informal eldercare impede women's employment? The case of European Welfare States. *Feminist Economics*, 121-44.

Kramer BJ. 2004. Men as caregivers: An overview. In BJ Kramer & EH Thompson Jr (Eds.) *Men as Caregivers*. Amherst: Prometheus Books.

Laditka J & Laditka S. 2001. Adult children helping older parents: Variations in likelihood and hours by gender, race, and family role. *Research on Aging*, 429-56.

Lilly MB, Laporte A & Coyte PC. 2007. Labor market work and home care's unpaid caregivers: A systematic review of labor force participation rates, predictors of labor market withdrawal, and hours of work. *The Milbank Quarterly*, 641-90.

Lilly MB, Laporte A & Coyte PC. 2010. Do they care too much? The influence of caregiving intensity on the labor force participation of unpaid caregivers in Canada. *Journal of Health Economics*, 895-903.

Lundberg S & Pollak RA. 1996. Bargaining and distribution in marriage. *Journal of Economic Perspectives,* 139-58.

Manser M & Brown M. 1980. Marriage and household decision-making: A bargaining analysis. *International Economic Review*, 31-44.

Michelson W & Tepperman, L. 2003. Focus on home: What time-use data can tell about caregiving to adults. *Journal of Social Issues,* 591-610.

Moen P. & Spencer, D. 2006. Converging divergences in age, gender, health, and wellbeing: Strategic selection in the third age. In RH. Binstock & LK. George (Eds.), *Handbook of aging and the social sciences.* Boston: Academic Press.

Neilson J & Stanfors M. 2014. It's about time! Gender, parenthood, and household divisions of labor under different welfare regimes. *Journal of Family Issues*, 1066-1088.

OECD. 2011a. *Help Wanted? Providing and Paying for Long-Term Care*. OECD Publishing.

OECD. 2011b. *Informal Carers in Health at a Glance 2011*. OECD Publishing.

Oi W. 1992. On working. *Economic Inquiry*, 1-28.

Oppenheimer VK. 1997. Women's employment and the gain to marriage: The specialization and trading model. *Annual Review of Sociology*, 431-53.

Pavalko EK & Artis JE. 1997. Women's care-giving and paid work: causal relationships in late midlife. *Journal of Gerontology: Social Sciences,* S170-9.

Phillips AC et al. 2009. Symptoms of depression in non-routine caregivers: The role of caregiver strain and burden. *British Journal of Clinical Psychology*, 335-46.

Pinquart M & Sorensen S. 2003. Differences between caregivers and noncaregivers in psychological health and physical health: a meta-analysis. *Psychology and Aging*, 250-67.

Robinson J & Bostrom A. 1994. The overestimated workweek? What time diary measures suggest. *Monthly Labor Review,* 11-23.

Sarkisian N & Gerstel N. 2004. Explaining the gender gap in help to parents: The importance of employment. *Journal of Marriage and Family*, 431-51.

Shelton BA & John D. 1996. The division of household labor. *Annual Review of Sociology,* 299-322.

Simonazzi A. 2009. Care regimes and national employment models. *Cambridge Journal of Economics*, 211-32.

Sinha M. 2013. *Portrait of Caregivers, 2012*. Ottawa: Statistics Canada.

Sirianni C & Negrey C. 2000. Working time as gendered time. *Feminist Economics*, 59-76.

Spiess KC & Schneider AU. 2003. Interactions between care-giving and paid work hours among European midlife women, 1994 to 1996. *Ageing & Society*, 41-68.

Stern S. 1995. Estimating long term care decisions in the presence of endogenous child characteristics. *Journal of Human Resources,* 551-80.

Stewart J. 2013. Tobit or not Tobit? *Journal of Economic and Social Measurement*, 263-90.

Stone R & Short PF. 1990. The competing demands of employment and informal caregiving to disabled parents. *Medical Care*, 513-26.

Szebehely M. 2005. Care as employment and welfare provision – child care and elder care in Sweden at the dawn of the 21st century. In H M Dahl & T Rask Eriksen (Eds.) *Dilemmas of Care in the Nordic Welfare State*. Aldershot: Ashgate.

Tal, B. & Mendes, R. (2017). Who Cares: The Economics of Caring For Aging Parents. CIBC Capital Markets, In Focus – May 8, 2017. Retrieved from http://cibc.mediaroom.com/2017-05-08-Caring-for-aging-parents-costs-Canadians-33-billion-a-year-CIBC

Treas J & Tsui-o T. 2011. How couples manage the household: Work and power in cross-national perspective. *Journal of Family Issues,* 1-29.

UNDP 2015. *Human Development Report. The rise of the south: Human progress in a diverse world*. New York: United Nations.

Ungerson C. 2003. Commodified care work in European labour markets. *European Societies*, 377-96.

Van den Berg B & Hassink WHJ. 2008. Cash benefits in long-term home care. *Health Policy*, 209-21.

Van Houtven CH & Norton EC. 2004. Informal care and health care use of older adults. *Journal of Health Economics*, 1159-80.

Van Houtven CH, Coe NB & Skira MM. 2013. The effect of informal care on work and wages. *Journal of Health Economics*, 240-52.

Vlachantoni A. 2010. The demographic characteristics and economic activity patterns of carers over 50: Evidence from the English Longitudinal Study of Ageing. *Population Trends,* 51-73.

Wolf AD & Soldo B. 1994. Married women's allocation of time to employment and care of elderly parents. *Journal of Human Resources*, 1259-76.

Wooley F. 1996. Getting the better of Becker. *Feminist Economics,* 114-20.

World Economic Forum. 2015. The Global Gender Gap Report. Accessed March 1, 2016 at: http://reports.weforum.org/global-gender-gap-report-2015/

Yeandle S, Bennett C, Buckner L, Shipton L & Suokas A. 2006. *Who cares wins: The social and business benefits of supporting working carers*. London: Carers UK.

Table 1. Caregiving context for Sweden, the UK, Canada, and the OECD.

	Sweden		UK		Canada		OECD	
	2000	**2010**	**2000**	**2010**	**2000**	**2010**	**2000**	**2010**
LFP, women aged 25-64[a]	81.3	82.6	69.5	72.4	72.2	76.5	62.4	66.1
LFP, men aged 25-64[a]	86.8	89.6	86.2	86.5	86.0	85.5	87.2	86.5
LFP, women aged 55-64 [a]	65.9	70.4	42.5	50.6	41.4	56.5	38.3	47.9
LFP, men aged 55-64 [a]	72.6	79.4	63.2	69.3	60.7	68.0	62.5	67.6
Women's share of part-time employment[b]	72.9	63.0	80.2	75.0	69.1	67.6	72.4	69.9
PT employment as % of women's total employment[b]	21.4	19.4	40.7	39.3	27.2	27.7	23.7	26.3
Global Gender Gap Index[f]	na	0.802	na	0.746	na	0.737	na	na
GGI rank[f]	na	4	na	15	na	20	na	na
Life expectancy (e0), men[c]	77.4	79.6	75.5	78.6	76.3	78.8	73.2	76.0
Life expectancy (e0), women[c]	82.0	83.6	80.3	82.6	81.7	83.2	79.8	82.0
Share of population age 65+[d]	17.3	18.3	15.8	15.9	12.6	14.2	13.1	14.7
Dependency ratio, population 15-64/0-14+65 and older[d]	55.5	53.6	53.5	50.9	46.5	44.2	50.5	50.0
Public expenditure on health care as % of GDP[g]	7.4	8.5	6.3	8.5	8.3	10.6	na	na
Public expenditure on caring benefits in cash, services, and tax breaks as % of GDP[h]	26.8	26.3	17.7	22.8	15.8	17.5	18.0	21.1
Share of elderly in care facilities[i,j]	7.7	5.4	4.2	6.9 (2004)	na	7.1	na	na
Beds in nursing and care facilities per 1000 population aged 65+	98.5	78.9	57.7 (2003)	51.6	56.5 (2003)	54.1	na	na

Sources: [a] OECD Dataset: LFS by sex and age – indicators **http://stats.oecd.org/viewhtml.aspx?datasetcode=LFS_SEXAGE_I_R&lang=en#** ; [b] OCED Incidence of FTPT employment - common definition **http://stats.oecd.org/Index.aspx?DatasetCode=FTPTC_I#**; [c] OECD Family Database; [d] OECD Stat. Extracts http://stats.oecd.org/ (downloaded February 28 2016). Dataset: Historical population data and projections (1950-2050); [f] World Economic Forum (2010) Global Gender Gap Report; [g] 2015 Joint OECD, EUROSTAT and WHO Health Accounts SHA Questionnaires (JHAQ) **http://stats.oecd.org/Index.aspx?DataSetCode=SHA;** [h] OECD Social Expenditure Database (SOCX) **http://stats.oecd.org/Index.aspx?datasetcode=SOCX_AGG#;** [i] OECD Stat. Extracts http://stats.oecd.org/ (downloaded February 28 2016). Dataset: Long-term care resources and utilisation. [j] Source: Statistics Canada, CANSIM table 107-5504. [k] Long-Term Care Resources and Utilisation: Beds in nursing and residential care facilities. **http://stats.oecd.org/Index.aspx?DataSetCode=HEALTH_LTCR#**

Table 2. Weighted means and proportions of variables used in regressions.

	Sweden	UK	Canada
Gender			
Men (ref.)	.48	.47	.48
Women	.52	.53	.52
Age	63.8	64.1	na
Age category			
Age 50-64[b]	.57	.54	.60
Age 65-74	.27	.27	.22
Age 75-79	.10	.17	.08
Age 80+	.07	.02	.10
Caregiver status			
Caregiver	.05	.05	.05
Caregiver: Low intensity	.04	.04	.03
Caregiver: High intensity	.01	.01	.02
Child under age 18 in household			
None under 18 (ref.)	.91	.92	.91
1 or more	.09	.08	.09
Household type			
One person household (ref.)	.28	.27	.19
Married/cohab. couple alone	.63	.50	.49
Married/cohab. couple with others	.08	.18	.22
Other	.01	.06	.10
Work status			
Full-time (ref.)	.38	.23	.36
Part-time	.11	.11	.07
Other/not in paid work/retired	.51	.63	.55
Missing /na	.00	.02	.01
Education			
Primary (ref.)	.30	.56	..49
Secondary	.40	.22	.27
Higher	.29	.19	.21
Education unknown	.01	.03	.02
Household Income			
Low 25% (ref.)	.26	.33	.21
Middle 50%	.50	.31	.34
High 25%	.24	.10	.21
Income unknown	.00	.26	.24
N	6,028	9,547	8,220
N (weekdays)	3,018	5,297	5,912
N (weekend days)	3,010	4,250	2,308

Note: Decimals subject to rounding.
Source: Swedish Time Use Survey (SWETUS) 2000/01 and 2010/11. Multinational Time Use Study (MTUS Harmonised simple file) UK (2000 & 2005). Canada General Social Survey – Cycle 24 (2010).

Table 3. Weighted means and proportions of variables used in regressions, caregivers[a] only.

	Sweden	UK	Canada
Gender			
Men	.47	.46	.36
Women	.53	.54	.64
Age	63.3	64.0	
Age category			
Age 50-64	.57	.51	.60
Age 65-74	.26	.34	.21
Age 75-79	.10	.13	.08
Age 80+	.07	.01	.11
Caregiver status			
Low intensity[b]	.81	.79	.61
High intensity	.19	.21	.39
Children in the household			
None under 18	.89	.92	.85
1 or more	.11	.08	.15
Household type			
One person household	.16	.14	.13
Married/cohabiting couple alone	.73	.56	.41
Married/ cohabiting couple with others	.10	.22	.35
Other	.01	.08	.12
Work status			
Full-time	.34	.14	.29
Part-time work	.15	.12	.06
Other/not in paid work	.51	.73	.62
Work status missing	.00	.02	.02
Education			
Primary	.27	.57	.48
Secondary	.45	.21	.30
Higher education	.28	.20	.21
Education unknown	.00	.03	.01
Household income[c]			
Low 25%	.19	.31	.22
Middle 50%	.49	.33	.42
High 25%	.32	.08	.14
Income missing	.00	.28	.22
N	292	499	344
N (weekdays)	147	284	263
N (weekends)	145	215	81

Note: [a] Caregiver defined as anyone doing any caregiving to another adult during the day of the survey. [b] Caregiver status defined low intensity caregiving (1-90 minutes during diary day) and high (90+ minutes diary day). [d] Household income unavailable for UK.
Source: See Table 2.

Table 4. Logistic regression, odds of being a caregiver[a], men and women aged 50+

	Sweden	UK	Canada
Gender (Man ref. cat.)			
Woman	1.02 (0.77-1.35)	1.06 (0.85-1.31)	1.79*** (1.30-2.47)
Work Status (Full-time ref. cat.)			
Part-time	1.51* (1.01-2.25)	1.89*** (1.27-2.81)	0.94 (0.50-1.77)
Not working/other	1.16 (0.79-1.70)	2.61*** (1.84-3.69)	1.79** (1.21-2.64)
Work status missing	na	0.62 (0.18-2.12)	3.33* (1.17-9.48)
Education (Primary ref. cat.)			
Secondary	1.28 (0.91-1.80)	0.95 (0.73-1.24)	1.16 (0.83-1.61)
Higher	1.07 (0.73-1.57)	1.08 (0.82-1.43)	1.37 (0.94-1.99)
Education unknown	0.30 (0.04-2.28)	1.78 (0.68-4.67)	0.40 (0.13-1.21)
Day of the week (Weekday ref. cat.)			
Weekend	0.99 (0.76-1.29)	0.92 (0.76-1.12)	0.82 (0.58-1.16)
N	6,028	9,047	8,220

Note: [a] Caregiver defined as anyone doing any caregiving to another adult during the day of the survey. Models included all controls listed in Table 2 except for income. Coefficients are expressed as odds ratios. 95% confidence intervals in parentheses.
† $p < .10$, * $p < .05$ ** $p < .01$ *** $p < .001$
Source: See Table 2.

Table 5. Weighted mean minutes for men/women aged 50+ per weekday and weekend day by activity for Sweden (2000/01 & 2010/11), the UK (2000 & 2005) and Canada (2010).

Sweden	Weekday				Weekend			
	Paid work	Routine housework	Care-giving	Leisure	Paid work	Routine housework	Care-giving	Leisure
Mean minutes	202/143	100/165	2/4	366/366	39/30	112/172	2/3	482/447
Ratio W/M	0.71	1.65	1.70	1.00	0.75	1.53	1.04	0.93
Mean if t>0	431/379	111/168	43/72	370/367	257/222	120/175	51/54	485/449
Ratio W/M	0.88	1.52	1.66	0.99	0.86	1.45	1.07	0.93
Part. rate (%)	47/38	91/98	5/5	99/100	15/13	93/98	5/5	99/100
N	1,490/1,528				1,491/1,519			
UK	Weekday				Weekend			
	Paid work	Routine housework	Care-giving	Leisure	Paid work	Routine housework	Care-giving	Leisure
Mean minutes	169/83	155/260	3/4	347/337	52/19	166/249	4/3	419/379
Ratio W/M	0.49	1.68	1.29	0.97	0.37	1.50	0.96	0.91
Mean if t>0	472/377	170/264	63/74	351/340	358/288	179/254	73/68	423/383
Ratio W/M	0.80	1.55	1.18	0.97	0.80	1.42	0.93	0.91
Part. rate (%)	36/22	91/98	5/6	99/99	14/7	93/98	5/5	99/99
N	2,443/2,854				1,965/2,285			
Canada	Weekday				Weekend			
	Paid work	Routine housework	Care-giving	Leisure	Paid work	Routine housework	Care-giving	Leisure
Mean minutes	230/162	64/153	5/6	354/340	51/35	79/164	4/7	479/424
Ratio W/M	0.70	2.38	1.09	0.96	0.68	2.09	1.65	0.89
Mean if t>0	516/473	91/167	145/102	368/352	343/326	111/181	161/137	489/432
Ratio W/M	0.92	1.83	0.70	0.96	0.95	1.64	0.85	0.88
Part. rate (%)	45/34	70/92	4/6	96/97	15/11	71/91	3/5	98/98
N	2,526/3,386				992/1,316			

Note: All figures subject to rounding.
Source: See Table 2.

Table 6. Raw gender gaps across activity variables for those aged 50+, weekdays and weekends, for Sweden (2000/01 & 2010-11), the UK (2000 & 2005) and Canada (2010).

Country	Day	Paid work (all)	Paid work (employed only)	Routine housework	Caregiving	Leisure
Sweden	Weekday	-59.2*** (8.78)	-55.9*** (11.45)	65.0*** (3.80)	1.5† (0.81)	-0.6 (7.55)
	Weekend	-9.7* (4.50)	-8.7 (8.60)	59.9*** (3.65)	0.1 (0.77)	-35.1*** (6.89)
UK	Weekday	-86.0*** (6.24)	-118.8*** (11.18)	105.0*** (3.98)	0.9 (0.79)	-9.8† (5.11)
	Weekend	-32.7*** (4.23)	-52.4*** (10.2)	82.6*** (4.25)	-0.1 (0.86)	-39.5*** (5.68)
Canada	Weekday	-68.3*** (9.45)	-48.1*** (13.05)	88.6*** (3.62)	0.5 (1.64)	-14.0† (7.41)
	Weekend	-16.1* (7.53)	-10.5 (16.10)	85.7*** (6.26)	2.7 (2.07)	-55.0*** (12.18)

Note: † $p < .10$, * $p < .05$ ** $p < .01$ *** $p < .001$. Gender gaps in minutes calculated using OLS (weighted) models which included only a gender dummy variable.
Source: See Table 2.

Table 7. Standardized gender gaps across activity variables for those aged 50+, weekdays and weekends in Sweden (2000/01 & 2010-11), the UK (2000 & 2005) and Canada (2010).

Country	Day	Paid work (all)	Paid work (employed only)	Routine housework	Caregiving	Leisure
Sweden	Weekday	-46.9*** (7.09)	-54.7*** (11.53)	58.6*** (3.65)	1.2 (0.88)	-24.9*** (6.58)
	Weekend	-8.0† (4.53)	-5.9 (8.67)	62.2*** (3.71)	0.0 (0.82)	-49.0*** (6.64)
UK	Weekday	-65.7*** (5.61)	-122.8*** (11.0)	88.0*** (4.09)	0.5 (0.81)	-45.5*** (4.84)
	Weekend	-27.5*** (4.12)	-53.3*** (10.24)	86.1*** (4.49)	-0.2 (0.88)	-61.9*** (5.61)
Canada	Weekday	-48.6*** (8.21)	-50.9*** (13.10)	84.4*** (3.64)	0.1 (1.79)	-49.1*** (6.68)
	Weekend	-13.0† (7.60)	-11.5 (16.89)	92.9*** (6.59)	3.3† (1.95)	-75.0*** (11.97)

Note: † $p < .10$, * $p < .05$ ** $p < .01$ *** $p < .001$. Gender gaps in minutes calculated using OLS (weighted) models which included all variables listed in Table 2, except for household income and caregiver status.
Source: See Table 2.

Table 8. Interaction between having caregiving responsibilities and gender on weekday and weekend time use in different activities, those aged 50+ (reference categories in parentheses).

A. Sweden	Paid work (all)	Paid work (employed only)	Routine housework	Leisure	Paid work	Routine housework	Leisure
			Weekday			Weekend	
Gender (Man ref.cat.)							
Woman	-45.5***	-54.0***	58.0***	-22.5***	-6.8	63.1***	-50.1***
	(7.28)	(11.83)	(3.76)	(6.77)	(4.67)	(3.72)	(6.75)
Caregiver status (not caregiver ref.cat.)							
Caregiver	6.5	-4.8	1.1	-19.0	0.3	45.1**	-75.6**
	(23.93)	(38.69)	(10.28)	(18.84)	(16.70)	(16.61)	(23.51)
Interaction gender* caregiver status	-28.2	-14.7	12.2	-46.2†	-25.1	-19.3	22.9
	(30.05)	(51.92)	(14.17)	(25.14)	(17.66)	(19.93)	(28.99)
R^2	0.34	0.04	0.23	0.28	0.05	0.11	0.12
N	3,018	1,670	3,018	3,018	3,010	3,010	3,010

B. UK	Paid work (all)	Paid work (employed only)	Routine housework	Leisure	Paid work	Routine housework	Leisure
			Weekday			Weekend	
Gender (Man ref.cat.)							
Woman	-66.5***	-120.2***	89.1***	-44.0***	-29.9***	88.3***	-60.5***
	(5.81)	(11.2)	(4.20)	(4.96)	(4.29)	(4.60)	(5.76)
Caregiver status (not caregiver ref.cat.)							
Caregiver	-82.9***	-106.0**	38.5**	-32.0*	-44.5***	35.9**	-36.3*
	(14.30)	(40.5)	(13.06)	(15.75)	(5.98)	(13.13)	(15.83)
Interaction gender* caregiver status	25.7	-12.6	-20.0	-23.2	49.2***	-43.1*	-26.4
	(18.52)	(49.3)	(17.01)	(19.68)	(12.70)	(18.27)	(22.01)
R^2	0.27	0.12	0.23	0.23	0.07	0.11	0.10
N	5,297	1,829	5,297	5,297	4,250	4,250	4,250

Table 8 cont. Interaction between having caregiving responsibilities and gender on weekday and weekend time use in different activities, those aged 50+ (reference categories in parentheses).

C. Canada	Paid work (all)	Paid work (employed only)	Routine housework	Leisure	Paid work	Routine housework	Leisure
			Weekday			Weekend	
Gender (Man ref.cat.)							
Woman	-48.1***	-48.7***	83.8***	-45.3***	-14.3†	94.1***	-73.1***
	(8.37)	(13.08)	(3.73)	(6.52)	(7.54)	(6.73)	(12.24)
Caregiver status (not caregiver ref.cat.)							
Caregiver	-126.2***	-101.0†	4.5	-15.7	-43.6†	-17.5	-74.2
	(30.65)	(58.41)	(14.88)	(47.51)	(24.36)	(24.34)	(53.63)
Interaction gender* caregiver status	43.2	1.8	9.4	-58.6	48.4	-11.6	8.1
	(38.48)	(89.22)	(19.71)	(51.21)	(38.46)	(32.95)	(60.44)
R^2	0.27	0.06	0.20	0.25	0.04	0.14	0.08
N	5,912	2,375	5,912	5,912	2,308	2,308	2,308

Note: † $p < .10$, * $p < .05$ ** $p < .01$ *** $p < .001$. OLS (weighted) models included all variables listed in Table 2, except for household income and caregiver intensity, which was replaced with a dummy variable to identify caregivers.
Source: See Table 2.

Table 9. Interaction between caregiving intensity and gender on weekday and weekend time use in different activities, those aged 50+ (reference categories in parentheses).

A. Sweden	Paid work (all)	Paid work (employed only)	Routine housework	Leisure	Paid work	Routine housework	Leisure
			Weekday			Weekend	
Gender (Man ref.cat.)							
Woman	-45.5***	-54.2***	58.0***	-22.6**	-6.8	63.1***	-50.2***
	(7.28)	(11.83)	(3.76)	(6.77)	(4.67)	(3.72)	(6.75)
Caregiving intensity (no caregiving ref.cat.)							
Low intensity	25.6	16.6	1.8	-15.5	3.8	48.8*	-64.4
	(25.03)	(37.20)	(8.98)	(19.29)	(19.10)	(18.87)	(26.30)
High intensity	-110.0*	-240.8*	-3.4	-41.0	-22.7*	21.6	-148.3***
	(54.97)	(121.32)	(47.91)	(61.37)	(9.05)	(19.41)	(34.72)
Interaction gender* low caregiving intensity	-53.7	-28.1	9.5	-31.8	-28.2	-18.8	21.3
	(33.86)	(54.01)	(13.86)	(27.88)	(20.12)	(22.65)	(32.41)
Interaction gender* high caregiving intensity	104.7†	194.9	21.6	-69.3	-4.3	-14.3	52.2
	(60.76)	(139.67)	(52.15)	(66.34)	(12.22)	(29.57)	(47.04)
R^2	0.34	0.04	0.23	0.28	0.05	0.11	0.13
N	3,018	1,670	3,018	3,018	3,010	3,010	3,010

B. UK	Paid work (all)	Paid work (employed only)	Routine housework	Leisure	Paid work	Routine housework	Leisure
			Weekday			Weekend	
Gender (Man ref.cat.)							
Woman	-66.5***	-120.2***	89.0***	-44.1***	-29.8***	88.3***	-60.5***
	(5.81)	(11.20)	(4.19)	(4.96)	(4.29)	(4.60)	(5.76)
Caregiving intensity (no caregiving ref.cat.)							
Low intensity	-78.5***	-107.1*	44.4**	-19.7	-41.4***	39.7**	-31.8†
	(15.99)	(42.90)	(14.57)	(17.24)	(6.78)	(12.78)	(16.53)
High intensity	-106.6***	-91.1	7.3	-98.5**	-54.8***	24.2	-50.1
	(26.06)	(95.3)	(25.28)	(32.85)	(7.35)	(35.97)	(39.39)
Interaction gender* low caregiving intensity	23.6	-19.7	-6.0	-21.4	34.5**	-33.3†	-13.7
	(21.18)	(53.24)	(19.31)	(21.21)	(10.89)	(19.04)	(22.80)

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Interaction gender* high caregiving intensity	42.3	10.5	-49.2	0.2	102.1*	-80.6†	-74.9
	(32.86)	(110.39)	(30.60)	(42.84)	(40.11)	(44.24)	(54.87)
R²	0.27	0.12	0.24	0.22	0.07	0.11	0.10
N	5,297	1,829	5,297	5,297	4,250	4,250	4,250

Table 9 cont. Interaction between caregiving intensity and gender on weekday and weekend time use in different activities, those aged 50+ (reference categories in parentheses).

C. Canada	Paid work (all)	Paid work (employed only)	Routine housework	Leisure	Paid work	Routine housework	Leisure
	Weekday				Weekend		
Gender (Man ref.cat.)							
Woman	-48.2***	-48.8***	83.7***	-45.5***	-14.3†	94.1***	-73.0***
	(8.37)	(13.08)	(3.73)	(6.51)	(7.53)	(6.73)	(12.24)
Caregiving intensity (no caregiving ref.cat.)							
Low intensity	-110.9**	-61.1	-1.2	80.1	-18.7	3.2	-7.5
	(42.51)	(63.79)	(17.14)	(63.09)	(46.17)	(17.48)	(65.93)
High intensity	-149.5***	-182.4	13.5	-163.0***	-66.2***	-36.0	-133.6†
	(39.01)	(97.1)	(26.76)	(39.84)	(14.72)	(38.19)	(69.14)
Interaction gender* low caregiving intensity	44.9	-7.0	38.6†	-145.7*	-23.9	-14.6	31.7
	(52.18)	(108.76)	(23.40)	(67.78)	(46.83)	(36.86)	(73.81)
Interaction gender* high caregiving intensity	28.0	4.1	-53.1†	69.3	105.8*	-6.2	0.8
	(48.78)	(124.00)	(30.70)	(48.48)	(49.84)	(48.10)	(74.25)
R²	0.27	0.06	0.21	0.25	0.04	0.14	0.09
N	5,912	2,375	5,912	5,912	2,308	2,308	2,308

Note: † *p* < .10, * p < .05 ** p < .01 *** p < .001. OLS (weighted) models included all variables listed in Table 2, except for household income and caregiver intensity, which was replaced with a dummy variable to identify caregivers.
Source: See Table 2.