

**It's Getting Late Today, Please do the Laundry – *the Influence of Long-Distance Commuting on the Division of Domestic Labor***

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**Abstract**

The study examines the effect of long-distance commuting on the division of domestic labor in heterosexual couples. A long journey to work can affect other areas of life. Commuters often have lower life satisfaction and their intimate relationships may be impaired by mental stress. When looking at domestic labor the question arises of who is in charge of managing the household and childcare. Do women still adopt the “lion’s share of housework” or take over the “second shift” if they spend part of the day on long commutes to work and back home? A long commute is defined as a journey to work of at least 45 minutes, daily or several times a week. We present the results of pooled regression analysis and fixed effects regressions conducted on data from the German Panel Analysis of Intimate Relationships and Family Dynamics (*pairfam*) for the years 2013, 2015, and 2016. The analysis shows that women’s long commutes are moderately associated with her partner’s engagement in housework and childcare. Instead of living ‘reversed roles’, the partners share such tasks. If the man is a long-distance commuter, his partner most often is solely responsible for all household tasks. Relative labor market position and income distribution within the couples, as well as adherence to gender roles explain the effects of long-distance commuting on labor division.

**Keywords:** Household labor, division of labor, gender ideology, long-distance commuting, job-related spatial mobility, bargaining theory, doing-gender approach

## 1 Introduction

One of the most significant social changes over the last decades in Germany has been the increase in women's participation in the labor market, driven by the growing participation of married women and mothers since the 1960s (Kollmeyer 2013; Grunow 2013; Nitsche/Grunow 2016). Sixty years ago, men were considered the breadwinners who worked for pay and women were homemakers. Women worked in the home, doing domestic labor without getting payed (Grunow 2013; Träger 2009). Today, women are at least as well educated as men and are integrated more extensively into the workforce (Kollmeyer 2013). Nevertheless, previous studies have shown that the increase in women's employment has not yet been translated into an egalitarian division of domestic labor (Fuwa 2004; Kroska 2004; Fuwa/Cohen 2007; Gerson 2010). Some studies report a rise in men's participation in domestic labor when their wives are in paid employment (Cunningham 2007; Bianchi et al. 2012; Statistisches Bundesamt 2015a). However, the additional time men invest in housework seems to be insignificant relative to the additional time women invest in the labor market (Sullivan 2000; Greenhill/Wilson 2006). As a result, the division of labor within households and intimate relationships seems to be crucial for gender inequality between men and women.

Improvements in the infrastructure for transportation and communication have helped mobility and flexibility to become important characteristics of modern societies (Schneider et al. 2002a). These improvements, together with social changes (such as individualization) have led to a growing importance of different forms of spatial mobility. Today, commuting seems to be a part of everyday life. In the past, living and working often both took place at home (Mitterauer 1990), today people are capable of coping with longer journeys and distances to work (Schneider et al. 2002a). Whereas men are still more likely to commute than women, the number of women commuting has increased over recent years (Schneider et al. 2016). It is undeniable that a long journey to work influences a commuter's private

and family life. A long journey to work (based on time and frequency) makes a claim on individual resources such as time, money and health (Koslowsky et al. 1995; Ducki 2010; R ger/Schulze 2016). Studies show that long-distance commuters have on average lower life satisfaction (Stutzer/Frey 2008), poorer health status and their intimate relationships are more likely to be impaired by mental stress compared to "unchallenged"<sup>1</sup> gainfully employed people (R ger/Schulze 2016). Commuters suffer more often from physical illness and mental stress, they have lower life satisfaction and lower satisfaction with their family and partnership (Schneider et al. 2002a; Meil 2010; Kley/Feldhaus 2017). The reasons include higher levels of stress, e.g. due to traffic jams, overcrowded trains, time pressure, and less leisure time (Feng/Boyle 2014). Commuters have to invest additional time for their journey to work and back home. Together with long working hours, commuting reinforces problems of balancing work and family life (Schneider et al. 2002a; Limmer 2005; Meil 2010). As a result, there is a lack of time for other activities: leisure time, family time and time for different household tasks. Reasons to take on the burden associated with commuting include better career opportunities and social ties at the area of residence. Most long-distance commuters are married or cohabiting and have children (Schneider 2008; Kley 2010).

Until now, we know little about the relevance of commuting on the division of household labor. This is surprising in light of the fact that the increase in women's employment has led to a double burden for women in that they take on the "second shift" (Hochschild/Machung 2003). This study examines the influence of women's and men's long-distance commuting on the division of domestic labor in heterosexual couples in Germany. We restrict a long-distance commute to at least 45 minutes for one way to work either daily or several times a week. We therefore focus on the following research questions: a) Do women still adopt the "lion's share

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<sup>1</sup> R ger and Schulze (2016) define "unchallenged" as gainfully employed people who have never commuted over long distances.

of housework” (Lachance-Grzela/Bouchard 2010) and childcare or take over the “second shift” (Hochschild/Machung 2003) if they spend a considerable part of the day commuting to work and back home? b) Do couples practice a more traditional division of household labor if the male partner is a long-distance commuter? c) Does starting to commute long distance yield changes in the division of household labor? In the analysis, different types of time-consuming household tasks are considered, such as laundry, cleaning and preparation of meals, as well as childcare. Irregular tasks, such as grocery shopping, repairs, and household management activities are not considered here.<sup>2</sup> Exploring the effects of commuting on gender roles may provide valuable insights for future policies related to work and family balances for men and women.

## **2 Theoretical framework and empirical findings**

### **2.1 Resource theories and the doing gender approach**

There is a large body of research dealing with the division of household labor within intimate relationships (e.g. Bianchi et al. 2000; Röhler et al. 2000; Halleröd 2005; Grunow et al. 2012; Buchebner-Ferstl 2011; Grunow 2013; Auspurg/Schönholzer 2013; Grunow/Baur 2014; Dechant et al. 2014; Nitsche/Grunow 2016; Auspurg et al. 2017). Economic theories and doing gender approaches are the most frequently discussed models to explain (unequal) sharing of household labor within couples. Economic theories predict that the person with the lowest market income is responsible for most of the household labor (Halleröd 2005). New home economics (Becker 1981) assumes that couples act according to the common good of all household members and to maximize joint utility. Maximum joint utility can only be achieved through specialization. Based on evaluations of potential earnings, one individual specializes on paid work (most likely the man), the other on household

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<sup>2</sup> Such tasks are considered gender-neutral or masculine. Nevertheless, we conducted some analyses regarding the influence of commuting on these intermittent tasks. There are hardly any (significant) effects of commuting on the division of such tasks.

labor (most likely the woman). Becker's (1981) predictions were based on the assumption that women invest less time in labor market-specific human capital compared to men.

Social exchange and bargaining theories drop the altruistic assumption of joint utility. Instead, they assume that individuals pursue the maximization of their own earnings (and power) and bargain over the division of household labor (Ott 1992). According to bargaining theory, doing housework is unpopular because it is unpaid work, because it is not a source of social approval, and because it does not create resources that are transferable to other contexts. Paid employment and other sources of income are the main sources of power, also within couples, due to their transferability to other contexts (Ott 1992; Lundberg/Pollak 1993). The partner who contributes more money to the household's income may believe that his or her higher contribution excuses him or her from household labor. However, since men's earnings are often higher, it is likely the man who feels that he is excused from housework (Sorensen/McLanahan 1987).

Commuting can be seen as a "tool" to realize individual goals like having a career and a good family life (Kley 2012; Kley/Feldhaus 2017). The more time is spent on employment and commuting, the less time remains for housework and childcare. From an economic perspective, longer commuting journeys can be compensated for by higher earnings and better employment positions (Lück/Schneider 2010; Schneider et al. 2002b; Stutzer/Frey 2008; So et al. 2001) or lower housing rents and housing prices as well as desired neighborhood characteristics (Sandow 2014). These theories assume that long-distance commuting is likely related to comparably high financial resources and human capital endowments, and therefore high bargaining power to avoid housework and childcare. We will test the following hypotheses:

*H1: Compared to couples without a long-distance commuter, the female or male long-distance commuter in mobile couples contributes less time to housework.*

*H2: Compared to couples without a long-distance commuter, the female or male long-distance commuter in mobile couples contributes less time to childcare.*

From a longitudinal perspective, we hypothesize that:

*H3: His or her share of housework decreases, if he or she starts long-distance commuting.*

*H4: His or her share of childcare decreases, if he or she starts long-distance commuting.*

According to economic theories (Becker 1981), the division of household labor is not explicitly gendered. If men and women had identical shares of income (or human capital), it is predicted that both would take on a similar share of household labor. In contrast, the *doing gender approach* postulates that individuals reproduce gender in their social interactions (West/Zimmerman 1987; 2002). It expects that men and women behave in anticipation of significant others' expectations (Bittman et al. 2003). Based on the doing gender approach, Brines (1993) hypothesizes that women would also do most of the housework when they are in a better relative position because they do not want to violate their or their partner's gender ideology. According to Brines (1993), the relationship between personal resources and individual contribution to household labor is U-shaped. Women do most of the housework as long as they are financially dependent on their partner. However, they also do most of the housework if their partner is financially dependent on them.

The theoretical assumptions of the doing gender approach therefore lead to conflicting hypotheses. Given this background it is hypothesized that, *irrespective of long-distance commuting, women are more likely in charge of housework tasks (H5), and childcare (H6) than men are.*

## **2.2 Household labor: Who does what? – Some empirical findings**

Everyone has to do it, but not everybody likes it. Household labor is part of everyone's daily life unless there is a third party who takes on these tasks. In our

analysis, we focus on the routine tasks of domestic labor: (1) housework that includes the preparation of meals, laundry and cleaning, and (2) childcare. We focus on those tasks because they must be performed frequently, are time-consuming and are often characterized as unpleasant, which especially applies to housework. However, childcare is also very time-consuming and can be exhausting, especially if the parent has spent most of the day working and commuting.<sup>3</sup> Furthermore, these tasks have a low level of "schedule control" (Cunningham 2007). Especially the needs of children can be unforeseeable and volatile.

The welfare of human beings depends on routine tasks like eating, being clothed, finding shelter and giving and receiving care (Coltrane 2000). These household labor tasks require a great deal of daily time. Although a vast majority of men and women agree that chores should be distributed equally, few couples practice an equal division of labor (Coltrane 2000). With regard to the German case, the distribution of household labor is often "traditional". Time use surveys show that women perform two or three times as much unpaid housework as men, even when they participate in the paid labor market (Statistisches Bundesamt 2015b; Bianchi et al. 2012). Women are more often responsible for routine and time-consuming tasks like doing the laundry, cooking and childcare. Men's responsibilities normally include more intermittent and more flexible tasks like repairs or managing money issues (Mikrozensus 2015; Statistisches Bundesamt 2015b). Still, most women and men consider an arrangement in which the woman takes responsibility for housework to be fair (Coltrane 2000; Gager 2008). Nevertheless, compared to the last forty years, women are doing less housework and men's contribution to housework has increased slightly (Statistisches Bundesamt 2015b). In particular, changes to the regulation of parental leave in 2007 might have shifted the division of paid and unpaid work between men and women. The parental leave benefit grants parents up

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<sup>3</sup> Full-time care is exhausting too. Nevertheless, children can require a great deal of attention, which can be exhausting for people who have been working and commuting.

to 65 percent of their previous income. Moreover, it includes two additional months exclusively for the other partner, which are often called the "daddy months", or the "paternity quota" (Bujard 2013; Geisler/Kreyenfeld 2012).

It is well known that the division of household labor depends on the degree of institutionalization of the relationship (Baxter et al. 2008; Dechant et al. 2014): Marriage, a long relationship duration and the presence of children (especially younger children) are associated with a more traditional division of paid and unpaid work between partners. It has been shown that couples in earlier phases of family formation often practice a more egalitarian division of housework, which shifts towards a "traditionally" gendered division with marriage and the arrival of children (Grunow 2013).

There are some studies on the influence of commuting on partnership quality (Feldhaus/Schlegel 2013; Kley/Feldhaus 2017) and family formation (Huinink/Feldhaus 2012; Meil 2010) but there is little research on the influence of commuting to work on the division of household labor within intimate relationships, especially for Germany. Most studies highlight the effect of men's commuting on the division of domestic labor, either housework or childcare (e.g. Meil 2010). Some studies have found evidence that as a woman's working hours increase, her share of traditional routine household tasks decreases (Cunningham 2007).

Based on cross-national data, Meil (2010) analyzed whether men's job-related spatial mobility (long-distance commutes and overnight stays) fosters a re-traditionalization of gender roles. On the basis of descriptive findings, Meil (2010) states that men's job-related spatial mobility does not have an unambiguous traditionalizing effect on the division of housework between the partners. Instead, there are differences with regard to the life stage, the labor market participation of the partner as well as the type of household. Hofmeister et al. (2010) analyzed the effect of long-distance commutes and overnight stays on the division of household labor in dual-earner couples in Germany and Poland based on the same data. They



found that, irrespective of commuting, women take on a greater responsibility for household labor than men do. Bergström Casinowsky (2013) analyzed the effect of commuting time and absence from home on the division of household labor in Swedish couples. She also found evidence that commuting men are less likely to be responsible for household labor. Moreover, women's responsibility for household labor decreased slightly with long-distance commuting.<sup>4</sup>

### 3 Data, method and variables

Using data from the *Panel Analysis of Intimate Relationships and Family Dynamics* (*pairfam*; <http://www.pairfam.de/>), a secondary analysis for the years 2013, 2015, 2016<sup>5</sup> was conducted. *Pairfam* is an interdisciplinary and representative data set of the population of Germany comprising the birth cohorts 1971–73; 1981–83, 1991–93 (Huinink et al. 2011). Its focus is on partnership and family processes. It includes variables relating to the dynamics between the partners, such as the division of different household labor tasks, conflicts within the relationship, gender ideology and commuting to work. *Pairfam* is based on a multi-actor design. It started in 2008, with about 12,400 anchorpersons and their partners if they were available.<sup>6</sup>

Our analytic sample comprises heterosexual couples who live in a joint household. We excluded living apart together relationships because information on household labor is only available for couples living in a joint household. The couples included in the analysis are either married or cohabiting without being married, and with or without children at the time of interview.

The analysis focuses on the influence of commuting on the division of housework and childcare between the partners. Different models are estimated for the following household tasks: (1) housework, including the preparation of meals, cleaning and

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<sup>4</sup> The definition of household labor was left up to the respondents, and the tasks included were not defined in detail.

<sup>5</sup> Corresponds to the waves five, seven and eight.

<sup>6</sup> Due to panel attrition, the number of participants decreased over the years. In 2016, ~ 4,700 anchorpersons and ~ 1,700 partners participated.

doing the laundry, and (2) taking care of the children, which was not further specified. For each domain, respondents were asked: "To what extent do you and [name of current partner] share duties in the following domains?" The division of household labor tasks is measured annually for anchors and their partners as the perceived share of work the respondent does in relation to his or her partner. It is measured on a 5-point scale: 1 "(Almost) completely my partner", 2 "Mostly my partner", 3 "Fifty-fifty", 4 "Mostly me" to 5 "(Almost) completely me". If respondents considered none of the categories applicable, for instance if there were no children in the household, their responses were coded as missing. A third party was involved in housework or childcare in less than one percent of the households, and 26 percent of the households were without children. Based on the gender of the respondent, the variables were recoded as follows: 1 "(Almost) entirely the man" to 5 "(Almost) entirely the woman". The woman's share increases from one to five and can be treated as a quasi-metric variable, as applied by Dechant et al. (2014) as well as Hofmeister et al. (2010), and as justified by tests of possible violations of linear regression assumptions.

Because there are some differences in the answers given by men and women regarding housework and childcare, only the answers of the anchorperson are considered.<sup>7</sup> Estimations on the basis of the partners' answers yielded similar results. Studies have shown that men on average report a more egalitarian division of unpaid work than women (e.g. Coltrane 2000; Lee/Waite 2005; Parker/Wang 2013). Whereas men more often report sharing responsibilities with their wife or partner, women more often report being solely responsible for the housework or childcare. In the analysis, the gender of the anchorperson is controlled for.

The first step of the analysis is a description of the division of household labor and childcare over different commuting arrangements based on the eighth wave (2016)

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<sup>7</sup> About 45% of the anchorpersons are male; 55% are female. About 75% of men's and women's answers correspond.

of *pairfam*, followed by a pooled linear regression (POLS) analysis (N~6,000) to empirically test for the hypothesized association between long commutes and the division of domestic labor within a couple. Using pooled data increases the number of observations and therefore facilitates testing for (weak) associations. Because there are different observations from the same individuals that are likely correlated, we clustered the data by persons (Brüderl 2010: 966) and applied robust standard errors (Hubert–White sandwich estimators).

Additionally, fixed effects regression models (Allison 2009) were estimated to test for a causal influence of starting to commute long distance on subsequent changes in the couples' domestic labor arrangements. Fixed effects regression makes use of the longitudinal panel information and controls for all time-constant characteristics of the individuals, whether measured or not measured (Allison 2009: 3).

The dependent variables are 5-point scales representing the proportion of housework and childcare done by the woman, treated as quasi-metric. We estimated variance-inflation factors to test for multicollinearity between the variables, and we analyzed the normal distribution of the residuals. The variables show similarities to a normal distribution and no multicollinearity.

The main explanatory variables are dummy variables for long-distance commuting by women and men of at least 45 minutes each way, whereas shorter commutes to work or being not gainfully employed form the reference category. Additionally, long commutes have to be undertaken daily or several times a week. Two 4-digit scales (for women and men) were formed containing the categories 1 "She/He commutes daily" 2 "She/He commutes several times a week" 3 "No long-distance commute" 4 "Not gainfully employed". Since in this operationalization the category "no long-distance commute" could contain long-distance commuters who travel once a week between their first and second residence, such weekend commuters are controlled for with a dummy variable for frequent overnight stays.

In *pairfam*, both the anchorperson and their partner were questioned biennially about commuting from the fifth year onwards (time in hours and minutes as well as frequency of commute); from the seventh year onwards, they were asked annually. Therefore, information regarding the partners' commutes to work were included in the same way as that of the anchorperson. Pooled linear regressions include several control variables that are known to have an effect on the division of household labor (Bittman et al. 2003; Cunha et al. 2016; Grunow 2014; Sayer 2010). Marital status, duration of living in a joint household, household income, the number of children, presence of children under the ages of 3 and 6 in the household, and the birth cohort of the anchorperson are self-explanatory.

Given our theoretical background, the most important resources are the relative level of employment and the relative income of both partners. The relative employment level was measured as follow: 1 "He more than she", 2 "She more than he", 3 "Equal". Relative employment includes full-time and part-time workers as well as those who are not gainfully employed. Relative net income was measured as the ratio of her monthly net income to the combined net income of both partners (1 "Her share 0–19%", 2 "Her share 20–39%", 3 "Her share 40–59%", 4 "Her share 60–79%", 5 "Her share 80–100%"). Since studies have shown that higher educated persons subscribe to more egalitarian gender norms while persons with less education are on average more traditional (Schulz 2010), we additionally control for education. Relative education has been measured in years of education (she higher, he higher, equal).

Moreover, the size of the municipality, the residential region (East or West Germany), homeownership status and social class were also considered in the analysis. Social class was measured in accordance with the standard international occupation prestige scale (SIOPS) of the anchorperson. We coded social class in five groups. A SIOPS score from 6–32 was coded as 1 "unskilled", a SIOPS from 22–41 as 2 "undemanding", a SIOPS from 42–50 as 3 "demanding", a SIOPS from

51–63 as 4 "independent tasks" and a SIOPS higher than 63 was coded as "leadership tasks" (Hoffmeyer-Zlotnik/Warner 2011). In Germany, there are still differences between the East and the West. Women living in East Germany are more often part of the workforce, are more likely to be full-time employed and are more likely to have non-traditional gender ideologies (Rosenfeld et al. 2004). Moreover, the distribution of gender role ideology might vary with the degree of urbanization (Rosenfeld et al. 2004). Municipalities with 100,000 or more inhabitants were coded as large cities, those with less than 100,000 and more than 5,000 as medium-sized cities and those with 5,000 or fewer inhabitants were coded as small towns. We included homeownership status, as homeowners may have to do more housework than renters, because owned units are often larger than rental units (Bianchi et al. 2000); the direct measure "size of the dwelling" does have a considerable share of missing values. Information regarding the analytical sample is presented in table A1 in the appendix.

## **4 Findings**

### **4.1 Division of household labor in couples**

Table 1 presents a description of the distribution of housework and childcare in couples. In 66% of cases, women do most of the housework (42% mostly the woman and 23% (almost) completely the woman). Men only take over responsibility for the household in 4% of cases, and 31% of couples share household tasks. A fifty-fifty share of housework is most likely among cohabiting couples (48%). In 60% of cases, the woman takes (full) responsibility for childcare. In contrast to the division of housework, there is a higher proportion of shared responsibility when it comes to childcare. Roughly 38% of the partners share responsibility for childcare. Among cohabiting couples, 45% of the anchorpersons reported an equal division of childcare, whereas married couples share responsibility in 32% of cases. Married women's responsibility for both housework and childcare is significantly higher than

that of cohabiting women. The relation between the division of housework and marital status is stronger than between the division of childcare and marital status. Furthermore, there are some differences in the distribution of housework according to the number of children. Half of the childless respondents reported an equal division of housework, whereas just one fourth of those with children reported an equal division of housework. Nearly 75% of women take on (full) responsibility for housework if they and their partner have children, whereas 45% of childless women take on (full) responsibility for housework.

Tab. 1: Distribution of the division of household labor in couples (in %)

<b>Division of ...</b>	<b>Housework</b>	<b>Childcare</b>
(Almost) completely ♂	0.93	0.34
Mostly ♂	2.84	2.22
Fifty-fifty	30.77	37.86
Mostly ♀	42.12	47.95
(Almost) completely ♀	23.34	11.63
	<i>N</i>	
	2,044	1,487
<b>Division of housework</b>	<b>Not married</b>	<b>Married</b>
(Almost) completely ♂	1.12	0.83
Mostly ♂	4.68	2.07
Fifty-fifty	47.86	23.65
Mostly ♀	35.18	44.85
(Almost) completely ♀	11.15	28.59
	<i>N</i>	
	532	1,512
	<i>p</i> <0.001, <i>V</i> =0.228	
<b>Division of childcare</b>		
(Almost) completely ♂	1.01	0.27
Mostly ♂	1.28	2.30
Fifty-fifty	44.98	32.30
Mostly ♀	44.36	51.78
(Almost) completely ♀	8.37	13.29
	<i>N</i>	
	210	1,277
	<i>p</i> <0.001, <i>V</i> =0.118	
<b>Division of housework</b>	<b>No children</b>	<b>Children</b>
(Almost) completely ♂	1.11	0.84
Mostly ♂	5.39	1.84
Fifty-fifty	48.97	23.53
Mostly ♀	33.20	45.46
(Almost) completely ♀	11.33	28.31
	<i>N</i>	
	465	1,579
	<i>p</i> <0.001; <i>V</i> =0.153	

Source: *pairfam* 2015 & 2016. Third party (N<20) and does not apply excluded, observations with missing values in income and household income excluded, column percentages presented, design weights applied, N not weighted, ♂: male, ♀: female, own calculations.

Table 2 shows that 9% of the women commute at least 45 minutes each way: 6% daily and 3% several times a week; whereas 19% of the men commute over a long distance: 15% daily and 4% several times a week. The majority of the workforce –

70% of the gainfully employed women and 74% of the men – travel less than 45 minutes to work or commute over a long distance only once a week or less.

Tab. 2: Commuting arrangements by gender

<b>Long-distance commute</b>	Men	Women
Daily	15.36	6.26
Several times a week	4.06	2.79
Not LD commuting	74.36	70.21
Not gainfully employed	6.21	20.74
<i>N</i>	<i>2.044</i>	<i>2.044</i>

Source: *pairfam* 2015 & 2016. Observations with missing values in income and household income excluded, own calculations.

## 4.2 Does commuting matter?

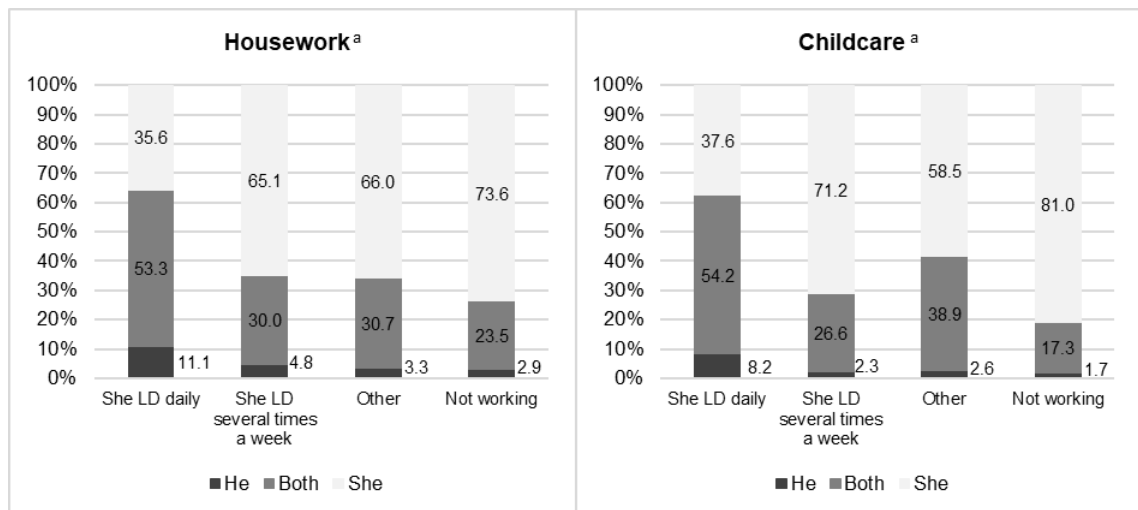
From the first minute onwards (regardless of frequency), gainfully employed women spend on average about 24 minutes (N=1,553), men 34 minutes (N=1,842) commuting to work. When considering only a commute of at least 45 minutes daily or several times a week, the commuting times of men and women are very similar (women: N=185, 61 minutes; men: N=397, 64 minutes). Differentiating between a daily commute and commuting several times a week, the daily commute is more widespread among both women and men. According to the eighth wave of *pairfam* (2016), there were 128 women commuting long distance to work daily; with a mean commuting time of about 62 minutes (several times a week: N = 57, mean commuting time = 61 minutes). There were more than twice as many men (N = 314) commuting to work every day with a mean time of 61 minutes (several times a week: N = 83, mean commuting time = 79 minutes).

Figures 1 and 2 provide a preliminary answer to the research questions: 1) Do women still adopt the “lion’s share of housework” and childcare if they spend a considerable part of the day commuting to work and back home? 2) Do couples practice a more traditional division of household labor if the male partner is a long-distance commuter? Half of the couples with a female daily long-distance commuter share the housework and childcare equally. When the female partner commutes several times a week, round about one third of the couples share these tasks equally (fig. 1). If the male partner commutes daily over a long distance, less than

one fourth of the couples share these tasks equally. Instead, in three fourths of the cases the female partner takes on full responsibility for housework or childcare (fig. 2).

The descriptive analysis illustrates that women with a daily commuting time of 45 minutes and more take on less household labor than those with shorter commutes or commutes that are performed several times a week. A woman's long commute does increase the man's engagement in household tasks slightly. As stated above, in cases where the woman is a daily long-distance commuter, 53% of the couples share housework equally (54% childcare). However, in couples where the man commutes long distance daily, only 23% share housework and childcare equally. Instead, the woman is responsible for the housework. A man's longer commuting time is associated with a higher proportion of the woman's responsibility for household tasks (figure 2).

Fig. 1: Division of housework and childcare over female long-distance commuting arrangements<sup>b</sup>



Source: *pairfam* 2016. Column percentages presented, design weights applied, N not weighted, observations with missing values in income and household income excluded, housework: N=2,044, daily=128, several times=57, other=1,435, not working=424; p<0.001; childcare: N=1,487, daily=65, several times=47, other=1,030, not working=345, p<0.001, own calculations.

<sup>a</sup> Division of housework/childcare: (Almost) completely woman/man and mostly woman/man summarized to woman/man, third party and does not apply excluded.

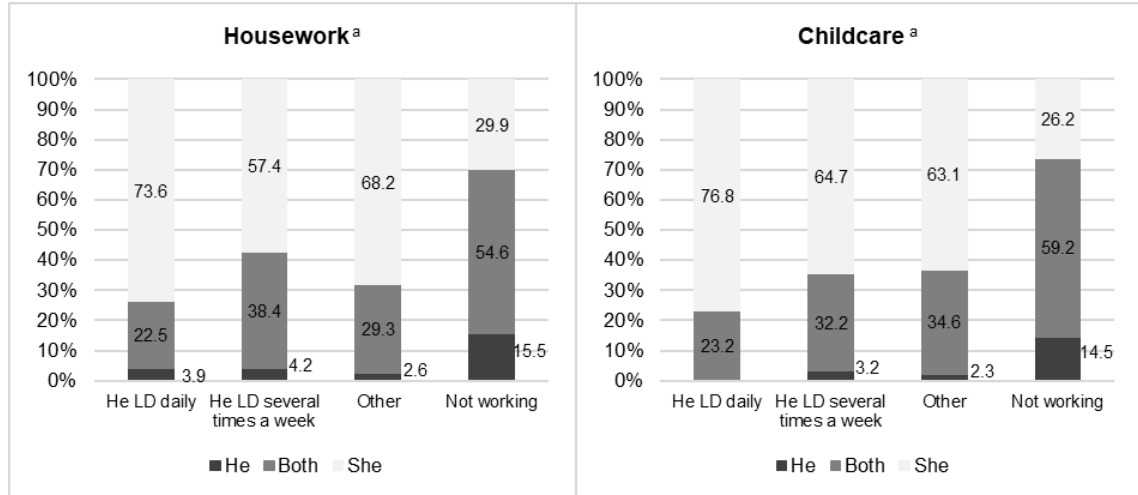
<sup>b</sup> Long-distance commute: at least 45 minutes each way to work, daily or several times a week.

Results for the division of childcare are similar to those for housework. Long-distance commuting women take on less responsibility for childcare compared to women in couples with no long-distance commuter (see fig. 1). Furthermore,



women’s responsibility for childcare is highest when the man commutes daily; then she is solely responsible for childcare in 77% of cases.

Fig. 2: Division of housework and childcare over male long-distance commuting arrangements<sup>b</sup>



Source: *pairfam* 2016. Column percentages presented, design weights applied, N not weighted, observations with missing values in income and household income excluded, housework: N=2,044, daily=314, several times=83, other=1,520, not working=127,  $p<0.001$ ; childcare: N=1,487, daily=245, several times=57, other=1,115, not working=70,  $p<0.001$ , own calculations.

<sup>a</sup> Division of housework/childcare: (Almost) completely woman/man and mostly woman/man summarized to woman/man, third party and does not apply excluded.

<sup>b</sup> Long-distance commute: at least 45 minutes each way to work, daily or several times a week.

The descriptive analysis reveals strong gender inequalities between men’s and women’s engagement in household tasks, especially when there is less (leisure) time because of long daily commutes. Over one third of the women seem to face a triple burden of household labor, employment and commuting.

In table 3, the employment level is additionally considered. Most differences between men and women regarding the division of housework and childcare within the couple persist. If women work full-time and have a long daily journey to work, nearly 60% of the couples share the housework equally. Partners of commuting women take on more housework than those of non-commuting women. Nevertheless, one fourth of those daily commuting women take over most of the housework. If the woman commutes several times a week, she takes over most of the housework and childcare (tab. 3). In contrast, 42% of the couples with a part-time working and daily commuting woman share the housework equally. Sixty percent of those women do the housework (almost) by themselves. Couples with a

woman who does not commute at least several times a week for 45 minutes are more traditional in terms of their division of housework. Men's responsibility for the housework is highest (16%) in couples where the woman works full-time and has a daily long-distance commute to work. As presented in table 3, 60% of the couples with a full-time employed woman share responsibility for children. In couples where the woman works part-time, the woman takes on most of the childcare. Couples with a man who works full-time and commutes do not share the housework the same way as those with a full-time working and commuting woman. Less than one fourth share the housework equally.

Tab. 3: Division of housework and childcare by journey to work and employment level in 2016

	Commuting woman					
	Full-time			Part-time		
	LD daily <sup>a</sup>	LD sev. times <sup>b</sup>	Other <sup>c</sup>	LD daily	LD sev. times	Other
<b>Housework</b>						
(Almost) completely ♂	1.4	0.0	1.3	0.0	0.0	0.5
Mostly ♂	14.8	0.0	3.6	0.0	6.7	1.8
Fifty-fifty	58.8	49.3	42.2	41.5	22.7	22.9
Mostly ♀	17.7	41.2	37.6	30.9	43.7	50.1
(Almost) completely ♀	7.3	9.6	15.3	27.6	27.0	24.7
<i>N</i>	85	17	631	43	40	804
<b>Childcare</b>						
(Almost) completely ♂	2.3	0.0	0.9	0.0	0.0	0.0
Mostly ♂	16.7	0.0	6.8	0.0	2.9	0.6
Fifty-fifty	59.7	36.3	52.4	50.0	23.8	33.6
Mostly ♀	21.3	53.3	31.0	54.2	66.6	54.8
(Almost) completely ♀	0.0	10.2	9.0	4.9	6.7	11.1
<i>N</i>	30	12	354	35	35	676
	Commuting man					
	Full-time			Part-time		
	LD daily <sup>a</sup>	LD sev. times <sup>b</sup>	Other <sup>c</sup>	LD daily	LD sev. times	Other
<b>Housework</b>						
(Almost) completely ♂	0.9	1.8	0.7	0.0	0.0	0.4
Mostly ♂	2.0	1.3	1.7	27.3	9.8	4.4
Fifty-fifty	21.5	33.3	27.7	44.5	66.1	51.2
Mostly ♀	44.3	42.0	44.9	21.0	14.3	36.5
(Almost) completely ♀	31.4	21.5	25.0	7.2	9.8	7.5
<i>N</i>	303	70	1423	11	13	97
<b>Childcare</b>						
(Almost) completely ♂	0.0	0.0	0.4	0.0	0.0	0.0
Mostly ♂	0.0	0.0	0.9	0.0	19.5	19.2
Fifty-fifty	22.7	26.5	34.1	45.2	61.0	43.6
Mostly ♀	59.0	56.7	52.4	54.8	19.5	32.4
(Almost) completely ♀	18.3	16.8	12.2	0.0	0.0	4.9
<i>N</i>	239	48	1,055	6	9	60

Source: *pairfam* 2016. Column percentages presented, design weights applied, *N* not weighted. Observations with missing values in income and household income excluded, not working women/men not presented, ♂: male, ♀: female, own calculations.

<sup>a</sup> LD: Long-distance commute of at least 45 minutes each way to work daily.

<sup>b</sup> LD: Long-distance commute of at least 45 minutes each way to work several times a week.

<sup>c</sup> Other: All women/men that do not count as long-distance commuters (but gainfully employed).

Moreover, the division of housework in couples with a full-time working man is nearly the same, irrespective of commuting status of the man. However, part-time employed and commuting men do take on a greater share of housework than other men. Men who are full-time employed take on less responsibility for childcare. The men with a long journey to work are involved in childcare the least. Evidence from a pooled linear regression and fixed effects regression analysis will be used to further test these results.

We conducted a stepwise POLS analysis to control for, among other things, interactions between long-distance commuting and employment; the results are presented in table 4. The division of housework (HW) and the division of childcare (CC) between both partners are the dependent variables. Models HW1 and CC1 only include long-distance commuting as predictors. Models HW2 and CC2 include further explanatory variables (as listed in the Methods section). Models HW3 and CC3 further include an interaction term for the relative employment level and female long-distance commuting. Full models are presented in table A2 (supplements).

As can be seen from table 4, women with a daily commuting duration of at least 45 minutes take on less housework (HW1, coef.=-0.435<sup>\*\*\*</sup>) than women with shorter commutes. After the inclusion of the relative employment level, relative income and family characteristics (HW2), the coefficients for long-distance commuting are diminished. Nevertheless, the effect of daily long-distance commuting remains significant after the inclusion of the control variables as well as interaction term (HW3, coef. -0.16<sup>\*</sup>). Female long-distance commuters who do not commute daily but several times a week take on slightly less housework than females with shorter commutes, but this effect is not significant.

With regard to male daily long-distance commuters, there are hardly differences in the division of housework compared to men with shorter commutes (HW2, coef.=0.06<sup>+</sup>). If the male partner commutes every day for more than 45 minutes, the

female partner takes on a greater share of childcare (CC2, coef.=0.17<sup>\*\*\*</sup>) compared to couples where the male partner has a shorter commute.

Tab. 4: Pooled linear regression analysis of her contribution to housework and childcare by a couple's long-distance commuting arrangement

POLs, design weighted	She does almost nothing (1) to she does almost everything (5)					
	HW1	HW2	HW3	CC1	CC2	CC3
<i>Long-distance commuting women (ref. not LD commuting)</i>						
Long-distance daily	-0.435 <sup>***</sup>	-0.139 <sup>*</sup>	-0.160 <sup>*</sup>	-0.366 <sup>***</sup>	-0.150 <sup>*</sup>	-0.263 <sup>***</sup>
Long-distance sev. times week	-0.074	-0.072	-0.092	-0.010	-0.035	-0.047
Not gainfully employed	0.262 <sup>***</sup>	-0.009 <sup>8</sup>	-0.208	0.344 <sup>***</sup>	0.197 <sup>***</sup>	0.068
<i>Long-distance commuting men (ref. not LD commuting)</i>						
Long-distance daily	0.098 <sup>*</sup>	0.064 <sup>+</sup>	0.063 <sup>+</sup>	0.205 <sup>***</sup>	0.172 <sup>***</sup>	0.170 <sup>***</sup>
Long-distance sev. times week	-0.100	-0.068	-0.066	0.096	0.104	0.103
Not gainfully employed	-0.674 <sup>***</sup>	-0.076	0.0391	-0.607 <sup>***</sup>	0.025	0.104
Constant	3.866 <sup>***</sup>	4.232 <sup>***</sup>	4.235 <sup>***</sup>	3.638 <sup>***</sup>	3.779 <sup>***</sup>	3.800 <sup>***</sup>
N	6,138	6,138	6,138	4,557	4,557	4,557
r <sup>2</sup>	0.071	0.231	0.232	0.097	0.211	0.213
df	6	41	46	6	40	45

Source: *pairfam* 2013, 2015, 2016. Design weights applied, clustered by id, robust standard errors applied (not shown), own calculations.

Control variables not shown; see supplement for full models.

+ p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Contribution to housework/childcare: from 1 "she (almost) nothing" to 5 "she (almost) everything".

Long distance commute: at least 45 minutes each way. Other forms of long-distance commuting controlled for by considering frequent overnight stays.

All in all, POLS regression reveals differences in the division of household labor in couples with female or male long-distance commuters compared to other couples. Whereas couples with a female (daily) long-distance commuter practice a more equitable division of housework and childcare, couples with a male (daily) long-distance commuter do not share those tasks equally. But POLS regression does have some limitations. For instance, it could be possible that the women in couples who already share the housework and childcare more equally than other couples are the ones who commute longer. To address the problem of possible reversed causality, we further estimated fixed effects regressions. Fixed effects estimations are free from unobserved heterogeneity and should therefore help to isolate the true effect of long commutes on changes in the division of housework within couples.

Before presenting the results of the fixed effects regression analysis, we will describe the changes in the division of housework and childcare over time. In about

<sup>8</sup> Sign changes after inclusion of relative employment.

one third of the cases, couples change their arrangements of housework and childcare from one year to the next (see table A3 in the appendix). Table 5 presents transition probabilities of housework and childcare arrangements from one year to the next. Women who take on the housework or childcare in one year are highly likely to take on those tasks the following year, too. If men take on the housework or childcare in one year, it is more likely that both he and his partner share those tasks the following year, or that women take on most of the housework and childcare.

Tab. 5: Transition probabilities for housework and childcare

<b>Housework</b>	<b>Transition probabilities for housework and childcare</b>				
	(Almost) comp. ♂	Mostly ♂	Fifty-fifty	Mostly ♀	(Almost) comp. ♀
(Almost) comp. ♂	21.57	15.69	17.65	19.61	25.49
Mostly ♂	3.88	28.16	47.57	15.53	4.85
Fifty-fifty	0.37	3.86	67.76	24.00	4.01
Mostly ♀	0.41	1.42	14.09	62.77	21.31
(Almost) comp. ♀	1.06	0.48	4.15	36.20	58.11
<b>Childcare</b>					
(Almost) comp. ♂	33.33	0.00	20.00	26.67	20.00
Mostly ♂	1.54	29.23	44.62	18.46	6.15
Fifty-fifty	0.24	2.76	72.87	21.61	2.52
Mostly ♀	0.30	1.33	20.04	68.50	9.84
(Almost) comp. ♀	0.29	0.29	7.29	52.77	39.36

Source: *pairfam* 2013, 2015, 2016, 2017. Transition probabilities of housework and childcare, answers of anchorperson, ♂: male, ♀: female, own calculations.

The question arises whether starting to commute plays a part in couples' rearrangements of housework and childcare. Table 6 presents the results of fixed effects regressions of starting long-distance commuting on the division of housework and childcare. The main independent variables are two dummy variables containing information on whether there is a change to long-distance commuting of at least 45 minutes daily or several times a week. Due to low numbers of observation, the daily and several times a week commuting arrangements were combined. Two hundred twenty-two women and 398 men started long-distance commuting (from a shorter commute or not gainfully employed base outcome). Time-constant variables were excluded from the models.

When men start long-distance commuting this yields small and not significant effects on the division of both housework (coef.=-0.03, n.s.) and childcare (coef.=0.05, n.s.). These findings are in line with the descriptive findings and those from the POLS

regressions. Additionally, there is no significant effect on the division of housework if the female partner starts to commute over a long distance (coef.=-0.02, n.s.). This finding corroborates the interpretation that female long-distance commuters likely take on the "triple burden" of employment, commuting and housework. It is in line with the doing gender assumption, which presupposes that women take on most of the housework irrespective of other burdens because they feel responsible for the household.

Concerning the division of childcare, there is a significant effect when the female partner starts to commute more than 45 minutes either daily or several times a week (coef.= -0.156\*). When a mother starts long-distance commuting, her share of childcare decreases significantly. As a result, the partners more often share care. A possible explanation for these findings is that children's needs cannot be postponed like housework tasks. The partner who is at home has to take care of them, as long as the other is not able to do so.

Moreover a change in the relative employment level has a significant effect on the division of housework and childcare between the partners. Having a child between three and six years of age decreases women's engagement in childcare. A possible explanation of this finding is that most children start kindergarten at the age of three, whereas making extensive use of professional childcare at younger ages is less common.

Tab. 6: Fixed effects regression of effects of changes to LD commute on division of housework and childcare

FE, not weighted	She does almost nothing (1) to she does almost everything (5)			
	HW1	HW2	CC1	CC2
<i>Change to LD commute</i>				
Woman starts LD commuting	-0.037	-0.024	-0.190 **	-0.156 *
Man starts LD commuting	0.003	-0.031	0.052	0.047
<i>Employment (ref. equal level of employment)</i>				
He more than she		0.155 ***		0.130 ***
She more than he		-0.197 ***		-0.325 ***
<i>Relative income (ref. 40-59%)</i>				
Her share 0-19%		0.043		0.187 ***
Her share 20-39%		-0.034		0.020
Her share 60-79%		0.020		-0.102
Her share 80-100%		-0.130 +		-0.111
<i>Family &amp; partnership</i>				
Child under age of 3		0.054		0.103 **
Child under age of 6		0.036		-0.107 **
Duration cohabitation		0.015 *		-0.007
<i>Gender ideology</i>				
Men should take on same share of housework		-0.062 **		-0.036 +
Constant	3.848 ***	3.844 ***	3.671 ***	3.772 ***
N	6,138	6,138	4,557	4,557
r2	0.0001	0.0285	0.0034	0.0554

Source: *pairfam* 2013, 2015, 2016; observations with missing values in household income excluded, own calculations.

+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Division of housework/childcare: She does (almost) nothing to she does (almost) everything (pseudo-metric)

Long-distance commute: At least 45 minutes daily or several times a week

## 5 Summary and outlook

This study examined the question of how couples manage household labor if the female or male partner commutes over a long distance. Long commutes were defined as a one-way journey of at least 45 minutes, conducted daily or several times a week. Do women still adopt the "lion's share of housework" and childcare if they spend a considerable part of the day commuting to work and back home? Moreover, do couples rearrange their division of housework and childcare if one of them starts long-distance commuting?

Our analysis was based on bargaining theory and the doing gender approach. First, (long-distance) commuting can be seen as a goal-oriented "tool" to achieve better earnings, a better job position and better career opportunities. Hence, commuters are likely to be well equipped with resources. According to economic theories, the

partner with higher resources is in a relative better position to realize his or her needs. Applied to household labor, the long-distance commuter may be able to avoid participating in housework and childcare. The doing gender approach leads to conflicting hypotheses. This approach suggests that women take over the lion's share of housework and childcare irrespective of their relative position because both partners adhere to gender roles.

Our analysis reveals that despite widespread egalitarian attitudes toward an equal division of household labor, women do most of the time-consuming tasks like cleaning, cooking, laundry and childcare. This is even truer if the male partner is a long-distance commuter, but when the female partner has a long commute the partners often share household tasks quite equally. Therefore, hypotheses 1 and 2 are confirmed: long-distance commuters do less housework than their counterparts with shorter commutes, but with regard to whether the commuter is male or female different levels of household burden apply.

Longitudinal fixed effects estimations revealed that starting long-distance commuting does not change a woman's share of housework significantly, but it does decrease her share of childcare; hypothesis 3 is therefore only partly supported. If the male partner starts long-distance commuting, there are hardly any changes in the division of housework and childcare; hypothesis 4 is therefore rejected.

These findings are only partly in line with bargaining theory because of different outcomes of long commutes for men and women. They speak largely against long-distance commuting as a *cause* for an unequal distribution of household labor; instead other assets and events are more likely to influence both partners' bargaining positions. First, it could be that if a woman has a high-level labor market position and a relatively high income – which may or may not be associated with long commutes – the result is a more equal distribution of household tasks within heterosexual couples.



Moreover, the findings support our hypotheses 5 and 6, that were based on doing gender assumptions. The descriptive findings revealed that household tasks in long-distance commuter couples are distributed quite differently depending on whether the man or the woman commutes. In households with female long-distance commuters, household tasks are often distributed quite equally between the partners, whereas in households with male long-distance commuters the woman is often solely responsible for both housework and childcare. The finding that 'reversed roles' are still uncommon despite the fact that women are nowadays equally well educated as men and often have high labor market potential, highlights the adherence to gender roles.

## References

- Allison, P. D. (2009). *Fixed effects regression models*. Los Angeles, London, New Delhi, Singapore, Washington DC: Sage (Quantitative applications in the social sciences 160).
- Auspurg, K., Iacovou, M. & Nicoletti, C. (2017). Housework share between partners. Experimental evidence on gender-specific preferences. *Social Science Research*. doi: 10.1016/j.ssresearch.2017.01.003.
- Auspurg, K. & Schönholzer, T. (2013). An Heim und Herd gebunden? *Zeitschrift für Soziologie*, 42, 2, pp. 138-156. doi: 10.1515/zfsoz-2013-0205.
- Baxter, J., Hewitt, B. & Haynes, M. (2008). Life course transitions and housework: Marriage, parenthood, and time on housework. *Journal of Marriage and Family*, 70, 2, pp. 259-272. doi: 10.1111/j.1741-3737.2008.00479.x.
- Becker, G. S. (1981). *A treatise on the family*. Cambridge, Mass: Harvard University Press.
- Bergström Casinowsky, G. (2013). Working life on the move, domestic life at standstill? Work-related travel and responsibility for home and family. *Gender, Work & Organization*, 20, 3, pp. 311-326. doi: 10.1111/j.1468-0432.2011.00579.x.
- Bianchi, S. M., Milkie, M. A., Sayer, L. C. & Robinson, J. P. (2000). Is anyone doing the housework? Trends in the gender division of household labor. *Social Forces*, 79, 1, pp. 191-228. doi: 10.2307/2675569.
- Bianchi, S. M., Sayer, L. C., Milkie, M. A. & Robinson, J. P. (2012). Housework: Who Did, Does or Will Do It, and How Much Does It Matter? *Social forces; a scientific medium of social study and interpretation*, 91, 1, pp. 55-63. doi: 10.1093/sf/sos120.
- Bittman, M., England, P., Sayer, L., Folbre, N. & Matheson, G. (2003). When does gender trump money? Bargaining and time in household work. *American Journal of Sociology*, 109, 1, pp. 186-214. doi: 10.1086/378341.

- Brines, J. (1993). The exchange value of housework. *Rationality and Society*, 5, 3, pp. 302-340. doi: 10.1177/1043463193005003003.
- Brüderl, J. (2010). Kausalanalyse mit Paneldaten. In: Wolf, C. & Best, H. (Eds.), *Handbuch der sozialwissenschaftlichen Datenanalyse*. Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 963-994.
- Buchebner-Ferstl, S. (2011). Hausarbeit in Partnerschaften - die Rolle von Präferenzstrukturen: ein innovativer Ansatz zur Erklärung von Verteilungsmustern. *Zeitschrift für Familienforschung*, 23, 2, pp. 241-259.
- Bujard, M. (2013). Die fünf Ziele des Elterngelds im Spannungsfeld von Politik, Medien und Wissenschaft. *Zeitschrift für Familienforschung*, 25, 2, pp. 132-153.
- Coltrane, S. (2000). Research on household labor: Modeling and measuring the social embeddedness of routine family work. *Journal of Marriage and Family*, 62, 4, pp. 1208-1233. doi: 10.1111/j.1741-3737.2000.01208.x.
- Cunha, M., André, S., Aparício, G., Santos, E. & Nunes, C. (2016). Organization of housework in heterosexual couples. Systematic review of the literature. *Procedia - Social and Behavioral Sciences*, 217, pp. 459-468. doi: 10.1016/j.sbspro.2016.02.014.
- Cunningham, M. (2007). Influences of women's employment on the gendered division of household labor over the life course: Evidence from a 31-year panel study. *Journal of Family Issues*, 28, 3, pp. 422-444. doi: 10.1177/0192513X06295198.
- Dechant, A., Rost, H. & Schulz, F. (2014). Die Veränderung der Hausarbeitsteilung in Paarbeziehungen. Ein Überblick über die Längsschnitfforschung und neue empirische Befunde auf Basis der pairfam-Daten. *Zeitschrift für Familienforschung*, 26, 2, pp. 144-168.
- Ducki, A. (2010). Arbeitsbedingte Mobilität und Gesundheit — Überall dabei — Nirgendwo daheim. In: Badura, B., Schröder, H., Klose, J. & Macco, K. (Eds.), *Fehlzeiten-Report 2009*. Berlin, Heidelberg: Springer Berlin Heidelberg, pp. 61-70.
- Feldhaus, M. & Schlegel, M. (2013). Berufsbezogene zirkuläre Mobilität und Partnerschaftszufriedenheit. *Comparative Population Studies - Zeitschrift für Bevölkerungswissenschaften*, 38, 2, pp. 315-340.
- Feng, Z. & Boyle, P. (2014). Do long journeys to work have adverse effects on mental health? *Environment and Behavior*, 46, 5, pp. 609-625. doi: 10.1177/0013916512472053.
- Fuwa, M. (2004). Macro-level gender inequality and the division of household labor in 22 countries. *American Sociological Review*, 69, 6, pp. 751-767.
- Fuwa, M. & Cohen, P. N. (2007). Housework and social policy. *Social Science Research*, 36, 2, pp. 512-530. doi: 10.1016/j.ssresearch.2006.04.005.
- Gager, C. T. (2008). What's fair is fair? Role of justice in family labor allocation decisions. *Marriage & Family Review*, 44, 4, pp. 511-545. doi: 10.1080/01494920802454116.
- Geisler, E. & Kreyenfeld, M. (2012). *How policy matters: How policy matters: Germany's parental leave benefit reform and fathers's behavior 1999-2009*. Rostock: Max-Planck-Institut für demografische Forschung.
- Gerson, K. (2010). *The unfinished revolution. How a new generation is reshaping family, work, and gender in America*. Oxford, New York: Oxford University Press.

- Greenhill, A. & Wilson, M. (2006). Heaven or hell? Telework, flexibility and family in the e-society: a Marxist analysis. *European Journal of Information Systems*, 15, 4, pp. 379-388. doi: 10.1057/palgrave.ejis.3000632.
- Grunow, D. (2013). Zwei Schritte vor, eineinhalb Schritte zurück. Geschlechtsspezifische Arbeitsteilung und Sozialisation aus Perspektive des Lebensverlaufs. *Zeitschrift für Soziologie der Erziehung und Sozialisation: ZSE*, 33, 4.
- Grunow, D. (2014). Aufteilung von Erwerbs-, Haus- und Familienarbeit in Partnerschaften im Beziehungsverlauf: der Einfluss von Sozialpolitik in Europa. In: Lück, D. & Cornelißen, W. (Eds.), *Geschlechterunterschiede und Geschlechterunterscheidungen in Europa*. Stuttgart: Lucius & Lucius (Der Mensch als soziales und personales Wesen Band 24), pp. 231-257.
- Grunow, D. & Baur, N. (2014). The association between norms and actions. The case of men's participation in housework. *Comparative Population Studies - Zeitschrift für Bevölkerungswissenschaften*, 39, 3, pp. 521-558. doi: 10.12765/CPoS-2014-10en.
- Grunow, D., Schulz, F. & Blossfeld, H.-P. (2012). What determines change in the division of housework over the course of marriage? *International Sociology*, 27, 3, pp. 289-307. doi: 10.1177/0268580911423056.
- Halleröd, B. (2005). Sharing of housework and money among Swedish couples. Do they behave rationally? *European Sociological Review*, 21, 3, pp. 273-288. doi: 10.1093/esr/jci017.
- Hochschild, A. R. & Machung, A. (2003). *The second shift*. New York, NY: Penguins.
- Hoffmeyer-Zlotnik, J. H. P. & Warner, U. (2011). *Measuring occupation and labour status in cross-national comparative surveys*. Bonn: GESIS (GESIS-Schriftenreihe 7).
- Hofmeister, H., Hünefeld, L. & Proch, C. (2010). The role of job-related spatial mobility in the household division of labor within couples in Germany and Poland. *Zeitschrift für Familienforschung*, 22, 3, pp. 308-330.
- Huinink, J., Brüderl, J., Nauck, B., Walper, S., Castiglioni, L. & Feldhaus, M. (2011). Panel analysis of intimate relationships and family dynamics (pairfam): Conceptual framework and design. *Zeitschrift für Familienforschung*, 23, 1, pp. 77-100.
- Huinink, J. & Feldhaus, M. (2012). Fertilität und Pendelmobilität in Deutschland. *Comparative Population Studies - Zeitschrift für Bevölkerungswissenschaften*, 37, 3-4, pp. 463-490. doi: 10.4232/10.CPoS-2012-05de.
- Kley, S. A. (2010). Multilokalität als Strategie zur Nutzung von Chancen. In: Soeffner, H. G. (Ed.), *Unsichere Zeiten. Herausforderungen und gesellschaftliche Transformationen*. Verhandlungen des 34. Kongress der Deutschen Gesellschaft für Soziologie. Wiesbaden (Deutsche Gesellschaft für Soziologie).
- Kley, S. A. (2012). Gefährdet Pendelmobilität die Stabilität von Paarbeziehungen? Einflüsse von Erwerbskonstellationen und Haushaltsarrangements in Ost- und Westdeutschland auf die Trennungswahrscheinlichkeit von Paaren. *Zeitschrift für Soziologie*, 41, 5, pp. 356-374.

- Kley, S. A. & Feldhaus, M. (2017). Effects of female commuting on partnership stability in suburban and other residential regions. *Population, Space and Place*, 72, 4, pp. 1-11. doi: 10.1002/psp.2093.
- Kollmeyer, C. (2013). Family structure, female employment, and national income inequality: A cross-national study of 16 western countries. *American Sociological Review*, 29, 4, pp. 816-827. doi: 10.1093/esr/jcs060.
- Koslowsky, M., Kluger, A. N. & Reich, M. (1995). *Commuting stress*. Boston, MA: Springer US.
- Kroska, A. (2004). Divisions of domestic work. *Journal of Family Issues*, 25, 7, pp. 890-922. doi: 10.1177/0192513X04267149.
- Lachance-Grzela, M. & Bouchard, G. (2010). Why do women do the lion's share of housework? A decade of research. *Sex Roles*, 63, 11-12, pp. 767-780. doi: 10.1007/s11199-010-9797-z.
- Lee, Y.-S. & Waite, L. J. (2005). Husbands' and wives' time spent on housework: A comparison of measures. *Journal of Marriage and Family*, 67, 2, pp. 328-336. doi: 10.1111/j.0022-2445.2005.00119.x.
- Limmer, R. (2005). Berufsmobilität und Familie in Deutschland. *Zeitschrift für Familienforschung*, 17, 2, pp. 8-26.
- Lück, D. & Schneider, N. F. (2010). Introduction to the special issue on 'Mobility and family': increasing job mobility - changing family lives. *Zeitschrift für Familienforschung*, 22, 2, pp. 135-148.
- Lundberg, S. & Pollak, R. A. (1993). Separate spheres bargaining and the marriage market. *Journal of Political Economy*, 101, 6, pp. 988-1010. doi: 10.1086/261912.
- Meil, G. (2010). Job mobility and family life. In: Schneider, N. F. & Collet, B. (Eds.), *Mobile living across Europe II. Causes and consequences of job-related spatial mobility in cross-national comparison*. Opladen: Budrich, pp. 215-235.
- Mikrozensus (2015). *Personen in Elternzeit*. Statistisches Bundesamt. [https://www.destatis.de/DE/ZahlenFakten/Indikatoren/QualitaetArbeit/Dimension/3/3\\_9\\_Elternzeit.html](https://www.destatis.de/DE/ZahlenFakten/Indikatoren/QualitaetArbeit/Dimension/3/3_9_Elternzeit.html) [retrieved: 2017-03-20].
- Mitterauer, M. (1990). *Historisch-anthropologische Familienforschung. Fragestellungen und Zugangsweisen*. Wien u.a.: Böhlau (Kulturstudien 15).
- Nitsche, N. & Grunow, D. (2016). Housework over the course of relationships. Gender ideology, resources, and the division of housework from a growth curve perspective. *Advances in Life Course Research*, 29, pp. 80-94.
- Ott, N. (1992). *Intrafamily bargaining and household decisions*. Berlin, Heidelberg: Springer (Microeconomic Studies).
- Parker, K. & Wang, W. (2013). *Modern parenthood: Roles of moms and dads converge as they balance work and family*. Pew Research Center. <https://www.pewsocialtrends.org/2013/03/14/modern-parenthood-roles-of-moms-and-dads-converge-as-they-balance-work-and-family/> [retrieved: 2019-07-29].
- Röhler, H., Steinbach, A. & Huinink, J. (2000). Hausarbeit in Partnerschaften. Zur Erklärung geschlechtstypischer Arbeitsteilung in nichtehelichen und ehelichen Lebensgemeinschaften. *Zeitschrift für Familienforschung*, 12, 2, pp. 21-53.
- Rosenfeld, R. A., Heike Trappe & Janet C. Gornick (2004). Gender and work in Germany: Before and after reunification. *Annual Review of Sociology*, 30, pp. 103-124.

- Rüger, H. & Schulze, A. (2016). Zusammenhang von beruflicher Pendelmobilität mit Stresserleben und Gesundheit. *Prävention und Gesundheitsförderung*, 11, 1, pp. 27-33. doi: 10.1007/s11553-015-0521-2.
- Sadow, E. (2014). Til work do us part: The social fallacy of long-distance commuting. *Urban Studies*, 51, 3, pp. 526-543. doi: 10.1177/0042098013498280.
- Sayer, L. C. (2010). Trends in housework. In: Treas, J. & Drobníč, S. (Eds.), *Dividing the domestic. Men, women, and household work in cross-national perspective*. Stanford, Calif: Stanford University Press (Studies in social inequality), pp. 19-38.
- Schneider, N. F. (2008). *Relevance and diversity of job-related spatial mobility in six European countries*. Opladen: Budrich (Mobile living across Europe 1).
- Schneider, N. F., Limmer, R. & Ruckdeschel, K. (2002a). *Berufsmobilität und Lebensform. Sind berufliche Mobilitätserfordernisse in Zeiten der Globalisierung noch mit Familie vereinbar?* Stuttgart: Kohlhammer (Schriftenreihe des Bundesministeriums für Familie, Senioren, Frauen und Jugend 208) (1<sup>th</sup> edition).
- Schneider, N. F., Limmer, R. & Ruckdeschel, K. (2002b). *Mobil, flexibel, gebunden. Familie und Beruf in der mobilen Gesellschaft*. Frankfurt/Main: Campus-Verl.
- Schneider, N. F., Rüger, H. & Ruppenthal, S. (2016). Mobilität und mobile Lebensformen. In: Niephaus, Y., Kreyenfeld, M. & Sackmann, R. (Eds.), *Handbuch Bevölkerungssoziologie*. Wiesbaden: Springer Fachmedien Wiesbaden, pp. 501-525.
- Schulz, F. (2010). *Verbundene Lebensläufe. Partnerwahl und Arbeitsteilung zwischen neuen Ressourcenverhältnissen und traditionellen Geschlechterrollen*. Wiesbaden: VS Verlag für Sozialwissenschaften (Life Course Research).
- So, K. S., Orazem, P. F. & Otto, D. M. (2001). The effects of housing prices, wages, and commuting time on joint residential and job location choices. *American Journal of Agricultural Economics*, 83, 4, pp. 1036-1048.
- Sorensen, A. & McLanahan, S. (1987). Married women's economic dependency, 1940-1980. *American Journal of Sociology*, 93, 3, pp. 659-687.
- Statistisches Bundesamt (2015a). *Wie die Zeit vergeht. Ergebnisse zur Zeitverwendung in Deutschland 2012/2013*. Wiesbaden: Statistisches Bundesamt.
- Statistisches Bundesamt (2015b). *Zeitverwendungserhebung. Aktivitäten in Stunden und Minuten für ausgewählte Gruppen*. Wiesbaden: Statistisches Bundesamt. [https://www.destatis.de/DE/Publikationen/Thematisch/EinkommenKonsumLebensbedingungen/Zeitbudgeterhebung/Zeitverwendung5639102139004.pdf?\\_\\_blob=publicationFile](https://www.destatis.de/DE/Publikationen/Thematisch/EinkommenKonsumLebensbedingungen/Zeitbudgeterhebung/Zeitverwendung5639102139004.pdf?__blob=publicationFile) [retrieved: 2017-03-20].
- Stutzer, A. & Frey, B. S. (2008). Stress that doesn't pay. The commuting paradox. *Scandinavian Journal of Economics*, 110, 2, pp. 339-366. doi: 10.1111/j.1467-9442.2008.00542.x.
- Sullivan, O. (2000). The division of domestic labour: Twenty years of change? *Sociology*, 34, 3, pp. 437-456.
- Träger, J. (2009). *Familie im Umbruch. Quantitative und qualitative Befunde zur Wahl von Familienmodellen*. Wiesbaden: VS Verlag für Sozialwissenschaften/GWV Fachverlage GmbH Wiesbaden (1<sup>th</sup> edition).
- West, C. & Zimmerman, D. H. (1987). Doing gender. *Gender and Society*, 1, 2, pp. 125-151.

West, C. & Zimmerman, D. H. (2002). Doing gender. In: Fenstermaker, S. & West, C. (Eds.), *Doing gender, doing difference. Inequality, power, and institutional change*. New York: Routledge, pp. 3-24.

## Supplements

Tab. A 1: Descriptive sample statistics

Variable	Obs.	Mean	Std. dev.	Min.	Max.
Age women	2,044	36.182	7.011	18	59
Age men	2,044	38.813	7.613	18	65
<i>Cohort</i>					
1991-1993	2,044	0.108	0.311	0	1
1981-1983	2,044	0.385	0.487	0	1
1971-1973	2,044	0.507	0.500	0	1
<i>Education</i>					
She higher educated	2,044	0.387	0.487	0	1
He higher educated	2,044	0.351	0.477	0	1
Equally educated	2,044	0.261	0.439	0	1
<i>Family</i>					
Married	2,044	0.740	0.439	0	1
Children under age of 3	2,044	0.215	0.411	0	1
Children under age of 6	2,044	0.327	0.469	0	1
Number of children	2,044	1.486	1.024	0	3
Duration of cohabitation in years	2,044	11.125	6.813	0	29
Duration of marriage in years <sup>a</sup>	1,548	10.263	6.267	0	29
<i>Characteristics of living</i>					
Homeownership status	2,044	0.486	0.500	0	1
East Germany	2,044	0.325	0.469	0	1
<i>Size of municipality</i>					
1,000 - < 2,000	2,044	0.043	0.202	0	1
2,000 - < 5,000	2,044	0.127	0.333	0	1
5,000 - < 20,000	2,044	0.335	0.472	0	1
20,000 - < 50,000	2,044	0.169	0.375	0	1
50,000 - < 100,000	2,044	0.075	0.264	0	1
100,000 - < 500,000	2,044	0.131	0.337	0	1
500,000 +	2,044	0.120	0.325	0	1
<i>Employment</i>					
Woman employed	2,044	0.793	0.406	0	1
Level of employment. woman	2,044	1.151	0.737	0	2
Man employed	2,044	0.938	0.241	0	1
Level of employment. man	2,044	1.817	0.524	0	2
<i>Relative income</i>					
Her share 0-19%	2,044	0.299	0.458	0	1
Her share 20-39%	2,044	0.331	0.471	0	1
Her share 40-59%	2,044	0.266	0.442	0	1
Her share 60-79%	2,044	0.064	0.244	0	1
Her share 80-100%	2,044	0.040	0.196	0	1
<i>Social class (anchor)</i>					
Not working	2,044	0.133	0.340	0	1
Undemanding	2,044	0.148	0.351	0	1
Demanding tasks	2,044	0.103	0.304	0	1
Independent tasks	2,044	0.351	0.477	0	1
Leadership tasks	2,044	0.210	0.408	0	1
<i>Commuting time in minutes <sup>b</sup></i>					
Commuting time women	1,553	24.290	28.792	1	480
Commuting time men	1,842	34.280	46.491	1	600
<i>Long-distance commuting women</i>					
She commutes daily	2,044	0.063	0.242	0	1
She commutes several times a week	2,044	0.028	0.165	0	1
Non-long-distance	2,044	0.702	0.458	0	1
Not gainfully employed	2,044	0.207	0.406	0	1
<i>Long-distance commuting men</i>					
He commutes daily	2,044	0.154	0.361	0	1
He commutes several times a week	2,044	0.041	0.197	0	1
Non-long-distance	2,044	0.744	0.437	0	1
Not gainfully employed	2,044	0.062	0.242	0	1
<i>Overnight commuting</i>					
She commute	2,044	0.019	0.135	0	1
He commute	2,044	0.113	0.316	0	1
Both commute	2,044	0.007	0.082	0	1
Neither commutes <sup>c</sup>	2,044	0.862	0.345	0	1

Source: *pairfam* 2016; observations with missing values in income and household income excluded, own calculations.

<sup>a</sup> Different number of observation due to different marital status.

<sup>b</sup> Frequency of commute not taken into account. Different number of observations due to restriction to commuting women and men.

<sup>c</sup> Could contain not gainfully employed people.

Tab. A 2: Pooled linear regression analysis of her contribution to housework and childcare by a couple's long-distance commuting arrangement

POLs, design weighted	She does almost nothing (1) to she does almost everything (5)					
	HW1	HW2	HW3	CC1	CC2	CC3
<i>Long-distance commuting women (ref. not LD commuting)</i>						
Long-distance daily	-0.435 ***	-0.139 *	-0.160 *	-0.366 ***	-0.150 *	-0.263 ***
Long-distance several times week	-0.074	-0.072	-0.092	-0.010	-0.035	-0.047
Not gainfully employed	0.262 ***	-0.009	-0.208	0.344 ***	0.197 ***	0.068
<i>Long-distance commuting men (ref. not LD commuting)</i>						
Long-distance daily	0.098 *	0.064 +	0.063 +	0.205 ***	0.172 ***	0.170 ***
Long-distance several times week	-0.100	-0.068	-0.066	0.096	0.104	0.103
Not gainfully employed	-0.674 ***	-0.076	0.039	-0.607 ***	0.025	0.104
<i>Characteristics of living</i>						
East Germany		-0.068 *	-0.071 *		-0.085 **	-0.088 **
Small town (ref: medium town)		0.072 *	0.072 *		-0.006	-0.001
Large city (ref: medium town)		-0.024	-0.025		-0.013	-0.013
Homeownership		0.073 *	0.073 *		0.041	0.042
<i>Employment (ref. equal level of employment)</i>						
He more than she		0.212 ***	0.194 ***		0.185 ***	0.167 ***
She more than he		-0.267 ***	-0.347 ***		-0.394 ***	-0.467 ***
<i>Relative income (ref. 40-59%)</i>						
Her share 0-19%		0.169 ***	0.174 ***		0.218 ***	0.221 ***
Her share 20-39%		0.020	0.022		0.076 *	0.077 *
Her share 60-79%		-0.144 *	-0.139 *		-0.213 **	-0.203 **
Her share 80-100%		-0.280 **	-0.270 **		-0.161	-0.144
<i>Household income (ref. 5. quantile)</i>						
1. quantile		-0.015	-0.011		-0.213 ***	-0.217 ***
2. quantile		0.023	0.024		-0.121 **	-0.121 **
3. quantile		0.022	0.023		-0.093 *	-0.094 *
4. quantile		0.044	0.046		-0.043	-0.044
<i>Family &amp; partnership</i>						
Married		0.107 **	0.105 **		0.035	0.031
<i>Number of children (ref. No children / one child)</i>						
One child		0.143 **	0.146 **			
Two children		0.201 ***	0.205 ***		0.020	0.017
Three children		0.213 ***	0.215 ***		0.040	0.038
Child under age of 3		-0.086 *	-0.089 *		0.074 *	0.071 *
Child under age of 6		0.071 +	0.071 +		-0.027	-0.027

Table continues



POLs, design weighted	She does almost nothing (1) to she does almost everything (5)					
	HW1	HW2	HW3	CC1	CC2	CC3
Duration cohabitation		0.003	0.003		-0.004	-0.004
<i>Birth cohort (ref. 1971-1973)</i>						
1991-1993		0.045	0.049		0.115	0.110
1981-1983		0.047	0.048		0.060 +	0.060 +
<i>Relative education (ref. equal)</i>						
She higher educated		0.007	0.005		-0.036	-0.037
He higher educated		-0.016	-0.019		-0.006	-0.005
<i>Social class (ref. unskilled)</i>						
Not working		0.061	0.059		-0.075	-0.073
Undemanding		0.017	0.015		0.078	0.072
Demanding tasks		-0.023	-0.022		0.047	0.047
Independent tasks		0.032	0.034		0.089 +	0.090 +
Leadership tasks		-0.058	-0.058		0.108 +	0.108 +
<i>Gender &amp; ideology</i>						
Male		-0.145 ***	-0.144 ***		-0.141 ***	-0.141 ***
Men should take on same share of housework		-0.186 ***	-0.186 ***		-0.071 ***	-0.071 ***
<i>Overnight commuters (ref. neither commutes overnight)</i>						
She commutes		-0.016	-0.016		-0.153 +	-0.149 +
He commutes		0.058	0.057		0.098 **	0.097 **
Both commute		-0.274 +	-0.268 +		-0.186	-0.188
<i>Female long-distance*employment (ref. other*equally employed)</i>						
Female daily LD commute*He more than she			0.068			0.276 *
Female daily LD commute*She more than he			0.018			-0.057
Female LD commute sev. times week*He more than she			0.069			-0.017
Female LD commute sev. times week*She more than he			-0.226			0.313
Not gainfully employed*He more than she			0.216			0.137
Constant	3.866 ***	4.232 ***	4.235 ***	3.638 ***	3.779 ***	3.800 ***
N	6,138	6,138	6,138	4,557	4,557	4,557
r2	0.071	0.231	0.232	0.097	0.211	0.213

Source: *pairfam* 2013, 2015, 2016. Design weights applied, clustered by id, robust standard errors applied (not shown), own calculations.

+ p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

<sup>a</sup>High coefficients due to low number of observations

Contribution to housework/childcare: She (almost) nothing to she (almost) everything, from 1 to 5, pseudo-metric.

Long-distance commute: at least 45 minutes each way, daily or several times a week. Not long-distance commuting people could include other commuting forms like overnighters (therefore, we included a control variable that contains information on overnight commuters).

Overnighter: Absent from home for at least 12 nights during the last 3 months.

Tab. A 3: Changes in the division of housework and childcare from one year to the next

	2013-2015	2015-2016
<b>Housework</b>		
<i>No changes</i>	63.20 (1,336)	65.85 (1,346)
<i>Changes</i>	36.80 (778)	34.15 (698)
<b>Childcare</b>		
<i>No changes</i>	62.21 (986)	65.90 (980)
<i>Changes</i>	37.79 (599)	34.10 (507)

Source: *pairfam* 2013, 2015, 2016, own calculations.