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Retirement and Changes in Housework: A Panel Study of Dual Earner Couples

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Thomas Leopold* & Jan Skopek**

ABSTRACT

Objectives. To examine how transitions to retirement influenced the division of household labor in dual earner couples. We tested hypotheses about changes (a) between a couple's pre-retirement and post-retirement stage, and (b) across the transitional phase during which both spouses retired from the workforce.

Method. We estimated fixed-effects models for the effects of the husband's and the wife's retirement on changes in their hours and share of routine housework. The data came from 29 waves of the German Socio-economic Panel Study, comprising $N = 27{,}784$ annual observations of $N = 3{,}071$ dual earner couples ages 45 to 75.

Results. Spouses who retired first performed more housework, whereas their partners who continued working performed less. This occurred irrespective of the retirement sequence. Husbands who retired first doubled up on their share of housework, but never performed more than 40 percent of a couple's total hours. None of the observed shifts was permanent. After both spouses had retired, couples reverted to their pre-retirement division of housework.

Discussion. Although the findings on changes after retirement support theories of relative resources, gender construction theories still take precedence in explaining the division of household labor over the life course.

KEYWORDS

family dynamics, family economics, gender roles, life span development, retirement, transitions

Introduction

Recent studies have shown that couples' division of household labor becomes less gendered after retirement. Husbands increase their hours spent on domestic tasks and take over some of the work previously performed by their wives (Leopold & Skopek, 2015; Caltabiano, Campolo, & di Pino, 2015). This shift to more equitable arrangements suggests that retirement reduces gender inequality in the home, and supports the idea that gender display becomes less salient in later life (Gutmann, 1975).

Yet, extant findings are limited in scope. Most notably, the analyses focused on traditional "male breadwinner" couples and examined only the husband's transition to retirement. Couples in modern societies, however, increasingly shift from a male breadwinner model towards a dual breadwinner model (Blossfeld & Drobnič 2001). Compared to specialized arrangements of the past, these couples are more egalitarian in dividing their labor. This involves not only more equitable participation in market work, but also a more equitable division of domestic work in pre-retirement years. Furthermore, dual earner couples experience two transitions to retirement, both of which may impact on each partner's performance of household labor. The only longitudinal study to jointly consider the effects of husbands' and wives' retirement on their division of household labor was based on a two-wave design (Szinovacz, 2000). Investigating whether changes after retirement are temporary or permanent, however, requires a larger window of observation.

In the present study, we focused on dual earner couples to examine the short-term and long-term effects of husbands' and wives' retirement on their division of household labor. Drawing on two theoretical perspectives – theories of gender construction and theories of relative resources – we formulate hypotheses about changes from pre-retirement to post-retirement years and across the transitional phase during which both spouses retire from the workforce. The empirical analyses were based on data from 29 waves (1985 until 2013) of the German Socio-economic Panel Study (SOEP). Given the availability of annual data about

hours spent on market work and routine housework across this large window of observation, these data were well-suited to test our hypotheses.

Theoretical background

Although the gender gap in household labor has narrowed over the past decades, couples' division housework remains gendered (Bianchi, Milkie, Sayer, & Robinson, 2000). Over the past two decades, longitudinal studies have enhanced our understanding of how this gender gap is produced and how it evolves over the life course. Two general findings have emerged from these studies.

First, gendered time patterns are "sticky." Once couples have established their division of household labor, this arrangement remains stable over major stages of the adult life course (Kühhirt, 2012; Rexroat & Shehan, 1987). Second, despite this overall pattern of stability, critical transitions may still entail substantial shifts. These changes are well-documented for the transition to parenthood, which intensifies gender inequality in the home. Following the birth of the first child, the gender gap in household labor widens markedly, and permanently (Sanchez & Thomson 1997; Grunow, Schulz, & Blossfeld, 2012). These shifts occur regardless of previous arrangements: Parenthood not only renders traditional couples even more traditional, but it also increases gender specialization in previously egalitarian couples (Kühhirt 2012).

These findings on the consequences of parenthood have recently been complemented by longitudinal evidence on a later-life transition. Looking at retirement, studies have reported the reverse pattern. As male breadwinners retired from the workforce, the gender gap in housework narrowed markedly (Leopold & Skopek, 2015; Caltabiano et al., 2015). Similar to the effects of parenthood, these changes in housework were permanent. In contrast to the evidence on parenthood, however, extant findings on retirement are limited in scope. Most notably, the couples studied were characterized by a strongly traditional, highly gendered

division of labor, and the analysis of changes in housework was restricted to the consequences of a male breadwinner's retirement.

With the rise in women's education, women's labor force participation, educational homogamy, and egalitarian gender roles (Blossfeld & Timm, 2003; Vincent-Lancrin, 2008; DiPrete & Buchmann, 2013), the traditional male breadwinner – female homemaker model has been increasingly replaced by dual earner arrangements (Blossfeld & Drobnič 2001). Considering the effects of retirement on the division of household labor, dual earner couples differ in important ways from their traditional counterparts on which existing research is based. First, although the division of household labor remains unequal even in dual earner couples, the gender gap is smaller (Presser, 1994; Coverman, 1985) as women who work for pay can "buy out" of housework (Gupta, 2006). Compared to male breadwinner couples, this leaves less room for convergence across the transition to retirement.

Second, among dual earners, the couple context of retirement is characterized by two transitions. Compared to male breadwinner couples, this introduces greater complexity in the potential effects of retirement on the division of household labor. Although spouses may retire jointly (Radl & Himmelreicher, 2015), they often retire consecutively (Drobnič, 2002). If spouses retire in sequence, the first spouse's retirement initiates a transitional phase in which the other spouse temporarily acts as a sole earner. Typical age gaps in couples suggest that wives frequently take on this role before they retire from the workforce, initiating a couple's post-retirement stage. Although the transitional phase of retirement among dual earners may last several years, we know little about whether, and to what extent, these couples respond to the associated shifts in market work by adjusting their division of domestic work.

Third, in view of these differences, it is important to adapt theoretical arguments pertaining to the effects of retirement on the division of household labor in male breadwinner couples to the context of dual earner couples. In the following, we consider two perspectives – gender construction theories and theories of relative resources – to formulate hypotheses

about (a) changes from pre-retirement to post-retirement years and (b) changes across the transitional phase connecting these stages.

Hypotheses

According to gender construction theories (Coltrane, 2000), couples' division of household labor emerges from gender-role attitudes or "ideologies" internalized in the socialization process. Through domestic work, women enact their female identity. Men, instead, demonstrate their masculinity by avoiding these activities, particularly female-typed tasks of routine housework (West & Zimmerman, 1987). The resulting gender role-playing is seen as a fundamental feature of marital households, persisting throughout all stages of coupled lives. Importantly, the associated division of household labor emerges largely independent of each spouse's participation in the workforce, given that time constraints and opportunity costs in the labor market do not offset gender role expectations in the home (Ferree, 1991).

Theories of relative resources, in contrast, explain a couple's division of labor on gender-neutral grounds. These theories focus primarily on productivity, marital power, and time availability (Coverman, 1985). The expectation of gender neutrality implies that although these factors are distributed unequally across men and women (primarily because of differential investments in human capital), their effects do not vary by gender (Becker, 1991). If both spouses had equal time constraints, equal income capacity, and equal domestic productivity, there would be no reason to expect a gender gap in their division of labor. Conversely, this gap would be most pronounced in highly specialized sole-breadwinner households, irrespective of whether the breadwinner is male or female.

Although these theoretical perspectives explain couples' division of labor in fundamentally different ways, their predictions are identical for changes between the pre-retirement and the post-retirement division of housework in dual earner couples. According to gender role theories, these stages do not differ in meaningful ways: Transitions to retirement

are unlikely to (a) alter gender norms, (b) transform gender identities, and (c) render household labor less important in the daily reproduction of gender norms and identities.

According to theories of relative resources, there is also no reason to expect differences in dual earner couples' division of household labor between pre-retirement and post-retirement stages. Before retirement, both spouses face opportunity costs in the labor market, and work hours limit their time available to perform household labor. After retirement, these factors are no longer relevant for either spouse. Despite major absolute shifts in resources experienced by each retiree, their resources relative to one another change little when comparing pre-retirement and post-retirement stages in dual earner couples.

Based on these considerations, we hypothesize the following: In dual earner couples, the gender gap in household labor does not differ between the pre-retirement stage and the post-retirement stage (Hypothesis 1).

Yet, the two theoretical perspectives lead to contrasting expectations for the transitional phase initiated by the first spouse's retirement and completed by the second spouse's retirement. According to gender construction theories, the expectation of continuity in couples' division of household labor extends throughout this phase. Shifts in market work, even if substantial, are not expected to involve a renegotiation of gender roles. A husband who retires first might even cut down on domestic activities to compensate for dissonance in his gender identity after his wife becomes a sole earner. This idea is known as the compensation hypothesis (Brines, 1994). Furthermore, gender construction theories do not expect couples to react strongly to new constellations of relative resources, given that gender itself is considered more important than any other factor in predicting their division of household labor (Shelton & John, 1996). Consequently, there is no reason to expect major shifts in couples' division of household labor across the transitional phase in which both spouses retire from the workforce.

Based on gender construction theories, we hypothesize the following: In dual earner couples, the gender gap in household labor remains unchanged after the first spouse's transition to retirement (Hypothesis 2a). In dual earner couples, the gender gap in household labor remains unchanged after the second spouse's transition to retirement (Hypothesis 2b).

According to theories of relative resources, a contrasting pattern can be expected. In dual earner couples, the first retirement entails a substantial shift in relative resources. The retiree's performance of household labor is no longer constrained by opportunity costs and time demands in the labor market, whereas the spouse who continues working is still constrained by these factors. Theories of relative resources predict that couples respond to this shift in the market sphere by adapting their division of labor in the domestic sphere. If the husband retires first, couples would temporarily shift towards arrangements in which the retired husband performs a higher share of domestic work. Following the wife's retirement, couples would revert to their pre-retirement division of household labor, adapting to the convergence in spouses' relative resources. Based on the principle of gender neutrality, a similar pattern would apply to the reverse sequence of retirement transitions (i.e., women retire first) in dual earner couples.

Based on theories of relative resources, we hypothesize the following: In dual earner couples, the division of household labor changes after the first transition to retirement; the spouse who retires first performs more household labor, whereas the spouse who remains employed performs less household labor (Hypothesis 3a). In dual earner couples, the division of household labor changes after the second transition to retirement; the spouse who retires second performs more household labor, whereas the spouse who retired first performs less household labor (Hypothesis 3b).

Methods

Data and Sample

Our analysis was based on 29 waves (1985 – 2013) of the German Socio-economic Panel Study (SOEP, version 30, 10.5684/soep.v30; Wagner, Frick, & Schupp, 2007). The SOEP is a large-scale panel survey of households and individuals that allowed us to study changes in market and domestic work in dual earner couples. Annual data provided by both spouses are available not only on changes in employment status and hours of paid work, but also on hours spent on different types of domestic work, including routine housework.

For our analysis, we selected continuously married heterosexual couples. We excluded a selective high-income sample (sample G, drawn in 2002) and an immigrant sample (sample M, drawn in 2013). In line with previous studies (Kühhirt, 2012; Szinovacz, 1996; 2000), we cut the observation window at lower and upper age bounds. Given the focus on later working life and retirement, we used a lower age bound of 45 for the wife and 50 for the husband, and an upper age bound of 75 for both spouses. We also removed left-censored couples in which one or both spouses had already retired upon first observation in the panel. These restrictions yielded a sample of couples who were "at risk" of retirement and observed continuously before and after the typical age of retirement.

To align this sample with our theoretical interest in dual earner couples, we further conditioned the analysis on couples in which both spouses were economically active (defined as working full-time or part-time) on at least one occasion across the observation window. Finally, we restricted the sample to couples observed at least twice in the panel. After all restrictions, our analytical sample consisted of 3,071 couples observed across 27,784 couple-years. For 27.9 % of these couples, we observed the transition to retirement of both spouses; for 15.7 %, we observed only the husband's retirement; for 4 %, we observed only the wife's retirement. For the remaining 52.4 % of couples, we observed no transition to retirement. Because these couples still provided information on the division of housework during later

stages of working life, we kept them in the sample. In Table 1, we provide a descriptive overview of time-constant characteristics of our sample.

- Table 1-

Measures

Table 2 includes information about all variables. Our *outcome* variables were based on an annual survey question about hours spent on routine housework such as washing, cooking, and cleaning (see Table 2 for details). From these data, we created variables to measure the gender gap in routine housework in absolute and in relative terms (Coltrane, 2000), considering each spouse's hours spent on housework as well as the husband's percentage share of a couple's total hours.

- Table 2 -

Our main *predictors* captured the process of retirement of both spouses. We identified the transition to retirement by a change from any type of paid employment to retirement. This change was recorded at an annual basis, occurring between the previous and the current wave. Based on this information, we defined the following sequences of retirement among dual earner couples: (a) husband retires first; (b) wife retires after husband; (c) wife retires first; (d) husband retires after wife; (e) both retire jointly.

In addition, we included two time variables. First, we modelled duration dependence by a variable counting the years after the first retirement (of either spouse) observed in the panel. Second, we included the husband's age to capture changes over time in housework that may not be attributable to retirement but to marital duration or to other life course changes (Artis & Pavalko, 2003; Bun Lam, HcHale, & Crouter, 2012).

After retirement, spouses may still work for pay. To account for this possibility, we included different indicators for market work. First, we included measures of the husband's and the wife's daily hours spent on paid work. These measures allowed us to model

retirement as a complete withdrawal from paid work (i.e., conditioned on being retired and spending zero hours on paid work). Second, we created a variable measuring the husband's share of a couple's total hours of market work (in %) based on the effective working hours reported by both spouses. This measure captured an important tenet of theories of relative resources, namely that spouses' work hours relative to each other matter for their division of household labor. To account for observations in which neither spouse reported any market work, we set this variable to 50 % and added further indicator variables for couples that performed no market work.

We included several *controls* for potential confounders. First, we included each partner's satisfaction with health (measured on an 11-point scale; z-standardized) to control for the possibility that health declines limited their ability to perform housework. Second, we added three controls for potential change over time in the demand for housework: (a) an indicator variable for whether at least one child under the age of 16 lived in the couple's household (reference category was no child); (b) a metric variable for the size of the living unit (in square meters, standardized to 50 square meter units and centered at the sample mean); and (c) an indicator variable for whether the couple's household had a yard (mean-centered).

Statistical Model

We estimated three sets of models for relative and absolute changes in routine housework: (a) models for the husband's housework hours; (b) models for the wife's housework hours; and (c) models for the husband's percentage share of the couple's total housework hours. A separate model for the share was necessary, as the average share of hours is not equal to the share of the average hours. For all outcomes, we estimated the following structural model

$$y_{it} = a + \boldsymbol{Rb_1} + \boldsymbol{Tb_2} + \boldsymbol{Wb_3} + \boldsymbol{Zb_4} + c_i + \epsilon_{it}$$

where vector **R** represents a dummy set indicating a couple's retirement sequence, vector **T** represents the time variables, vector **W** represents the variables for market work, and vector **Z** represents the controls. The couple-specific intercept c_i accounts for unobserved heterogeneity in housework and allows for errors at measurement occasions ϵ_{it}. We included the vectors of variables in a stepwise fashion, thus estimating our model in four steps (Models 1–4) for all outcomes. This approach allowed us to assess the extent to which changes due to retirement were mediated by changes in dual earners' market work arrangements or confounded by other time-varying factors.

We estimated all models using couple-level fixed effects and cluster-robust standard errors. The fixed-effects model subtracts within-couple means over time from both sides of the equation ("within transformation"). It relates variation in the outcome only to variation in the explanatory variables. All time-constant heterogeneity between couples is rendered inconsequential, even if unobserved (Allison, 2009). Only variables that varied within couples entered the fixed-effects model.

To retain information about the baseline levels of the outcome variables, we estimated a constant for the expected value of each outcome conditional on all covariates equaling zero. This constant was identified by constraining the couple-specific effects to a sum of zero ($\sum c_i = 0$) and adding the grand means to both sides of the equation. By centering the independent variables, we modeled the constant as the expected value of the outcomes before any spouse in dual earner couples had entered retirement.

Results

In Table 3, we present the results from the fixed-effects models for husband's hours (Models 1a – 4a) and the wife's hours (Models 1b – 4b) of routine housework as well as for the husband's share of couple's total housework hours (Models 1c – 4c). We start with a baseline model for changes across transitions to retirement. If the husband retired first, his

daily housework hours (Model 1a) increased, on average, by 0.65 hours (or about 40 minutes). Looking at the wife (Model 1b), this transition was associated with a reduction of 0.24 hours (or 15 minutes) of routine housework. Upon the wife's retirement, her already-retired husband's increase in housework hours dropped to an 0.41 hour (or 25 minute) increase compared to his pre-retirement level (decline significant at $p < 0.001$), whereas the wife's housework hours increased to exceed her pre-retirement level by 0.19 hours (or 11 minutes).

- Table 3 -

Looking at the reverse sequence (i.e., wife retires first, husband retires after wife), the tradeoff in hours of housework was less pronounced. After the wife's retirement, her housework hours increased by more than half an hour per day (Model 1b), whereas her non-retired husband's hours remained almost unchanged (Model 1a). Upon the husband's retirement, his already-retired wife's increase in housework hours dropped to a 0.32 hour (or 25 minutes) increase compared to her pre-retirement level (decline of 14 minutes, significant at $p < 0.01$), while the husband's housework hours increased to exceed his pre-retirement level by 0.59 hours (or 35 minutes). For the final sequence considered in our models – joint retirement – Model 1a and Model 1b show that both spouses increased their housework hours by a similar amount of approximately 20-25 minutes (difference in coefficients not statistically significant).

Looking at Model 1c for average changes in the husband's share of a couple's total housework hours, we find a temporary increase of almost 14 percentage points if the husband retired first. This increase is approximately cut in half after his wife followed into retirement. For the reverse sequence, Model 1c shows that the housework share of a working husband was unresponsive to the wife's retirement, but increased by approximately 9 percentage points after he followed suit.

In the next steps of the estimation, we added the time variables (Models 2 a–c), the variables for market work (Models 3 a–c), and the controls (Models 4 a–c). The most notable change in the retirement variables is found after the indicators for market work are added to the equation. The variables for work hours are centered at 8 hours a day (i.e., full-time work) for both the husband and the wife, thus conditioning the constant to the expected value of the outcome among non-retired dual full-time earners. Changes in couples' market work explain most of the variation found for the indicators for transitions to retirement. Based on Model 3, a husband's (wife's) change from working full-time to inactivity, for example, was associated with a near 54 (93) minutes increase in daily hours of routine housework. These effects were smaller (26 and 74 minutes), however, if the other spouse was already inactive.

Among working husbands, a 1-hour decrease in market work was associated with a 3-minute increase in routine housework (Model 3a); among working wives, the tradeoff was somewhat stronger, estimated at an 8-minute increase in housework for a 1-hours decrease in market work (Model 3b). This indicates a higher elasticity of housework to market work among women. Overall, no substantial associations between the retirement variables and changes in housework hours remain after accounting for changes in market work. In terms of the husband's relative contribution (Model 3c), we obtain equivalent findings. Adding the controls in Model 4 (a –c) does not affect this pattern. The R-squares indicate that our final models fit the data well, particularly for wives' housework hours.

- Figure 1 -

To evaluate our hypotheses, we plot trajectories for hours and shares of housework in Figure 1. These plots are based on the full specification (Models 4a, 4b, and 4c) and apply to dual earners who retire from a full-time job (8 work hours per day) to complete inactivity (0 work hours per day), holding all other variables at their means. This model-based scenario is aligned with our theoretical considerations about current and future cohorts of "dual breadwinners" retiring from the workforce. Predicted changes due to retirement are shown for

three sequences: the husband retires first (left-hand panel), the wife retires first (middle panel), and both spouses retire jointly (right-hand panel). The top row of Figure 1 shows changes in the husband's housework hours (Model 4a) and the wife's housework hours (Model 4b); the bottom row shows changes in the husband's share of a couple's total housework hours (Model 4c). Typical time spans between the husband's and the wife's retirement are defined by median durations between these transitions. We calculated these durations using survival methods that take censoring into account (Kaplan-Meier estimation, results not shown).

According to Hypothesis 1, the gender gap in household labor should not differ between pre-retirement and post-retirement stages in dual earner couples. The plots shown in Figure 1 support this hypothesis. Our relative measure for the gender gap – the husband's share – differed only minimally between these stages, regardless of the retirement sequence (bottom row of Figure 1). It is important to note, however, that the gender gap increased in absolute terms, as indicated by a comparison between the husband's and the wife's hours of housework in the pre-retirement stage and the post-retirement stage (top row of Figure 1).

Our remaining hypotheses pertained to the transitional phase connecting these stages. According to gender construction theories, the performance of housework should remain largely unresponsive to the shifts in market work that are associated with a phase in which both spouses retire consecutively from the workforce (Hypothesis 2a and Hypothesis 2b). According to theories of relative resources, the performance of housework should adapt to these shifts (Hypothesis 3a and Hypothesis 3b). The plots shown in Figure 1 lend qualified support to the latter hypotheses. Looking at the husband's share, shifts across the transitional phase of retirement are substantial, particularly if the husband retired first. In this case – defined for a husband who retired from a full-time job while the wife continued working full-time – his share of housework temporarily doubled from 20 % to 40 %, and reverted to the pre-retirement level after the wife's retirement.

It is important to note, however, that wives still performed a larger share of routine housework even while they acted as sole full-time earners. This point is further illustrated by the changes found for individual hours of housework across the transitional phase in which both spouses retired (top row of Figure 1): Full-time working wives performed approximately half an hour more of routine housework than their fully retired husbands. A further notable finding is that wives' retirement was generally associated with larger shifts in terms of absolute changes in hours of housework.

Our findings are robust against alternative specifications and estimation techniques. In additional analyses (not shown), we accounted for changes in income differences (pension and job incomes) between spouses. These analyses showed that income was a weak predictor for changes in housework and did not affect the pattern of findings. We also modified Models 3 and 4 by dropping the husband's share of market work and by interacting the husband's and the wife's hours of market work. These alternative specifications did not affect the results. Furthermore, we applied simultaneous equation techniques to account for the covariance between the husband's and the wife's changes in housework hours. The residual covariance was low and did not affect the results. In view of that, we adopted a more parsimonious fixed-effects estimation strategy.

Discussion

The aim of this study was to examine how transitions to retirement influenced the division of household labor in dual earner couples. Our analysis went beyond previous research, which had focused on traditional male breadwinner couples and considered only the husband's retirement (Leopold & Skopek, 2015; Caltabiano et al., 2015). In contrast to these studies, our findings pertain to contemporary and future cohorts of couples who approach retirement as dual full-time earners.

Based on the theoretical contrast between gender construction theories and theories of relative resources, we formulated hypotheses about stability and change in the division of household labor in dual earner couples, as both spouses retired from the workforce. First, we considered differences between the pre-retirement stage in which both spouses worked for pay, and the post-retirement stage in which both spouses had relinquished their worker roles. In this regard, both gender construction theories and theories of relative resources yielded identical predictions, albeit for different reasons. Consistent with these predictions, our analysis showed that the relative gender gap in household labor, measured by the husband's share of a couple's total hours of routine housework, did not differ between these stages. This result contrasts with the pattern reported for male breadwinner couples, which indicated a converging gender gap in household labor after retirement (Leopold & Skopek, 2015; Caltabiano et al., 2015). For the absolute gender gap measured in terms of men's and women's hours of housework, we even found an increase compared to the pre-retirement stage.

Second, we also considered the transitional phase connecting pre-retirement and post-retirement stages. Given the contrasting predictions for this phase, these analyses allowed us to adjudicate between both theoretical perspectives. The results suggest that theories of relative resources fit more closely with changes in couples' division of household labor observed across both spouses' transitions to retirement. Spouses who retired first performed more housework, whereas their partners performed less. This occurred irrespective of whether the husband or the wife retired first. On average, husbands who retired first doubled up on their share of housework, reaching a temporary peak of 40 %. Conversely, wives who retired first, substantially increased their housework hours, decreasing their husbands' share to a temporary nadir of 10 %. None of these shifts was permanent, however, as couples reverted to their previous shares of housework after both spouses had retired.

Consistent with theories of relative resources, these findings show that dual earner couples responded readily to shifts in market work by adjusting their division of labor in the domestic sphere. Our results corroborate previous research showing that retirement influences housework and, more generally, that couples adapt to changes in paid labor (Szinovacz, 2000; Shelton & John, 1996). Yet, although a focus on spouses' *relative* contributions and on *changes* in couples' division of household labor has yielded empirical support for theories of relative resources, this evidence must be weighed against findings *absolute* contributions and on *levels* of participation in housework. In pre-retirement as well as post-retirement stages, wives performed the lion's share of these tasks, net of differences in key resources such as time and income. Moreover, husbands performed less hours of housework even if they had already retired while their wives still worked full-time. These patterns cannot be explained by theories of relative resources alone.

In this regard, Szinovacz (2000, p. 89) has argued that an allocation of housework that is based on relative resources may reflect "lower-level transformation rules (…) subject to higher-level rules that include power structure and ideology." If these higher-level rules still take precedence over considerations of efficiency and time availability, relative resources remain a second-order explanation for couples' division of household labor over the life course. Gender construction theories still appear to explain more of the overall picture, although the shifts observed in the present study are not consistent with this perspective.

It is important to note, however, that our data were drawn from a relatively traditional context in terms of gender roles (DiPrete, 2002). This is particularly true for our analytical sample consisting of retirement cohorts from the past two decades. It is conceivable that future cohorts of dual earner couples are characterized not only by a less-gendered division of labor in pre-retirement years, but also by a stronger trade-off between hours of market work and hours of housework.

To substantiate this claim, future life course research on the division of labor in couples should focus on the spearheads of gender equality currently found in Scandinavian countries. In studies on the division of household labor, and time use in general, longitudinal findings on changes in later life are still scarce (Hank & Jürges, 2007; Leopold & Skopek, 2014; Solomon, Acock, & Walker, 2004; Kahn, McGill, & Bianchi, 2011). As demonstrated in the present study, a focus on older couples contributes not only to understanding the division of labor across the life course, but also to gain further insight into the mechanisms that produce, or reduce, gender inequality.

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TABLE 1. TIME-CONSTANT CHARACTERISTICS OF COUPLES

			M	*SD*	Range	Description / Survey question
Education	Wife	Low	0.18		0–1	Highest educational level.
		Medium	0.63		0–1	Low = lower or intermediate
		High	0.18		0–1	secondary degrees without post-
	Husband	Low	0.09		0–1	secondary training
		Medium	0.66		0–1	Medium = vocational training or upper
		High	0.26		0–1	secondary degree
						High = tertiary degree
Year of Birth	Wife		1948.96	9.44	1914–1967	
	Husband		1945.82	9.36	1916–1962	
Age at	Wife		61.06	3.75	45–70	Average age at retirement (if observed)
Retirement	Husband		61.49	3.76	50–74	
Year of	Wife		2002.50	6.94	1985–2013	Average calendar year of retirement
Retirement	Husband		2001.18	7.11	1985–2013	
Age at first observation	Wife		49.71	4.24	45–73	
	Husband		52.85	3.77	50–73	
Age at last	Wife		58.47	7.40	46–75	
observation	Husband		61.60	7.12	51–75	
Location		East	0.27		0–1	Residence in 1989 (i.e., before
		West	0.73		0–1	unification)
Retirement	Wife first		0.24		0–1	Observed sequence of spouses'
sequence	Husband first		0.20		0–1	retirement
	Jointly		0.04		0–1	
	Not observed		0.52		0–1	

Note: SOEP-long, version 30 (1985 – 2013). N = 3,071 married couples.

TABLE 2. TIME-VARYING CHARACTERISTICS OF HUSBANDS AND WIVES

		M	*SD*	Range	Description / Survey question
Routine housework	Wife	3.06	1.74	0–11	"What does a typical weekday look like for you? How many hours per day do you spend on the following activities?" Housework: washing, cooking, cleaning; from 1985 until 1990 asked jointly with errands, since 1991 separately; top-coded to 12 hours; "does not apply" coded to 0 hours.
	Husband	0.82	1.02	0–11	
	Husband's share (%)	20.38	22.62	0–100	
States of transition to retirement	No retirement	0.63		0–1	Information on retirement obtained from the employment calendar questionnaire in which respondents are asked about their employment status from January to December of the previous year; the transition to retirement was defined if the status "retirement / pension" or "early retirement" was reported within in the last year.
	Husband retires first	0.15		0–1	
	Wife retires after husband	0.10		0–1	
	Wife retires first	0.04		0–1	
	Husband retires after wife	0.05		0–1	
	Both retire jointly	0.03		0–1	
Years in retirement	All observations	1.89	3.53	0–23	Variable counting the years after the first retirement (of either spouse) was observed. Set to 0 for no retirement.
	In retirement	5.13	4.16	0–23	
Hours of paid work	Wife	3.93	3.69	0–16	Effective working hours (incl. overtime) per week divided by 5 (= daily hours); missing type "does not apply" coded to 0. Centered at 8 hours a day (full-time earner) in the regressions.
	Husband	5.43	4.56	0–16	
	Husband's share (%)	54.51	27.85	0–100	
No work	Wife	0.38		0–1	Dummy variables indicating if hours in paid work are 0 for wife, husband, or both.
	Husband	0.37		0–1	
	Both	0.24		0–1	
Health satisfaction	Wife	6.18	2.12	0–10	Categorical variable ranging from 0 (completely satisfied) to 10 (completely dissatisfied); z-standardized in the regressions.
	Husband	6.13	2.16	0–10	
Age	Wife	55.97	6.66	45–75	Husband's age, centered at age 59 in the regressions.
	Husband	59.09	6.31	50–75	
Survey year before 1991		0.09		0–1	Dummy indicating survey years before 1991; accounts for measurement differences in housework (see above); mean-centered in the regressions.
Household	Living space	107	42.21	8–470	Measured in square meters; mean-centered and rescaled to units of 50 square meters in the regressions; imputations for missing values provided by the SOEP group.
	Yard	.70		0–1	Flat/house has a garden (1 = yes, 0 = no); mean-centered in regressions.
	Child in household	.09		0–1	At least one child under 16 lives in the household (1 = yes, 0 = no); mean-centered in regressions.

Note: SOEP-long, version 30 (1985 – 2013). N = 3,071 married couples. N = 27,784 observations (couple-years).

TABLE 3. FIXED-EFFECTS REGRESSION MODELS FOR CHANGES IN ROUTINE HOUSEWORK ACROSS TRANSITIONS TO RETIREMENT

	Husband's hours				Wife's hours				Husband's share			
	Model 1a	Model 2a	Model 3a	Model 4a	Model 1b	Model 2b	Model 3b	Model 4b	Model 1c	Model 2c	Model 3c	Model 4c
Retirement												
H retires first	0.65*	0.54*	0.06	0.06	-0.24*	-0.12*	-0.07	-0.07	13.82*	11.13*	1.64*	1.62*
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.62)	(0.67)	(0.68)	(0.68)
W retires after H	0.41*	0.28*	-0.03	-0.03	0.19*	0.40*	-0.14*	-0.14*	6.55*	2.70*	-0.35	-0.38
	(0.04)	(0.05)	(0.05)	(0.05)	(0.06)	(0.07)	(0.07)	(0.07)	(0.74)	(0.91)	(0.95)	(0.94)
W retires first	0.10*	-0.00	0.03	0.04	0.55*	0.66*	-0.09	-0.09	-0.29	-2.77*	0.52	0.60
	(0.05)	(0.05)	(0.05)	(0.05)	(0.07)	(0.08)	(0.07)	(0.07)	(0.95)	(0.99)	(0.93)	(0.93)
H retires after W	0.59*	0.46*	0.10	0.11	0.32*	0.51*	-0.06	-0.07	8.88*	5.22*	1.34	1.54
	(0.05)	(0.06)	(0.06)	(0.06)	(0.09)	(0.09)	(0.09)	(0.09)	(1.02)	(1.16)	(1.18)	(1.17)
Both retire jointly	0.43*	0.30*	0.00	0.00	0.32*	0.50*	-0.07	-0.07	6.60*	2.99*	0.54	0.54
	(0.07)	(0.07)	(0.07)	(0.07)	(0.13)	(0.13)	(0.13)	(0.13)	(1.44)	(1.46)	(1.47)	(1.46)
Time												
Years in retirement		-0.02*	-0.01	-0.01		0.01	0.02*	0.01*		-0.36*	-0.11	-0.09
		(0.01)	(0.00)	(0.00)		(0.01)	(0.01)	(0.01)		(0.11)	(0.10)	(0.10)
H's age		0.02*	0.01*	0.01*		-0.02*	-0.04*	-0.03*		0.57*	0.32*	0.31*
		(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)		(0.06)	(0.06)	(0.06)
Work												
H's work share (%)			0.00	0.00			-0.00	-0.00			0.06*	0.06*
			(0.00)	(0.00)			(0.00)	(0.00)			(0.03)	(0.03)
H's work hours			-0.05*	-0.05*			0.02*	0.02*			-1.22*	-1.22*
			(0.01)	(0.01)			(0.01)	(0.01)			(0.12)	(0.12)
W's work hours			0.03*	0.03*			-0.14*	-0.14*			1.48*	1.47*
			(0.01)	(0.01)			(0.01)	(0.01)			(0.15)	(0.15)
W no work			-0.05	-0.06			0.51*	0.52*			-0.25	-0.32
			(0.04)	(0.04)			(0.08)	(0.08)			(0.83)	(0.83)
H no work			0.63*	0.63*			-0.04	-0.05			12.19*	12.15*
			(0.07)	(0.07)			(0.09)	(0.09)			(1.59)	(1.58)
Both no work			-0.27*	-0.27*			-0.19*	-0.19*			-7.61*	-7.62*
			(0.04)	(0.04)			(0.06)	(0.06)			(0.84)	(0.83)

(continued on next page)

TABLE 3 – CONTINUED

	Husband's hours				Wife's hours				Husband's share			
	Model 1a	Model 2a	Model 3a	Model 4a	Model 1b	Model 2b	Model 3b	Model 4b	Model 1c	Model 2a	Model 3a	Model 4c
Controls												
Children < 16				0.05				0.11*				0.42
				(0.03)				(0.05)				(0.64)
Living space				0.00				0.07*				-0.02
				(0.02)				(0.03)				(0.41)
Garden				-0.06				0.07				-1.68*
				(0.03)				(0.05)				(0.67)
H's health				0.02*				-0.00				0.29
				(0.01)				(0.01)				(0.18)
W's health				-0.04*				0.02				-1.00*
				(0.01)				(0.01)				(0.19)
Survey year < 1991	0.44*	0.51*	0.54*	0.55*	0.84*	0.76*	0.78*	0.77*	4.58*	6.23*	6.74*	6.78*
	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)	(0.07)	(0.06)	(0.06)	(0.67)	(0.72)	(0.67)	(0.66)
Constant	0.64*	0.72*	0.67*	0.67*	3.03*	2.95*	2.43*	2.43*	17.03*	18.83*	20.20*	20.17*
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.03)	(0.03)	(0.16)	(0.25)	(0.38)	(0.38)
Number of observations	27,784	27,784	27,784	27,784	27,784	27,784	27,784	27,784	27,784	27,784	27,784	27,784
Number of couples	3,071	3,071	3,071	3,071	3,071	3,071	3,071	3,071	3,071	3,071	3,071	3,071
R^2 within	.06	.06	.13	.13	.03	.04	.13	.13	.05	.06	.14	.14
R^2 between	.07	.06	.21	.21	.14	.10	.39	.39	.01	.00	.17	.17
R^2 overall	.07	.06	.16	.16	.08	.06	.26	.26	.03	.03	.16	.17

Note: SOEP-long, version 30 (1985 – 2013). See Table 2 for details on the variables. Cluster-robust standard errors in parentheses. * $p < 0.05$.