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Descriptive Finding

Fifty years of change updated: Cross-national gender convergence in housework

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Contents

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Abstract

BACKGROUND
Gendered trends in housework provide an important insight into changing gender inequality. In particular, they shed light on the debate over the stalling of the 'gender revolution'. Additionally, the gender division of housework is significantly related to couple well-being; disagreements over housework are among the major sources of marital conflict.

OBJECTIVE
The objective is to bring the evidence on gendered trends in time spent on core housework up to date, and to investigate cross-national variation in those trends.

METHODS
Using 66 time use surveys from 19 countries, we apply a random-intercept, random-slope model to investigate half a century of change in gender differences in housework (1961–2011).

RESULTS
There is a general movement in the direction of greater gender equality, but with significant country differences in both the level and the pace of convergence. Specifically, there was a slowing of gender convergence from the late 1980s in those countries where men and women's time in housework was already more equal, with steeper gender convergence continuing in those countries where the gender division of housework was less equal.

CONCLUSIONS
Our findings support the view that despite short-term stalls, slow-downs, and even reverses, as well as important differences in national policy contexts, the overall cross-national picture shows a continuing trend towards greater gender equality in the performance of housework.

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1. Introduction

In this paper we update previous cross-national evidence on the gender division of housework. Due to the usual gap that occurs between the collection of survey data and their public launch, most research on this topic published up to the end of the first decade of the 21st century – including some influential decade reviews (Bianchi and Milkie 2010; Lachance-Grzela and Bouchard 2010) – relied on research based on data on housework time from the years up to 2005–2006 at the latest (although Bianchi et al. 2012 updated the US time use data to 2010).

Using the Multinational Time Use Study (Fisher and Gershuny 2013), we bring the cross-national evidence up to date by including data from 10 additional surveys from 9 countries for the period 2005–2011 (Australia, Canada, Finland, France, Italy, Netherlands, Spain, U.K., and U.S.A.).

The study of housework is interesting for three main reasons. Firstly, it is a routine, repetitive and disliked activity, which means that the relative time spouses spend on housework has long been recognized as an important indicator of marital power (Davies and Greenstein 2013). We use core housework (cleaning, cooking, and clothes care) as our measure in these analyses because these are both the most disliked domestic labour activities and the most traditionally feminine. They have, therefore, been the ones that have been most resistant to change. Since the burden of responsibility for these activities traditionally falls on women, this can have negative consequences for their work-life balance and their sense of time pressure. Secondly, the division of housework is significantly related to couples' well-being. Disagreement over housework is one of the main sources of marital conflict (Ruppaner 2010; van der Lippe, Voorpostel, and Hewitt 2014). Between 36% (Portugal) and 90% (Finland) of married/cohabiting couples across Europe report having disagreements over housework (van der Lippe, Voorpostel, and Hewitt 2014). Thirdly, housework has been an important measure in the debate over the stalling or not of the 'gender revolution' (e.g., England 2010). The inclusion of more recent surveys in our analyses allows us to bring the cross-national evidence underpinning the 'convergence versus stall' debate in the gender division of housework up to the end of the first decade of the current century.

2. Data

Time use diary data is generally regarded as the 'gold standard' for the measurement of time spent in routine activities such as housework (e.g., Robinson and Godbey 1997; Bianchi, Robinson and Milkie 2006). The data we use comes from Multinational Time Use Study (MTUS), an international archive of cross-national time use surveys dating

from the 1960s to the current day. We use data from 19 countries between 1961 and 2011, chosen on the basis of their data series and quality. The sample is limited to adults aged 19 or older. Table 1 shows the full list of surveys included in the data, sample sizes, and average minutes spent on core housework by men and women.

Table 1: Minutes in core housework: Women and men by country and year

Country	Survey	Women-Mean	Men-Mean	Gender gap	Women-N	Men-N
Australia	1974	214	20	194	807	628
	1987	175	42	132	1489	1337
	1992	165	49	116	6583	5944
	1997	165	56	109	6834	6252
	2006	157	64	93	6618	5861
Belgium	1965	254	17	237	979	959
Canada	1971	194	34	160	1166	869
	1986	147	37	110	4933	3978
	1992	149	43	106	4584	3628
	1998	137	51	86	5557	4499
	2005	118	51	67	10335	8015
	2010	119	55	64	8325	6304
Czechoslovakia	1965	239	37	202	894	774
Denmark	1987	129	38	90	1643	1637
	2001	122	59	63	3286	3020
Finland	1979	155	29	126	4820	4438
	1987	145	40	105	6421	5855
	1999	128	48	80	4462	3860
	2009	125	57	68	3393	2987
France	1966	242	26	216	1533	1553
	1974	216	44	171	3542	2865
	1998	176	40	136	7496	6615
	2009	147	52	95	14445	12342
Germany	1965	242	17	225	2117	1570
	1991	200	55	145	11510	10234
	2001	150	49	100	15153	12866
Hungary	1965	271	23	248	1038	951
	1977	210	38	172	2563	2100
Israel	1991	166	24	142	2215	1824

Table 1: (Continued)

Country	Survey	Women-Mean	Men-Mean	Gender gap	Women-N	Men-N
Italy	1980	260	17	243	1113	1003
	1989	272	22	251	15207	13589
	2002	229	34	196	22031	19817
	2008	221	38	183	18014	16106
Netherlands	1975	195	34	161	4459	3213
	1980	188	37	152	9611	6489
	1985	173	45	128	11284	8799
	1990	156	46	109	12922	8484
	1995	134	45	90	11137	9128
	2000	134	55	79	6881	4732
	2005	125	45	80	6881	5775
Norway	1971	267	42	225	3120	2900
	1981	198	52	146	2866	2612
	1990	146	43	104	2966	2715
	2000	150	72	78	3509	3073
Poland	1965	215	32	183	1640	1223
	2003	189	54	135	21436	15733
Spain	2002	214	40	174	24883	21267
	2009	190	51	139	9437	8038
Sweden	1991	148	58	90	3525	3540
UK	1961	219	24	195	4687	4567
	1974	198	27	172	7475	6588
	1983	188	57	131	5334	3731
	1987	168	44	125	4692	4141
	1995	149	51	98	1034	864
	2000	155	65	90	9191	7565
	2005	122	48	74	2635	2149
USA	1965	224	29	195	1069	885
	1975	173	43	130	3853	3067
	1985	154	57	97	1433	1218
	1992	125	57	68	4685	3677
	1998	122	75	47	607	464
	2004	125	50	75	25365	19109
	2007	120	52	68	20110	15068
	2010	117	53	65	20798	15698
Yugoslavia/Slovenia	1965	277	23	254	1259	968
	2000	191	47	145	5627	4866

Notes: N-refers to number of diaries. Weights are applied to account for sampling design and day distribution.
Source: Multinational Time Use Study

In the analyses that follow, housework refers to the most disliked, routine, and traditionally feminine-defined housework activities of laundry and cleaning, food preparation, and cooking. Household chores that are traditionally masculine or gender-neutral, such as home maintenance, car repairs, or shopping, are excluded.

3. Methods

We first calculated average minutes spent on core housework by men and women across countries (see Table 1). We then applied multilevel models estimating the effect of gender, controlling for relevant socio-demographic factors. The baseline model is a random intercept model, where individuals are nested in surveys (country–year), showing the effect of being a woman on the time spent on core housework with no socio-demographic controls:

$$Y_i^0 = \beta_{j[i]}^0 + \beta^1 diaryday_i + \beta^2 gender_i + \varepsilon_i, \quad \text{where}$$

$$\varepsilon_i \sim N(0, \sigma)$$

$$\beta_j^0 = \gamma_0^0 + \xi_{0,j}, \text{ where}$$

$$\xi_j \sim N(0, \upsilon)$$

In a second model we add controls for demographic and socio-economic variables, namely age, educational attainment, employment and marital status, number of children under age 18 in the household, and the presence of a child under age 5 in the household. The third model is a random-intercept, random-slope model in which we allow the slope of being woman to vary across surveys (country–year). The model shows the extent to which the effect of gender on minutes spent on core housework varies across surveys:

$$Y_i^0 = \beta_{j[i]}^0 + \beta^1 diaryday_i + \beta_{j[i]}^2 gender_i + \beta^3 age_i + \beta^4 education_i + \beta^5 employment_i +$$

$$\beta^6 civicstatus_i + \beta^7 numberofchildren_i + \beta^8 childunder5_i + \varepsilon_i, \quad \text{where}$$

$$\varepsilon_i \sim N(0, \sigma)$$

$$\beta_j^0 = \gamma_0^0 + \xi_{0,j}$$

$\beta_j^2 = \gamma_2^0 + \xi_{2,j}$, *where*

$$\begin{pmatrix} \xi_{0,j} \\ \xi_{2,j} \end{pmatrix} \sim N(0, \epsilon)$$

We performed three main robustness checks on our modelling procedures to take account of variation across countries and time in survey design. As stated above, for our multilevel models we nested individuals within surveys (country–year). However, since some surveys collected more than one diary per respondent and more than one respondent per household, a five-level structure of diaries nested within individuals, nested within households, nested within years, nested within countries would more accurately reflect the hierarchical structure of the data. But five-level models create substantial estimation problems. We therefore replicated the analysis by randomly choosing one diary per individual in all countries. There were no noticeable changes to the results (a slight increase in the standard errors was not sufficiently large to affect levels of statistical significance for any of the coefficients).

Secondly, there were inevitably some surveys for which certain variables were missing (1.6% of cases were missing on one or more of the variables). These cases were list-wise deleted. We replicated the analysis by including them and coding them as missing. However, we did not find that this resulted in any substantive change in our findings (not shown but available on request).

Thirdly, there are some surveys for which certain variables did not exist. These surveys are included and coded as 'not available' for those variables. Limiting the sample to those surveys where we have full information does not change the results (refer to the supplied code for further details; results not shown but available upon request).

4. Results

Figure 1 shows average minutes spent on housework for women and men for all included countries over the half-century from 1961–2011 (the data on which this figure is based are also shown in Table 1). The green country markers show minutes spent on core housework (cooking, cleaning, and clothes care) for women in that country, while the blue country markers show the same for men. Two lines are fitted – the solid lines are from a linear regression on core housework with year as the only variable; the dotted lines show a LOESS smooth curve (local polynomial regression fitting) for the same model. Three general conclusions may be drawn from eyeballing this graph.

Firstly, women's core housework continues to decrease, and men's to increase – although less steeply than the decrease for women. Secondly, the gap between women and men in the performance of housework persists at the end of the first decade of the 21st century, although it is narrowing. Thirdly, there is substantial cross-national variation evident in the data for women, but much less so in those for men. This variation among women is interpretable in relation to existing public policy regime typologies, reflecting differences in gender ideologies and practice (e.g., Esping-Andersen 2009). For instance, it is clear that, right up until the end of the first decade of the 21st century, women from the Mediterranean countries (Italy and Spain) continued to do far more housework than women in other countries. Although the cross-national variation is much less for men, Italian men also stand out below the regression lines as consistently doing less housework than men from other countries.

There is little difference between the two fitted regression lines for men. By contrast, for women the LOESS curve dips in the middle of the period, then straightens out somewhat towards the end. Through not constraining the regression line to a linear form, it is possible to see that cross-nationally there was a period of steeper decline in women's housework time, lasting up to about 1990, followed by a flattening out of the curve. At the overall level this flattening lends support to the idea of a stalling in the process of gender convergence, a stalling that is primarily created by a levelling-off of women's housework time.

While there are features of interest in the regression lines shown in Figure 1, they do not take into account the possible effects of other demographic trends that may be related to overall-level changes in housework time, such as declining family size and increased variation in family structures, or of socio-economic variables such as educational level and employment status. For this reason we next present multilevel models taking into account the effect of various demographic and socio-economic variables.

The baseline Model 1 of Table 2 shows that being a woman is, on average, associated with more than two hours of extra housework per day. When we add the controlling factors into the model (Model 2), the coefficient of being a woman falls by only ten minutes. This decrease is entirely due to the socio-economic variables, especially employment status (the other variables are also in the expected direction and in line with the previous findings from the literature). Being highly educated and employed are negatively associated with minutes spent on core housework, and having children at home and being married or cohabiting as opposed to single increases time in the activity. Recent evidence shows some differences in the gender division of labour between cohabiting and married couples (Bianchi et al. 2014), but unfortunately most of the surveys we use do not allow us to distinguish these groups of couples.

Figure 1: Average minutes in core housework: Women and men (1961–2011)

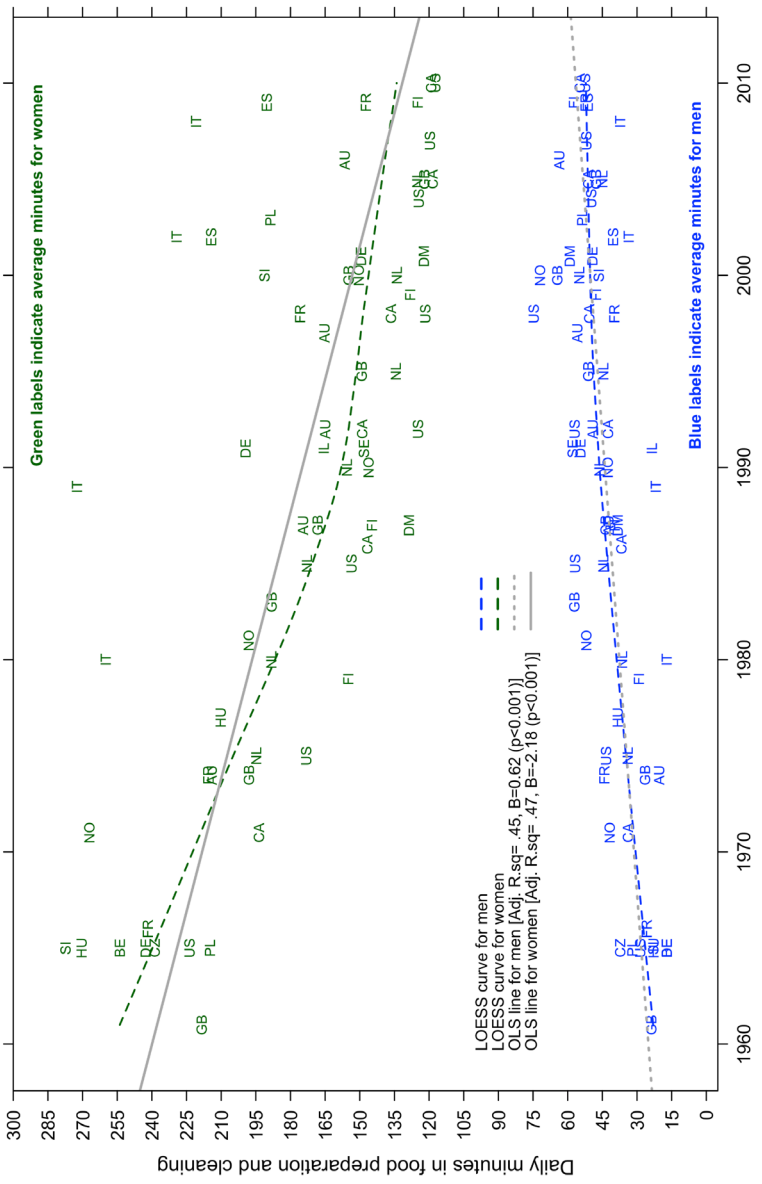


Table 2: Multilevel models of minutes spent on core housework

	Model 1	Model 2	Model 3
Woman	123.36***	115.82***	122.19***
	(0.24)	(0.24)	(5.98)
Not in paid work		54.20***	49.57***
		(0.28)	(0.28)
Completed secondary education		–9.90***	–8.17***
		(0.30)	(0.29)
Above secondary education		–16.05***	–15.56***
		(0.34)	(0.33)
Single		–25.99***	–25.06***
		(0.28)	(0.27)
Has one child under 18		7.68***	9.03***
		(0.37)	(0.36)
Has two children under 18		15.96***	17.37***
		(0.40)	(0.40)
Has three or more children under 18		23.00***	24.79***
		(0.55)	(0.54)
Has a child under age 5		3.03***	3.48***
		(0.40)	(0.39)
Weekday diary	–4.46***	–4.33***	–4.34***
	(0.25)	(0.24)	(0.23)
Age: 31–40		26.68***	26.33***
		(0.38)	(0.37)
Age: 41–50		37.78***	37.72***
		(0.40)	(0.39)
Age: 51–60		40.06***	41.25***
		(0.41)	(0.40)
Age: 61–70		28.69***	31.76***
		(0.47)	(0.46)
Age: 71+		10.83***	14.77***
		(0.52)	(0.51)
Constant	50.72***	20.16***	16.54***
	(2.43)	(2.18)	(1.84)
Variance components			
Individual level			
Intercept	108.24	102.83	100.31
Woman			48.51
Country-year level			
Intercept	19.57	17.15	14.32
N	821604	821604	821604
AIC	10029375	9945061	9904598

Notes: *** p<.01; ** p<0.05; * p<.10

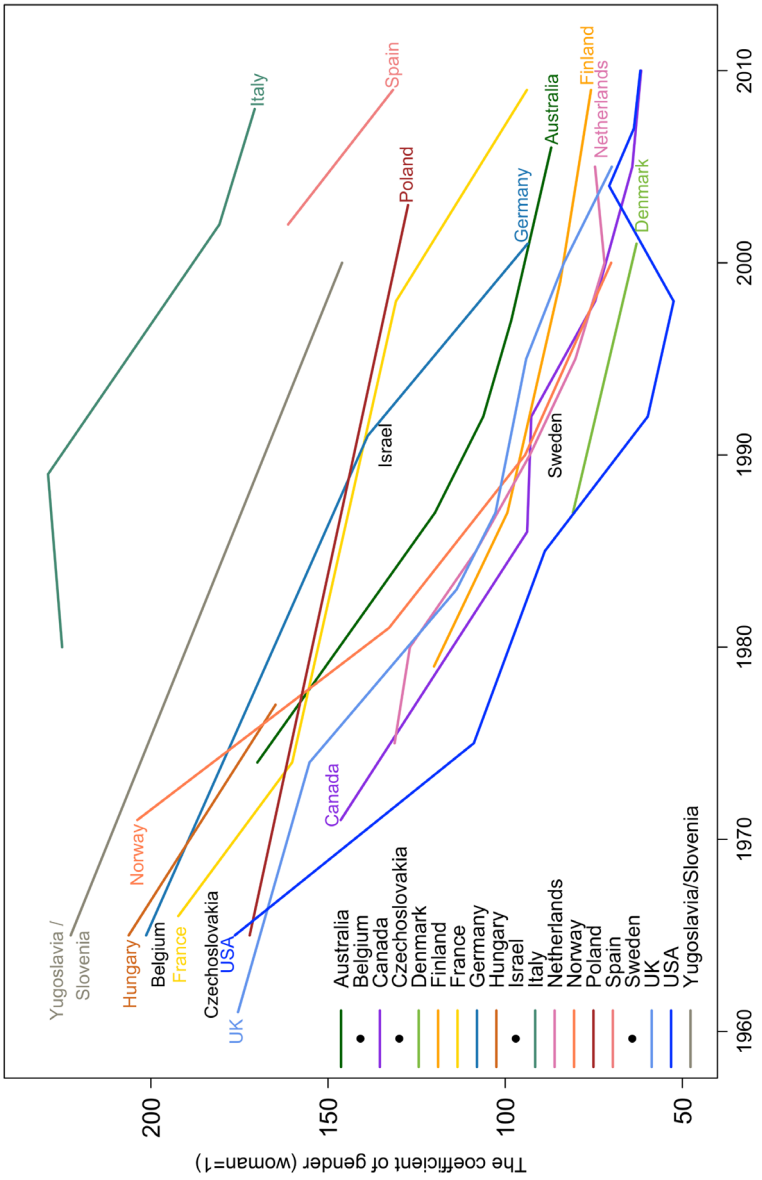
As the main objective of the paper is to show the changing effect of gender on core housework across time and countries, in the final model of Table 2 (Model 3) we allow

the slope of gender to vary by survey (country-year). As expected, the gender gap in housework varies substantially across both countries and time. In order to more clearly interpret the findings of this final model, in Figure 2 we plot the coefficient of gender for each survey (country-year). This graphical presentation of the pattern of gender convergence in housework on a country-by-country basis allows us to discern some important cross-national variation, net of other socio-demographic factors. This variation can be observed both in the level and in the pace of change over time. Most obviously, in relation to level, it is clear that in the countries of Southern Europe (Italy and Spain), the ex-Soviet bloc (Poland and Yugoslavia/Slovenia), and continental Europe (France and Germany) women did a relatively high share of the housework across most or all of the 50-year period. An interesting distinction is also evident in the different pace of change between these countries and others in which the gender division of housework has been more equal across the period. This distinction is in line with the findings of Geist and Cohen (2011), whose analysis of International Social Survey Program data between 1994 and 2002 showed that more traditional countries move faster towards egalitarianism in routine housework over time.

While the trends for the countries referred to above (where the gender division of housework is more unequal) show steep declines in that inequality in the later part of the period covered, most of the lines for those countries that cluster in the lower part of the graph (where the gender division of housework is more equal) tend to be more curvilinear in shape: steeper in the earlier part of the period, and flattening off gradually towards the later part. This slowing in trajectory occurs approximately from the late 1980s – well before the mid-point of the observed period. This shape of curve is characteristic of the Anglophone countries (Canada, Australia, United States) and some Northern European countries such as Finland and the Netherlands (the lines for the United Kingdom and Norway maintain a more consistent trajectory, but their final levels are more in line with this second group of countries than with the first.) The slowing in convergence is particularly clear in the case of the U.S.A., where the predicted line representing the relative effect of being a woman dips to a low in the late 1990s before increasing again in the direction of greater inequality. (While this recent movement in the US in the direction of greater inequality has been referred to as evidence for a stall in gender convergence, we would note that several sources over the past decade have questioned the results of the US data from the 1980s and 1990s – see, for example, Allard et al. 2007; Bianchi et al. 2012; Egerton et al. 2005).

In any event, the outcome of this variation is a graph that appears to consist of two broad groups of countries: 1) those with high levels of inequality of housework, experiencing relative steep declines in that inequality right up to the end of the 50-year period covered by the graph; and 2) those with lower levels of inequality, where the trend in the direction of greater equality appears to be slowing.

Figure 2: Gender gap in minutes spent on housework



5. Conclusion

Over a 50-year period there appears to have been a general movement in the direction of gender convergence in housework, but with significant country differences in both the level and the pace of that convergence. Specifically, the evidence suggests a slowing of gender convergence from the late 1980s in those countries where men and women's time in housework is more equal, whereas in those countries where the gender division of housework is relatively unequal there is greater gender convergence in the later part of the period studied. The LOESS curve superimposed on the data shown in Figure 1 suggests that this slow-down for the more gender-equal countries primarily results from a levelling in the rate of decline in housework time for women. There is less change in the overall trajectory of men's housework time, which displays less variation between countries than in the case of women. As has often been suggested, this slow-down supports the idea that there may be limits to the equality in housework that can be achieved under current social policy, management culture, and gender ideology constraints (see, for example, Bianchi et al. 2012; England 2010; Esping-Andersen 2009; Kan, Sullivan, and Gershuny 2011). However, we agree with Bianchi et al. (2012) that the slowing in convergence over recent decades in many countries does not imply an absolute ceiling effect. In Nordic countries, where social policy and gender ideology are more conducive to gender equality, it seems that the move in the direction of gender equality continues – although perhaps at a slower pace (e.g., Evertsson 2014; Neilsson and Stanfors 2014). Moreover, there is evidence for the increasing adoption of more gender egalitarian attitudes across European and Anglo Saxon countries (e.g., Braun and Scott 2009; Pampel 2011) and for a catch-up effect in fathers' contributions to domestic work and childcare in very low-fertility countries (Sullivan, Billari, and Altintas 2015). The data shown here support the view that despite short-term stalls, slowdowns, and even reverses, as well as important differences in policy contexts, the overall picture is of a continuing move towards greater gender equality in the performance of housework (see also Stanfors and Goldscheider 2015).

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