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## **Couples' relative education and the division of domestic work in France, Spain, and the United States**

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### **Abstract**

The reversal of the gender gap in education and the emergence of couples in which the woman has a better economic or education status than her partner have been key shifts in family dynamics in recent decades. One of the consequences of this phenomenon is a more egalitarian division of tasks within couples, which is derived from the stronger resources of more educated women to negotiate roles. In this paper, I explored the division of unpaid domestic work in couples in France, Spain and the US, taking into account the level of education and the income of both members of the couple.

The results show that hypogamous couples by education are more egalitarian than other types of couples, but the reversal of the gender gap in education has a relative effect on the division of housework. In that sense, better status in terms of earnings supposes more equality within the couple. However, gender inequalities persist even when the woman makes more money than her partner. A higher level of income is not sufficient to obtain more equality within the household, and other normative changes must be implemented in societies.

**Keywords:** gender, female status, education, time use, unpaid work

L'inversion du fossé entre les sexes en matière d'éducation et l'émergence de couples au sein desquels la femme a une meilleure éducation et un meilleur statut économique que son partenaire est une des clefs pour comprendre les dynamiques familiales de ces dernières décennies. L'une des conséquences de ce phénomène est la division plus égalitaire des tâches au sein des couples due aux meilleures compétences d'une femme plus éduquée, capable de négocier son rôle.

Dans cet article, j'analyse la distribution des tâches non rémunérées au sein des couples en France, en Espagne et aux États Unis, en tenant compte du niveau d'éducation et des revenus des deux membres du couple. Les résultats montrent que les couples hypogames par éducation sont plus égalitaires que d'autres types de couples, mais l'inversion du fossé entre les sexes du point de vue de l'éducation a un effet relatif sur la distribution des tâches domestiques. En ce sens, un meilleur statut en termes de revenus suppose plus d'égalité dans le couple. Cependant, l'inégalité des genres persiste même quand la femme gagne plus d'argent que son partenaire. Un plus haut niveau de revenus n'est pas suffisant pour obtenir plus d'égalité au foyer. D'autres changements normatifs doivent être mis en œuvre dans les sociétés.

Mots Clés : genre, statut de la femme, éducation, usage du temps, travail non rémunérée.

## Introduction

Gender relations are currently at the epicenter of theoretical discussions about the transformation of the family in Western countries (Arpino et al., 2015; Brinton and Lee, 2016; Cherlin, 2016; England, 2010; Esping Andersen and Billari, 2015; Goldscheider et al., 2015). Recent works point to a more symmetrical distribution of productive and reproductive roles between men and women as the necessary catalyst to raise the low fertility levels into which many developed countries have settled in the past three decades. One of the key factors of this gender revolution is that in almost all developed countries, women are now achieving higher levels of education than men, and this educational superiority is affecting partnership formation. Accumulating more human capital increases a person's opportunity cost of being responsible for the reproductive tasks of the household, as the traditional model predicts. In this new paradigm, gender roles and the distribution of tasks within couples must change, but how much?

The primary aim of this paper is to explore how the extended female's educational advantage in heterosexual couples affects the division of roles in the couple, and the slow but sustained increase in the number of women with an economic advantage in the household affects the allocation of time between men and women, particularly regarding domestic work. Will the female's educational advantage accelerate the completion of the gender revolution by closing the domestic labor gap between men and women?

Using data from time use surveys in France, Spain and the United States, this paper will explore the relationship between couples' level of education, earnings and allocation of time to analyze

whether the better human capital achieved by women is reflected in a more egalitarian division of time. The three countries in the study belong to different welfare state regimes and show considerable cultural and social differences as well as gender relationships and attitudes. The availability of samples for two periods of observation for each country will also allow us to study the evolution of these differences over time.

### **The reversal of the gender gap in education and family dynamics**

In recent decades, there has been a dramatic increase in the level of education of the population across the globe. Illiteracy rates have decreased to almost zero in most developed countries and have decreased to lower levels in developing countries. In conjunction, the proportion of the population with a university degree has grown considerably, and in some countries, it represents more than 50% of the population 25-34 years old (OECD, 2019). This increase has been even more extraordinary among women, who now achieve higher levels of education than men in most countries (Esteve et al, 2012; Esteve et al, 2016; Van Bavel and Klesment, 2017). In most countries, a reversal of the gender gap in education (RGE) has occurred that should have consequences for union formation and family life because it represents a complete breakdown regarding the traditional pattern in which men are advantaged in the marriage market. Traditional marriage practices in which men marry down in education are unlikely to persist for long since women have gained an educational advantage (Esteve et al 2016). This new paradigm was expected to go in two main directions regarding union formation: nonmarriage or changes in marriage patterns. However, most recent evidence seems to indicate that reversal of the RGE is not associated with an increase

in the likelihood of singlehood, and education has become positively associated with union formation for women (De Hauw et al., 2017; Jalovaara, 2012; Perelli-Harris and Lyons-Amos, 2016). Conversely, most recent evidence indicates that changes in marriage patterns have occurred and mate preferences have moved towards gender symmetry (Van Bavel et al, 2018). As a result, for the first time in history, there are more couples in which women have a higher level of education than their male partner (hypogamy) than vice versa (hypergamy).

However, how different are these “new” patterns compared to the “old” ones? In early studies, RGE was expected to increase couples’ instability and relative divorce risks for hypogamous couples compared to hypergamous couples (Bumpass et al., 1991; Goldstein and Harknett, 2006; Heaton, 2002; Teachman, 2002). However, more recent studies show that this difference has disappeared, and the association between wives’ educational advantages and union dissolution no longer exists in more recent cohorts (Grow et al. 2017; Schwartz and Han, 2014). These new trends suggest that this new family arrangement has been accepted and norms and family values have changed towards more flexible and egalitarian partnerships (Schwartz and Han, 2014).

The more egalitarian values in new couples’ arrangements should also be reflected in a more egalitarian distribution of gender roles in the household. Cross-country comparison shows an association between RGE and egalitarian attitudes, although it is not clear if the association is casual (Esteve et al, 2016). Women’s education advantage is also associated with couples in which the woman earns more than the man and with a higher probability of the woman being the main breadwinner in the household. In that sense, the economic or exchange model predicted an inverse association between potential earnings and time spent on housework,

which, in terms of education, means that women with more education than their husbands will focus more on paid work and that men will perform more housework (Gupta, 2007; Sullivan, 2011).

However, females' educational advantage does not always translate into a higher level of income (Van Bavel, 2012). Women's education expansion has occurred mainly in fields related to education, health, and social sciences, while they are underrepresented in engineering and computer science, which usually open the door to more lucrative and powerful positions in the labor market (Van Bavel, 2012; Vincent-Lancrin, 2008; Mandel and Semyonov, 2006).

### **The division of housework as a measure of gender equity within the couple**

Time spent on housework has traditionally been considered a good indicator of the distribution of roles and gender equity within the couple and provides insights into power and equity in intimate relationships (Bianchi et al, 2000; Coltrane, 2000; Davis and Greenstein, 2013; Sayer, 2005). Housework has been considered a symbolic field in which males and females display their gender identities (West and Zimmerman, 1987). Another premise when studying housework is that it is viewed negatively by both women and men, and individuals attempt to reduce the time spent in these tasks (Shelton and John, 1996). According to the traditional model, housework has been a field dominated by women, who had the most disadvantageous position in the negotiation of roles and were responsible for most of the tasks devoted to housework chores.

Housework and the distribution of household labor have been widely studied since the 1960s (Davis and Greenstein 2013; Blood and Wolfe, 1960). Researchers have established two main theoretical frameworks to explain the distribution of housework within couples: resource-based and social psychological symbolic (Davis and Greenstein, 2013). In addition, the resource-based framework can be split into two perspectives. On the one hand, the time availability perspective predicts that the member of the couple who spends more time in paid work will have less time spent on housework duties, and consequently, the other member will spend more time on housework (South and Spitze, 1994). Traditionally, men have been more involved in paid work, which justifies a lower devotion of time to housework. On the other hand, the relative resources perspective lies in the new economics of the household approach, which considers the most efficient organization of the gender specialization of roles within the couple such that the member of the couple with more resources will perform less housework (Becker, 1981; Coltrane, 2000; Bianchi et al. 2000). In that sense, earnings and status represent the potential for exercising power and negotiating the distribution of roles within the couple (Esping Andersen and Schmitt, 2020).

Related to earnings, as predicted by the relative resources theories, previous literature showed a negative association between women's relative earnings compared to their partner and the time they spend on unpaid work, but this pattern applies only until the point that women contribute to half of the household income. Above this point, there is a "compensatory gender display," and women tend to do a higher share of housework when they contribute more to the household's income (Altuzarra et al 2020; Baxter and Hewitt, 2013; Bittman et al 2003;



Brines, 1994; Sevilla et al 2010). The main explanation for this deviance is that couples adapt their behavior when their gender roles are not as traditionally expected.

The social psychological symbolic frameworks are based on gender theories that establish that males and females behave according to what is expected for their gender stereotypes (West and Zimmermann, 1987). As mentioned above, housework is considered a female field, which means that women have to do most of it and men avoid it. Attitudes, values, beliefs and expectations influence the performance of housework, and the performance (or lack of performance) of housework is a way of reaffirming the individual's masculinity or femininity. As explained in the previous paragraph, when traditional gender expectations are broken, the gender display emerges to neutralize nonnormative behavior (Gupta, 2007; West and Zimmerman, 1987). Again, when the woman has a higher level of earnings, she will compensate for this deviance by doing more housework, while the man might refuse to do more housework to reinforce his masculinity (Bertrand et al 2015; Sullivan and Gershuny, 2016; Tichenor, 2005).

Some authors have pointed out a certain convergence in the distribution of time among men and women in recent decades (Kan et al, 2011; Sayer, 2016). In that sense, the gender gap in housework has decreased in most Western societies. Women have reduced their time spent on housework, while time spent on housework by men has slightly decreased, although the amount is far from the decrease among women (Kan et al 2011; Altintas and Sullivan, 2016; Sullivan et al 2018). However, an important part of this decrease is due to technological advances and changes in habits (more precooking, more relaxed standards of cleaning, etc.) that have reduced the total amount of time spent on housework by families, and the

externalization of tasks has also been important (Gershuny et Harms, 2016; Leopold et al 2018). Nevertheless, from the point of view of the relative resources and bargain theories, the improvement in women's human capital and their higher implications in the labor market have something to say in this convergence because the traditional allocation of time does not make sense. A female's educational advantage has increased the opportunity cost of maintaining the traditional division of housework, and a new balance in the distribution of domestic work is necessary.

### **Objectives and context of the study**

The objective of this paper is to explore the relationship between RGE and the division of household tasks as a measure of gender equity in three countries with different cultural and social norms and policy contexts. The main research question I seek to answer is whether couples for which the woman has an educational advantage are more egalitarian. If they are more egalitarian, I want to explore at what point and if there are other factors that mediate this relationship. In that sense, the study will also consider the level of income as a mediator in the relationship since the educational advantage of women does not always translate into a higher level of income.

The three countries in our study are the United States, France and Spain. The United States is classified as liberal, France as conservatist and Spain as familialist in welfare state regime classifications (Arts and Gelissen, 2002; Esping Andersen, 1999). According to these classifications, the United States is characterized by low involvement of the state in providing services (Anxo et al., 2011). Conversely, in France, policies aim to preserve the existing

statuses and traditional norms, and in contrast to other conservatist countries, the state has the responsibility of providing social support, such as childcare (Anxo et al, 2011; Fagnani and Letablier, 2005). In the case of Spain, family support is a key factor in balancing work and family (Arts and Gelissen, 2002, Esping Andersen, 1999). The three countries also differ in gender norms and the social acceptance of new gender attitudes, especially regarding the timing of these new changes. In that sense, in Spanish society, traditional gender roles predominated much later, and some reminiscence of the old model is still present (Sevilla-Sanz, Giménez-Nadal and Fernández, 2010). Spain also has lower female employment rates than the other countries.

Another objective of the study is to explore changes over time. Education expansion and RGE have occurred in almost all societies, but the timing is different depending on the country. Although the time span of this study only covers approximately ten years and the main changes in Western countries occurred in an earlier period and not the period covered, the data available will allow for an exploration of the female's educational advantage in each country, whether there are different speeds in the change, and whether there is a convergence among countries. We have to account for the fact that access to higher education is more common in the United States, and the impact of females' better position in education has been more extended. Therefore, we expect differences in countries such as Spain in which the population's access to higher education happened later, and the changes attributable to the female's educational advantage might be in earlier stages.

## **Data and methods**

In this study, I use data from time use surveys conducted in France, Spain and the United States in 2000 and 2010. Time use surveys are the most reliable data source for collecting time use information (Sevilla, 2014). The information is gathered by means of a diary of activities in which the respondents report all their activities over 24 hours. In addition to the diary's information, socioeconomic information on the participants, their households and the other members of the household is also collected.

The surveys for France were carried out in 1998-99 and 2009-10, for Spain in 2002-03 and 2009-10 and for the US in 2003 and 2010. The selection of countries is both strategic and practical. As described in the previous section, I selected countries that have different social, cultural, and policy environments to investigate whether time is spent similarly or differently in varying contexts. However, the selection is also based on the availability of and access to data. In that sense, the availability of data on individual earnings is mandatory in our analysis, and this information is not always collected in the surveys or is sometimes collected but only at the household level. The data I use come from the Multinational Time Use Survey ([mtusdata.org](http://mtusdata.org)), but it has been supplemented with variables available in the original datasets of the surveys. The MTUS-X is a collaborative project between the Maryland Population Center, the Centre for Time Use Research and the Minnesota Population Center. The project harmonizes original data from time use surveys from all over the world and disseminates the harmonized dataset with a friendly system. However, not all of the variables for the original samples are included in the MTUS datasets, and not all of the original categories are available. For that reason, I need to add a few variables from the original datasets, for example, the individual's income. French and Spanish original data were collected from the National Statistical Institutes, INSEE and INE, respectively, while in the United States, the survey was

conducted by the Bureau of Labor Statistics. The European surveys have not established periodicity, and I have selected the most recent surveys available for each country. For the United States, surveys have been carried out annually since 2003, but I have selected the years in which data are available for the other countries for comparative reasons.

The sample selection consists of respondents of working age (16-64 years old) who live with a partner of different sexes. For each respondent, I cross his/her sociodemographic information and the information on his/her partner. The main variables in the analysis are the level of education and the income of the individuals. Respondents' original education and earnings from each survey were harmonized into four categories to make them comparable over countries and time. Educational attainment has been recoded into the following categories:

- 1 Secondary or less
- 2 HS and vocational
- 3 1st cycle university and superior vocational
- 4 College degree or higher

For income, I have to apply some imputations because there were missing values in all samples, given that approximately one-third of the respondents did not provide their individual earnings. I used an automatic imputation procedure in SPSS to impute missing earnings that uses the occupation, gender, age, and education of the respondent as predictor variables (Heymans and Eekhout, 2019). I have done some robustness checks to test if the missing values follow any concrete pattern and I haven't found any characteristic with a significant difference in the proportion of missing values. In this case, the harmonized categories were created

according to the different salary levels in each country in the study. The following categories were established for each country:

1 Very low: less than 500€ per month for Spain and France and less than \$250 per week for the US.

2 Low: 500-1250€ per month for Spain, 500-1500€ per month for France, and \$250-600 per week in the US.

3 Middle: 1250-2000€ per month for Spain, 1500-2500€ per month for France, and \$600-1000 per week in the US.

4: High: more than 2000€ per month for Spain; more than 2500€ per month in France, and more than \$1000 per week in the US.

Using these four categories for each member, couples are classified into four groups by education and income levels.

- Homogamy low: Both members have the same level, and the level is the lowest
- Homogamy high: Both members have the same level, and it is not the lowest level
- Hypergamy: The man has a higher level
- Hypogamy: The woman has a higher level

For each respondent, I also compute the time spent on unpaid domestic work, which is the main dependent variable of the study. This work includes activities such as cooking and food preparation, setting tables and washing/putting away dishes, cleaning, laundry, ironing,

clothing repair, maintaining home/vehicle tasks, purchasing goods, and other domestic work tasks. In the case of Spain and France, both members of the couples filled a diary. For that reason, although diaries are independent, the couple's information is the same and, thus, is repeated. To avoid duplicating couples, I randomly select one diary. Table 1 shows a description of the final sample.

Table 1 about here

The methodology applied consists of descriptive estimates and takes as an independent variable the couples' characteristics by education and level of income and as a dependent variable time spent in housework by the member of the couple who completed the diary. First, I explore the distribution of couples by the level of education and earnings separately. In the second step, I analyze the time spent on domestic work by men and women in each category. The difference between the mean time spent by women and the mean time spent by men provides a measure of the gender gap in domestic work. In the final step, I explore the gender gap by taking into account the combination of couple characteristics by level of education and income. Additionally, I run a multivariate model as a robustness check. The OLS regression multivariate model additionally uses the control variables children status (with or without children), type of union (cohabitators or married), and day of the week (weekday or weekend)—variables that might affect the allocation of couples' time. I use the model to compute the predicted means of time spent on housework by women and men by country, year, and a combination of couples' education and income characteristics. I use the models to compute the

gender gap as the differences between the predicted time on domestic work for women minus the predicted time on domestic work for men.

In all analyses, I explore differences between the three countries and at the two moments of observation to explore cross-country differences and trends in the phenomenon over time.

## **Results**

### *Couple characteristics in France, Spain and the US*

Table 2 shows the main characteristics of the couples in the final sample used in the study. The age of the respondents is slightly higher for men, in line with the usual pattern of unions in which the man is approximately two years older than the woman. We can also see that the age of the respondents also increased between the two periods of observation, which could be a consequence of the delay in the entry of union currently observed in most Western societies (Mensch et al, 2005). General characteristics also show that the proportion of cohabiters is higher in France than in the other two countries. Approximately one out of five French couples cohabit, more than double that of the two other countries. These percentages did not change much between the two periods, except for Spain, where the proportion of cohabiters almost doubled during the period of observation.

The proportion of couples with children under 18 in the household has not changed over time, and it is similar in the three countries, at slightly over 50%.



Table 2 about here

Differences between the countries are higher when we consider the employment status of the members of the couples. In France and the US, the proportion of dual-earner couples is approximately 60% in both periods of analysis, with an increase of 5 points for France and a decrease of 4 points for the US. In Spain, the proportion of dual-earner couples increased almost 7 points between 2002 and 2009. In the first observation, couples in which the man was the only employed member were the majority in Spain, although this group diminished considerably. In the three countries, the proportion of couples in which only the woman works also increased, reaching approximately 10 percent in 2009-10.

The distributions of couples by education and earnings are detailed in figure 1. We can observe that women's advantage is much more significant in terms of education, which means that the advantage of higher education does not always translate into a higher level of income. We can also observe that changes over time are not significant in France or the United States, but they are significant in Spain, especially in the distribution by education. In Spain, there has been a considerable increase in couples in which both members have higher education and couples in which the woman has more education than her partner. Moreover, in Spain, couples in which both members have low education are still significant and represent almost one out of three couples, a much higher proportion than in the other two countries, but this figure decreased by 12 points due to the general access to higher education of the younger generations. In that sense, access to higher education is much more extensive in the US, and in more than half of US couples, both members are in the upper part of the scale. Couples in which both members

have higher education or the woman has a higher level of education than the man represent almost 80% of American couples. In France, the proportion of both members with higher education decreased by 2.5 points over the study period, but hypogamy increased by the same amount.

Regarding income, the proportion of couples in which both members reported high levels was approximately 20% in all three countries. This estimate is especially interesting in the US because it represents a much lower percentage than that for both members of the couple having higher education. In general, the most predominant couples in terms of income are those in which the man has a higher level. Although the proportion of this group decreased in the three countries over the study period, they still represent approximately half of the couples in Spain and the US and 43.8% in France. Conversely, couples in which the woman has higher earnings (hypogamy) are still low, especially in France and Spain. Couples in which the woman has higher earnings than her partner represent half of the couples in which the woman has more education in France and Spain. This proportion has increased, especially in Spain, where it has increased by almost 5 percentage points; however, it is far from the proportion of couples in which the man earns more.

Figure 1 about here

Table 3 explains why the distribution of couples by education and earnings differs. The percentages correspond to the distribution of couples by earnings level for each education level

in each sample. Estimates with a gray background are for couples in which the members are in the same category for both dimensions.

Table 3 about here

The estimates show that women's advantage in education (hypogamy) is translated into a low proportion of women with an advantage in earnings. We can see that this proportion has improved in the three countries, but the percentage of couples who are hypogamous in education but hypergamous in terms of income is even higher than the proportion of couples who are hypogamous in both characteristics in the total sample. In France in 1998, only 18% of hypogamous couples in education were also hypogamous in earnings, while 42% were hypergamous in terms of earnings. These figures remained similar in 2009. Lower estimates are observed in Spain in 2002, where in only 13% of the couples in which the woman has more education does the woman also have higher earnings. In contrast, in more than half (52%) of couples who were hypogamous in education, the woman had a lower income. In the case of Spain, we observed a slightly better situation in 2009, where hypogamy in both categories rose to 21%, while the combination of hypogamy by education and hypergamy by earnings diminished to 44%. In the US, the difference between the two groups is lower, and hypogamy in both characteristics is observed in approximately one-third of the couples, a percentage that has not changed much over time.

For most couples in which the man has better education (hypergamy), the man also earns more; this was observed in almost two-thirds of hypergamous couples in terms of education in Spain and the US for both periods. In France, this scenario represented 58% in 1998 and decreased

to 49% in 2009. Couples in which the man has a better education but the woman has a better salary are very rare, representing only 7% of couples who are hypergamous in education in Spain.

For the total sample of couples in which both partners have a high education, the man earns more in approximately half of the couples. Both partners with a high level of income are also observed in only one-third of couples in France and Spain and in approximately one-fifth of couples in the US.

*Gender gap in couples in terms of the education and earnings of their members*

The gender gap in housework by couples' education and earnings is displayed in figure 2. The first conclusion of the figure is that the gender gap is positive in all groups, which means that women always spend more time than men on housework. Another aspect to take into account is that the gender gaps are in general higher in the education graph than in the earnings graph, which suggests that earnings give more resources and potential to the negotiation of roles and, as a consequence, a more symmetrical allocation of domestic work.

Figure 2 about here

The graph for education shows that couples in which both members have low education are the least egalitarian in all the samples, while hypogamous and homogamous couples with high education are the most egalitarian. Hypergamous couples fall between these two groups.

Spanish and French couples have seen a significant reduction in the gender gap in all categories, while changes over time are very low in the US. Thanks to this evolution over time, French couples were the most egalitarian in the most recent observation, while Spanish couples were the least egalitarian, although the gender gap decreased in all groups.

Regarding earnings, the most egalitarian are the couples in which the woman earns more. The gender gap in time spent on housework in this type of couple has decreased in all countries, and it is less than 30 minutes per day in all countries in the most recent observation. Contrary to the observations by education, gender gaps in homogamous high-income couples are higher in all countries. Except for France, where the gender gap in time spent on housework these types of couples has decreased by approximately 40 minutes, the reduction of the gender gap has been very low between the two periods of observation, and as a result, this gap remains much higher than that for hypogamous couples, especially in Spain, where it is one hour and 35 minutes. On the other hand, the least egalitarian couples are hypergamous and homogamous couples with low income. Gender gaps in the time spent on housework in these groups have diminished, but they are still approximately two hours in France and the US and slightly over three hours in Spain.

#### *Gender gap in couples by the combination of the education and earnings of their members*

In this section, I analyze the gender gap for each combination of education and income categories. First, we have to take into account that, as before, the proportion of each combination is not the same, and the combinations in which the man has a better position in

both variables are more common, while those in which the woman is in a better position are rarer. Appendix 1 contains the distribution of the combinations in each sample. percentages in gray correspond to couples with equal categories in income and earnings. In France, the most common combination is being in the hypergamous category in terms of both education and earnings (16% in each year). In the US, couples in which both members have high education but the man has a higher level of income are the most common. A similar situation is observed in Spain, but in this case, both have low education. This difference reflects the different stages of education expansion in Spain and the US, with the latter country having a much higher proportion of highly educated individuals.

Figure 3 shows the gender gap in unpaid work by each combination and each sample. First, we must mention again that all gender gaps are positive, which means that women always do more housework, regardless of their level of education and income. Second, we find a decrease in the gender gap in France and Spain between the two periods of observation, while in the US, the gender gaps have increased in categories such as couples in which both members have low education and low income. Except for low-educated couples, it seems that there is a certain convergence between countries in the 2010 estimates. Third, couples in which both members have low education (first column in each square) have higher gender gaps. However, if we look at the rows, higher gender gaps are observed in couples in which the man earns more, and these gaps are the lowest in hypogamous couples.

Focusing on 2010, the lowest gender gaps in France and Spain are for couples in which the woman has a better position in both factors (hypogamous couples), with gender gaps in the times spent on housework lower than 10 minutes in both cases, but in general, gender gaps are smaller when the woman has a higher income than in the other situations. In the US, the gender

gap in this group has slightly increased, and as a result, the lowest gender gaps are observed for couples who are hypergamous in education and in which both members have a low income (18 minutes). In France and Spain, the highest gender gaps in 2010 are observed for homogamous couples with a low level of education and couples who are hypergamous in earnings. The gaps are 166 and 240 minutes, respectively. In the US, the gender gap for this combination is also high (185 minutes), but it is lower than that observed for the combination in which both members have low education and earnings (203 minutes).

Figure 3 about here

Finally, we compute a multivariate model for the time spent on housework and control for the main variable of interest and other household characteristics that can affect couples' allocation of housework, such as children's status, type of couple, and day of the week (García Román, 2020). The coefficients of the model are available in Appendix 2. The multivariate model includes interaction effects between gender and country, couples' characteristics, and couples' earnings. Using the Stata command *margins*, I compute the predicted means of the time spent on housework by women and men in each combination of a couple's education and earnings in every sample. From this predicted mean, I compute the gender gap plotted in figure 4. The predicted gender gaps in figure 4 do not show significant differences relative to the estimates in figure 3. Controlling for additional couples' characteristics, such as parenthood status and type of union, confirms the findings found using the descriptive estimates.

Figure 4 about here

## **Conclusion**

In this paper, I have explored the relationship between education expansion and the emergence of a female's educational advantage with the division of unpaid work within the household. I have introduced the level of income of each member of the couple as a possible mediator of the association because a better level of education does not always manifest in a better position in the labor market. The analysis adds a cross-country perspective that compares data from France, Spain and the US and a time perspective that allows the study of the evolution of the phenomenon over time.

In general, couples in which the woman has a higher education (hypogamous) have a more egalitarian division of unpaid domestic work. However, better education does not mean a better position in the labor market, which means that in a considerable proportion of couples in which the woman has more human capital (better education), she is not the member of the couple who earns the most money. The couple's position in terms of income is more important than that in education for having a more egalitarian division of housework. Income gives women more power in the negotiation of roles and, as a result, a more equal division of tasks.

The three countries in our analysis are in different stages of access to higher levels of education. In the US, access to higher education is more extensive, and as a result, females' educational advantage is more generalized. Changes in the composition of the couples are clearer in European countries, especially in Spain, which is behind the other two countries in relation to access to high levels of education by the population. Nevertheless, we have seen a certain degree of convergence between the countries, which can predict that what is observed in the US can happen in the other countries in the following periods. In that sense, fewer



differences are observed between the two periods in the US. As some authors have pointed out, gender convergence in the use of time seems to stall in recent periods, and the impact of improvements in women's status is attenuated when they are transferred into the private sphere. In that sense, only women with a much better position in the labor market have achieved a certain equality in the partnership, but even in couples where the woman earns more, she still has the main responsibility for housework.

This study has some limitations but also offers directions for future studies. The period of observation is probably too short to observe more significant changes in the composition of the couples, and it does not cover the period when the effect of the reversal of the gender gap in education was stronger. Moreover, only three countries are included because it is complicated to obtain harmonized data on time use. Individual income is not collected in most time use surveys, and it is key to understanding the resources in the household because better education is not sufficient in the bargaining process. Future work should add more countries with different characteristics and social and cultural norms, which will allow us to better understand contextual differences. Future studies should also analyze what happens in other types of activities, such as the care of children and leisure. As in most recent studies on unpaid work, we have not considered caring for children as part of unpaid domestic work since it has a different nature that makes the activity more gratifying for fathers and has stronger implications for raising children, especially among the most educated. Leisure time inequalities are also relevant in relation to an individual's well-being, especially given that the increase in women's time in paid work is sometimes detrimental to their leisure activities. Future work should also include family context and possibly a separate analysis of parents and

nonparents that could not have been included but might provide more insights into the relationship between partners' relative resources and the division of household tasks.

Overall, addressing our main research question, we have seen that couples in which females have a better education are more egalitarian than other types of couples. However, our findings show that females' educational advantage has a relative effect on the division of housework. Access to better salaries is not as great as access to higher education. There is still gender segregation in the labor market, more feminized occupations are not the best remunerated, and women's access to managerial occupations is still limited. Moreover, there is also a gender wage gap, and women's careers are affected by motherhood penalties. However, a higher level of income is not sufficient to obtain more equality in the household, and other normative changes have to be implemented in society. Gender mechanisms are still present.

## References

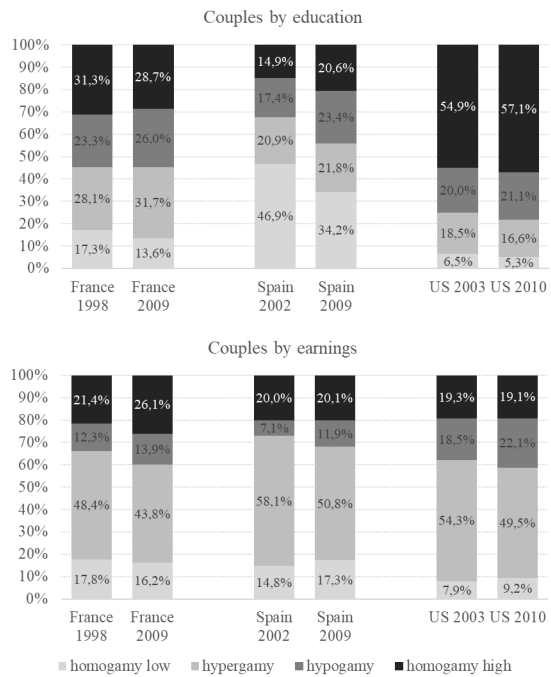
- Altintas, E., and Sullivan, O. (2016). Fifty years of change updated: Cross-national gender convergence in housework. *Demographic Research*, 35: 455-470. <https://doi.org/10.4054/DemRes.2016.35.16>
- Altuzarra, A., Gálvez-Gálvez, C., and González-Flores, A. (2020). Do Spanish dual-earner couples share unpaid work equally?. *Social Indicators Research*, 150: 731-763. <https://doi.org/10.1007/s11205-020-02346-3>
- Anxo D., Mencarini L., Pailhé A., Solaz A., Tanturri ML., and Flood L. (2011). Gender differences in time use over the life course in France, Italy, Sweden, and the US. *Feminist Economics*, 17(3):159–95. <https://doi.org/10.1080/13545701.2011.582822>
- Arpino, B., Esping Andersen, G., and Pessin, L. (2015). How do changes in gender role attitudes towards female employment influence fertility? A micro-level analysis. *European Sociological Review*, 31: 381-407. <https://doi.org/10.1093/esr/jcv002>
- Arts, W., and Gelissen, J. (2002). Three worlds of welfare capitalism or more? A state-of-the-art report. *Journal of European Social Policy* 12(2): 137–158. <https://doi.org/10.1177/0952872002012002114>

- Becker, G. (1981). *A treatise on the family*. Cambridge: Harvard University Press.
- Bertrand M., Kamenica E., and Pan J. (2015). Gender identity and relative income within households. *Quarterly Journal of Economics* 130(2):571–614. <https://doi.org/10.1093/qje/qjv001>
- Bianchi, S. M., Milkie, M., Sayer, L., and Robinson, J. (2000). Is anyone doing the housework: Trends in the gender division of household labor. *Social Forces*, 79 (1): 191-228. <https://doi.org/10.1093/sf/79.1.191>
- Blood, R. O., and Wolfe, S. M. (1960). *Husbands and wives: The dynamics of married living*. New York: Free Press.
- Brinton, M., and Lee, D. (2016). Gender-role ideology, labor market institutions, and postindustrial fertility. *Population and Development Review*, 42 (3): 405-433. <https://doi.org/10.1111/padr.161>
- Bumpass, L. L., Martin, T. C., and Sweet, J. A. (1991). The impact of family background and early marital factors on marital disruption. *Journal of family issues*, 12(1): 22-42. <https://doi.org/10.1177/019251391012001003>.
- Cherlin, A. (2016). A happy end to a half century of family change?. *Population and Development Review*, 42 (1): 121-129. <https://doi.org/10.1111/j.1728-4457.2016.00111.x>
- Coltrane, S. (2000). Research on household labor: Modeling and measuring the social embeddedness of routine family work. *Journal of Marriage and Family*, 62 (4): 1208-1233. <https://doi.org/10.1111/j.1741-3737.2000.01208.x>
- Davis, S., and Greenstein, T. (2013). Why study housework? Cleaning as a window into power in couples. *Journal of Family Theory & Review*, 5: 63-71. <https://doi.org/10.1111/jftr.12004>
- De Hauw, Y., Grow, A., and Van Bavel, J. (2017). The reversed gender gap in education and assortative mating in Europe. *European Journal of Population*, 33 (4): 445-474. <https://doi.org/10.1080/00324728.2017.1371477>
- England, P. (2010). The gender revolution. Uneven and stalled. *Gender & Society*, 24 (2): 149-166. <https://doi.org/10.1177/0891243210361475>
- Esping-Andersen, G., and Schmitt, C. (2020). Multidimensional couple bargaining and housework allocation. *Acta Sociologica*, 63(1): 3-22. <https://doi.org/10.1177/0001699319859418>
- Esping-Andersen, G., and Billari, F. (2015). Rethorizing family demographics. *Population and Development Review*, 41(1): 1–31. <https://doi.org/10.1111/j.1728-4457.2015.00024.x>
- Esping-Andersen, G. (1999). *Social foundations of postindustrial economies*. Oxford: Oxford University Press. <https://doi.org/10.1093/0198742002.001.0001>.

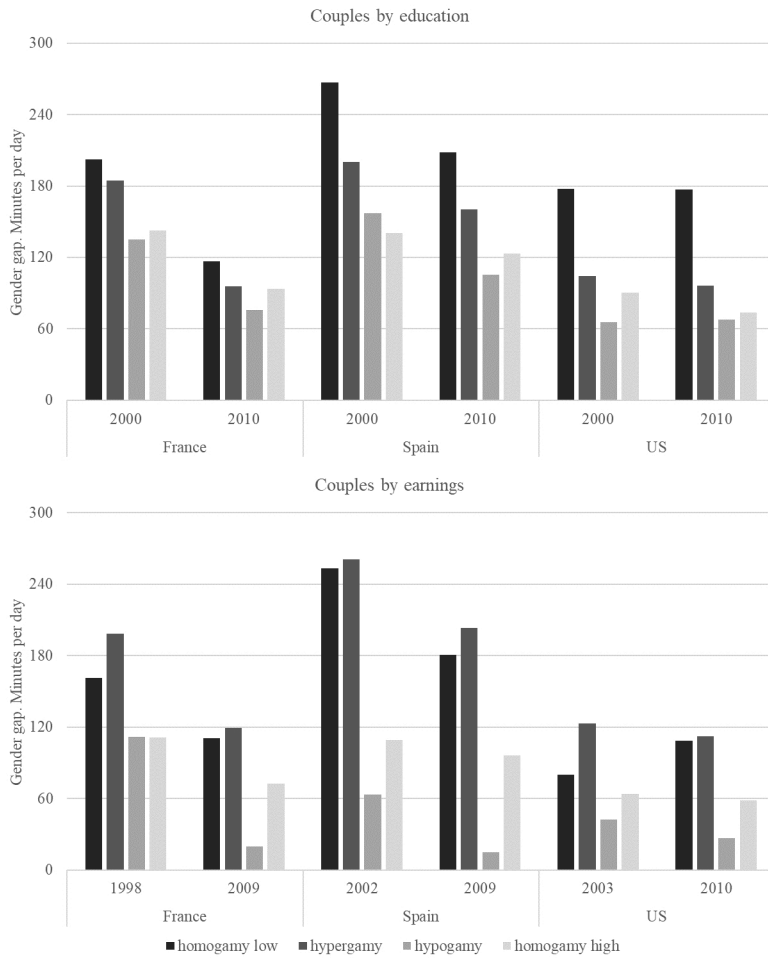
- Esteve, A., García-Román, J., and Permanyer, I. (2012). The gender-gap reversal in education and its effect on union formation: the end of hypergamy? *Population and Development Review*, 38(3): 535–46. <https://doi.org/10.1111/j.1728-4457.2012.00515.x>
- Esteve, A., Schwartz, C.R., Van Bavel, J., Permanyer, I., Klesment, M., and Garcia Román, J. (2016). The end of hypergamy: global trends and implications. *Population and Development Review*, 42(4):615–625. <https://doi.org/10.1111/padr.12012>
- Fagnani, J., and Letablier, M. T. (2005). Social rights and care responsibility in the French welfare state. In *Care and social integration in European societies*, 135-152. <https://doi.org/10.1332/policypress/9781861346049.003.0007>
- García Román, J. (2020). The division of gender roles in female breadwinner couples in the United States and Spain. *Revista Española de Investigaciones Sociológicas*, 170: 73-94. <https://doi.org/10.5477/cis/reis.170.73>
- Gershuny, J., and Harms, T. A. (2016). Housework now takes much less time: 85 years of us rural women's time use. *Social Forces*, 95 (2):1-22. <https://doi.org/10.1093/sf/sow073>
- Goldscheider, F., Bernhardt, E., and Lappegard, T. (2015). The gender revolution: A framework for understanding changing family and demographic behavior. *Population and Development Review*, 41 (2): 207-239. <https://doi.org/10.1111/j.1728-4457.2015.00045.x>
- Goldstein, J. R., and Harknett, K. (2006). Parenting across racial and class lines: Assortative mating patterns of new parents who are married, cohabiting, dating or no longer romantically involved. *Social Forces*, 85(1): 121-143. <https://doi.org/10.1353/sof.2006.0125>
- Grow, A., Schnor, C., and Van Bavel, J. (2017). The reversal of the gender gap in education and relative divorce risks: a matter of alternatives in partner choice?. *Population Studies*, 71(1):15–34. <https://doi.org/10.1080/00324728.2017.1371477>
- Gupta S. (2007). Autonomy, dependence, or display? The relationship between married women's earnings and housework. *Journal of Marriage and Family*, 69(2):399–417. <https://doi.org/10.1111/j.1741-3737.2007.00373.x>
- Heymans, M., and Eekhout, I. (2019) *Applied missing data analysis with SPSS and (R) studio*. Amsterdam.
- Jalovaara, M. (2012). Socioeconomic resources and first-union formation in Finland, cohorts born 1969–81. *Population Studies*, 66(1):69–85. <https://doi.org/10.1080/00324728.2011.641720>
- Kan, M. Y., Sullivan, O., and Gershuny, J. (2011). Gender convergence in domestic work: discerning the effects of interactional and institutional barriers from large-scale data. *Sociology*, 45: 234–251. <https://doi.org/10.1177/0038038510394014>

- Leopold, T., Skopek, J., and Schulz, F. (2018). Gender convergence in housework time: A life course and cohort perspective. *Sociological Science*, 5: 281-303. <https://doi.org/10.15195/v5.a13>
- Mandel, H., and Semyonov, M. (2014). Gender pay gap and employment sector: sources of earnings disparities in the United States, 1970-2010. *Demography*, 51: 1597–1618. <https://doi.org/10.1007/s13524-014-0320-y>
- Mensch, B. S., Singh, S., and Casterline, J. B. (2005). Trends in the timing of first marriage among men and women in the developing world. In *The changing transitions to adulthood in developing countries: Selected studies*, 118-171.
- OECD (2020), *Population with tertiary education (indicator)*. <https://doi.org/10.1787/0b8f90e9-en> (Accessed on 19 August 2020)
- Perelli-Harris, B., and Lyons-Amos M. (2016). Partnership patterns in the United States and across Europe: The role of education and country context. *Social Forces*. 95(1):251–1282. <https://doi.org/10.1093/sf/sow054>
- Sayer, L.C. (2016). Trends in women's and men's time use, 1965–2012: Back to the future?. In McHale, S., King, V., Van Hook, J. and Alan Booth, A. (eds.), *Gender and Couple Relationships*. Dordrecht: Springer.
- Sayer, L. C. (2005). Gender, time, and inequality: Trends in women's and men's paid work, unpaid work, and free time. *Social Forces*, 84: 285–303. <https://doi.org/10.1353/sof.2005.0126>
- Schwartz, C.R., and Han, H. (2014). The reversal of the gender gap in education and trends in marital dissolution. *American Sociological Review*, 79(4):605–29. <https://doi.org/10.1177/0003122414539682>
- Sevilla-Sanz, A., Giménez-Nadal, J.I., and Fernández, C. (2010). Gender roles and the división of unpaid work in Spanish households. *Feminist Economics*, 16 (4): 137-184. <https://doi.org/10.1080/13545701.2010.531197>
- Sevilla-Sanz, A. (2010). Division of household labor and cross-country differences in household formation rates. *Journal of Population Economics*, 23(1): 225–49. <https://doi.org/10.1007/s00148-009-0254-7>
- Sevilla, A. (2014). On the importance of time diary data and introduction to a special issue on time use research. *Review of Economics of the Household*, 12: 1–6. <https://doi.org/10.1007/s11150-014-9242-0>
- Shelton, B. A., and John, D. (1996). The division of household labor. *Annual Review of Sociology*, 22: 299–322. <https://doi.org/10.1146/annurev.soc.22.1.299>

- Sullivan O. (2011). An end to gender display through the performance of housework? A review and reassessment of the quantitative literature using insights from the qualitative literature. *Journal of Family Theory Review*, 3(1):1–13. <https://doi.org/10.1111/j.1756-2589.2010.00074.x>
- Sullivan, O., and Gershuny, J. (2016). Change in spousal human capital and housework: a longitudinal analysis. *European Sociological Review*, 32 (6): 864-880. <https://doi.org/10.1093/esr/jcw043>
- Sullivan, O., Gershuny, J., and Robinson, J. P. (2018). Stalled or uneven gender revolution? A long-term processual framework for understanding why change is slow. *Journal of Family Theory & Review*, 10(1): 263-279. <https://doi.org/10.1111/jftr.12248>
- Teachman J. (2010). Wives' economic resources and risk of divorce. *Journal of Family. Issues*, 31(10):1305–23. <https://doi.org/10.1177/0192513X10370108>
- Tichenor V. (2005). Maintaining men's dominance: Negotiating identity and power when she earns more. *Sex Roles*. 53(3-4):191–205. <https://doi.org/10.1007/s11199-005-5678-2>
- Van Bavel, J., and Klesment M. (2017). Educational pairings, motherhood, and women's relative earnings in Europe. *Demography*, 54: 2334-2349. <https://doi.org/10.1007/s13524-017-0621-z>
- Van Bavel, J. (2012). The reversal of gender inequality in education, union formation and fertility in Europe. *Vienna Yearbook of Population Research*, 10: 127-154. <https://doi.org/10.1553/populationyearbook2012s127>
- Van Bavel, J., Schwartz, C.R., and Esteve, A. (2018). The reversal of the gender gap in education and its consequences for family life. *Annual Review of Sociology*, 44: 341-360. <https://doi.org/10.1146/annurev-soc-073117-041215>
- Vincent-Lancrin, S. (2008). The reversal of gender inequalities in higher education: an ongoing trend. In *Higher Education to 2030: Demography*, 265-298. Paris: OECD.
- West, C., and Zimmermann, D. H. (1987). Doing gender. *Gender & Society*, 1: 125-151. <https://doi.org/10.1002/9781405165518.wbeosd084>

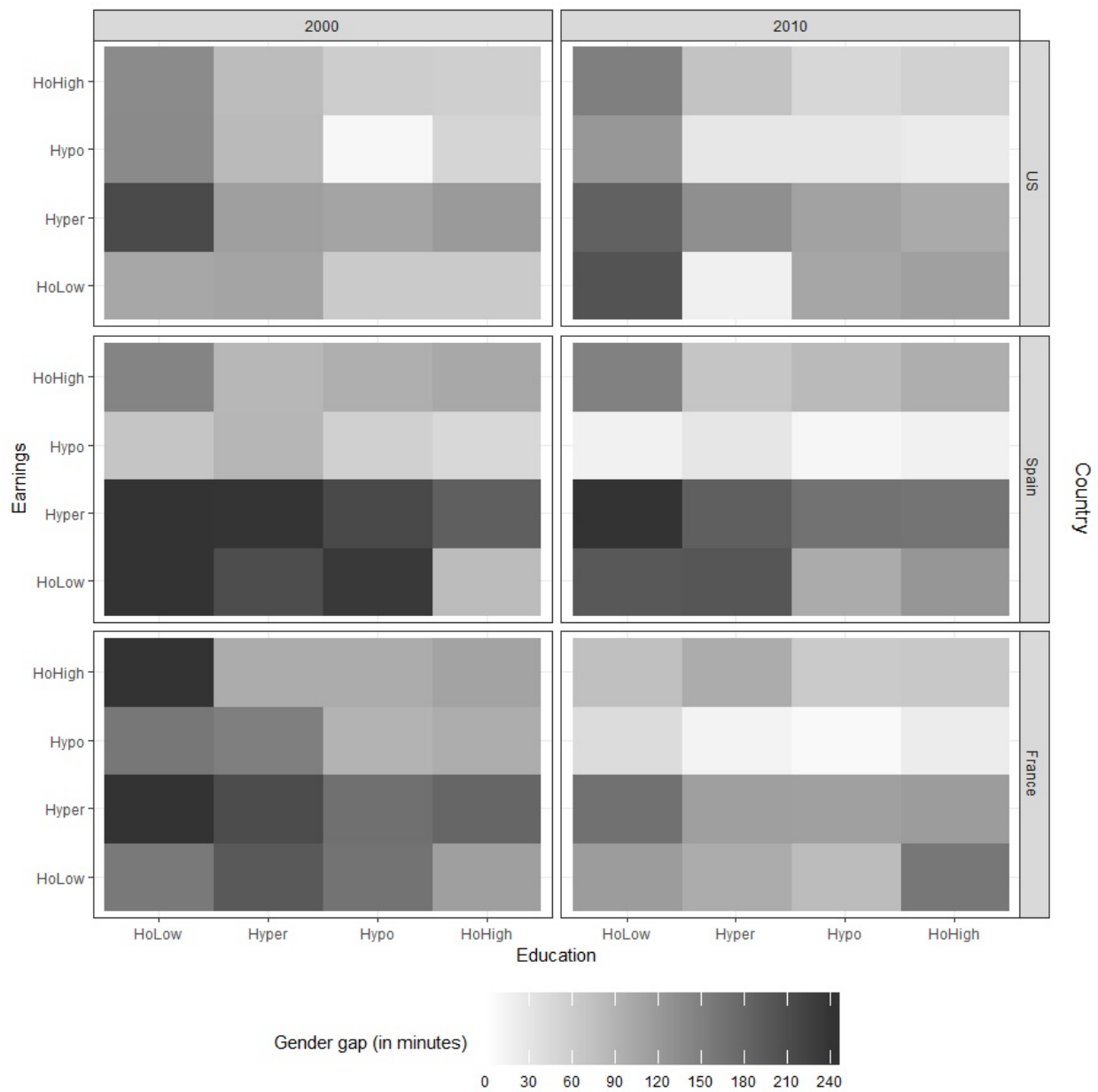
**Figure 1. Distribution of couples by educational attainment and earnings of both members**

Source: Own calculations from the Multinational Time Use Study, Encuesta de Empleo del Tiempo 2002-03 and 2009-10, Enquete Emploi du temps 1998-99 and 2009-10, American Time Use Survey.

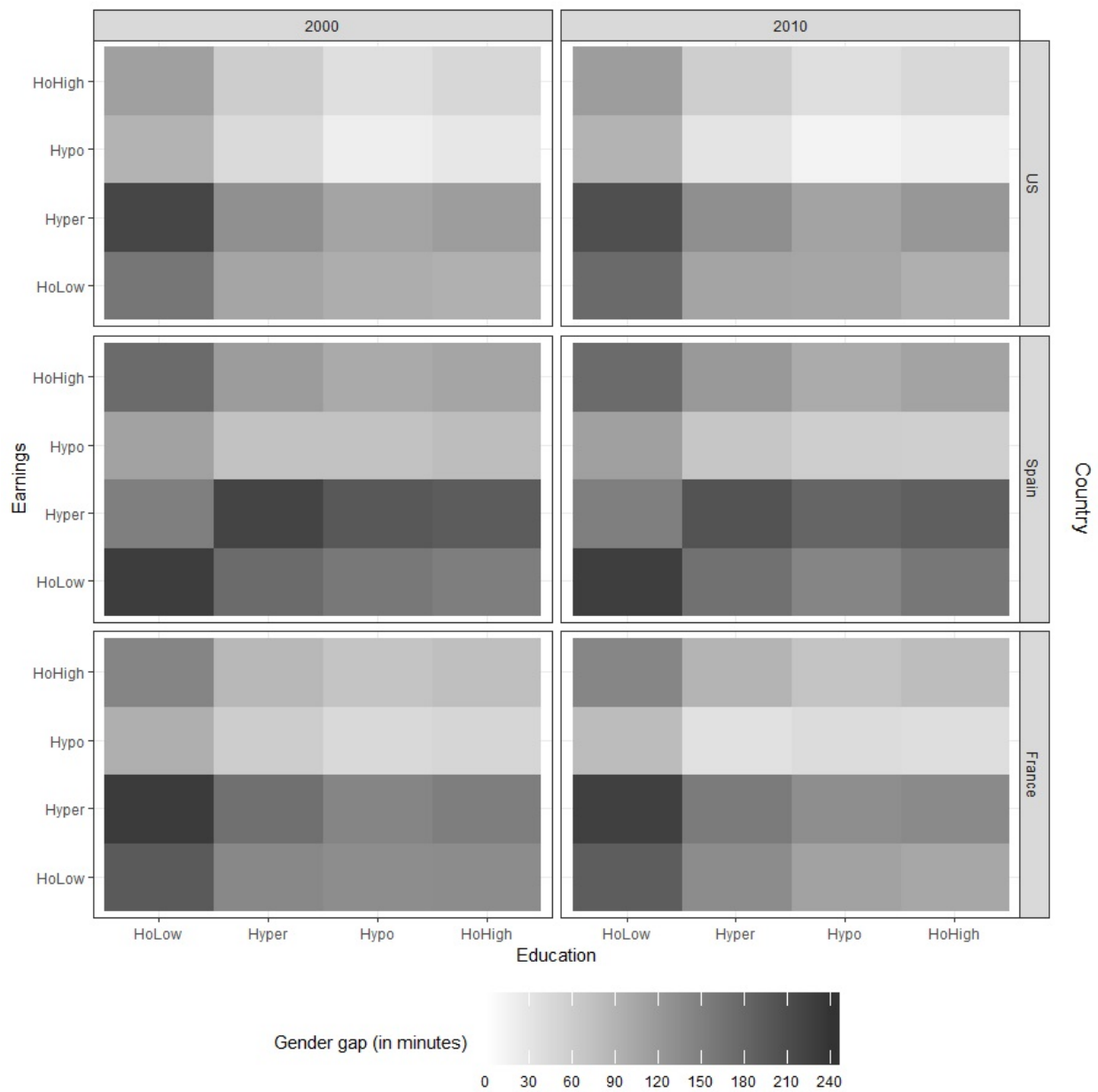
**Figure 2. Gender gap in housework by couples' education and earnings**

Source: Own calculations from the Multinational Time Use Study, Encuesta de Empleo del Tiempo 2002-03 and 2009-10, Enquete Emploi du temps 1998-99 and 2009-10, American Time Use Survey.



**Figure3. Gender gap in housework by couples' combination of education and earnings**

Source: Own calculations from the Multinational Time Use Study, Encuesta de Empleo del Tiempo 2002-03 and 2009-10, Enquete Emploi du temps 1998-99 and 2009-10, American Time Use Survey.

**Figure 4. Predicted gender gap in housework by couples' combination of education and earnings**

Source: Predicted means applying Stata command *margins* to the multivariate model in Annex 1.

**Table 1. Sample description**

	France		Spain		US	
	1998	2009	2002	2009	2003	2010
N	3853	4319	9384	4160	9742	5556
Male	1896	2204	4726	2075	4612	2656
Female	1957	2115	4658	2085	5130	2900
Weekday	2823	1030	6213	2558	4774	4968
Weekend	2608	1711	3171	1602	2785	2771

Source: Own calculations from the Multinational Time Use Study, Encuesta de Empleo del Tiempo 2002-03 and 2009-10, Enquete Emploi du temps 1998-99 and 2009-10, American Time Use Survey.

**Table 2. Couples' characteristics**

	France		Spain		US	
	1998	2009	2002	2009	2003	2010
Age (Mean)						
Male	43.6	45.3	44.6	45.1	43.2	44.6
Female	41.0	43.2	42.2	42.9	41.3	42.3
Type of union						
Cohabitators	19.9%	21.9%	5.5%	10.4%	7.7%	7.7%
Married	80.1%	78.1%	94.5%	89.6%	92.3%	92.3%
Children status						
Without children	43.0%	46.3%	42.1%	42.8%	42.8%	44.0%
With children	57.0%	53.7%	57.9%	57.2%	57.2%	56.0%
Education						
homogamy low	17.3%	13.6%	46.9%	34.2%	6.5%	5.3%
hypergamy	28.1%	31.7%	20.9%	21.8%	18.5%	16.6%
hypogamy	23.3%	26.0%	17.4%	23.4%	20.0%	21.1%
homogamy high	31.3%	28.7%	14.9%	20.6%	54.9%	57.1%
Employment						
Dual earner	56.1%	61.4%	40.2%	47.1%	61.5%	57.8%
Only he works	25.0%	17.1%	42.9%	29.6%	26.0%	25.3%
Only she works	7.0%	9.6%	5.1%	9.8%	7.7%	10.2%
None works	11.9%	12.0%	11.8%	13.5%	4.7%	6.7%
Earnings						
homogamy low	17.8%	16.2%	14.8%	17.3%	7.9%	9.2%
hypergamy	48.4%	43.8%	58.1%	50.8%	54.3%	49.5%
hypogamy	12.3%	13.9%	7.1%	11.9%	18.5%	22.1%
homogamy high	21.4%	26.1%	20.0%	20.1%	19.3%	19.1%

Source: Own calculations from the Multinational Time Use Study, Encuesta de Empleo del Tiempo 2002-03 and 2009-10, Enquete Emploi du temps 1998-99 and 2009-10, American Time Use Survey.

**Table 3. Proportion of couples by earnings for each group of couples by education**

Country	Year	Education	Earnings			
			HoLow	Hyper	Hypo	HoHi
France	1998	Homo low	39%	42%	9%	10%
		Hyper	17%	58%	9%	16%
		Hypo	15%	42%	18%	25%
		Homo high	9%	48%	13%	30%
	2009	Homo low	36%	35%	14%	15%
		Hyper	17%	49%	13%	21%
		Hypo	13%	39%	17%	32%
		Homo high	9%	46%	12%	32%
Spain	2002	Homo low	24%	59%	5%	12%
		Hyper	11%	66%	5%	17%
		Hypo	5%	52%	13%	31%
		Homo high	4%	51%	10%	34%
	2009	Homo low	32%	48%	8%	11%
		Hyper	13%	64%	7%	16%
		Hypo	9%	44%	21%	27%
		Homo high	6%	49%	12%	32%
US	2003	Homo low	21%	57%	8%	14%
		Hyper	10%	65%	10%	14%
		Hypo	7%	42%	30%	21%
		Homo high	6%	55%	18%	21%
	2010	Homo low	26%	47%	10%	17%
		Hyper	10%	63%	16%	11%
		Hypo	10%	37%	34%	18%
		Homo high	7%	50%	21%	22%

Source: Own calculations from the Multinational Time Use Study, Encuesta de Empleo del Tiempo 2002-03 and 2009-10, Enquete Emploi du temps 1998-99 and 2009-10, American Time Use Survey.

**Annex 1. Proportion of couples by combinations of earnings and education**

Country	Year	Education	Earnings			
			HoLow	Hyper	Hypo	HoHi
France	1998	Homo low	7%	7%	1%	2%
		Hyper	5%	16%	3%	4%
		Hypo	4%	10%	4%	6%
		Homo high	3%	15%	4%	9%
	2009	Homo low	5%	5%	2%	2%
		Hyper	5%	16%	4%	7%
		Hypo	3%	10%	4%	8%
		Homo high	3%	13%	4%	9%
Spain	2002	Homo low	11%	28%	2%	6%
		Hyper	2%	14%	1%	4%
		Hypo	1%	9%	2%	5%
		Homo high	1%	8%	1%	5%
	2009	Homo low	11%	16%	3%	4%
		Hyper	3%	14%	2%	3%
		Hypo	2%	10%	5%	6%
		Homo high	1%	10%	3%	7%
US	2003	Homo low	1%	4%	1%	1%
		Hyper	2%	12%	2%	3%
		Hypo	1%	8%	6%	4%
		Homo high	3%	30%	10%	12%
	2010	Homo low	1%	2%	1%	1%
		Hyper	2%	10%	3%	2%
		Hypo	2%	8%	7%	4%
		Homo high	4%	29%	12%	13%

Source: Own calculations from the Multinational Time Use Study, Encuesta de Empleo del Tiempo 2002-03 and 2009-10, Enquete Emploi du temps 1998-99 and 2009-10, American Time Use Survey.