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Is unpaid work conducive of well-being? The case of within-household unpaid work in the Modena District

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Abstract: In this paper, we document the pattern of unpaid domestic and care work, disaggregated on the basis of the type of work and the care recipient, and its partial correlation with subjective well-being as measured by reported life satisfaction. We explore gender-specific effects since domestic and unpaid work has an intrinsic relational dimension that, at least in the current Italian society, has an important gender-specific component. The data used come from the 2012 Survey on the Economic and Social Conditions in the Modena District (ICESmo3) which is a unique dataset that contains disaggregated data on unpaid work. In particular, this dataset allows us to look at the correlations between the different types of unpaid work and reported life satisfaction. The overall picture that emerges from the data is one where unpaid work within the household is more likely to be conducive of well-being if it is more likely to be genuinely voluntary and intrinsically motivated. Although we must admit that this conclusion is highly speculative, we think it is a good starting point for further analyses in this regard.

Keywords: subjective well-being; life-satisfaction; unpaid work; care; gender.

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1 Introduction

This paper focuses on the role of a specific instance of gratuity and gifts for individual's life satisfaction. In particular, the focus is on unpaid domestic and care work, disaggregated on the basis of the type of work and the care recipient. Also, we investigate gender-specific effects since unpaid work within the household has an intrinsic relational dimension that, at least in the current Italian society, has an important gender-specific component.

Our main objective is to investigate to what extent unpaid work goes with higher life satisfaction. More precisely, we want to see if the extent to which such unpaid work is intrinsically motivated and genuinely voluntary has an impact on its correlation with subjective well-being. In order to disentangle potential confounding factors related to personal attitudes towards relational activities, we control for different forms of other unpaid activities that are likely to produce relations goods. In particular, we control for social interactions and relational activities in terms of the quantity of people with whom the interviewed person feels comfortable to discuss about personal affairs, and in terms of the frequency of interaction with relatives, friends, colleagues and neighbours.

We focus on Italy and, more specifically, on the Modena district which is located in the Emilia Romagna region. The reasons for this choice are several, but the main one is that for this context is available a unique dataset that contains detailed information on the socioeconomic structure of the household together with the allocation of unpaid working time by type of activity, social activities, and a measure of subjective well being. The Modena District is characterised by a high development not only in terms of gross domestic product but also in terms of social infrastructure and social capital. The restriction to a specific area in terms of available social infrastructure and labour market allows us to reduce the heterogeneity that can be found in a country like Italy, where the availability of child care services and the status of the labour market are characterised by a large variance both within and across regions. The area analysed is subjected also to an increasing process of ageing and this study contributes to the literature by distinguishing the effect of unpaid care work according to the person cared for. This could allow to detect different effects both by the gender and by the subject of care activity, potentially informing local policy-makers on what policies can achieve higher well-being. Notwithstanding, the larger than average presence of child care services in the Modena district there is a large share of unpaid work activity provided to a larger extent by women with an unequal distribution within the household (Addabbo and Picchio, 2009). A gender-biased allocation of tasks that is also visible in the most recent data collected at such local level (see Section 4 for more details on this).

The data used in this study come from a unique dataset built from the last wave (year 2012) of the Survey on Economic and Social Conditions in the Modena District (ICESmo3) carried out by the Centre for the Analysis of Public Policies (CAPP). As a measure of subjective well-being we use reported life satisfaction. We restrict our attention to the sub-sample of couples with children where both parents are employed. In addition, we restrict our attention to couples of age between 15 and 64. We do this for two reasons: first, this allows to have a sample where potential confounding factors on unpaid work are reduced (e.g., non-binding time constraint, absence of need for child cares, etc.) and, second, this sub-sample selects couples for which the load of unpaid work is more likely to be intense and various.

The main conclusion that we infer from our estimates is that when unpaid work is genuinely voluntary and intrinsically motivated, it goes with higher subjective well-being. We have to warn the reader that this is a highly speculative conclusion, although we think it can still be a good starting point for further analysis along this line of research. The evidence that we find in support of this idea points to four different facts: hours spent on childcare go with a higher subjective well-being, both for men and women; hours spent on caring other relatives (mainly elderly) go with higher subjective well-being for men but lower subjective well-being for women; hours spent on domestic work go with higher subjective well-being, but this is true especially for men; such a positive correlation is also observed for men's time spent on caring other relatives (mainly elderly), while the correlation is of the opposite sign if the object of care are children (i.e., men are more happy if their partner works less in caring children and less in caring other relatives, while women are more happy if their partner works less in caring their children and more in caring other relatives). We refer the reader to the last section of the paper for a more detailed discussion of these findings.

The paper is organised as follows. In Section 2, we briefly review the related literature. In Section 3, we present the life satisfaction equations – one for each parent – model that it is then estimated by using the seemingly unrelated regression model that allows for correlation in their errors terms. In Section 4, we comment on the potential role of gender in the effects of care and social interactions. In Section 5, we discuss what tentative policy suggestions might emerge from our analysis.

2 Literature review

The present paper is related to the literature on the effects of unpaid work on subjective well-being life satisfaction, from a gender perspective.

Gender inequalities in the intra-household allocation of time and resources have been found to differently affect household members' well being (Addabbo and Maccagnan, 2010; Kauppinen, 2010; van den Berg et al., 2014). Penalties in terms of the access to employment, career perspectives and wages have been documented across European countries as particularly high on women caregivers (Kauppinen, 2010; Heitmuller and Inglis, 2007). There is an increasing interest in elderly care that can be related both to the effects connected to the ageing process of the population and to the fiscal austerity. The latter has a negative impact on the public provisions of care services (both in terms of child and elderly care services and health) and contributes to the observed increasing shift from institutional to home-based care.

With special reference to the effect on subjective well being expressed by self-rated life satisfaction van den Berg et al. (2014) by estimating fixed effects ordered logit models on Household, Income and Labour Dynamics in Australia (HILDA) provide evidence of a negative impact of informal care. High psychological and social costs have also been documented by Schofield et al. (1999) in their analysis on a survey of 26,000 households in Australia by comparing 219 female family carers of people with chronic illnesses and disabilities to non-carers women. Schofield et al. (1999) underline also the costs connected to the observed higher overload stated by working carers of chronically ill or disabled than other carers and the higher probability that the former are affected by unbalance between paid work and care. Bolin et al. (2008) document labour market

attachment and wage penalties costs connected to elderly care provided by over 50 carers in Europe by using SHARE survey showing different effects by gender and by group of countries. According to their analysis, Southern European women are more negatively affected in terms of wage reduction than in Central and Northern European countries if involved in elderly caregiving, whereas men are subjected to a higher cost in terms of lower number of hours of work and lower employment probability in Central and Northern Europe.

The issue of the effect of care on life satisfaction is indirectly analysed by Berger (2013) who, by using German Socio Economic Panel data and estimating fixed-effects models, detects a lower level of life satisfaction for mothers in family-related non-participation and mothers employed part-time with respect to mothers employed full-time. She estimates the direct (non-pecuniary) and indirect (related to foregone earnings) effects of non- or reduced participation in the labour market and finds that each one contributes at about half of the total negative effect on mothers' life satisfaction.

Unpaid work is typically intrinsically motivated, although it is sometimes extrinsically motivated. Extrinsic motivation refers to the incentives coming from outside an individual. By contrast, intrinsic motives issue from within an individual. According to Deci (1971, p.105), "one is said to be intrinsically motivated to perform an activity when one receives no apparent reward except the activity itself". Since Deci's definition concentrates on the non-instrumental nature of intrinsically motivated activities this idea can be translated in the economic language by assuming that intrinsically motivated activities enter directly the utility functions of individuals.¹

Intrinsic motivations can explain why people engage in unpaid work, even if no extrinsic motivation is provided. Intrinsically motivated activities, though effort-demanding, might make individuals happier. Indeed, an important class of intrinsically motivated activities are those that involve relational goods [Uhlener (1989), and, more recently, Gui (2000) and Gui and Sugden (2005)], which are supposed to be essential to the well-being of humans.

The available empirical evidence indicates that relational goods are strongly and positively correlated with subjective well-being. The works by Helliwell (2006, 2007), Helliwell and Huang (2010) and Helliwell et al. (2010) have shown that this holds for measures of social capital in general – of which relational goods are an important component (Bartolini et al., 2013a, 2013b; see also Bartolini and Bilancini, 2010; for a survey). Martin and Westerhof (2003) study on 2,313 individuals (25–74 years) from the National Survey of Midlife Development in the USA allows to detect the different effect on subjective well-being of contact with relatives and friends, finding that the former has a small significant effect on life satisfaction whereas this does not happen for contact with friends. Helliwell and Putnam (2005) produce further evidence in this regard (see also the interesting paper by Powdthavee, 2008). Bruni and Stanca (2008) document, using World Value Survey data, that relational goods are strongly and positively correlated with subjective well-being. The paper by Lim and Putnam (2010) deserves special attention in this regard: they show that the well known stylised fact that 'religiosity brings happiness' – i.e., that actively participating in religious activities positively correlates with subjective well-being – disappears if we control for companionships and close friendships inside religious congregations. Putting it differently, the correlation between religiosity and subjective well-being seems to be spurious: relational goods go with higher subjective well-being and it happens that inside religious communities relational goods are, on average, more widely consumed.

Becchetti et al. (2008) and Becchetti et al. (2012) also deserve a special attention since they are the first attempts to test the causal relationship between relational goods and subjective well-being. In the first paper, a structural equation model is used where both directions of causation are explored. In the second paper, retirement is cleverly used as source of exogenous variation to test the causation going from relational goods to subjective well-being – more leisure time implies, on average, more sociability. In sum, they find that causation can go both ways, although the strongest channel seems to be, as anticipated, the one going from relational goods to subjective well-being.

3 The empirical model

Subjective well-being is measured by individual self rated level of satisfaction in life replying by giving a mark from 0 (unsatisfied) to 10 (maximum level of satisfaction) to the question on ‘To what extent on the whole are you satisfied with your life?’

To account for the impact of a range of characteristics both at individual and at family level we estimate the following system of equations that allows to analyse also the interaction of partners’ time allocation and involvement in volunteers and social activities:

$$\begin{aligned}
 \text{Life Sat}_{iw} = & \beta_{0w} + \beta_{1w}\text{Age}_{iw} + \beta_{2w}\text{Age}^2_{iw} + \beta_{3w}\text{High School}_{iw} \\
 & + \beta_{4w}\text{Degree or over}_{iw} + \beta_{5w}\text{White Collar}_{iw} + \beta_{6w}\text{Teacher}_{iw} \\
 & + \beta_{7w}\text{Manager}_{iw} + \beta_{8w}\text{Entrepreneur}_{iw} + \beta_{9w}\text{Self-employed}_{iw} \\
 & + \beta_{10w}\text{Temporary Work}_{iw} + \beta_{11w}\text{Number of Close Friends}_{iw} \\
 & + \beta_{12w}\text{INT Friends}_{iw} + \beta_{13w}\text{INT Relatives}_{iw} \\
 & + \beta_{14w}\text{INT Neighbours}_{iw} + \beta_{15w}\text{INT Colleagues}_{iw} \\
 & + \beta_{16w}\text{Child care hours}_{iw} + \beta_{17w}\text{Other Relatives care hours}_{iw} \\
 & + \beta_{18w}\text{Domestic unpaid working hours}_{iw} \\
 & + \beta_{19w}\text{Paid working hours}_{iw} + \beta_{20w}\text{Child care hours}_{im} \\
 & + \beta_{21w}\text{Other relatives care hours}_{im} \\
 & + \beta_{22w}\text{Domestic unpaid working hours}_{im} \\
 & + \beta_{23w}\text{Paid working hours}_{im} \\
 & + \beta_{24w}\text{Equivalent Household Income}_{im} \\
 & + \beta_{25w}\text{Number of Children aged less than } 18_{iw}
 \end{aligned} \tag{1}$$

$$\begin{aligned}
\text{Life Sat}_{im} = & \beta_{0m} + \beta_{1m} \text{Age}_{im} + \beta_{2m} \text{Age}^2_{im} + \beta_{3m} \text{High School}_{im} \\
& + \beta_{4m} \text{Degree or over}_{im} + \beta_{5m} \text{White Collar}_{im} + \beta_{6m} \text{Teacher}_{im} \\
& + \beta_{7m} \text{Manager}_{im} + \beta_{8m} \text{Entrepreneur}_{im} + \beta_{9m} \text{Self-employed}_{im} \\
& + \beta_{10m} \text{Temporary Work}_{im} + \beta_{11m} \text{Number of Close Friends}_{im} \\
& + \beta_{12m} \text{INT Friends}_{im} + \beta_{13m} \text{INT Relatives}_{im} \\
& + \beta_{14m} \text{INT Neighbours}_{im} + \beta_{15m} \text{INT Colleagues}_{im} \\
& + \beta_{16m} \text{Child care hours}_{im} + \beta_{17m} \text{Other Relatives care hours}_{im} \\
& + \beta_{18m} \text{Domestic unpaid working hours}_{im} \\
& + \beta_{19m} \text{Paid working hours}_{im} + \beta_{20m} \text{Child care hours}_{im} \\
& + \beta_{21m} \text{Other relatives care hours}_{im} \\
& + \beta_{22m} \text{Domestic unpaid working hours}_{im} \\
& + \beta_{23m} \text{Paid working hours}_{im} \\
& + \beta_{24m} \text{Equivalent Household Income}_{im} \\
& + \beta_{25m} \text{Number of Children aged less than 18}_{im}
\end{aligned} \tag{2}$$

where i denotes the individual, w denotes women, and m denotes men.

Life Sat_{iw} is i^{th} woman's level of satisfaction and Life Sat_{im} is i^{th} man's level of satisfaction. Individual characteristics included in the model are age and age squared (to test for its nonlinearity), highest level of education (high school and degree or over, taking as reference lower than high school level of education), job status including a set of dummies taking as reference being a blue collar worker, temporary work taking as reference being employed on a permanent work, number of children aged less than 18, relational goods measured by a set of dummies taking the value of 1 if the individual meets at least once a month for at least one hour her relatives, friends, neighbours or colleagues and by a discrete variable on the number of close friends she can rely upon.

The direct effect of individual weekly hours of care work is then estimated distinguishing by type of the person cared for and the caregivers and the effect of partner's care work provision is also estimated: β_{16w} in equation (1) measures the mother's weekly hours in child care direct effect on her level of life satisfaction, β_{20w} in equation (1) measures her partner's weekly hours in child care direct effect on her level of life satisfaction. Similarly the direct effect of one's unpaid domestic weekly hours of work on subjective well-being is estimated together with the direct effect of one's partner unpaid domestic hours of work on one's subjective well-being. In order to account for the effect of paid work hours on the individual level of life satisfaction and that of the partner, we include among the regressors the number of weekly paid work hours for each partner.

To account for the potential correlation across the residual components of each equation the parameters of the two equations system are estimated by using a seemingly unrelated maximum likelihood regression estimator (SUREG).²

Finally, we run tests for potential problems of multicollinearity finding no evidence of them (results available upon requests to authors).

4 Data and descriptive statistics on the context analysed

Modena District is located in Emilia Romagna region in Italy and is characterised by a higher than Italian average per capita income, a higher than Italian average women's participation to the labour market and by a wider than Italian average social infrastructure (Addabbo and Picchio, 2009). This remains true notwithstanding the fact that the Modena District has been severely hit by the Great Recession in 2007–2012 and by an earthquake that in year 2012 has affected a vast area in the district. The context analysed is characterised also by a fertility rate below the Italian average and by a relevant gap between wished and effective number of children (Addabbo, 2005). The Modena District is peculiar in Italy for the higher female employment rates and the higher availability of child care services. Importantly for this study, the district also shows a high inequality in the intra-household distribution of time (Addabbo and Maccagnan, 2010) with women being the main responsible for care and domestic work within the household.

The dataset used to estimate the model is the last wave available (2012) of the Survey on Economic and Social Conditions in the Modena District (ICESmo3) carried out by the CAPP in 2002, 2006 and 2012.³

The survey allows to recover information on the socio-demographic structure of 2,020 households in the district of Modena and is representative of its population. The use of this source of data is also related to the uniqueness of providing, together with the socioeconomic characteristics of each household member, other variables that are at the core of this study: subjective well-being as measured by reported life satisfaction, relational goods as measured by the number of intimate relationships and social contacts, and each partner's allocation of time (including unpaid domestic and care work).

With reference to the allocation of time a potential alternative is the EU-Statistics survey on Income and Living Conditions (EU-SILC) of 2010. This survey however measures only total unpaid work although it does so for a set of European countries, including Italy, with an *ad hoc* module.⁴ So, the information provided does not allow to distinguish unpaid domestic work from unpaid care work, which is a crucial point in our analysis. We are not aware of other potential candidate datasets on Italy or Italian regions that fit our purposes.

From the ICESmo3 dataset we selected the 2012 sub-sample of 993 double earners couples with children in a phase of their life cycle (from 15 to 64 years old) when their unpaid working load is more likely to be intense. Table 1 reports descriptive statistics for our sub-sample. As one can see, women's unpaid domestic and care work are on average higher than the unpaid domestic and care work provided by their partners. Also, there is some difference between the partners' intensity of social activities, in particular regarding the frequency of meeting relatives and colleagues. In particular, women are more likely to meet relatives and colleagues than their partners.

On average women provide 20 hours a week of child care against 11 by their partners. A similar gap is observed for domestic unpaid work as women provide an average of 21 hours a week against six provided by men. As shown in Figure 1, the distribution of weekly hours of child care work is more concentrated towards zero hours of work for fathers than for mothers. Figure 2 shows the distribution of unpaid care work towards other relatives, but restricting the sample to those couples who have relatives, apart from children, that require continuous care (which represent 1% of our sample). This picture suggests that women typically provide a larger number of weekly hours of unpaid care

work than men. Figure 3 and Figure 4 show, respectively, the distribution of unpaid domestic work and total unpaid work, both by gender. Similar considerations apply.

Table 1 Social activities and relations and unpaid work by gender in double earners aged 15–64 couples with children

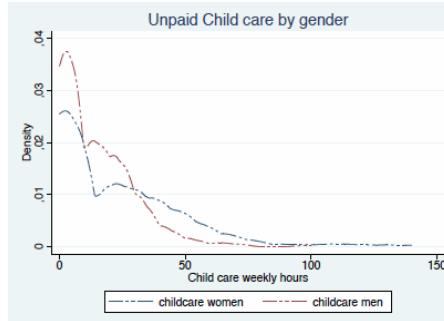
Variables	Women		Men		Gender gap W-M
	Mean	Std. dev.	Mean	Std. dev.	
N. close friends*	3.37	3.05	2.93	2.54	0.44
Relations with**					
Friends	0.84	0.37	0.85	0.36	-0.01
Relatives	0.83	0.37	0.77	0.42	0.06
Neighbours	0.31	0.46	0.29	0.45	0.03
Colleagues	0.34	0.47	0.30	0.46	0.04
Child-care	19.79	23.62	10.63	13.57	9.15
Other relatives care	3.74	11.44	1.73	4.53	2.01
Domestic work	20.59	10.83	5.96	6.99	14.63
Life satisfaction	6.89	2.31	6.65	2.53	0.25

Notes: * Number of people who are considered as close friends (i.e., as asked in the interview can engage in intimate and important discussions).

** Dummies taking the value of one if the individual have met at least for one hour and at least once a month friends, relatives, neighbours or colleagues.

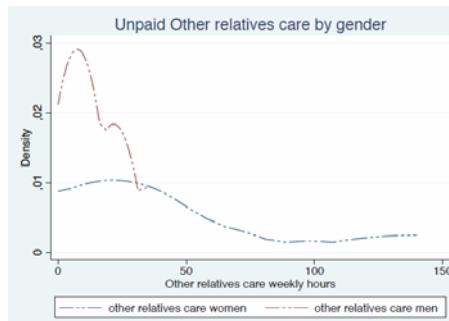
Source: Our Elaborations on ICESmo3 data

Figure 1 Child care work by gender in double earners aged 15–64 couples with children (see online version for colours)



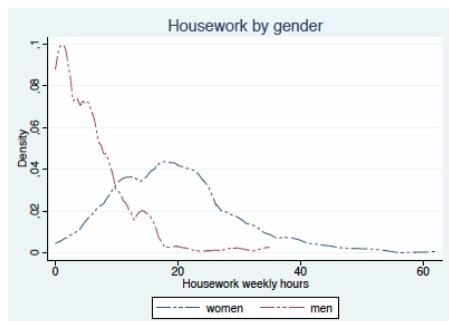
Source: Our Elaborations on ICESmo3 data

Figure 2 Care towards other relatives needing assistance in the family (double earners aged 15–64 couples with children and relatives needing continuous care) (see online version for colours)



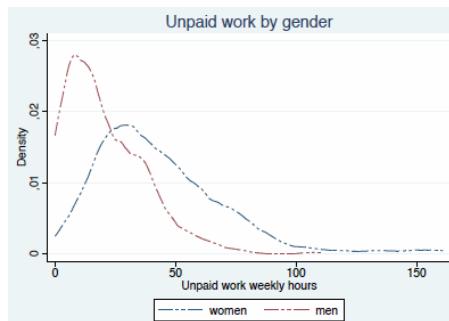
Source: Our Elaborations on ICESmo3 data

Figure 3 Housework by gender in double earners aged 15–64 couples with children (see online version for colours)



Source: Our Elaborations on ICESmo3 data

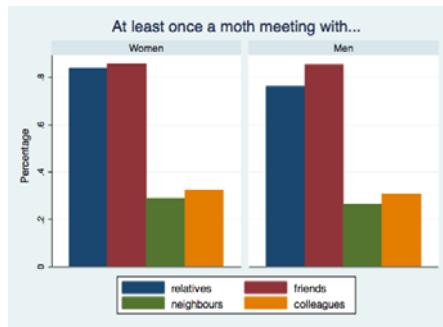
Figure 4 Unpaid work by gender in double earners aged 15–64 couples with children (see online version for colours)



Source: Our Elaborations on ICESmo3 data

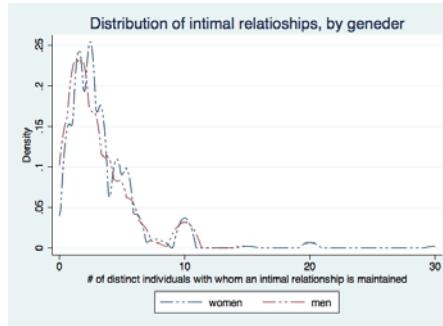
Finally, looking at the distribution of relational goods as measured by social contacts with relatives/friends/neighbours/colleagues (Figure 5) and by the number of persons with whom one declares to have an intimal relationship (Figure 6), we see that the difference between men and women is typically small (and basically not statistically significant). The only difference worth noting is that women seem to spend more time in activities with relatives and to have marginally more intimate relationships. Overall, the sample considered shows a substantial access to relational goods.

Figure 5 Distribution of social contacts with relatives, friends, neighbours and colleagues
(see online version for colours)



Source: Our Elaborations on ICESmo3 data

Figure 6 Distribution of the number of intimal relationships (see online version for colours)



Source: Our Elaborations on ICESmo3 data

5 Results

The two life satisfaction equations – one for each partner in the couple – have been estimated by using the seemingly unrelated regression model that allows for correlation in the two errors terms estimates and are shown in Table 2. More time spent in childcare goes with a higher reported life satisfaction, for both members of the couple. Instead, more time spent in child care by one's partner has no statistically significant co-movement with reported life satisfaction.⁵

Table 2 Seemingly unrelated regression model estimates, double earners (aged 15–64) couples with children

Variables	Life satisfaction	
	Women	Men
Age	0.0924 (0.0647)	0.0532 (0.0719)
Age ²	-0.00126* (0.000735)	-0.000795 (0.000816)
High School	0.167 (0.169)	-0.252 (0.187)
Degree	-0.0559 (0.225)	-0.0755 (0.250)
White collar	0.352* (0.193)	0.32 (0.215)
Teacher	0.922*** (0.319)	-0.303 (0.354)
Manager	0.209 (0.299)	0.0608 (0.332)
Entrepreneur	-0.540* (0.299)	0.590* (0.332)
Self-employed	0.246 (0.253)	0.388 (0.281)
Temporary	-0.125 (0.298)	-0.105 (0.331)
Number of people considered as close friends	0.0343** (0.0153)	0.00887 (0.0170)
Meeting friends for one hour at least once a month	-0.146 (0.200)	-0.119 (0.222)
Meeting relatives for one hour at least once a month	0.500*** (0.169)	0.692*** (0.188)
Meeting neighbours for one hour at least once a month	0.123 (0.156)	0.325* (0.173)
Meeting colleagues for one hour at least once a month	0.0383 (0.157)	0.354** (0.174)
Woman's child care (weekly hours)	0.0219*** (0.00631)	-0.00140 (0.00700)
Woman's elderly care (weekly hours)	-0.0396*** (0.00881)	-0.00540 (0.00978)

Source: Our elaborations on ICESmo3

Table 2 Seemingly unrelated regression model estimates, double earners (aged 15–64) couples with children (continued)

Variables	Life satisfaction	
	Women	Men
Woman's domestic unpaid work (weekly hours)	0.0164** (0.00653)	0.0118 (0.00726)
Woman's paid work (weekly hours)	-0.00573 (0.00439)	-0.0141*** (0.00488)
Man's child care (weekly hours)	-0.00967 (0.00892)	0.0310*** (0.00991)
Man's elderly care (weekly hours)	0.0373** (0.0150)	0.0397** (0.0167)
Man's domestic unpaid work (weekly hours)	-3.72e-05 (0.00962)	0.0441*** (0.0107)
Man's paid work (weekly hours)	-0.00856* (0.00485)	-0.0133** (0.00538)
Log equivalent household income	0.955*** (0.167)	1.018*** (0.185)
Number of children aged less than 18	-0.0673 (0.102)	0.075 (0.113)
Constant	-4.316** (2.068)	-4.125* (2.297)
Observations	981	981
R-squared	0.132	0.111

Source: Our elaborations on ICESmo3

However, more time spent in elderly care goes with *lower* reported life satisfaction for women and *higher* reported life satisfaction for men. Interestingly, a woman's subjective well-being is *positively* correlated with the time spent by her partner on elderly care, while we do not observe this type of correlation for men. These two asymmetries, we think, are consistent with the fact that the distribution of caregiving is also very asymmetric between women and men, with women working more frequently and longer hours. Available evidence suggests that the individual costs of elderly caregiving are both increasing and convex in the number of weekly hours of work (see, for instance, Schofield et al., 1999; van den Berg et al., 2014), which could explain our result [see also the work of MacDonald et al. (2005) on the effect of different types of unpaid work on women's stress level].

Another interesting result is that more unpaid domestic work (different from child care and elderly care) goes with a greater reported life satisfaction. This holds for both members of the couple, although the correlation is stronger for men. This latter finding is consistent with the fact that there is an asymmetry in terms of the time allocated to unpaid domestic work, again with women working more frequently and longer hours (as shown in Figure 3 of Section 4). Yet, this does not suffice to explain the positive correlation. One possibility in this regard is that unpaid domestic work might proxy for dimensions

not captured by our relational variables (e.g., the quality of relationships inside the family), which in turn can affect positively both the choice of how much domestic work to do and subjective well-being.

Turning our attention to the type of paid work, we see that teachers are on average more satisfied, although this is true only for women. Abstracting from the intrinsic content of this job, the finding could be due to the greater flexibility allowed in terms of work/family balance and the fact that women are typically more involved – and, hence, time constrained – in unpaid work at home. This same issue can also be connected to another finding: being entrepreneurs go with a lower reported life satisfaction, but again only for women.

As expected, more paid work hours go with a lower reported life satisfaction – of course, for given income. However, the estimate is statistically significant only for men. Again, we suspect that this is the result of the asymmetry between men's and women's average allocation of time: men work for a pay more often and longer hours. So, men might be experiencing a greater disutility of work on the margin than women. In particular, women might well be willing to work more for a pay and men to work less, but this could be prevented by a combination of constraints inside the couple (e.g., caregiving) and market prices (e.g., earning potential).

Another interesting finding is that more paid working hours for one's partner go with one's lower reported life satisfaction, and this holds for both men and women. This can well be the result of complementarities in leisure time or joint work inside the household.

Turning to relational goods, we find that the higher is the number of people that can be considered close friends the higher is women's life satisfaction. Surprisingly enough, the correlation is not statistically significant for men. Meeting neighbours or colleagues at least once a month for one hour goes with a higher reported life satisfaction for men, while this does not hold for women. These asymmetries are not simple to explain. Especially in the light of the fact that both partners' life satisfaction is positively correlated with meeting their relatives at least once a month for one hour [a result which is consistent with the findings in Martin and Westerhof (2003)]. One potential explanation might be that women have access to less relational goods, mostly concentrated around the house (neighbours) and job (colleagues) but have a small number of intimate relationships, while men have a more equilibrated network of social contacts. However, looking at our data this explanation does not seem convincing as men and women appear to have very similar social contacts (see Figure 5 and Figure 6). This finding, we think, requires further and deeper study.

6 Concluding remarks

In this paper, we have documented the pattern of unpaid work within the household and its partial correlation – by type of work – with subjective well-being, for couples with children in the Modena District. The general picture that one can infer from the estimates is that when unpaid work is genuinely voluntary and intrinsically motivated, it goes with higher subjective well-being. Although this conclusion is highly speculative, we think it is a good starting point for further analysis in this regard.

More precisely, we have found that more hours devoted to the care of children in the household – which is a kind of unpaid work that is reasonably intrinsically motivated –

go with a higher subjective well-being. We stress that estimates for men and women are concordant on this point. Also, we found that men seem to enjoy more than women domestic unpaid work. Given the typical division of labour in the household, this seems consistent with the idea that unpaid work brings satisfaction to the extent that it is felt as something not due by some kind of agreement or by some imposed rule, but as a consequence of a genuinely voluntary decision.

However, when we look at the care work towards other relatives (mainly elderly) – which is a kind of unpaid work that may not be intrinsically motivated, but felt as a duty – we see that more hours go with a lower subjective well-being for women and with a higher subjective well-being for men. Several explanations are possible for this latter result, but we think that the most convincing one has to do with the gender-specific difference that pertains to the division of labour within the household. In particular, descriptive statistics show that women suffer from a more severe time squeeze, which is mostly due to a greater time than men devoted to domestic work and child care, that in turn might depend on a smaller opportunity cost of unpaid work as well as on cultural factors. So, while for men caregiving to the elderly might be intrinsically motivated, for women the same task might be felt like a duty, as a part of the due work in the family – and, hence, less intrinsically motivated. This interpretation is consistent with the fact that women are more satisfied when their partners invest more hours in the care of the elderly, while men are less satisfied when women do the same.

If these hypotheses turn out to be correct then, we believe, there is room for some considerations in terms of policies that can improve the well-being of working couples with children. A wider investment on policies helping to attain a better work-life balance could allow to reduce stress and strain, and to allow the caregivers to keep their ties with their paid work activities, and therefore to provide caregiving work on a more genuinely and voluntary basis – and, hence, with more intrinsic motivation. In particular, the burden of elderly care should be shifted from women – who seem to suffer from it – to men – who instead seem to enjoy it. This could be attained by adequate policies at workplaces and by the strengthening of the social infrastructure. In general, we think that policies that help people to have a more flexible work/life balance are also likely to better reconcile employment with care, and so they can have a positive effect on the individual agency and lead to higher life satisfaction. This policy suggestion is also in line with Rubin and White-Means (2009) findings on the role that employment can play in mitigating stress and strain for sandwiched (having both care towards children and elderly care responsibilities) caregivers and in reducing the costs connected to elder caregiving [with reference to caregivers over 50 as found by Bolin et al. (2008)] also in relation to the mental health and psychological problems that have been documented by previous literature (Haug et al., 1999; Schofield et al., 1999) for elder caregiving related to the lack of social contacts. Also, this might support the idea put forward by Schofield et al. (1999) of promoting awareness amongst health professionals about the potential negative effect on health and well-being of carers of persons with chronic diseases and disabilities spreading also the information on the existing public services.

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Notes

- 1 The distinction between intrinsic and extrinsic motivations is now standard in economics. Various empirical studies in psychology have found that extrinsic motivations can crowd out intrinsic ones. This has arisen a lively debate in psychology (Sansone and Harackiewicz, 2000), but it has also attracted interest among the economists (Frey, 1997; Kreps, 1997; Benabou and Tirole, 2003; for a survey see Frey and Jegen, 2001).
- 2 The estimates have been carried out by using STATA13 module SUREG.
- 3 More information on the design and the results of the survey are available at <http://www.capp.unimore.it/strumenti/ICESMO3html>.
- 4 [http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/
Glossary:EU_statistics_on_income_and_living_conditio_ns_%28EU-SILC%29](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:EU_statistics_on_income_and_living_conditio_ns_%28EU-SILC%29)
- 5 We also estimated a model without including a regressor for paid work hours and temporary work status where a negative and statistically significant partial correlation arises, although we suspect for spurious reasons (estimates are available upon request). Indeed, since life satisfaction is negatively correlated with paid working load, this difference could well be the result of the fact that more child care by the partner triggers a substitution effect resulting in more paid working hours for oneself.