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Family Life in Lockdown

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*Pietro Biroli¹, Steven Bosworth², Marina Della Giusta²,
Amalia Di Girolamo³, Sylvia Jaworska², Jeremy Vollen¹*

Abstract

The lockdown imposed following the COVID-19 pandemic of spring 2020 dramatically changed the daily lives and routines of millions of people worldwide. We analyse how such changes contributed to gender inequality within the household using a novel survey of Italian, British, and American families in lockdown. A high percentage report disruptions in the patterns of family life, manifesting in new work patterns, chore allocations, and household tensions. Though men have taken an increased share of childcare and grocery shopping duties, reallocations are not nearly as stark as disruptions to work patterns might suggest, and families having to reallocate duties report greater tensions. Our results paint a picture of tightened constraints budging up against stable and gendered patterns of intra-household cooperation. While the long-run consequences of the COVID-19 lockdown on family life cannot be assessed at this stage, we point towards the likely opportunities and challenges.

Keywords: lockdown; care; housework; tensions; COVID-19

JEL codes: D13; D15; D63; J12; J16

Kitchen life is based on a musical rhythm, on a concatenation of movements, like dance steps, and when I speak of rapid gestures, it's a female hand I think of, not my own clumsy sluggish movements, that's for sure, always getting in the way of everybody else's work. At least that's what I've been told my life long by parents, friends -male and female- superiors, underlings and even my daughter these days. They've been conspiring together to demoralise me, I know; they think that if they go on telling me I'm hopeless they'll convince me there's an element of truth to the story. But I hang back on the sidelines, waiting for an opportunity to make myself useful, to redeem myself. Now the plates are all caged up in their little carriage, round faces astonished to find themselves standing upright, curved backs waiting for the storm about to break over them down there at the bottom of the tunnel where they will be sent off in exile until the cycle of cloudbursts, waterspouts and steam jet is over. This is the moment for me to go into action. Italo Calvino, La Poubelle Agree in The Road to San Giovanni, pp58/59

¹ University of Zürich

² University of Reading

³ University of Birmingham

Introduction

Frantically trying to limit the spread of the COVID-19 pandemic, governments worldwide imposed severe lockdown policies that suddenly changed the daily lives and routines of millions of people. This lockdown artificially created a fusion between the work and family life of men and women, who had to come to terms with their relative contribution to childcare and household chores. Such unexpected division of labour fuelled domestic tensions and exacerbated pre-existing gender and socio-economic inequalities, and might lead to long-term changes in gender norms.

Through the lens of behavioural and gender economic models, augmented by language and discourse analysis, we view these lockdown policies as a requirement for citizens to cooperate with each other at multiple levels: on the one hand they need to cooperate with government in respecting lockdown measures themselves, and on the other they have to cooperate more within their households as the usual divisions between work, home, and school become blurred. It is important to understand how such cooperation has occurred as this has likely impacted households differently, depending on what happened to the livelihoods of household members and on the presence of children who need care and schoolwork help. For example, whilst the overwhelming evidence on the immediate *health* consequences of COVID-19 suggests that men have fared much worse than women, the emerging evidence on labour markets indicates that the impact has been stronger on sectors with high female employment shares and that women are more likely to be working in jobs that can be done from home and more likely to lose their jobs (Adam-Prass et al. 2020 for the UK, the US, and Germany; Alon, et al. 2020 for the US, Hupkau and Petrongolo 2020 in the UK).

We study the personal and family consequences of this abrupt change in daily life via a real-time online survey in three of the most severely hit OECD countries—Italy, the UK, and the US. We find sizable reductions in job opportunities, health, and wellbeing in all three countries, as well as strong willingness to cooperate, but only with those who are deemed responsible and trustworthy. Looking at the reallocation of household chores following the lockdown, we find a dramatic increase in the proportion of shared childcare across all countries and increases in the sharing of most other household chores. The only exception is grocery shopping, which has instead become a more specialised task largely done by men. In all three countries we have surveyed, job loss or working from home when the partner is working outside are associated with a greater deviation from the status quo in terms of division of labour. These unexpected shifts in division of household tasks fuelled an increase in tension within couples, further increasing existing inequalities.

Documenting the extent to which family members have changed the work they do inside the household in response to lockdown is an important matter in both the short and long run, as this may dampen or amplify the effects of school closures on both children and their parents, women's chances of returning to work, as well as mental health and family outcomes since domestic tensions can affect family stability (Ruppanner et al., 2018).

A real time survey to measure jobs, health, wellbeing, and cooperation

We conducted a study of family life in lockdown aimed at understanding how daily routine has been modified, how the division of labour within the household has changed, and how personal wellbeing, family tension, beliefs and aspirations, risk attitudes, and the willingness to cooperate within and outside of the household have been during lockdown. We ran a survey with a total of 3,157 adults (18-83 years old) and 235 children (4-18 years old) in the US, the UK and Italy over the period 11-19 April, when our respondents had been in lockdown for between 5-6 weeks in Italy, 2-3 in the UK, and 1-4 in the US depending on the respondent's specific location. These countries are among the worst affected OECD countries by COVID-19 in both reported COVID-19 deaths per capita,⁴ excess mortality during the pandemic⁵ and, according to recent OECD projections,⁶ in economic terms too.

The participants in the US (949 adults and 42 children) and the UK (1,001 adults and 52 children) were recruited using an online survey collection tool⁷ which stratifies samples across age, sex, and ethnicity. The participants in Italy (1,207 adults and 141 children) were recruited primarily through social media and thus cannot be expected to constitute as representative a sample as those of the US and UK. Of the 3,157 adult respondents, 2,526 indicated that they are cohabiting with either their partner or another adult during the quarantine period (1,034 in Italy, 800 in the UK, and 692 in the US). This is the subset for which, when division of labour responses were provided, we measured and summarized the re-allocation of household tasks. Of these 2,526 cohabiting respondents, 893 indicated that they are also living with their children during the quarantine period (468 in Italy, 220 in the UK, and 205 in the US).

The impact of the virus was sizable. We find that 17% of respondents in Italy, 11% of respondents in the UK, and 10% of respondents in the US were directly affected by COVID-19 either because they were tested for it or knew someone who was infected. 15% of respondents in Italy, 20% of respondents in the UK, and 17% of respondents in the US lost their job or were furloughed. On a psychological level, respondents showed high levels of anxiety⁸ (55% of respondents in Italy, 48% in the UK, and 43% in the US reported to be anxious on the day prior to the survey), and low levels of happiness⁹ (13% of respondents in Italy and 24% in the UK and in the US reported not being happy). Respondents clearly feel isolated, and most reported that one of the first things they would like to do once lockdown ends is to visit family and friends (78% of respondents in Italy, 77% of respondents in the UK, and 64% of respondents in the US). 20% of respondents in Italy, 41% of respondents in the UK, and 47% of respondents in the US reported that one of the first things they would like to do once lockdown ends is to go shopping.

⁴ <https://coronavirUSA.jhu.edu/map.html>

⁵ <https://www.economist.com/graphic-detail/2020/04/16/tracking-covid-19-excess-deaths-across-countries>

⁶ <http://www.oecd.org/economic-outlook/june-2020/>

⁷ <https://www.prolific.co/>

⁸ Reporting 5 or more on a scale from 0 ("not at all") to 10 ("completely") to the question "How anxious did you feel yesterday?"

⁹ Reporting less than 5 on a scale from 0 ("not at all") to 10 ("completely") to the question "How happy did you feel yesterday?"

Even while struggling with the personal and social toll imposed by the pandemic, individuals sustain high levels of cooperation. In terms of cooperation with lockdown measures, most people adopt the recommended protective measures such as washing hands (80% of respondents in Italy, 91% of respondents in the UK, and 90% of respondents in the US), avoiding shaking hands (88% of respondents in Italy and 90% of respondents in the UK and the US), keeping a safe distance from others (91% of respondents in Italy and 96% of respondents in the UK and the US), and avoiding crowded places (83% of respondents in Italy, 92% of respondents in the UK, and 91% of respondents in the US). Mask-wearing habits vary greatly by country, 84% of respondents in Italy, 13% of respondents in the UK, and 58% of respondents in the US reporting that they wear a mask in public, reflecting the lack of a general consensus amongst governments and intergovernmental organizations on mask effectiveness at the time of the survey. A majority of respondents also follow more restrictive lockdown measures like limiting supermarket visits as much as possible (87% of respondents in Italy, 88% of respondents in the UK, and 89% of respondents in the US), refraining from visiting friends (82% of respondents in Italy, 94% of respondents in the UK, and 82% of respondents in the US), refraining from visiting relatives (82% of respondents in Italy, 92% of respondents in the UK, and 72% of respondents in the US), and staying home except in case of emergency (78% of respondents in Italy, 47% of respondents in the UK, and 41% of respondents in the US).

To measure cooperation within the couple, respondents took part in an incentivised Prisoners Dilemma game (Fehr et al. 2002). 69% of respondents in Italy, 71% of respondents in the UK, and 75% of respondents in the US are willing to cooperate with strangers who respect social distancing measures, whilst 21% of respondents in Italy, 14% of respondents in the UK, and 20% of respondents in the US would cooperate also with strangers who do not respect measures. These results indicate a strong willingness to cooperate, but only with those who are deemed responsible and trustworthy.

Allocation of household chores

In terms of household work, sharing of most duties increased during lockdown, but so did the burden on women. The proportion of *shared* childcare increased dramatically (17 percentage points in Italy, 8 percent in the UK and 11 percent in the US), and for most other tasks (cleaning, cooking and gardening) sharing grew between 2 and 11 percentage points on average. The one exception is grocery shopping, which during lockdown became a more male-specialised task (sharing went down 16 percentage points in Italy, 12 percent in the UK and 9 percent in the US). Overall, the burden of household chores on women increased, which is problematic as there are significant reductions in lifetime earnings associated with performing these activities (Chu et al, 2020; Grossman, 2019; Folbre, 2017).

When comparing reporting of household tasks, interesting gender discrepancies arise. There are gender differences in reported increases in both one's own tasks (on average men report larger increases, driven by grocery shopping, childcare and cleaning), and in the partner's tasks, with men both in the UK and the US samples reporting they do more (although to a small extent) than what women say their partners do.

To understand the reallocation of tasks within the household, and the ensuing tension, it is important to first understand the *time constraints* faced by couples. Time constraints in our data are proxied by grouping individuals into three categories, according to their work status: working outside of the home (least time at home); working at home (moderate time at home); not working (most time available at home). Looking at the change in time constraints faced by respondents and their partners from before to during the lockdown, we can establish the potential for taking on more household work. We analyse the “shift in comparative advantage towards home production” by taking the difference between the respondents’ and their partners’ change in time constraints, in the spirit of a difference-in-differences approach (before vs. after the lockdown, self vs. partner). We focus on the perspective of individuals who saw an increase in time at home relative to their partners, for example people who started working from home during the lockdown while their partner kept on going to the office, or people who were laid off while the partner kept on working.¹⁰ As expected, those who lost their job report doing more now, while those who are still working report doing the same or less, especially in the case of women. The opposite is true for those whose partners lost their job, again especially for women. Similar results are found by Del Boca et al. (2020) who analyse the change in time use of a representative sample of 520 Italian women and find that the additional burden during lockdown has been greater on women than on men, regardless of the partner working arrangement, while men spend more time doing housework only when their partner continues to work outside of the household.

The Sankey diagrams shown in Figure 1 report changes in childcare and grocery shopping from before the lockdown (left-hand side of the graph) to during the lockdown (right-hand side of the graph) for women and men respectively. The figures are split according to those who have more time at home during lockdown than before relative to their partner (left panel, for example because they started working from home while their partner still works from the office), and those whose time constraints relative to their partner remain unchanged (right panel, for example because both used to work outside and both started working from home during lockdown).

[FIGURE 1 ABOUT HERE]

For childcare, both men and women who saw a shift in comparative advantage towards home production take on more of this responsibility themselves compared to before. This same pattern, though slightly less pronounced, holds true across most other household work (see Supplementary Figure 1). However, when we look at grocery shopping, men are taking on more of it, while women less, regardless of their relative job status. This shift to men doing the shopping occurs across all households, including the ones where we would predict otherwise based on available time at home. The fact that relative time constraints are not predictive of who is doing grocery shopping suggests that the importance of time availability is outweighed by other factors such as risk perceptions, the unskilled nature of the task, and gender norms. For example, a possible interpretation of this finding is that men are more

¹⁰ Only one member of the couple responds to the survey, and reports both their own and their partner’s job status before and during the lockdown. To keep the perspective of the partner with more time available at home, sometimes the answers are swapped. That is, if the respondent has relatively more time at home during the lockdown than their partner, we keep the answers related to the respondent; if the opposite occurs, we look at the answers related to the respondent’s partner.

willing to take the risk (and possibly the pleasure) of going out of the house to buy food, or conform to the gender norms pertaining to the role of men as hunters or connectors between the domestic and public sphere. Gender norms are known to be related to a range of family, economic, and educational outcomes (Guiso et al, 2008; Seguino, 2007; Ingelhart and Norris, 2003), and are quite different across the three countries that we surveyed.¹¹

Additional evidence supporting the notion that shifting time availability is predictive of some—but not all—variation in household task reallocation is shown in Table 1. Here we report the marginal coefficients from ordered probit regressions using time constraints and cooperation with the partner to predict the change in household tasks following the lockdown. The outcome variable is coded such that a higher number is indicative of less involvement.¹² We see that having relatively more time at home is always related to greater involvement in household chores (a negative coefficient), slightly more for men than women, although often the relationship is small. Specifically, men who experience relatively more time at home compared to their partners take on a greater share of childcare, as well as a greater share of grocery shopping, though this latter effect is smaller as we observe men taking on more grocery shopping duties regardless of their change in relative time at home. Only a few women are seen to take on a greater share of grocery shopping when they experience an increase in available time at home relative to their partners. Women also take on more cleaning duties when they experience an increase in relative time at home. Interestingly, whether respondents would be willing to cooperate with their partners in the Prisoner’s Dilemma game is also predictive of taking on more household responsibilities during lockdown, particularly men taking on more childcare and women doing more cleaning. Controlling for propensity to cooperate with one’s partner does not substantially change the estimated predictive power of experiencing a relative shift in time at home, suggesting independent contributions to the respondents’ willingness to reallocate household chores. Few movements in the allocation of cooking, laundry, or gardening duties are predicted.

[INSERT TABLE 1 ABOUT HERE]

Family cooperation and tensions

So far, we have shown that the lockdown led to substantial reallocation of household chores, following not only changes in time constraints, but also individual propensity to cooperate with the partner and task-specific gender norms. Next we ask: is this reallocation of tasks conducive to more or less harmony within the couple? To investigate the potential consequences of an uneven reallocation of chores, we examine the respondent’s report on

¹¹ The USA and UK are both ranked 15th in the Gender Development Index of the United Nations Development Programme (<http://hdr.undp.org/en/content/table-4-gender-development-index>), and the labour force gender participation gap is smallest in the UK (10.6 percentage points in 2018 according to the OECD (<https://stats.oecd.org/index.aspx?queryid=54751>), followed by the USA with 12% and Italy with 18.3%). However, the last WEF report on gender equality (http://www3.weforum.org/docs/WEF_GGGR_2020.pdf) indicates that the representation of women on company boards is highest in Italy at 34% (this was mandatory for listed companies since 2012), followed by the UK at 27.2%, and the USA at 21.7%; politics is also somewhat different with 30% of women MPs the UK, 19.1% in the USA, and 31% in Italy.

¹² Specifically, the outcome variable is the first difference (during vs before the lockdown) of self-reported allocation of several household tasks, coded such that 2 corresponds to “Mostly partner”, 1 to “Shared equally”, and 0 to “Mostly self”.

tensions about the division of household labour, quarrels before and during the lockdown, and the language used to discuss these issues.

Marked gender differences are present when looking at tension over the division of household tasks and general wellbeing. Tensions in the household are reported in all countries, with women generally reporting higher household tensions than men. Some household tension¹³ is reported by 28% of men and 43% of women amongst respondents in Italy, 28% of men and 37% of women amongst respondents in the UK, and 32% of both men and women amongst respondents in the US. Child respondents report household tensions more frequently than adults, with 67% of children from the Italy sample and 64% of children from the UK and US samples reporting significant household tension. In line with national surveys of wellbeing over the same period, most respondents report higher anxiety and lower instantaneous wellbeing relative to overall life satisfaction and sense of leading a worthwhile life, with women reporting consistently higher anxiety and lower wellbeing than men in both Italy and the UK, while the averages are closer for women and men in the US sample. Average life satisfaction is 5% lower amongst women than men in the Italy sample, 1% lower in the UK sample, and less than 1% lower in the US sample. Instantaneous anxiety, on average, is 19% higher among women than men in the Italy sample, and 12% higher among women relative to men in the UK and US sample.¹⁴ These findings align with those in the UK and US indicating that women, and mothers in particular, experienced a markedly larger decline in wellbeing than men during the pandemic (Prados and Zamarro 2020; Zhou et al, 2020). When asking questions directly to children, we find that those with above-average assessments of their school, their teachers, how hard they work, and how well they perform consistently report higher wellbeing and instantaneous wellbeing than children with below-average assessments, as do those who report using social media less than an hour both during quarantine and before.

To understand how these changes in wellbeing are related to reallocation of household tasks, the Sankey diagrams in Figures 2 and 3 represent how the allocation of childcare and cleaning changed from before to during the lockdown, for Italy, the UK, and the US respectively, with flows colour-coded based on the level of household tension reported by respondents specifically related to the allocations of household tasks.¹⁵ Darker lines indicate higher levels of reported tension. Considering for example childcare, across all samples, the respondents more likely to report the lowest level of tension in the household are those who share childcare, alongside those who report that their partner is mostly doing it and, only in the US sample, those who outsource it. This observation aligns with the finding from a study in the US that insufficient support with childcare has been a key driver of conflict amongst couples with young children during the lockdown (Calarco et al. 2020). The respondents who report high levels of tensions vary by country. Respondents in Italy who report the highest tension

¹³ Reporting 3 or more on a scale from 0 (“no tension at all”) to 10 (“a lot of tension”) to the question “Are you experiencing tensions over the division of work to do in the household at the moment?”

¹⁴ This is calculated by computing simple averages of the 1-10 scale responses for the wellbeing variables from each group and then the percent increase/decrease in this average going from the male group to the female group in each country.

¹⁵ After the questions about the division of tasks, we asked “Are you experiencing tensions over the division of work to do in the household at the moment?”, with possible answers from 0 (“no tension at all”) to 10 (“a lot of tension”). Similar results can be found by colour-coding the flows by answers to the question “How often do you and your partner/flatmate quarrel?”

are those who either continue to be solely responsible for childcare or saw a reallocation of childcare to themselves, compared to a previous shared or outsourced provision. This is different from the UK case, where the highest tensions are reported by respondents who are now sharing more of the childcare than before the lockdown, regardless of whether they were previously solely responsible or their partner was. The US sample is somewhat in between, with highest tensions reported by both those who saw an increase in their own load and those who were previously solely responsible and started sharing during the lockdown.

[FIGURE 2 ABOUT HERE]

When considering other household activities, we again find that respondents reporting the lowest levels of tension are those who report sharing tasks. High levels of tension are related to deviations from the status quo, and not just changes that increase one's own load, but also those that shift tasks away from oneself and to the partner. These patterns of low tension when sharing and high tension when changing allocations are clearly illustrated by the diagrams displaying changes in the allocation of cleaning in Figure 3 (see Supplementary Figures 2-4 for the other tasks).

[FIGURE 3 ABOUT HERE]

Additional evidence supporting the notion that changes in allocation of household tasks is predictive of higher tension is shown in Table 2. Via an OLS regression, we find that changing the usual allocation of any household task during the lockdown is related to higher levels of tension. Higher tension is particularly predicted by changes in grocery shopping, cleaning, and childcare duties (see Supplementary Tables 2 and 4), while the association with changes in cooking and gardening chores is smaller and less precisely estimated. To give an idea of the magnitude, the association between tension and changing who is in charge of groceries or cleaning because of the lockdown is between one third and one half of the association between tensions during the lockdown and having a child present in the household (see Supplementary Table 1). Except for cooking, the strong association between changing tasks and tension is robust to the inclusion of detailed controls for the respondent's and their partner's job status, as well as personal characteristics such as cooperation, risk seeking, mental health and wellbeing (see columns 2 and 3 of Table 2 and Supplementary Tables 1-4). Furthermore, similar patterns can be found by using an indicator of higher levels of quarrelling during the lockdown as outcome variable (see Supplementary Tables 3-4).¹⁶

Gender differences in the relationship between tensions and changes in allocation of household tasks are not pronounced. As shown in column 4 of Table 2 (and Supplementary Tables 1-4), gender differences in this association are usually small, and often noisily estimated. Exceptions are changes in who is responsible for gardening, which is twice as strongly associated with tension when the respondent is male (0.337 for males, 0.337-0.241=0.096 for females, but the difference is still not statistically significant), and changes in

¹⁶ Since both the outcome variable (change in frequency of quarrelling) and the main regressors (change in allocation of household tasks) are first-differences from during to before the lockdown, this analysis is similar to fixed-effect regression holding fixed time-invariant individual unobservables.

childcare (which is strongly associated with tension when the respondent is male, almost uncorrelated if female, see Supplementary Table 2, column 4).

[INSERT TABLE 2 ABOUT HERE]

These results are important as tensions can impact family stability: divorce filings were reported to be on the rise in Wuhan¹⁷ and family dynamics can be altered by calamities and natural disasters: divorces increased in New York after 9/11 and marriage, birth, and divorce rates increased in the year following Hurricane Hugo in 1989 in the 24 counties of South Carolina that were declared disaster areas compared with the 22 other counties in the state (Cohan and Cole, 2002 and 2009). In our sample, 21 of 2,607 respondents with partners declare they want a divorce when quarantine ends. Our survey instrument was not designed to investigate domestic violence and the nature of our sample and its collection mode would probably have excluded vulnerable families where this issue would be more prevalent, but it is important to note that lockdown has been linked to domestic violence (Peterman et al 2020), and the inability to meet financial obligations and maintaining social ties is likely to increase family stress and domestic violence (although Beland et al., 2020, do not find strong evidence in this regard).

Talking through it

Communication difficulties play a vital role in marriage unhappiness and communications-related issues are cited much more often as causes for divorce than external issues, including economic ones (Thompson, 2008). To better understand potential issues with communication, we analysed the language that respondents used to answer open ended questions to our survey. When it comes to the language used to address tensions arising from the establishment of a new routine and allocation of household tasks during the lockdown, we find markedly different styles by gender and, to a lesser extent, by country. In all three countries, women are more likely than men to voice their concerns in our survey. When addressing the disagreement (about half the women in our sample prefer to say nothing) women talk about their expectations, dissatisfaction, and anger. Men's preferred strategy is to say nothing, and when they do, they do so to signal there is not a big problem and no routine has been established, often because it does not seem to be needed.

The word clouds below show the language used by female and male respondents in each country.

[FIGURE 4 ABOUT HERE]

This gender difference in the use of language to talk about tensions can be interpreted as a reflection of the gendered expectations in terms of role divisions, and might further reinforce such roles. Household work and the related communications are seen as a female domain and not a space for men to engage in conversations. The 'proper' workplace, and not the household, is the place for men to communicate. Also, women are expected to express emotions and hence are more likely to open up about their frustrations as opposed to men who are expected to be more restrained (Lakoff, 1975; Tannen, 1990).

¹⁷ <https://www.globaltimes.cn/content/1181829.shtml>

Conclusion

Our study finds a dramatic increase across Italy, the UK, and the US in the proportion of shared childcare, and increases in the sharing of most other tasks, with the exception of grocery shopping which instead became a more specialised task done largely by men during the lockdown. In all three countries we surveyed, the reallocation of household tasks mirrors the relative changes of job status within the couple: respondents who lost their job (while their partners did not) or who are working from home (while their partners kept on working outside of the house) are shouldering a greater share of household chores. The opposite is true for those whose partners lost jobs (but not them). Thus, asymmetric changes in job situations are strongly associated with a deviation from the status quo in terms of division of labour.

The specialisation pattern we find, with women doing more of everything and men doing more shopping, is corroborated by a range of studies carried out during the crisis. In the US, Carlson et al. (2020) find that both parents report devoting more time to housework, with substantial increases in the sharing of both childcare (from 50% to 60%) and household tasks (from 38% to 53%). Such increases in sharing, however, are slightly disproportionate: in childcare, mothers do more of the homework supervision and fathers more of the playtime; in household tasks, fathers especially increased time devoted to grocery shopping. Parents also disagree on how much fathers actually do: 42% of fathers report an increase in housework time, 45% report more time in the care of young children overall, and 43% report more total care of older children, while only 25%, 34% and 20% of mothers respectively say their partners did so. Sevilla and Smith (2020) show that UK families with young children have been doing the equivalent of a working week in childcare, with women doing the greater share and a reduction in the gender childcare gap, with men's increases very sensitive on their employment status (whether they work from home or have been furloughed or lost their job). In Spain, Farré et al. (2020) show increases in women's loads and a similar pattern of men specialising at grocery shopping, possibly, they argue, because it is a relatively easy, out-of-household task and perceived as carrying more risk.

We must also caution that while our UK and US samples are representative on a few sociodemographic variables (age, ethnicity, gender), we have obviously surveyed a segment of the population with stable access to the internet, as well as time availability to complete the survey. We are therefore unlikely to have sampled those families with the greatest tensions or sharpest time constraints. More work must be done to assess the needs of the most vulnerable families, especially since their wellbeing and health are most at risk from the COVID-19 crisis.

As with much of the COVID-19 crisis, it is early days to speculate on the durability of these changes. However, there is some hope that more sharing of childcare and household work might be the silver lining on the cloud of adverse occupational effects that women are set to face: Alon et al (2020) and Hupkau and Petrongolo (2020) speculate that this pandemic and the consequent reallocation of household chores may lead to a change of work and gender norms similar to that experienced with paternity leave introductions. However, these increases in sharing are not documented across all households, but rather among

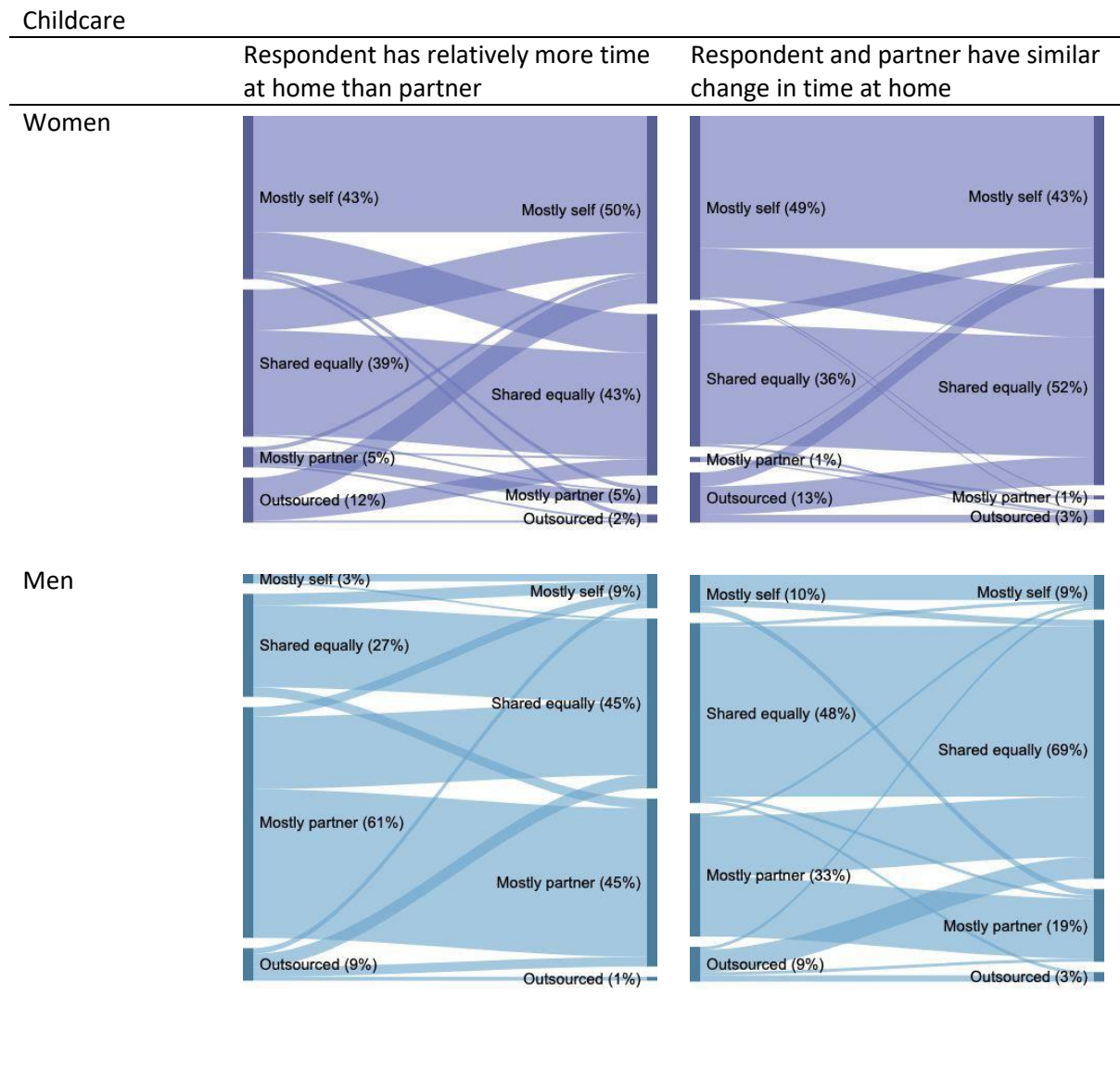
respondents who also report low tensions, and we might therefore be seeing a very partial silver lining, with women in some households experiencing multiple in- and out-of-household shocks.

A more pessimistic view might focus on the fact that, even when a pandemic is forcing men to participate in the house work, many still do so by exercising their freedom to choose the more pleasant tasks, and deciding how to contribute through gender-tinted lenses. The disaster literature suggests alternative scenarios for the short and the long run in terms of changes in the division of labour: Peek and Fothergill (2008) relay how the gendered division of labour may be even more pronounced in disasters, with women cast as nurturers and men as protectors, but also cite studies conducted on hurricane Andrew in the 1990s that found that, while gender roles were suspended and readapted during the crisis, they then reverted to previous arrangements (Alway et al., 1998) largely due to external constraints related to labour market forces and availability of childcare.

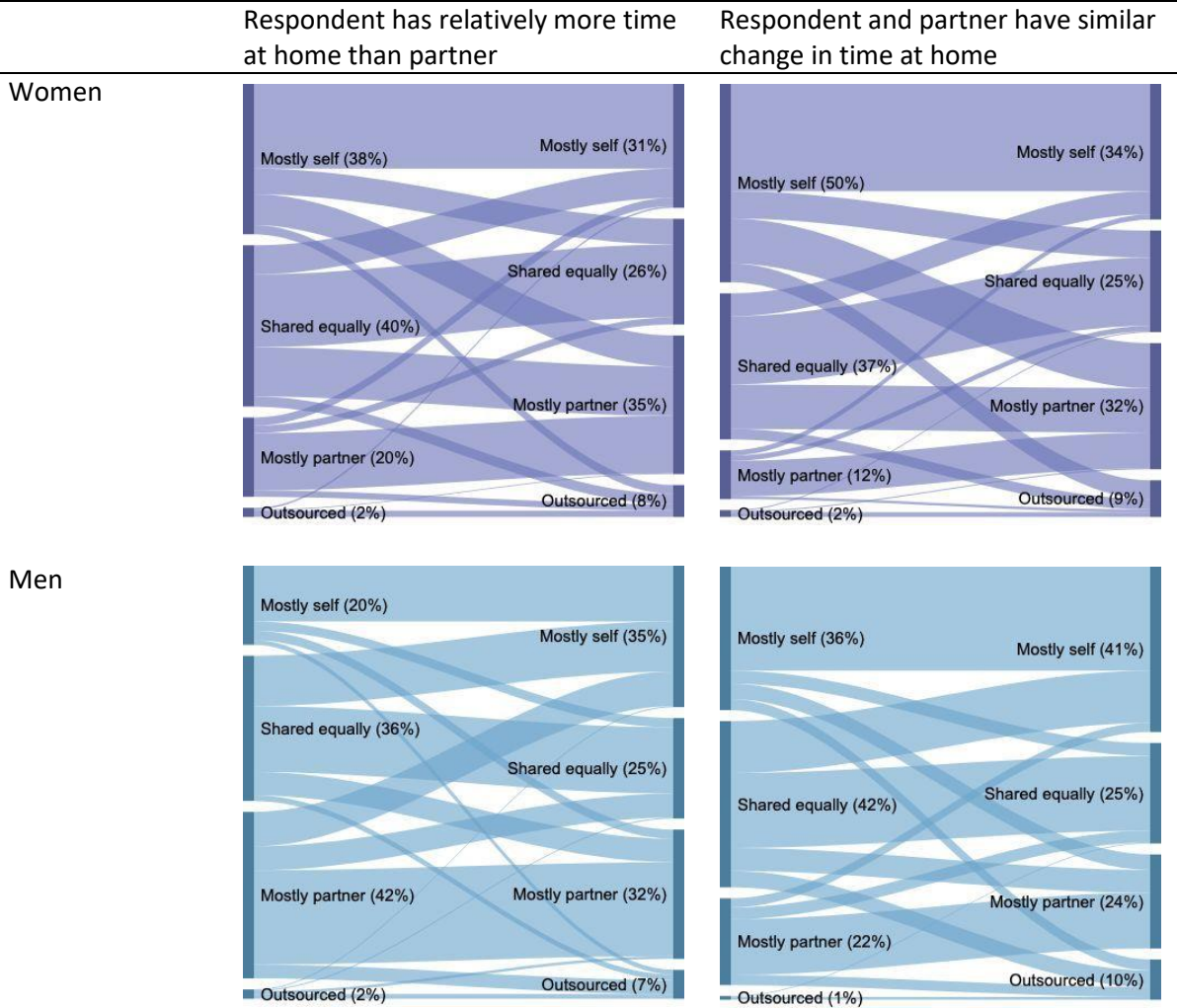
A feature of the COVID-19 lockdown is that most of the work that is still happening, and all of the childcare, have moved into homes. This forced fusion of work and family life means that men at the very least witnessed, if not shared, the demand to be available for both work and family, typically experienced more acutely by working mothers. Time will tell whether this will be sufficient to generate the changes in workplace and household culture necessary to create more balanced allocations of both paid and unpaid work (Goldin, 2014; Folbre, 2017; Grossbard, 1993), but the differences we find in levels of tension across households suggest this will not be a smooth or an evenly distributed outcome across all household types.

Figures

Figure 1: Changes in division of childcare and grocery shopping from before to during the lockdown, split by relative change in time at home

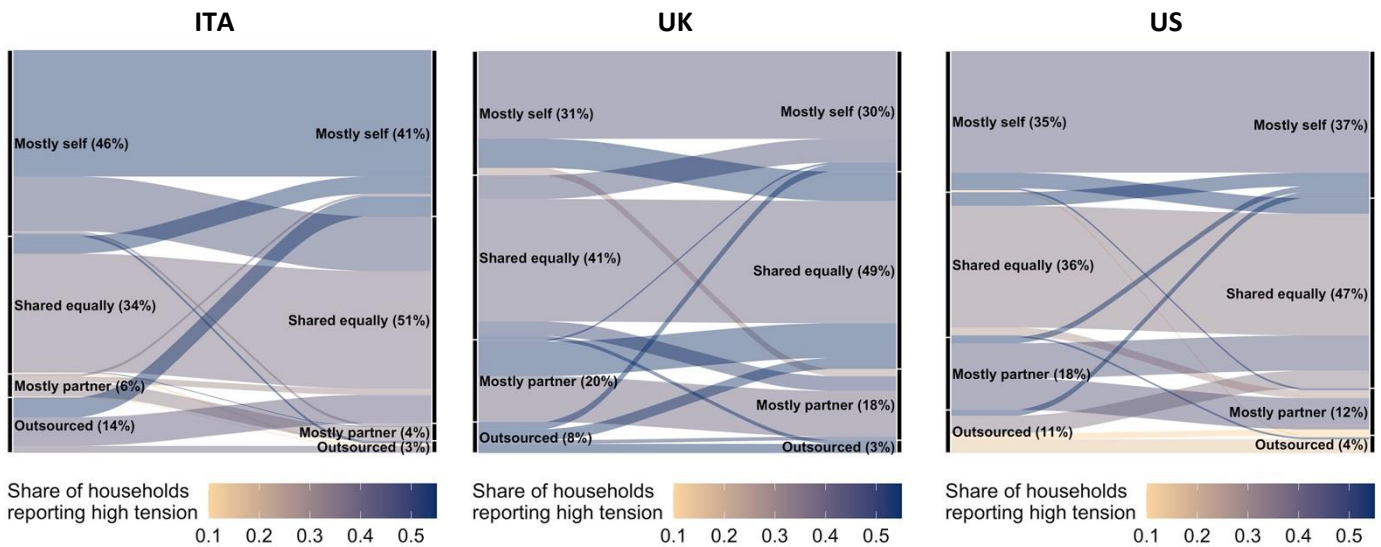


Groceries



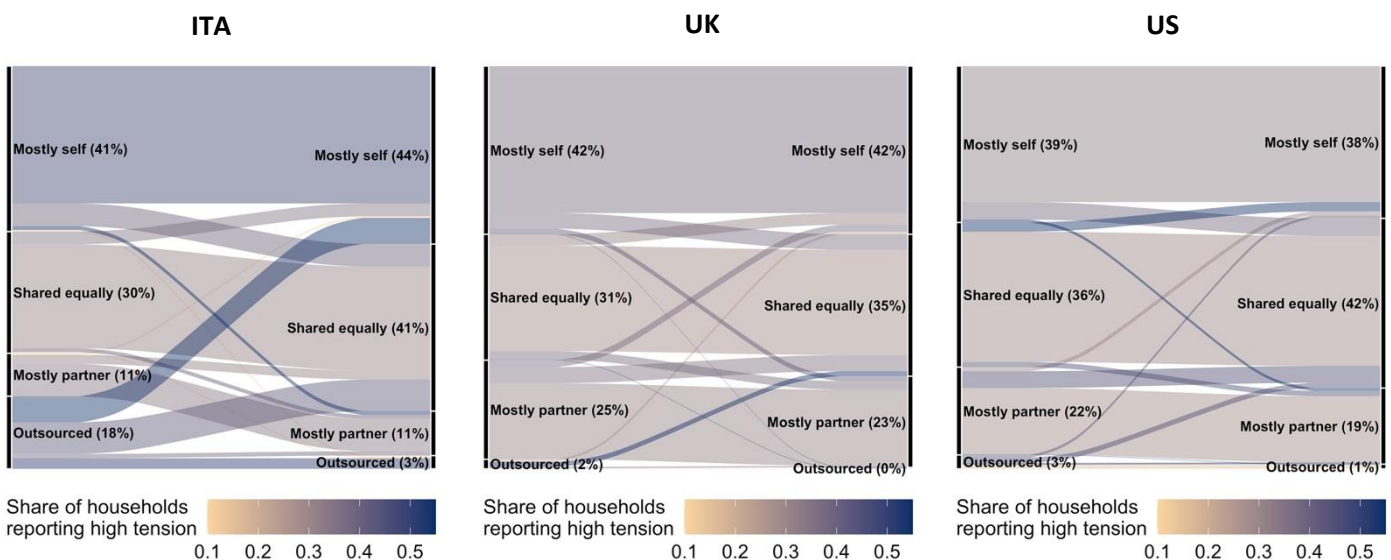
Notes: The above Sankey diagrams report changes in childcare and grocery shopping allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for women and men respectively. The figures are split according to whether the respondent has relatively more time at home than their partner during the lockdown compared to before (left-hand side panel) or experienced a similar change in time at home as their partner following the lockdown (right-hand side panel). Source: online survey in Italy, UK, USA. For childcare, N = 476 (women) and 316 (men). For grocery shopping, N = 1,208 (women) and 873 (men).

Figure 2: Changes in division of childcare from before to during the lockdown, coloured by share of households reporting high tension



Notes: The above Sankey diagrams report changes in childcare allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for each of the countries surveyed. Diagram flows are colour-coded by the share of respondents reporting high household tensions specifically related to the allocations of household tasks. Darker lines correspond to subsets with higher reported household tensions, and are useful in capturing the effect of task reallocation in lockdown. Source: online survey in Italy, UK, USA. N = 893.

Figure 3: Changes in division of cleaning from before to during the lockdown, coloured by share of household reporting high tension



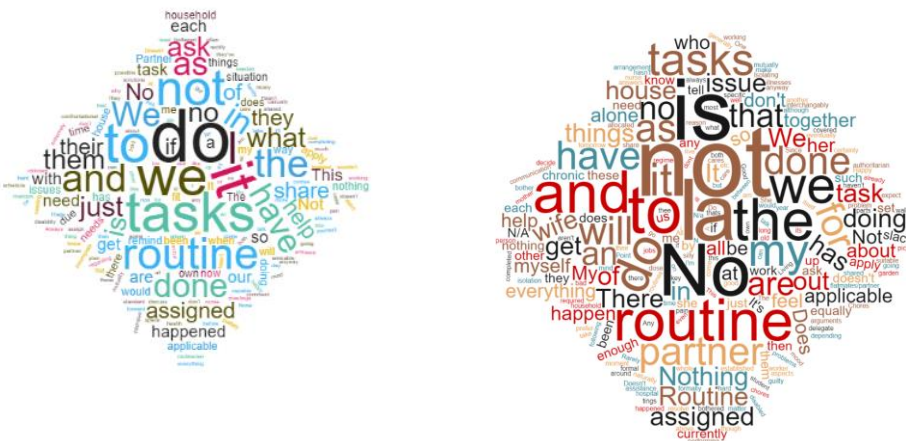
Notes: The above Sankey diagrams report changes in cleaning allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for each of the countries surveyed. Diagram flows are colour-coded by the share of respondents reporting high household tensions specifically related to the allocations of household tasks. Darker lines correspond to subsets with higher reported household tensions, and are useful in capturing the effect of task reallocation in lockdown. Source: online survey in Italy, UK, USA. N = 2,527.

Figure 4: Word Clouds from the open answers to the question regarding tension on the division of assigned household tasks.

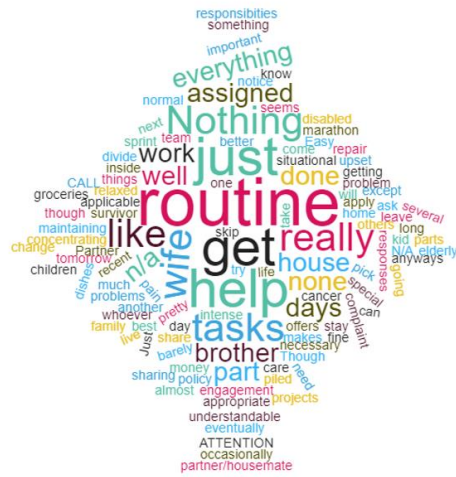
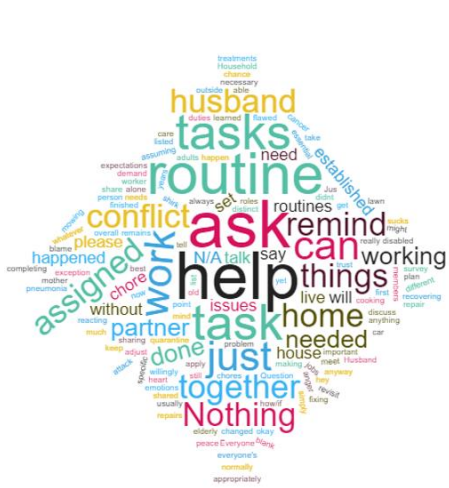
Word cloud women (left—“not happening”) and men (right—“not doing it”) addressing tensions Italy



Word cloud women (left—“we do it”) and men (right—“No routine”) addressing tensions UK



Word cloud women (left—“ask help”) and men (right—“get help”) addressing tensions USA



Tables

Table 1: Ordered probit regressions predicting changes in family chore allocations

<i>Men</i>												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Childcare		Groceries		Cooking		Cleaning		Laundry		Gardening	
Relatively	-0.401**	-0.393**	-0.240***	-0.240***	-0.060	-0.060	-0.066	-0.062	-0.072	-0.072	-0.076	-0.076
more time	(.177)	(.178)	(.091)	(.177)	(.105)	(.105)	(.112)	(.112)	(.121)	(.121)	(.122)	(.122)
Cooperate		-0.309*		0.017		-0.023		-0.158		-0.012		-0.005
w/ partner		(.184)		(.099)		(.110)		(.116)		(.127)		(.125)
Survey FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	214	214	646	646	646	646	646	646	646	646	646	646
<i>Women</i>												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Childcare		Groceries		Cooking		Cleaning		Laundry		Gardening	
Relatively	-0.198	-0.197	-0.168**	-0.169**	-0.006	-0.004	-0.169*	-0.163	-0.169	-0.171	-0.017	-0.022
more time	(.153)	(.153)	(.079)	(.079)	(.098)	(.098)	(.105)	(.105)	(.109)	(.186)	(.010)	(.100)
Cooperate		-0.207		-0.017		0.055		0.174*		-0.071		-0.157
w/ partner		(.151)		(.080)		(.105)		(.108)		(.113)		(.109)
Survey FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	305	305	849	849	849	849	849	849	849	849	849	849

Notes: The coefficients are marginal effects from an ordered probit regression. Standard errors in parenthesis. * indicates p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01. *Outcome* variable is the first-difference (during the lockdown minus before) in self-reported allocation of several household tasks, with 2 corresponding to “Mostly partner”, 1 to “Shared equally”, and 0 to “Mostly self”. All other answers (“paid help/deliveries” or “prefer not to say”) are coded as missing. *Relatively more time* is an indicator variable for having relatively more time at home than the partner during the lockdown compared to before (constructed as a difference-in-differences between the time available at home because of job status during the pandemic vs before (first diff.) and of the respondent vs the partner (second difference)). *Cooperate with partner* is an indicator variable for willingness to cooperate with the partner in a Prisoner’s Dilemma game. *Controls* include country fixed effects and polynomial in age. Source: online survey in Italy, UK, USA.

Table 2: OLS regression predicting tension due to change in allocation of household tasks

	(1)	(2)	(3)	(4)
	Tension over the division of household tasks			
Changed division: grocery	0.284** (0.114)	0.264** (0.119)	0.246** (0.115)	0.324 (0.210)
Ch. grocery x fem				-0.119 (0.251)
Changed division: clean	0.472*** (0.161)	0.440*** (0.163)	0.390** (0.155)	0.491* (0.259)
Ch. clean x fem				-0.157 (0.321)
Changed division: cook	0.117 (0.183)	-0.002 (0.183)	0.045 (0.178)	0.078 (0.279)
Ch. cook x fem				-0.070 (0.363)
Changed division: gardening	0.113 (0.175)	0.200 (0.189)	0.164 (0.177)	0.337 (0.364)
Ch. gardening x fem				-0.241 (0.416)
Job status	No	Yes	Yes	Yes
Personal characteristics	No	No	Yes	Yes
N	2348	2121	2120	2111

Notes: Coefficients from an OLS regression. Robust standard errors in parenthesis. * indicates p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01. *Outcome* variable is self-reported answer to the question 'Are you experiencing tensions over the division of work to do in the household at the moment?' on a scale from 0 (no tension at all) to 10 (a lot of tension). *Changed division*: indicator equal to one if the division of the household task is different during the lockdown than before, and zero otherwise (i.e. indicator for the diagonal flows in the Sankey diagrams). *Ch. x fem*: interaction between the indicator for changed division of household labor and female respondent. *Demographic controls*: cubic polynomial in age and indicator for presence of children in the household. *Job status*: controls for respondent and partner's job status, including indicators for working remotely (omitted category); working outside of home (both as essential workers and non-essential workers); work for a family business; government-sponsored training scheme; apprenticeship; employed with other paid work; self-employed; furlough; temporary leave (e.g. maternity leave or ill); student; homemakers; retired. *Personal characteristics*: controls for cooperating with the partner in a Prisoner's Dilemma game; indicator for risk-seeking behaviours reported in reasons to leave home (see friends, tired of being in the home, getting bored, getting some adrenaline, exercising free will); self-reported life satisfaction; living a worthwhile life; happiness; anxiety; frequency talking with family or friends; indicator for wanting to buy a gift to the partner when lockdown ends. Source: online survey in Italy, UK, USA.

References

Adams-Prass, A., Boneva, T., Golin, M., & Rauh, C. (2020). [Inequality in the impact of the Coronavirus shock: Evidence from real time surveys](#). *Journal of Public Economics*, 189, 104245.

Alon, T. M., Doepke, M., Olstead-Rumsey, J., & Tertilt, M. (2020). [The impact of COVID-19 on gender equality](#). NBER Working Paper No. 26947.

- Alway, J., Belgrave, L.L., & Smith, K.J. (1998). Back to normal: Gender and disaster. *Symbolic Interaction*, 21(2), pp.175-195.
- Beland, L., Brodeur, A., Haddad, J., & Mikola, D. (2020). COVID-19, family stress and domestic violence: Remote work, isolation and bargaining Power. IZA DP No. 13332
- Del Boca, D., Oggero, N., Profeta, P., & Rossi, M. (2020). Women's Work, Housework and Childcare, before and during COVID-19. *Review of Economics of the Household* volume 18, pages1001–1017
- Calarco, J. M., Meanwell, E., Anderson, E., & Knopf, A. (2020). My Husband Thinks I'm Crazy: COVID-19-Related Conflict in Couples with Young Children. SocArXiv. September 23. <https://osf.io/preprints/socarxiv/cpkj6>
- Carlson, D. L., Petts, R., & Pepin, J. R. (2020). USA couples' divisions of housework and childcare during COVID-19 pandemic. SocArXiv. May 6. doi:10.31235/osf.io/jy8fn.
- Cattan, S., Farquharson, C., Krutikova, S., Phimister, A., & Sevilla, A. (2020). Trying times: How might the lockdown change time use in families? IFS Briefing Note 20 April 2020.
- Chu, Y. W. L., Cuffe, H. E., & Doan, N. (2020). Motherhood employment penalty and gender wage gap across countries: 1990–2010. *Available at SSRN 3584920*.
- Farré, L., Fawaz Y., González, L., & Graves, J. (2020). How the COVID-19 Lockdown Affected Gender Inequality in Paid and Unpaid Work in Spain. IZA Discussion Paper No. 13434
- Fehr, E., & Gächter, S. (2002). Altruistic punishment in humans. *Nature*, 415(6868), 137–140.
- Folbre, N., (2017). The care penalty and gender inequality. In: S. Averett, L. Arys, & S. Hoffman (Eds.), *The Oxford Handbook of Women and Economy*, pp.1-28.
- Goldin, C. (2014). A grand gender convergence: Its last chapter. *American Economic Review*, 104(4), pp.1091-1119.
- Grossbard-Schechtman, S. (1993). *On the economics of marriage: a theory of marriage, labor, and divorce*. Westview Press.
- Guiso, L., Monte, F., Sapienza, P., & Zingales, L. (2008). Culture, gender, and math. *Science*, 320(5880), pp.1164-1165.
- Inglehart, R. & Norris, P. (2003). *Rising tide: Gender equality and cultural change around the world*. New York: Cambridge University Press
- Lakoff, Robin. (1975). Language and woman's place. *Language and Society*, 2, 45-79.
- Peek, L., Abramson, D. M., Cox, R. S., Fothergill, A., & Tobin, J. (2018). Children and disasters. In: *Handbook of disaster research* (pp. 243-262). Springer, Cham.

Peterman, A., Potts, A., Thompson, K., Shah, N., Oertelt-Prigione, S., & van Gelder, N. (2020). [Pandemics and violence against women and children](#). Working Papers 528, Center for Global Development.

Prados, M., & Zamarro, G. (2020). Gender Differences in Couples' Division of Childcare, Work and Mental Health During COVID-19. CESR-Schaeffer Working Paper, (003).

Ruppanner, L., Brandén, M., & Turunen, J. (2018). Does unequal housework lead to divorce? Evidence from Sweden. *Sociology*, 52(1), pp.75-94.

Seguino, S. (2007). Plus Ça Change? Evidence on global trends in gender norms and stereotypes. *Feminist Economics*, 13(2), pp.1-28.

Tannen, Deborah (1990). *You Just Don't Understand: Women and Men in Conversation*. Virago Press.

Thompson, P. (2008). Desperate housewives? Communication difficulties and the dynamics of marital (un)happiness. *The Economic Journal*, 118(532), pp.1640-1669.

Zhou, M., Hertog, E., Kolpashnikova, K., & Kan, M. Y. (2020). Gender inequalities: Changes in income, time use and well-being before and during the UK COVID-19 lockdown.

Appendix

Supplementary Tables

Supplementary Table 1: OLS regression predicting tension due to change in allocation of household tasks (all coefficients)

	(1)	(2)	(3)	(4)
	Tension over the division of household tasks			
Changed division: grocery	0.284**	0.264**	0.246**	0.324
	(0.114)	(0.119)	(0.115)	(0.210)
Ch. grocery x fem				-0.119
				(0.251)
Changed division: clean	0.472***	0.440***	0.390**	0.491*
	(0.161)	(0.163)	(0.155)	(0.259)
Ch. clean x fem				-0.157
				(0.321)
Changed division: cook	0.117	-0.002	0.045	0.078
	(0.183)	(0.183)	(0.178)	(0.279)
Ch. cook x fem				-0.070
				(0.363)
Changed division: gardening	0.113	0.200	0.164	0.337
	(0.175)	(0.189)	(0.177)	(0.364)
Ch. gardening x fem				-0.241
				(0.416)
Age	-0.013*	-0.011	-0.006	-0.006
	(0.007)	(0.007)	(0.007)	(0.007)
Age squared	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Age cubed	-0.000*	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Children present	1.022***	0.997***	1.094***	1.095***
	(0.122)	(0.128)	(0.122)	(0.123)
Female	0.176*	0.249**	0.142	0.221*
	(0.106)	(0.116)	(0.113)	(0.132)
UK survey	0.039	-0.019	-0.362**	-0.368**
	(0.128)	(0.141)	(0.147)	(0.146)
US survey	-0.016	-0.017	-0.353**	-0.354**
	(0.130)	(0.140)	(0.144)	(0.145)
Work outside home as essential worker		0.082	0.079	0.079
		(0.188)	(0.179)	(0.179)
In furlough		0.176	0.145	0.139
		(0.257)	(0.235)	(0.235)
Self-employed or freelance		-0.318**	-0.336**	-0.341**
		(0.142)	(0.132)	(0.132)
Working for your own or family business		-0.086	-0.041	-0.061
		(0.373)	(0.339)	(0.340)
Ill, maternity leave, on holiday, or temp leave		0.174	0.137	0.143
		(0.360)	(0.352)	(0.354)
Full time responsibility for family and home		-0.263	-0.248	-0.256
		(0.202)	(0.191)	(0.191)
In education		0.092	-0.007	-0.014
		(0.302)	(0.301)	(0.301)
Retired		-0.420**	-0.393**	-0.393**
		(0.191)	(0.181)	(0.180)
Partner works outside home as essential worker		0.075	0.079	0.073

		(0.155)	(0.147)	(0.147)
Partner in furlough		0.308	0.248	0.242
		(0.228)	(0.215)	(0.215)
Partner self-employed or freelance		0.242	0.245*	0.248*
		(0.153)	(0.145)	(0.146)
Partner working for your own or family business		0.467	0.437	0.444
		(0.518)	(0.483)	(0.483)
Partner ill, maternity leave, on holiday, or temp leave		0.565	0.554	0.560
		(0.477)	(0.471)	(0.471)
Partner full time responsible for family and home		0.119	0.100	0.103
		(0.257)	(0.242)	(0.242)
Partner in education		0.589*	0.736**	0.751**
		(0.356)	(0.352)	(0.355)
Partner retired		0.268	0.292*	0.292*
		(0.187)	(0.177)	(0.177)
Cooperate with Partner in the dilemma game			-0.034	-0.031
			(0.106)	(0.106)
Risk-seeking			0.570***	0.570***
			(0.176)	(0.176)
Life satisfaction			-0.080**	-0.080**
			(0.036)	(0.036)
Life worthwhile			-0.066*	-0.067*
			(0.035)	(0.035)
Happy			-	-
			0.105***	0.103***
			(0.037)	(0.037)
Anxious			0.135***	0.136***
			(0.021)	(0.021)
Frequency talking with friends/family in lockdown			-0.039	-0.039
			(0.043)	(0.043)
Wants to gift partner			-	-
			0.452***	0.451***
			(0.172)	(0.172)
Constant	2.182***	2.020***	3.295***	3.242***
Demographic controls	Yes	Yes	Yes	Yes
Job status	No	Yes	Yes	Yes
Personal characteristics	No	No	Yes	Yes
N	2348	2121	2120	2111

Notes: Coefficients from an OLS regression. Robust standard errors in parenthesis. * indicates p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01. *Outcome* variable is self-reported answer to the question 'Are you experiencing tensions over the division of work to do in the household at the moment?' on a scale from 0 (no tension at all) to 10 (a lot of tension). *Changed division*: indicator equal to one if the division of the household task is different during the lockdown than before, and zero otherwise (i.e. indicator for the diagonal flows in the Sankey diagrams). *Ch. x fem*: interaction between the indicator for changed division of household labour and female respondent. *Demographic controls*: cubic polynomial in age and indicator for presence of children in the household. *Job status*: controls for respondent and partner's job status, including indicators for working remotely (omitted category); working outside of home (both as essential workers and non-essential workers); work for a family business; government-sponsored training scheme; apprenticeship; employed with other paid work; self-employed; furlough; temporary leave (e.g. maternity leave or ill); student; homemakers; retired. *Personal characteristics*: controls for cooperating with the partner in a Prisoner's Dilemma game; indicator for risk-seeking behaviours reported in reasons to leave home (see friends, tired of being in the home, getting bored, getting some adrenaline, exercising free will); self-reported life satisfaction; living a worthwhile life; happiness; anxiety; frequency talking with family or friends; indicator for wanting to buy a gift to the partner when lockdown ends. Source: online survey in Italy, UK, USA.

Supplementary Table 2: OLS regression predicting tension due to change in allocation of household tasks, including childcare (all coefficients)

	(1)	(2)	(3)	(4)
	Tension over the division of household tasks			
Changed division: childcare	0.471*	0.358	0.361	1.017**
	(0.253)	(0.266)	(0.253)	(0.429)
Ch. childcare x fem				-1.060**
				(0.524)
Changed division: grocery	0.241	0.203	0.179	0.118
	(0.205)	(0.208)	(0.205)	(0.448)
Ch. grocery x fem				0.064
				(0.500)
Changed division: clean	0.227	0.398	0.283	0.621
	(0.249)	(0.259)	(0.243)	(0.490)
Ch. clean x fem				-0.422
				(0.563)
Changed division: cook	-0.101	-0.255	-0.212	-0.291
	(0.304)	(0.298)	(0.303)	(0.478)
Ch. cook x fem				0.089
				(0.606)
Changed division: gardening	0.636**	0.723**	0.569*	0.746
	(0.314)	(0.336)	(0.325)	(0.748)
Ch. gardening x fem				-0.261
				(0.811)
Age	0.015	0.014	-0.007	-0.008
	(0.018)	(0.019)	(0.019)	(0.019)
Age squared	0.000	-0.000	-0.000	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Age cubed	-0.000*	-0.000**	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.476**	0.588**	0.382	0.674**
	(0.219)	(0.235)	(0.235)	(0.275)
UK survey	0.090	0.077	-0.365	-0.390
	(0.248)	(0.278)	(0.285)	(0.285)
US survey	-0.068	-0.191	-0.410	-0.494*
	(0.253)	(0.270)	(0.260)	(0.261)
Work outside home as essential worker		0.203	0.155	0.133
		(0.316)	(0.314)	(0.314)
In furlough		0.565	0.470	0.434
		(0.543)	(0.472)	(0.483)
Self-employed or freelance		-0.300	-0.365	-0.373
		(0.255)	(0.233)	(0.233)
Working for your own or family business		0.194	0.292	0.277
		(0.731)	(0.650)	(0.661)
Ill, maternity leave, on holiday, or temp leave		0.017	0.131	0.136
		(0.470)	(0.441)	(0.455)
Full time responsibility for family and home		-0.182	-0.216	-0.249
		(0.288)	(0.273)	(0.271)
In education		0.742	0.607	0.630
		(0.979)	(1.071)	(0.971)
Retired		-0.680	-0.738*	-0.633
		(0.507)	(0.424)	(0.420)
Partner works outside home as essential worker		0.117	0.036	0.048
		(0.251)	(0.235)	(0.235)

Partner in furlough	0.077 (0.434)	0.311 (0.429)	0.366 (0.427)
Partner self-employed or freelance	0.246 (0.266)	0.210 (0.257)	0.185 (0.257)
Partner working for your own or family business	0.674 (0.836)	0.487 (0.852)	0.557 (0.836)
Partner ill, maternity leave, on holiday, or temp leave	0.671 (0.754)	0.680 (0.719)	0.604 (0.742)
Partner full time responsible for family and home	-0.168 (0.416)	-0.128 (0.395)	-0.187 (0.403)
Partner in education	-0.972 (1.083)	-1.224 (1.251)	-0.872 (1.200)
Partner retired	1.090* (0.616)	0.902 (0.663)	0.776 (0.615)
Cooperate with Partner in the dilemma game		-0.331* (0.201)	-0.317 (0.202)
Risk-seeking		0.407 (0.362)	0.383 (0.369)
Life satisfaction		-0.240*** (0.067)	-0.238*** (0.068)
Life worthwhile		-0.011 (0.063)	-0.019 (0.063)
Happy		-0.056 (0.067)	-0.057 (0.067)
Anxious		0.156*** (0.038)	0.156*** (0.038)
Frequency talking with friends/family in lockdown		-0.107 (0.080)	-0.106 (0.081)
Wants to gift partner		-0.013 (0.309)	0.030 (0.311)
Demographic controls	Yes	Yes	Yes
Job status	No	Yes	Yes
Personal characteristics	No	No	Yes
N	844	798	798

Notes: Coefficients from an OLS regression. Robust standard errors in parenthesis. * indicates p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01. *Outcome* variable is self-reported answer to the question 'Are you experiencing tensions over the division of work to do in the household at the moment?' on a scale from 0 (no tension at all) to 10 (a lot of tension). *Changed division:* indicator equal to one if the division of the household task is different during the lockdown than before, and zero otherwise (i.e. indicator for the diagonal flows in the Sankey diagrams). *Ch. x fem:* interaction between the indicator for changed division of household labor and female respondent. *Demographic controls:* cubic polynomial in age and indicator for presence of children in the household. *Job status:* controls for respondent and partner's job status, including indicators for working remotely (omitted category); working outside of home (both as essential workers and non-essential workers); work for a family business; government-sponsored training scheme; apprenticeship; employed with other paid work; self-employed; furlough; temporary leave (e.g. maternity leave or ill); student; homemakers; retired. *Personal characteristics:* controls for cooperating with the partner in a Prisoner's Dilemma game; indicator for risk-seeking behaviours reported in reasons to leave home (see friends, tired of being in the home, getting bored, getting some adrenaline, exercising free will); self-reported life satisfaction; living a worthwhile life; happiness; anxiety; frequency talking with family or friends; indicator for wanting to buy a gift to the partner when lockdown ends. Source: online survey in Italy, UK, USA.

Supplementary Table 3: OLS regression predicting increased quarrelling during the lockdown, using change in in allocation of household tasks (all coefficients)

	(1)	(2)	(3)	(4)
	More quarrelling during the lockdown			
Changed division: grocery	0.118*	0.041	0.053	-0.120
	(0.071)	(0.075)	(0.077)	(0.162)
Ch. grocery x fem				0.217
				(0.185)
Changed division: clean	0.160*	0.171*	0.147	0.085
	(0.093)	(0.098)	(0.099)	(0.175)
Ch. clean x fem				0.102
				(0.209)
Changed division: cook	0.176*	0.122	0.164	0.464***
	(0.103)	(0.110)	(0.113)	(0.179)
Ch. cook x fem				-0.486**
				(0.232)
Changed division: gardening	0.169	0.215*	0.200*	0.361
	(0.106)	(0.112)	(0.113)	(0.231)
Ch. gardening x fem				-0.205
				(0.265)
Age	-0.014***	-0.014***	-0.012**	-0.013**
	(0.005)	(0.005)	(0.005)	(0.005)
Age squared	0.000	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Age cubed	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Children present	0.192***	0.149*	0.206**	0.192**
	(0.074)	(0.080)	(0.082)	(0.082)
Female	0.146**	0.173**	0.122	0.142
	(0.072)	(0.080)	(0.083)	(0.102)
UK survey	0.234***	0.266***	0.073	0.069
	(0.080)	(0.089)	(0.098)	(0.098)
US survey	0.047	0.044	-0.161	-0.156
	(0.088)	(0.097)	(0.109)	(0.109)
Work outside home as essential worker		-0.040	-0.034	-0.026
		(0.115)	(0.117)	(0.116)
In furlough		-0.120	-0.181	-0.181
		(0.151)	(0.153)	(0.153)
Self-employed or freelance		-0.112	-0.148	-0.142
		(0.096)	(0.098)	(0.098)
Working for your own or family business		0.057	0.089	0.070
		(0.221)	(0.224)	(0.226)
Ill, maternity leave, on holiday, or temp leave		0.166	0.122	0.119
		(0.189)	(0.197)	(0.198)
Full time responsibility for family and home		0.088	0.076	0.073
		(0.127)	(0.129)	(0.129)
In education		0.076	0.055	0.055
		(0.179)	(0.183)	(0.183)
Retired		-0.160	-0.164	-0.151
		(0.178)	(0.182)	(0.183)
Partner works outside home as essential worker		-0.064	-0.057	-0.057
		(0.097)	(0.099)	(0.100)
Partner in furlough		0.111	0.106	0.107
		(0.142)	(0.146)	(0.146)
Partner self-employed or freelance		-0.012	-0.033	-0.035

	(0.101)	(0.102)	(0.103)
Partner working for your own or family business	-0.089	-0.082	-0.093
	(0.282)	(0.288)	(0.283)
Partner ill, maternity leave, on holiday, or temp leave	0.301	0.329	0.331
	(0.245)	(0.249)	(0.252)
Partner full time responsible for family and home	0.353**	0.337**	0.351**
	(0.158)	(0.158)	(0.159)
Partner in education	-0.028	0.001	0.024
	(0.222)	(0.220)	(0.220)
Partner retired	-0.150	-0.144	-0.149
	(0.154)	(0.155)	(0.156)
Cooperate with Partner in the dilemma game		0.028	0.032
		(0.076)	(0.077)
Risk-seeking		0.235**	0.237**
		(0.117)	(0.117)
Life satisfaction		-0.011	-0.014
		(0.023)	(0.023)
Life worthwhile		-0.026	-0.027
		(0.021)	(0.021)
Happy		-0.082***	-0.080***
		(0.022)	(0.022)
Anxious		0.023*	0.024*
		(0.013)	(0.013)
Frequency talking with friends/family in lockdown		-0.026	-0.026
		(0.031)	(0.032)
Wants to gift partner		-0.465***	-0.474***
		(0.150)	(0.149)
Demographic controls	Yes	Yes	Yes
Job status	No	Yes	Yes
Personal characteristics	No	No	Yes
N	2311	2088	2079

Notes: Coefficients from an OLS regression. Robust standard errors in parenthesis. * indicates p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01. *Outcome* variable is an indicator equal to one if the respondent reported a higher frequency of quarrelling during vs before the lockdown (constructed as the first difference of two questions 'How often do you and your partner/flatmate quarrel since isolation/usually, before the lockdown?' on a scale from 1 (never) to 6 (all of the time)). *Changed division:* indicator equal to one if the division of the household task is different during the lockdown than before, and zero otherwise (i.e. indicator for the diagonal flows in the Sankey diagrams). *Ch. x fem:* interaction between the indicator for changed division of household labor and female respondent. *Demographic controls:* cubic polynomial in age and indicator for presence of children in the household. *Job status:* controls for respondent and partner's job status, including indicators for working remotely (omitted category); working outside of home (both as essential workers and non-essential workers); work for a family business; government-sponsored training scheme; apprenticeship; employed with other paid work; self-employed; furlough; temporary leave (e.g. maternity leave or ill); student; homemakers; retired. *Personal characteristics:* controls for cooperating with the partner in a Prisoner's Dilemma game; indicator for risk-seeking behaviours reported in reasons to leave home (see friends, tired of being in the home, getting bored, getting some adrenaline, exercising free will); self-reported life satisfaction; living a worthwhile life; happiness; anxiety; frequency talking with family or friends; indicator for wanting to buy a gift to the partner when lockdown ends. Source: online survey in Italy, UK, USA.

Supplementary Table 4: OLS regression predicting increased quarrelling during the lockdown, using change in in allocation of household tasks including childcare (all coefficients)

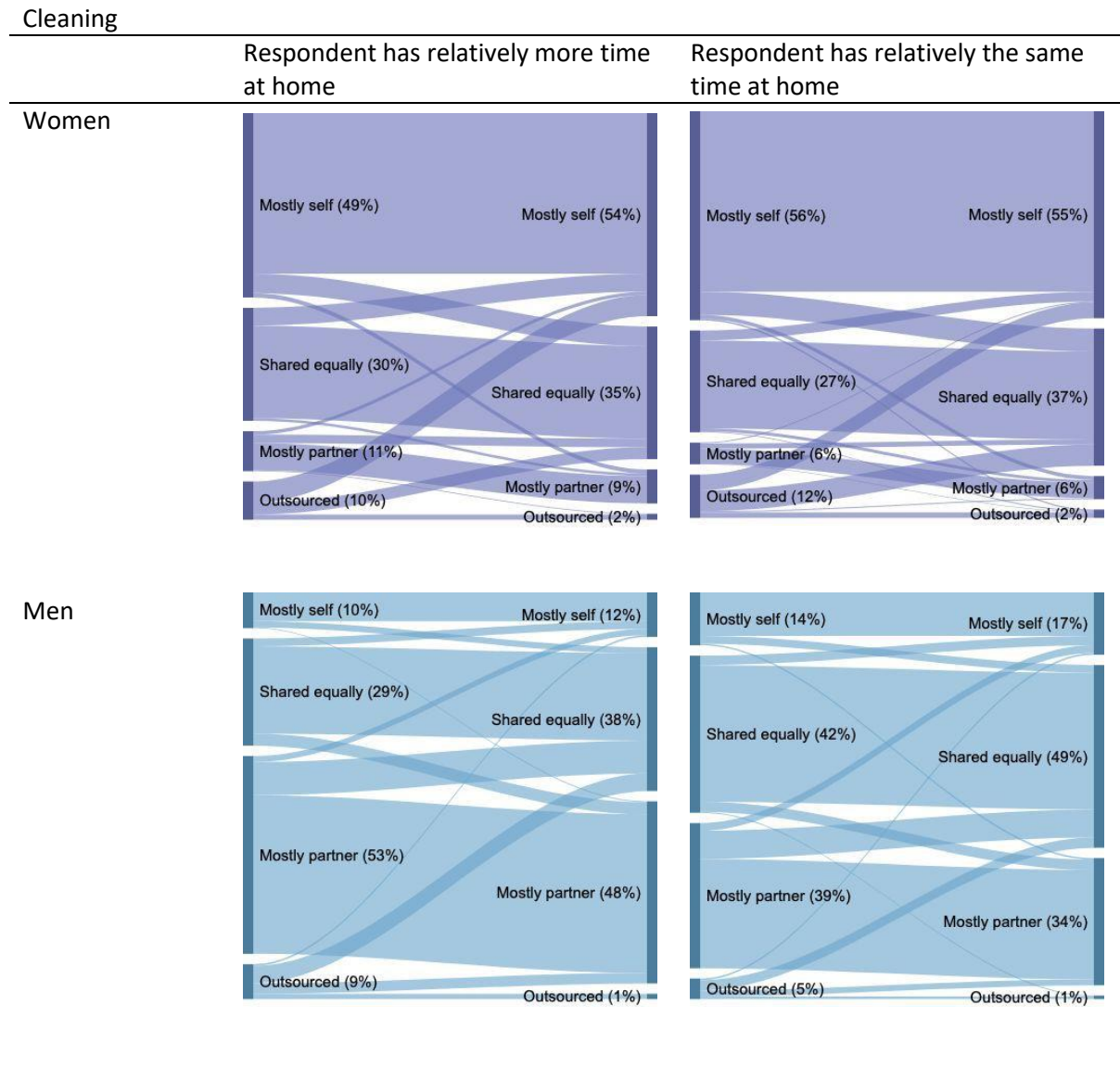
	(1)	(2)	(3)	(4)
	More quarrelling during the lockdown			
Changed division: childcare	0.256*	0.291**	0.296**	0.389
	(0.134)	(0.142)	(0.144)	(0.243)
Ch. childcare x fem				-0.167
				(0.300)
Changed division: grocery	0.021	-0.038	-0.006	-0.408
	(0.110)	(0.115)	(0.118)	(0.309)
Ch. grocery x fem				0.435
				(0.335)
Changed division: clean	0.063	0.088	0.060	-0.239
	(0.135)	(0.142)	(0.143)	(0.281)
Ch. clean x fem				0.390
				(0.323)
Changed division: cook	0.076	0.020	0.051	0.641**
	(0.156)	(0.171)	(0.177)	(0.295)
Ch. cook x fem				-0.922**
				(0.382)
Changed division: gardening	0.132	0.144	0.093	0.631
	(0.168)	(0.176)	(0.180)	(0.418)
Ch. gardening x fem				-0.680
				(0.461)
Age	-0.013	-0.012	-0.019	-0.017
	(0.011)	(0.013)	(0.014)	(0.014)
Age squared	-0.000	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Age cubed	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.087	0.128	0.052	0.172
	(0.123)	(0.143)	(0.152)	(0.200)
UK survey	0.082	0.150	0.015	0.009
	(0.137)	(0.155)	(0.181)	(0.182)
US survey	-0.029	-0.097	-0.219	-0.229
	(0.142)	(0.163)	(0.181)	(0.182)
Work outside home as essential worker		0.033	0.010	0.037
		(0.176)	(0.183)	(0.183)
In furlough		-0.155	-0.272	-0.305
		(0.291)	(0.282)	(0.285)
Self-employed or freelance		-0.084	-0.141	-0.130
		(0.150)	(0.151)	(0.150)
Working for your own or family business		0.195	0.272	0.248
		(0.361)	(0.356)	(0.364)
Ill, maternity leave, on holiday, or temp leave		0.325	0.324	0.354
		(0.245)	(0.247)	(0.250)
Full time responsibility for family and home		0.183	0.156	0.156
		(0.167)	(0.171)	(0.173)
In education		0.885*	0.853	0.863
		(0.529)	(0.555)	(0.566)
Retired		0.284	0.295	0.288
		(0.626)	(0.580)	(0.609)
Partner works outside home as essential worker		-0.156	-0.185	-0.172
		(0.139)	(0.145)	(0.147)
Partner in furlough		-0.197	-0.092	-0.085

	(0.264)	(0.282)	(0.287)
Partner self-employed or freelance	-0.023	-0.036	-0.034
	(0.148)	(0.149)	(0.148)
Partner working for your own or family business	-0.659	-0.802	-0.814
	(0.552)	(0.567)	(0.572)
Partner ill, maternity leave, on holiday, or temp leave	0.568	0.668*	0.706**
	(0.346)	(0.344)	(0.358)
Partner full time responsible for family and home	0.177	0.215	0.272
	(0.236)	(0.245)	(0.247)
Cooperate with Partner in the dilemma game		-0.193	-0.199
		(0.121)	(0.123)
Risk-seeking		0.472**	0.491**
		(0.208)	(0.211)
Life satisfaction		-0.060*	-0.063*
		(0.036)	(0.036)
Life worthwhile		0.015	0.015
		(0.034)	(0.034)
Happy		-0.083**	-0.082**
		(0.037)	(0.038)
Anxious		0.018	0.017
		(0.022)	(0.022)
Frequency talking with friends/family in lockdown		0.029	0.033
		(0.054)	(0.054)
Wants to gift partner		-0.317	-0.313
		(0.209)	(0.207)
Demographic controls	Yes	Yes	Yes
Job status	No	Yes	Yes
Personal characteristics	No	No	Yes
N	836	781	778

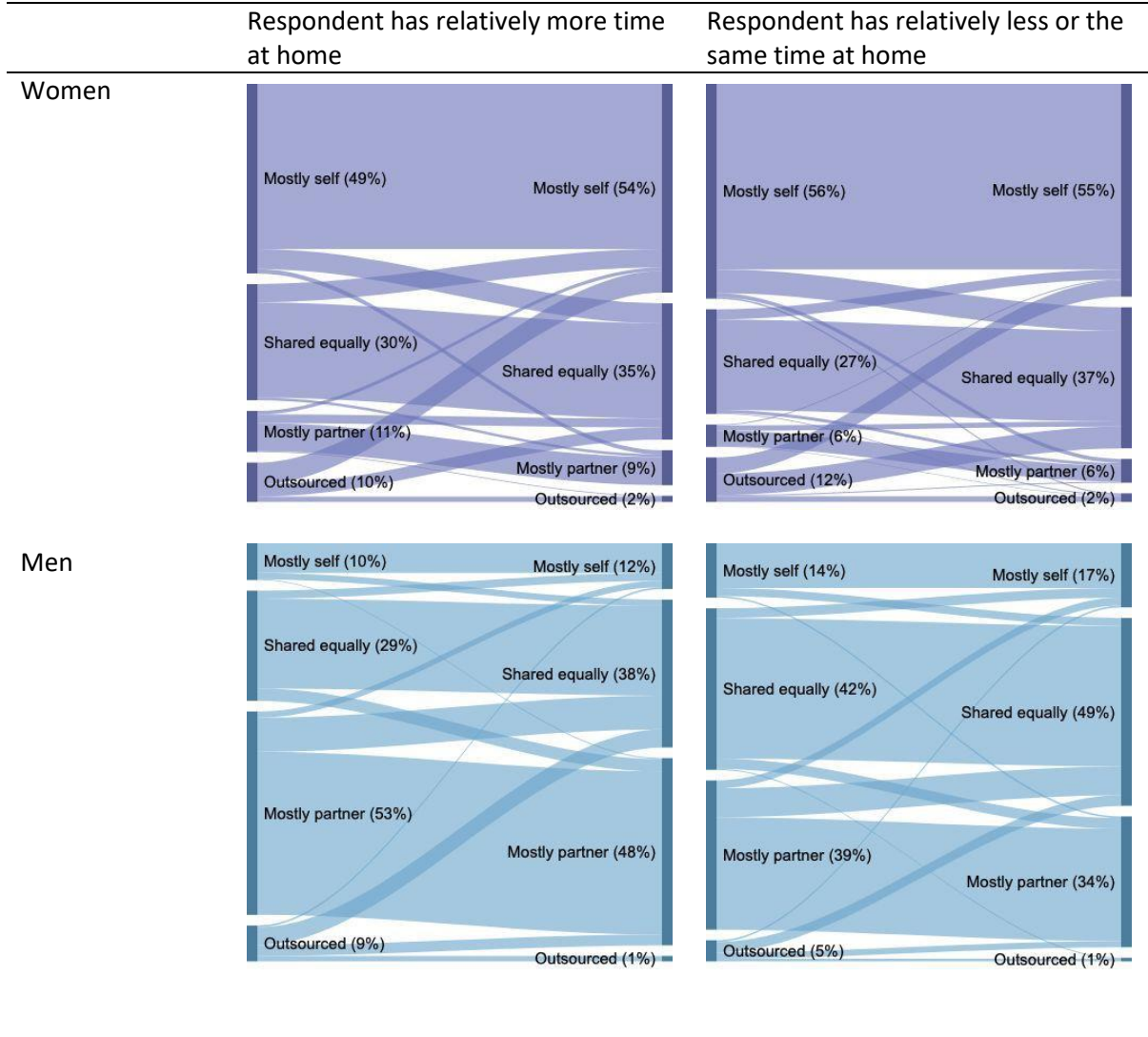
Notes: Coefficients from an OLS regression. Robust standard errors in parenthesis. * indicates p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01. *Outcome* variable is an indicator equal to one if the respondent reported a higher frequency of quarrelling during vs before the lockdown (constructed as the first difference of two questions 'How often do you and your partner/flatmate quarrel since isolation/usually, before the lockdown?' on a scale from 1 (never) to 6 (all of the time)). *Changed division*: indicator equal to one if the division of the household task is different during the lockdown than before, and zero otherwise (i.e. indicator for the diagonal flows in the Sankey diagrams). *Ch. x fem*: interaction between the indicator for changed division of household labor and female respondent. *Demographic controls*: cubic polynomial in age and indicator for presence of children in the household. *Job status*: controls for respondent and partner's job status, including indicators for working remotely (omitted category); working outside of home (both as essential workers and non-essential workers); work for a family business; government-sponsored training scheme; apprenticeship; employed with other paid work; self-employed; furlough; temporary leave (e.g. maternity leave or ill); student; homemakers; retired. *Personal characteristics*: controls for cooperating with the partner in a Prisoner's Dilemma game; indicator for risk-seeking behaviours reported in reasons to leave home (see friends, tired of being in the home, getting bored, getting some adrenaline, exercising free will); self-reported life satisfaction; living a worthwhile life; happiness; anxiety; frequency talking with family or friends; indicator for wanting to buy a gift to the partner when lockdown ends. Source: online survey in Italy, UK, USA.

Supplementary Figures

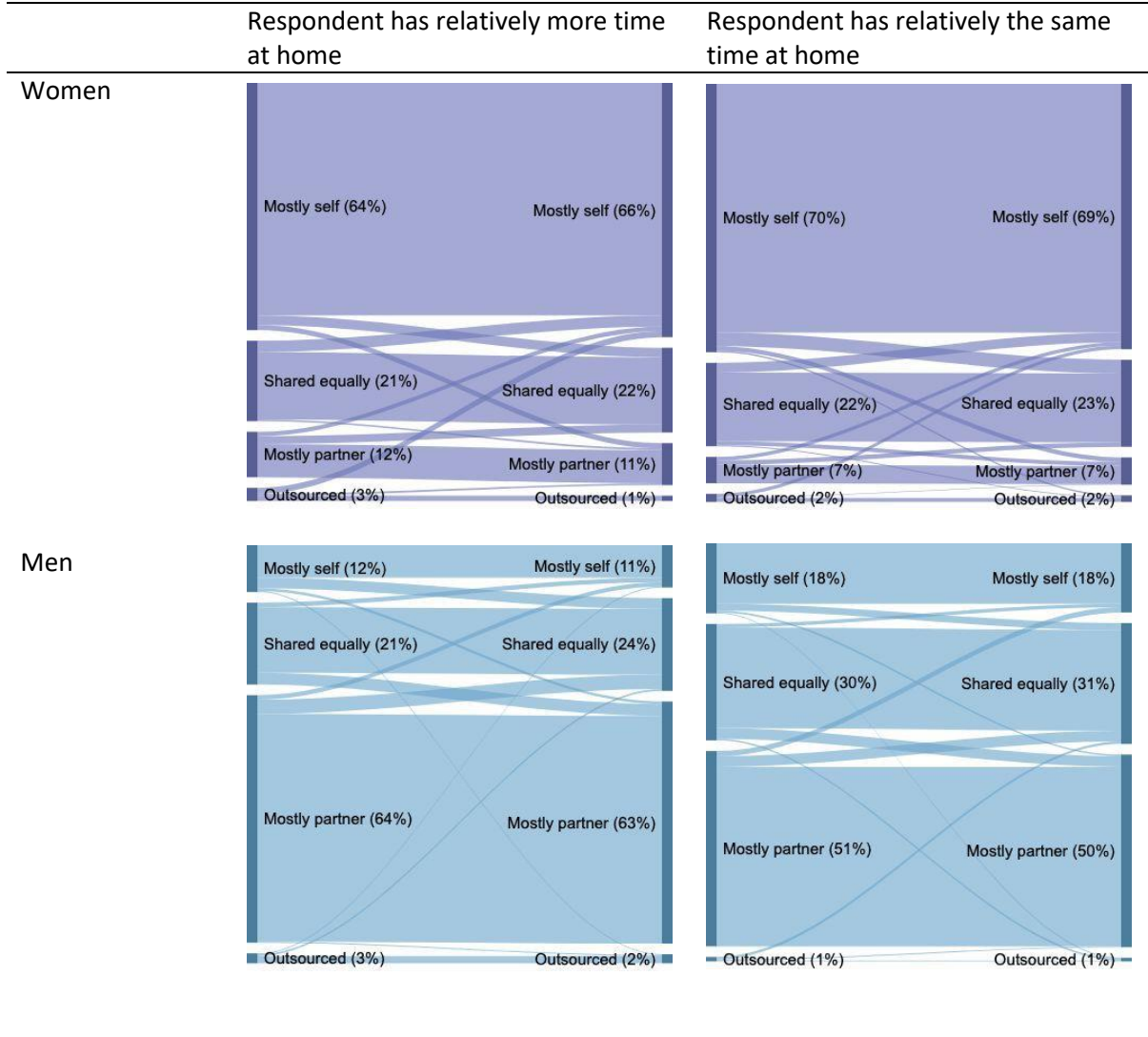
Supplementary Figure 1: Sankey diagrams for the reallocation of cleaning, cooking, laundry, and gardening from before to during the lockdown.



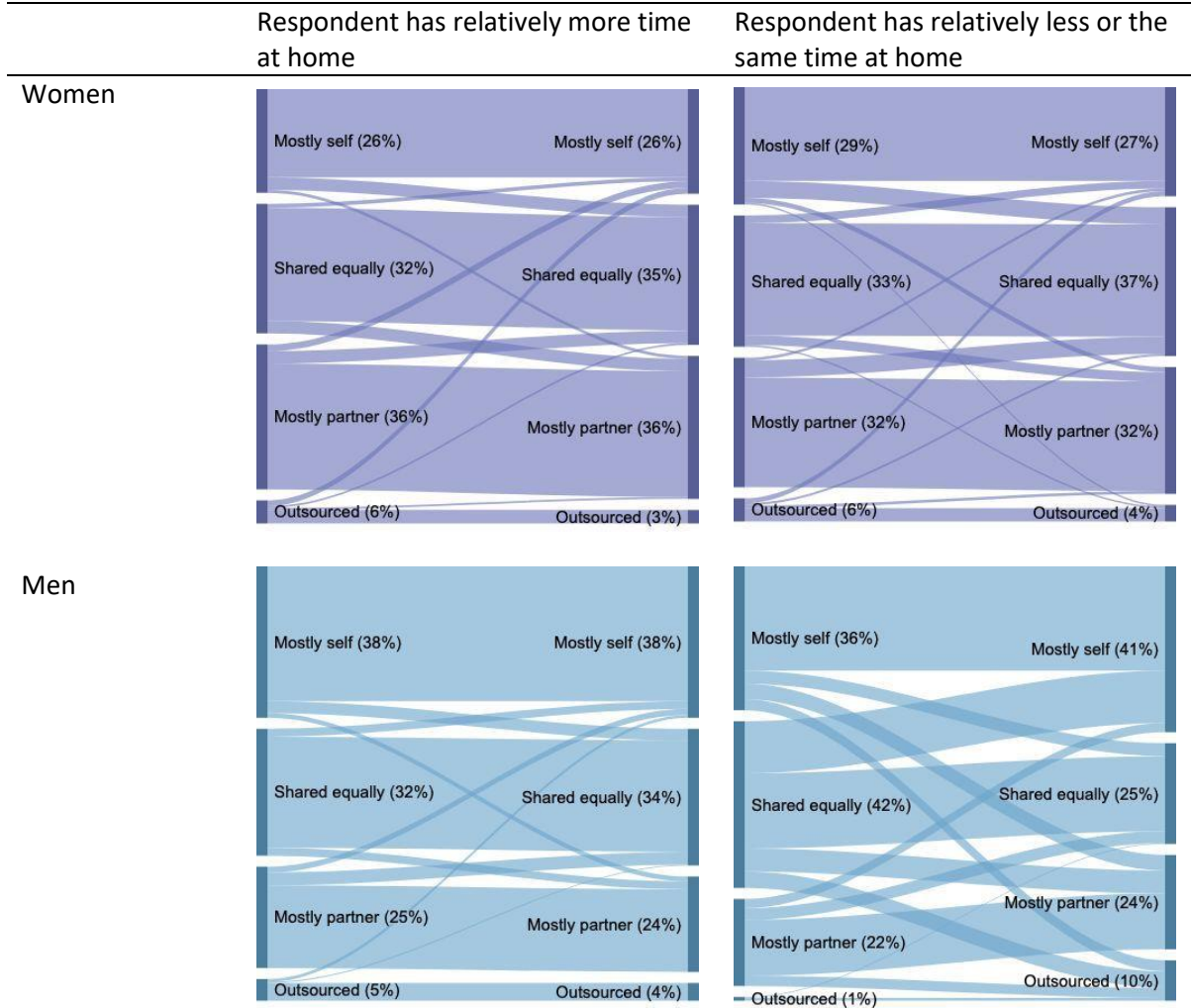
Cooking



Laundry

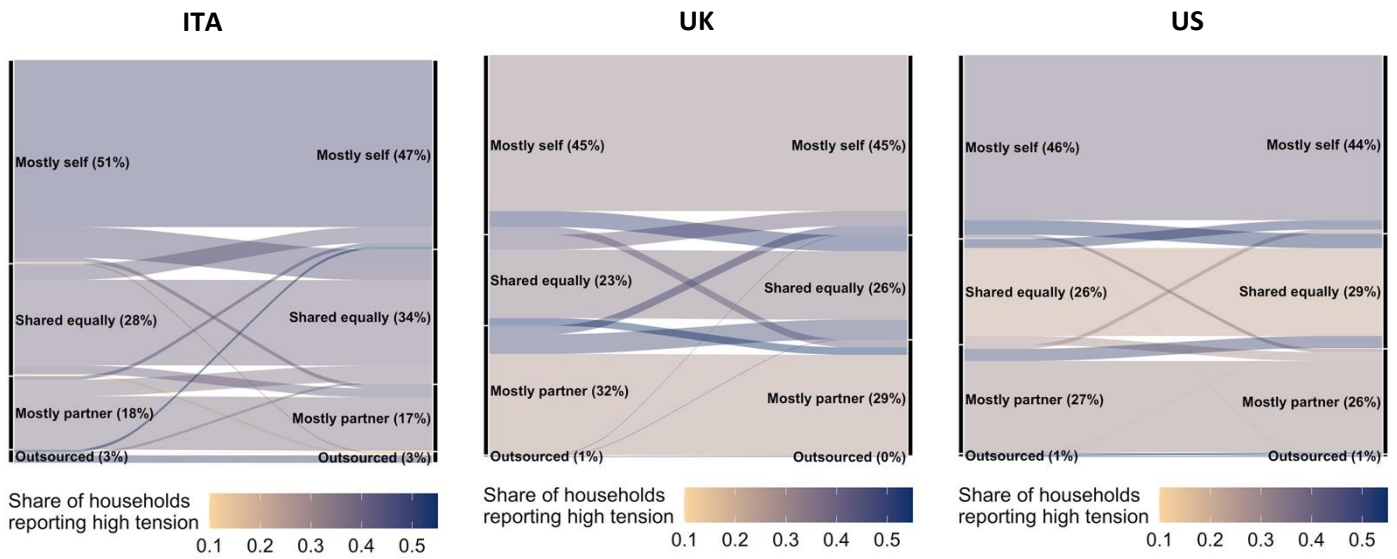


Gardening



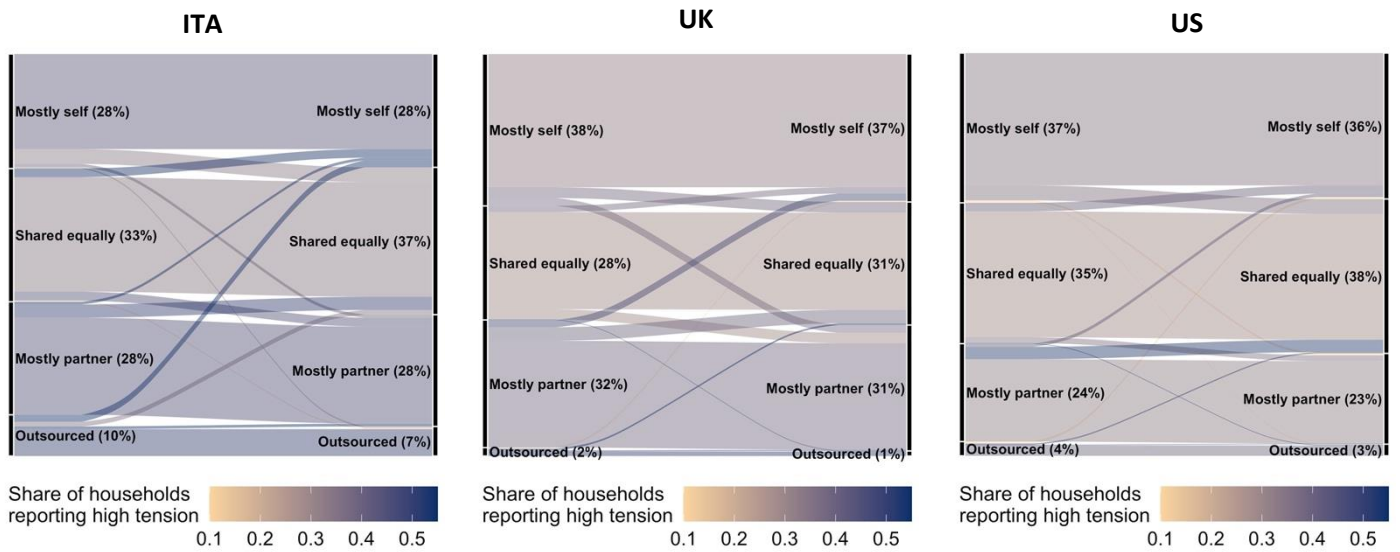
Notes: The above Sankey diagrams report changes in cleaning, cooking, laundry, and gardening allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for women and men respectively. The figures are split according to whether the respondent has more (left-hand side panel) or the same time (right-hand side panel) at home during lockdown than before relative to their partner. Responses for which the respondent has less time relatively are flipped so that the response is used from the perspective of the respondent's partner. Source: online survey in Italy, UK, USA. For cleaning, N = 1,296 (women) and 871 (men). For cooking, N = 1,207 (women) and 872 (men). For laundry, N = 1,207 (women) and 871 (men). For gardening, N = 1,157 (women) and 826 (men).

Supplementary Figure 2: Changes in division of cooking from before to during the lockdown, coloured by share of household reporting high tension



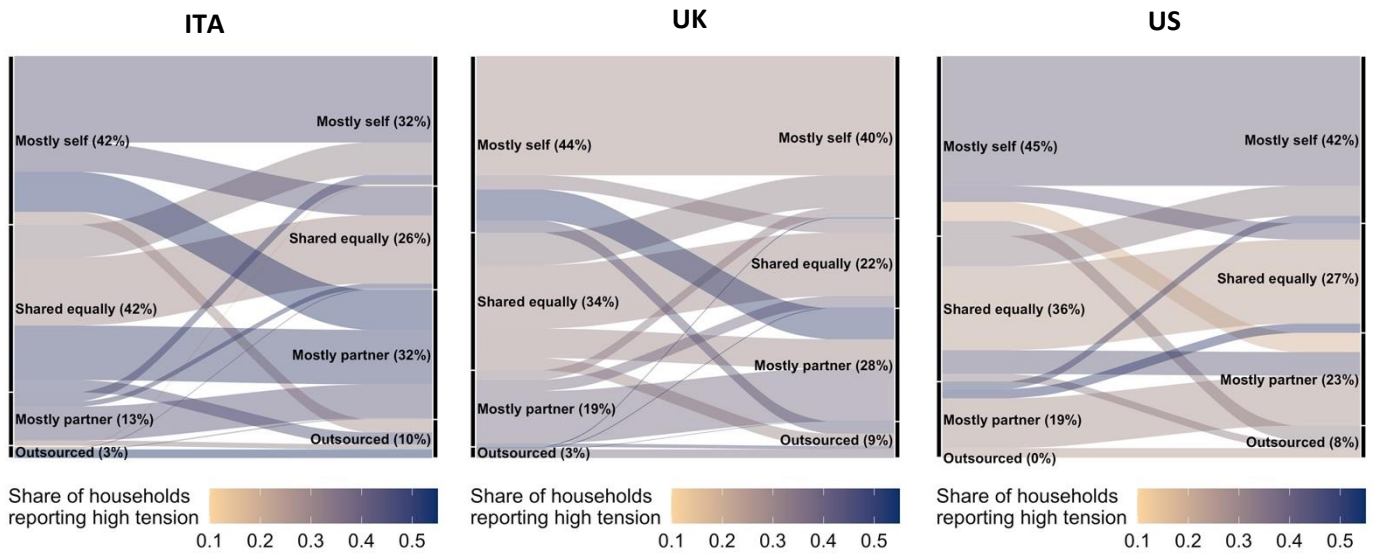
Notes: The above Sankey diagrams report changes in cooking allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for each of the countries surveyed. Diagram flows are coloured by the share of respondents reporting high household tensions specifically related to the allocations of household tasks. Darker lines correspond to subsets with higher reported household tensions, and are useful in capturing the effect of task reallocation in lockdown. . Source: online survey in Italy, UK, USA. N = 2,524.

Supplementary Figure 3: Changes in division of gardening from before to during the lockdown, coloured by share of household reporting high tension



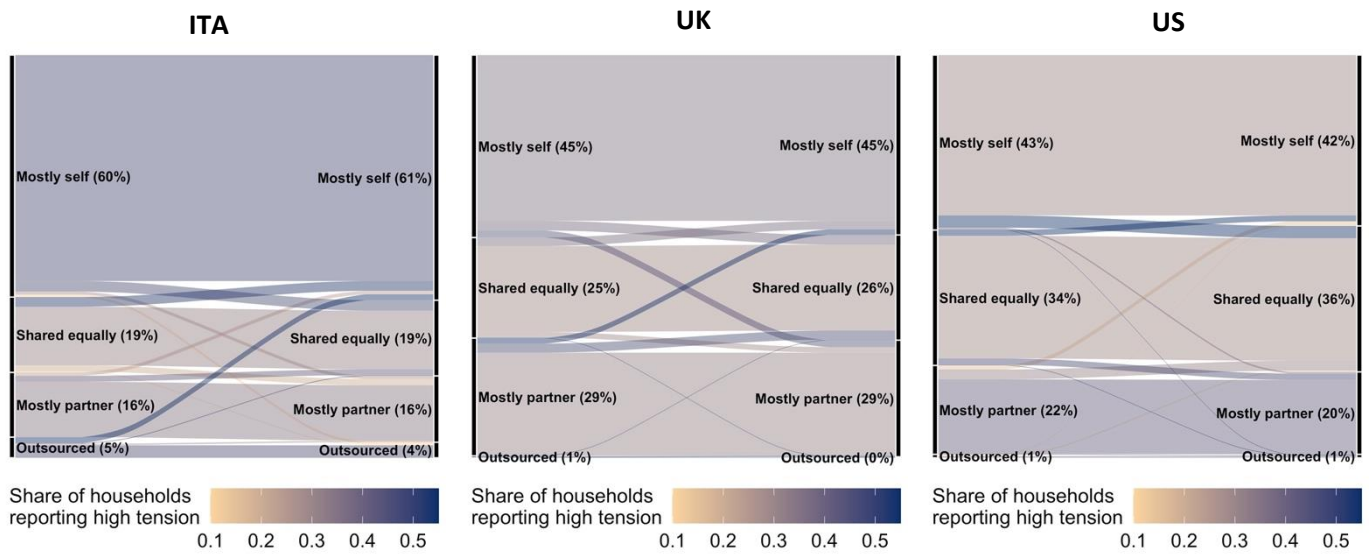
Notes: The above Sankey diagrams report changes in gardening allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for each of the countries surveyed. Diagram flows are coloured by the share of respondents reporting high household tensions specifically related to the allocations of household tasks. Darker lines correspond to subsets with higher reported household tensions, and are useful in capturing the effect of task reallocation in lockdown. Source: online survey in Italy, UK, USA. N = 2,367.

Supplementary Figure 4: Changes in division of groceries from before to during the lockdown, coloured by share of household reporting high tension



Notes: The above Sankey diagrams report changes in grocery shopping allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for each of the countries surveyed. Diagram flows are coloured by the share of respondents reporting high household tensions specifically related to the allocations of household tasks. Darker lines correspond to subsets with higher reported household tensions, and are useful in capturing the effect of task reallocation in lockdown. Source: online survey in Italy, UK, USA. N = 2,520.

Supplementary Figure 5: Changes in division of laundry from before to during the lockdown, coloured by share of household reporting high tension



Notes: The above Sankey diagrams report changes in laundry allocation from before the lockdown (left-hand side of each diagram) to during the lockdown (right-hand side of each diagram) for each of the countries surveyed. Diagram flows are coloured by the share of respondents reporting high household tensions specifically related to the allocations of household tasks. Darker lines correspond to subsets with higher reported household tensions, and are useful in capturing the effect of task reallocation in lockdown. Source: online survey in Italy, UK, USA. N = 2,524.