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Sharing the Caring?
The Gender Division of Care Work during
the COVID-19 Pandemic in Germany

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DISCUSSION PAPER SERIES

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ABSTRACT

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The COVID-19 pandemic and related closures of daycare centers and schools significantly increased the amount of care work done by parents. There is much speculation over whether the pandemic increased or decreased gender equality in parental care work. Based on representative data for Germany we present an empirical analysis that shows greater support for the latter rather than the former hypothesis. A key finding is that there is a significant increase in the number of couples where the mother is left completely or almost completely alone with the care work. We see only small increases in the prevalence of fathers doing more than mothers or in splitting these tasks 50:50. Additionally we find that the increase in mothers solely responsible for care work is greatest when the mother alone works from home. The division of care work is perceived very differently by mothers and fathers, a difference that also increased during the pandemic.

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1. Introduction

As in all OECD countries, daycare centers and schools across Germany have been subject to frequent closures and otherwise limited operation since March 2020 due to measures aimed at slowing the spread of COVID-19. As a result, parents have taken over a great deal of the educational and care work that is typically provided by these institutions. There has also been an increase in the amount of housework, e.g. cooking or cleaning, because children and adults spend more time at home. The additional care work and housework is particularly challenging for working-parent families, i.e. two-parent households where both are working or working single-parent households, since it comes on top of hours spent in paid employment.[1] In many cases, these families have not made use of alternative care by grandparents due to their vulnerability to the disease (e.g. Langmeyer et al., 2020).[2]

An important question is how this additional work in the household is shared between mothers and fathers, i.e. the gender division. Two competing hypotheses emerged early on in the pandemic: On the one hand, it could be that the additional responsibilities would fall largely on women, resulting in an exacerbation of existing gender inequalities (see e.g. Allmendinger, 2020, in Germany, or Cohen & Hsu, 2020; Lewis, 2020, in the U.S.). On the other hand, it could be that the closure of education and care facilities would contribute to increasing the participation of fathers in child care and housework, thus bringing about a change in social norms in the medium term that could increase gender equality (e.g., Alon et al., 2020; Hupkau and Petrongolo, 2020). Ultimately, it is an empirical question of how parents have divided up the additional tasks.

Our paper makes use of a supplementary wave of the *pairfam* survey to examine the changed division of child care and housework in Germany during the COVID-19 pandemic. We use this data to examine changes in the division of child care and housework compared to the pre-pandemic period, controlling for broader time trends in these outcomes. We also look at the estimated changes in the gender division differently when reported by male or female respondents. Finally, we carry out a heterogeneity analysis where we estimate the changes in the gender division conditional on the working from home patterns of each parent.

Our key result is that the share of households where the woman is completely or almost completely responsible for child care and/or housework increases significantly during the pandemic. Although the overall picture shows a decrease in the number of household where the

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[1] In Germany, this applies to around two-thirds of all families with children up to twelve years of age, corresponding to more than four million households (Müller et al., 2020).

[2] Langmeyer et al. (2020) show that almost all children (98 percent) were cared for by at least one parent, but distinguishing between mothers and fathers is not possible in this study. If the youngest child in the household was younger than three, the children were especially often cared for by grandparents (20 percent), although it was recommended that this contact be dispensed.

mother does most (but not all) of the care work, the details are nuanced: for around two-thirds of these households the gender division becomes even more unequal, i.e. the mother is left alone with these tasks. The remainder shifts mostly toward a roughly 50:50 split, with a few having the father do more than half; however, these increases are not statistically significant. Thus, we find much more support for increasing gender equality. The results also depend crucially on the gender of the respondent. The increased prevalence of households where the woman is solely responsible for care work is only apparent when mothers are asked. In line with this, we also show that the differences in perceptions between male and female respondents spikes to an all-time high during the pandemic. Lastly, the increased frequency of couples where the woman is alone responsible for care work is concentrated among those household where only the woman works from home.

Our results contribute to a growing literature from many countries that documents the nuanced impacts of the pandemic on how couples share care work. Using time use data, Sevilla and Smith (2020) show that mothers in the UK continue to provide more child care than fathers during the pandemic, even though the "gender child care gap," i.e., the difference between the share of child care provided by mothers and fathers, has become smaller. In particular, fathers who work from home or became unemployed have become more involved. For England, Andrew et al. (2020) show that very large gender asymmetries emerge when one partner has stopped working for pay during the crisis: mothers who have stopped working for pay do far more domestic work than fathers in the equivalent situation. Similar results are shown for Canada (e.g. Shafer et al., 2020), Australia (Craig and Churchill, 2021), and Spain (Farré et al., 2020). For the US, Zamarro and Prados (2021) find an increase in gender inequality with respect to child care. In Italy, care work increased for mothers but the gender distribution of additional child care is strongly dependent on the employment status of each parent (Del Boca et al., 2020, 2021). Another Italian study shows that its slight increase in the share of fathers providing child care led to the increased well-being of children (Mangiavacchi et al., 2021). Biroli et al. (2020) analyze how the COVID-19-pandemic contributed to gender inequality within the household using a novel survey of Italian, British, and American families in lockdown. They also verify that, although 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.

We also contribute to a literature that examines the impact of the pandemic on the distribution of care work in Germany, specifically. E.g., Zinn et al. (2020), using a special Socio-Economic Panel (SOEP-CoV) survey, find that mothers took on the majority of additional child care during the first lockdown in spring 2020. While mothers looked after their children aged up to eleven for an average of about ten hours on weekdays during this period, the time for fathers was only half as long at about five hours. At the same time, the data also show that fathers invested disproportionately more time in the education and care of their children compared to the period before the pandemic and they increased their share of total child care.

Additionally, Zoch et al. (2020), using the German National Educational Panel Study (NEPS), show that mothers took on the central role in child care in the spring of 2020. Fathers did participate in child care, but usually did so together with the mother or with the support of third parties. In families with day-care and school children under 14 years of age, mothers took over child care entirely in 33 percent of the cases. Fathers took over child care alone only 6 percent of the time. In 29 percent of households, both parents took care of the children, while the remaining families made use of third parties. Similar results are reported in a study by Hipp and Bünning (2021) based on survey data from a non-probability sample collected in spring 2020. Additionally, Kohlrausch and Zucco (2020) analyze a non-probability sample showing that among couples who practiced an equal division of tasks before the pandemic, the majority also shared tasks during the crisis. However, since the beginning of the pandemic, women have taken over the main part of the care work in almost one-third of households, while this was only the case for about ten percent of men. Möhring et al. (2020) also show that in the first weeks of the lockdown in spring 2020, mothers alone took over child care in about half of the families. As in other studies, this was particularly the case in households with a lower income. On the basis of *pairfam* data from 2020, which is not yet available to the broader scientific community, an analysis shows that there have not been fundamental changes in the division of labor on an aggregate level, but the proportion of women taking on child care alone has increased (Hank & Steinbach, 2021).[3] Boll et al. (2021) show, based on data collected from June to August 2020, that those fathers who took over more child care have done so mostly in contexts where the mother could not work from home.

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[3] This study compares data from couples in the regular pairfam survey in 2020 before the lockdown with data from the pairfam Corona supplementary survey (see data and methodological approach).

2.   Data

In our empirical analysis, we make use of the household panel *pairfam - The German Family Panel* (Huinink et al., 2011; Brüderl et al., 2020).[4] A COVID-19 supplement was added to the regular *pairfam* data based on a survey carried out between May and July of 2020 (Walper et al., 2020a, 2020b). The COVID-19 supplementary survey includes questions on household composition, COVID-19-related restrictions, well-being, and changes in the employment situation (e.g. working from home, or being on furlough). Respondents are asked about their situation as well as that of their partner. Unlike many other surveys, the *pairfam* supplement asks directly about the division of care work in the household, which also allows for analyzing gender-specific differences in the perception.[5] All main respondents who were included in the previous pre-COVID-19 survey wave (or only temporarily dropped out in this wave) were asked to be reinterviewed for the COVID-19 supplement. Of these 9,640 persons, 3,160 participated in the COVID-19 supplementary survey. We restricted the sample to the 777 mixed-sex couple households that report living with at least one child younger than 14 and who were observed both in the COVID-19 supplement as well as the previous survey wave (2018/19).[6]

Table 1 provides summary statistics for the survey respondents. About 59 percent of respondents are mothers. The majority have obtained a schooling degree from the higher educational track (*Abitur*), indicating that the sample is positively selected with respect to education. Most interviews were conducted in May and June 2020, with 90 percent of the respondents mentioning that some lockdown ordinances were in place. More than half (57 percent) of respondents reported that schools were (partially) closed and 46 percent reported that daycare centers were (partially) closed at the time of the interview.[7] One in four reported working from home full-time and about the same share of parents interviewed reported working from home part-time. Eleven percent of the respondents reported being furloughed or part-furloughed. Furthermore, 30 percent of the respondents reported that their net household income had decreased in the wake of the COVID-19 pandemic.

The *pairfam* survey includes questions on the division of household tasks within the partnership, which is the focus of this paper. The relevant question is: *"How do you and your*

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[4] The pairfam data is representative for the 1991-1993, 1981-1983, 1971-1973 cohorts.

[5] Unfortunately, only one respondent per household is surveyed; due to this, we are unable to examine *within-household* differences in the perception of the division of care work. While, in principle, a similar proportion of women and men are respondents in *pairfam*, women were slightly more likely to participate in the Corona supplementary survey. Therefore, compared to the regular *pairfam* survey, a larger proportion of respondents are women (58 instead of 53 percent in the total sample).

[6] For simplicity, mixed-sex couples with child(ren) in the household are referred to as parents in this paper.

[7] Questions about school and daycare closures are only answered by parents whose children are normally in school or daycare.

partner <u>currently</u> organize tasks in the following areas?" The areas listed are *"Child care"* [only for households with children], *"Housework (washing, cooking, cleaning)*," *"Shopping.*" *"Financial and administrative matters,"* and *"Repairs in house, apartment or car."* For each area respondents may select from the following answers: *"(Almost) completely my partner,"* *"For the most part my partner," "Split about 50/50," "For the most part me,"* and *"(Almost) completely me."* For easier comparability between answers from female and male respondents, gender-specific recoding was carried out for this report, i.e. the scale ranges from *"(Almost) completely father"* to *"(Almost) completely mother."*

Table 1: Sample characteristics of pairfam COVID-19

	Mean	SD
Female	0.589	(0.492)
Birth cohort 1991-1993	0.049	(0.216)
Birth cohort 1981-1993	0.603	(0.490)
Birth cohort 1971-1973	0.347	(0.476)
Married	0.871	(0.335)
Higher schooling degree (Abitur)	0.701	(0.458)
East Germany	0.145	(0.352)
Interview month: May	0.502	(0.500)
Interview month: June	0.477	(0.500)
Interview month: July	0.021	(0.145)
Lockdown ordinances	0.895	(0.306)
Schools (partially) closed	0.573	(0.495)
Day care (partially) closed	0.462	(0.499)
Full-time employed	0.416	(0.493)
Part-time employed	0.329	(0.470)
More flexible working hours	0.146	(0.354)
Working from home full-time	0.245	(0.431)
Working from home part-time	0.268	(0.443)
Reduced working hours (furlough)	0.106	(0.308)
Household income decreased	0.295	(0.456)
Observations	777	

Notes: Table reports sample means weighted using the survey weights provided in the pairfam dataset. Source: pairfam COVID-19 supplement.

Figure 1 shows the division of labor during the pandemic compared to the previous wave.[8] Before the COVID-19 pandemic, in 2019, the majority of respondents (60 percent) reported that child care was "for the most part" provided by the woman. In 29 percent of cases, child care was shared "about 50/50." Nine percent of respondents said that child care was "(almost) entirely the woman's responsibility." In less than three percent of all households, child care was "(almost) completely" or "for the most part" taken care of by the man in 2019. Compared to this period, we observe several shifts versus the May to July 2020 survey: While the proportion of couples who share child care more or less equally increases slightly to 31 percent, the proportion of families in which the woman "for the most part" takes care of the children has fallen sharply by 13 percentage points (pp). On the other hand, the proportion of families in which the woman takes care of the children "(almost) completely" has increased by eight pp. The proportion of families in which the man "for the most part" takes care of the children has also risen somewhat – although significantly less – from below three to five percent. Very similar patterns emerge in the division of housework (Figure 1, right panel).

Figure 1: Division of child care and housework among couples with at least one child aged up to 14 years
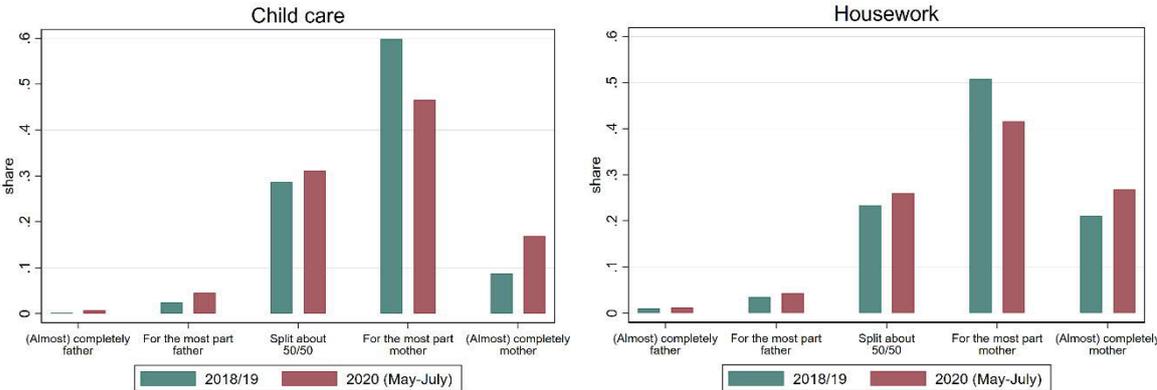
Source: pairfam, wave 2018/19 and pairfam COVID-19 supplementary survey 2020.

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[8] In our main analysis we focus on child care and housework. The same figure for the other task covered in the survey are presented in Appendix Figure A1.

3.   Empirical approach

Our descriptive analysis of the data shows how the division of tasks has changed in 2020 compared to the previous survey years. Since we use a balanced panel of households for the comparison, we do not need to worry if the differences reflect different types of households entering the survey in each wave. Nevertheless, the annual changes we show may also reflect ongoing trends in households with children that are unrelated to the impacts of the pandemic. In order to account for such potential trends, we exploit the panel structure of the data and use information from six additional pre-COVID-19 survey waves.

We begin by estimating a simple OLS regression that controls for a linear time trend.

$$y_{it} = \alpha + \beta COVID_t + \gamma Trend_t + \varepsilon_i \ (1)$$

where y_{it} is a division of task y of couple (or respondent) i in survey year t, $COVID$ is an indicator that equals one in survey year $t = 2020$, and zero for the previous seven survey years, and $Trend_t$ is a linear time trend. The coefficient of interest is β and indicates how the division of the analyzed task has changed during the pandemic conditional on the time trend. In two further specifications we add household controls or fixed effects:

$$y_{it} = \alpha + \beta COVID_t + \gamma Trend_t + X_{it}\delta + \varepsilon_i \ (2)$$

$$y_{it} = \alpha + \beta COVID_t + \gamma Trend_t + f_i + \varepsilon_i \ (3)$$

where X_{it} is a vector of individual control variables (marital status, birth year dummies, sex of respondent, location in East Germany, education, and child age dummies) and f_i are respondent-level fixed effects controlling for unobserved heterogeneity between respondents. To account for serial correlation, we cluster standard errors at the individual level.

4. Results

Impacts on gender division of care work

We present the main results in two tables. First, Table 2 shows the results where the dependent variable equals one, if the woman is (almost) completely responsible for the tasks. Table 3, on the other hand, shows results for the outcome that tasks are split evenly. These two outcomes help us to paint a nuanced picture not just on whether extreme divisions at the expense of mothers have increased, but also whether the share of households with even divisions have changed. We focus again on the main outcomes, child care and housework, and present other outcomes (shopping, repairs, and financial and administrative matters) in the appendix.

Table 2: Regression results: Woman (almost) completely takes care of […]

	I	II	III	IV	V	VI
	Panel A: Child care (pre-COVID mean: 0.103)					
COVID	0.081*** (0.016)	0.077*** (0.016)	0.081*** (0.016)	0.073*** (0.016)	0.117*** (0.025)	0.012 (0.017)
Observations	1510	3981	3981	3978	2308	1670
	Panel B: Housework (pre-COVID mean: 0.247)					
COVID	0.057*** (0.020)	0.050** (0.020)	0.049** (0.020)	0.051** (0.020)	0.123*** (0.029)	-0.047* (0.025)
Observations	1516	3981	3981	3977	2306	1671
Sample years	2018/19-2020		2012/13-2020			
Linear time trend		Y	Y	Y	Y	Y
Control variables			Y			
Individual FEs				Y	Y	Y
Respondents		Both			Woman	Man

Notes: Table shows results of OLS regressions of the dependent variable on a binary indicator variable for the 2020 survey wave, COVID. Column (I) uses a sample of the last two survey waves only. Columns (II)-(VI) use the last six survey waves. Columns (II), (III), and (IV) reflect regressions of equations (1), (2), and (3), respectively. Columns (V) and (VI) use the specification in column (VI) but focusing only on female or male respondents, respectively. Sample weights provided in the *pairfam* dataset are used. Standard errors clustered at the respondent level in parenthesis. Significance levels: * $p<0.1$, **<0.05, *** $p<0.01$. Source: *pairfam*, waves 2018/19 and COVID-19 supplement.

Table 2 shows how the COVID-19 pandemic affected the share of households where the woman was solely responsible for care work in Germany. The COVID-19-induced change in the division of housework and child care is robust to the inclusion of additional survey years, controlling for a linear time trend, and to the addition of control variables or respondent level fixed effects. The share of couples in which the woman (almost) completely takes care of child care (Panel A) has increased by between 7 pp and 8 pp, depending on the specification.

Compared to the pre-COVID mean, this almost doubles the share. This change is somewhat smaller for the division of housework, where the increase in the share of couples in which the woman (almost) completely takes care of housework increases by between 5 pp and 6 pp (Panel B).

If one considers only information provided by mothers (column V), the changes are larger still: the share of households in which women "almost completely" take over child care or housework rises by about 12 pp during the pandemic. However, if one only examines families in which fathers provided the information (column VI), there are no statistically significant changes in the division of child care and, in fact, a small decrease in the share of families in which the mother takes over (almost) completely housework.

As can be seen from Table 3, we do not find any significant changes in the share of couples who share child care equally (Panel A). As far as the division of housework is concerned, the share of couples who share housework equally has increased by 3 pp in the main sample (Panel B). However, this result is driven by fathers' reporting only: If we only include the families in which mothers provided the information, there is no statistically significant change in the share of couples who share housework equally (column V). However, if we only include families in which fathers provided the information, we find an increase in the share of couples who share housework equally by almost 6 pp (column VI).[9]

In Appendix Tables A1 and A2, we show there has been an increase in the share of households where the man "does at least half" along with a decrease in the frequency of pairs where the women is "for the most part" responsible for care work.[10] In Appendix Tables A3 and A4, we look at a further breakdown of housework tasks into shopping, repairs, and financial administration, using our main dependent variables of "women (almost) completely responsible" and "50/50 split." For shopping and finances, we find an increased frequency of women being left alone with these tasks and a decrease in 50/50 splits, but there are no changes for repairs.

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[9] The share of couples where the father caries out more than half of child care has increased by 2.4 pp, but remained unchanged for housework (not shown, but available upon request from the authors). As less than one percent of couples report the father being (almost) completely responsible for those tasks, we do not report those results separately.

[10] Man does at least half represents the sum of 'man (almost) completely', 'man for the most part', and 'roughly 50/50 split'.

Table 3. Regression results: About 50/50 split in […]

	I	II	III	IV	V	VI
	Panel A: Child care (pre-COVID mean: 0.287)					
COVID	0.023	0.026	0.014	0.018	-0.007	0.054
	(0.020)	(0.021)	(0.022)	(0.021)	(0.026)	(0.034)
Observations	1536	4022	4022	4021	2347	1674
	Panel B: Housework (pre-COVID mean: 0.222)					
COVID	0.027	0.031*	0.024	0.030*	0.012	0.055**
	(0.017)	(0.017)	(0.018)	(0.017)	(0.021)	(0.027)
Observations	1536	4022	4022	4021	2347	1674
Sample years	2018/19-2020		2012/13-2020			
Linear time trend		Y	Y	Y	Y	Y
Control variables			Y			
Individual FEs				Y	Y	Y
Respondents		Both			Woman	Man

Notes: Table shows results of OLS regressions of the dependent variable on a binary indicator variable for the 2020 survey wave, COVID. Column (I) uses a sample of the last two survey waves only. Columns (II)-(VI) use the last six survey waves. Columns (II), (III), and (IV) reflect regressions of equations (1), (2), and (3), respectively. Columns (V) and (VI) use the specification in column (VI) but focusing only on female or male respondents, respectively. Sample weights provided in the *pairfam* dataset are used. Standard errors clustered at the respondent level in parenthesis. Significance levels: * p<0.1, **<0.05, *** p<0.01. Source: *pairfam*, waves 2018/19 and COVID-19 supplement.

Impacts on perceptions of task sharing

Differing responses between men and women to questions about the division of labor in the household are a well-documented phenomenon (Charles et al., 2018; Dyer et al., 2014; Geist, 2010; Kamo, 2000; Mikelson, 2008).[11] In the *pairfam* data in 2018/19, 26 percent of mothers and 33 percent of fathers (in couple households with a child below 14 years) said that child care was split "about 50/50." Further, 59 percent of mothers and about 60 percent of fathers said that child care was "mostly done by the woman." On the other hand, there was a large discrepancy in the category "(almost) completely by the woman:" Almost 13 percent of the mothers, but only around 3 percent of the fathers, stated that this division of child care was true for them.

In the COVID-19 pairfam supplementary survey from 2020, the differences between the answers of men and women have become even greater - this is again most evident in the category indicating that child care is "(almost) completely" taken over by the woman: Here, in 2020, almost 25 percent of all mothers stated this as true for them, but only five percent of

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[11] For example, Dyer et al. (2014) find that when mothers, fathers and children of the same family are interviewed, the reports on father involvement of children fall in between the scores of fathers and mothers.

fathers. This indicates that the differences in perception regarding the division of housework and child care have widened during the closures of day care centers and schools caused by the pandemic. A similar result is found by Shafer et al. (2020) in a study based on data from Canada.

Figure 2 shows the average reported by mothers and fathers for the outcome that the woman is (almost) completely responsible, as well as differences in the perception of the sharing of child care and housework in the *pairfam* data for all years from 2012/13 up until the COVID-19 supplementary survey. We see that the difference between maternal and paternal perceptions has increased dramatically from 2018/19 to 2020, compared with the changes seen between other years (one exception is the increase in the difference in the perception of the sharing of child care, which has also strongly increased between 2014/15 and 2015/16). Both mothers and fathers report that women are more likely to be responsible entirely for child care, but the increase in 2020 is much stronger for mothers. For housework, the difference has increased from 10 percent in 2018/19 to more than 25 percent in 2020, an increase that is driven both by mothers reporting a higher share and fathers reporting a lower share.

Figure 2: Share of respondents stating that in their household, the women takes over (almost) completely child care / housework
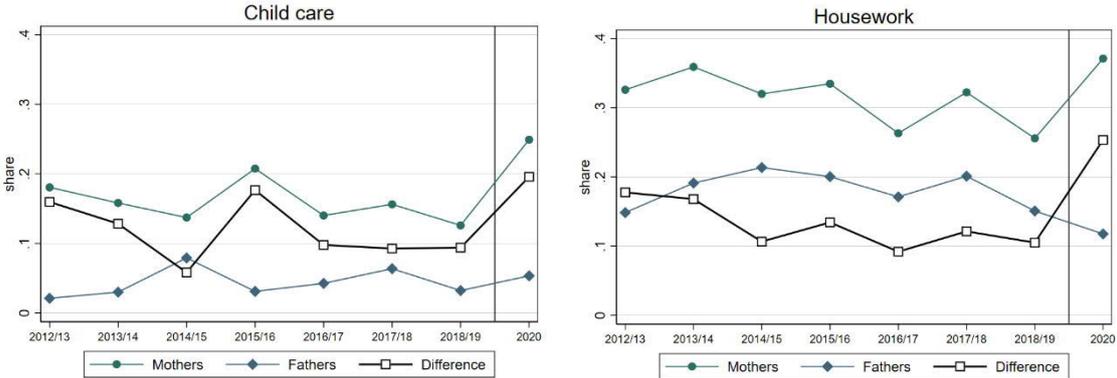
Source: pairfam, waves 2012/13 – 2018/19 and COVID-19 supplement.

Task sharing and working from home

Next, we examine whether the changes in the division of child care and housework are influenced by whether parents work from home. In Figure 3, we plot the *COVID* coefficients estimated using different subsamples of parents by their working from home patterns. For this analysis, we restrict the sample to families where both parents were employed in 2019 and we only use the last two survey waves, i.e. the specification in Column (I) in the previous regression tables.

The estimates show that if both parents work from home, which accounts for 30 percent of all working parents, there is no statistically significant increase in the proportion of families where the mother is almost exclusively responsible for child care. On the other hand, the proportion of families in which the woman takes over child care or housework "(almost) completely" has increased to the greatest extent in those families in which only the woman worked from home during the 2020 pandemic: The proportion of families in which the woman takes over child care or housework "(almost) completely" has risen by about 17 pp in each case. Overall, this is 14 percent of all working parents, while in 33 percent no one works from home and in 23 percent only the husband works from home. Remarkably, the proportion of families in which almost exclusively the woman takes care of the children has also increased where neither parent worked from home or where only the man worked from home. This does not apply to the division of housework; no statistically significant changes are observed here. It should be noted, however, that mothers often combine working from home with housework, whereas this does not seem to be the case to the same degree for men.

Figure 3: Regression coefficients for women takes over (almost) completely child care / housework, by working from home pattern
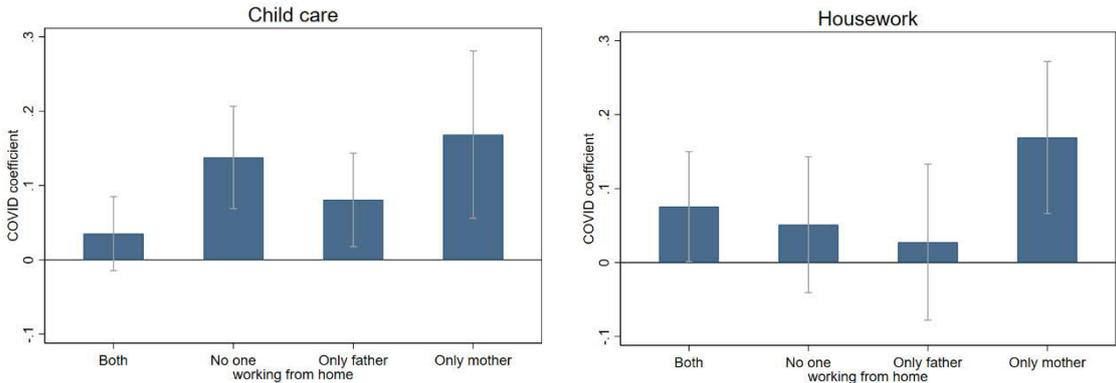
Source: pairfam, wave 2018/19 and COVID-19 supplement.

When interpreting the relationship between the division of child care and paid work from home, it should be noted that it is not clear from the *pairfam* data whether working from home was ordered by the employer or requested by the parents. Therefore, in the context of these evaluations, it is not possible to speak of a causal effect of working from home on the division of care work, because it could be that the parents themselves requested to work from home so they could arrange child care in the way they wanted to during the pandemic.

5.   Discussion

There is much discussion in public and academia about the consequences of the COVID-19 pandemic and the associated closures of day care centers and schools for gender equality. Opinions differ widely: while some spoke of a "retraditionalisation," others thought the pandemic could be an "equality accelerator." Analyses based on the *pairfam* COVID-19 supplementary survey conducted between May and July 2020 and the *pairfam* survey waves spanning to seven years before the pandemic suggest a more nuanced picture: On the one hand, not much changed among couples who already divided child care and housework in an egalitarian way before the pandemic: They - about one quarter of the couples – also reported this egalitarian division during the pandemic. However, the proportion of those in which the woman is responsible "for the most part" for the care work has become smaller in favor of an increasing prevalence of couples in which the woman takes over child care and housework almost completely. In this sense, one can speak of an increased traditionalization as these couples already had a gender-traditional division before the pandemic. At the other end of the distribution, the share of couples in which the man predominantly does the care work has also risen slightly to about five percent.

It is noteworthy that there are pronounced differences in the responses of mothers and fathers. The shifts toward a larger share of women taking over almost all the care work is primarily reported by women, not by men. We find that these gender-specific differences in response behavior, which are also reported in previous studies, became even greater during the pandemic. Moreover, our results do not show an increased prevalence of women being solely responsible for child care in the case where both mother and father work from home, whereas the strongest increase is seen when only the mother was working from home. Perhaps surprisingly, even when the father is working from home, mothers took on more child care. Thus, working from home does not seem to be associated with an improvement in gender equality in the context of the COVID-19 pandemic.

Our analyses provide short-term results on the gender division of child care and housework during a time with widespread lockdown ordinances at the beginning of the pandemic. More research is needed to gain knowledge on the longer term effects of the COVID-19 pandemic on the gender division of child care and housework in order to provide a final evaluation of the COVID-19 effects on the gender inequality. Thus far, it is unclear whether the COVID-induced changes are only observed during the pandemic or whether they have also impacted overall norms with potential long-term consequences. Nonetheless, our results show that the gender division of child care and housework as well as shopping and other family tasks is not fixed. It is influenced by external factors, be it a pandemic or policy instruments that change the existing financial incentives for intra-household task sharing. If policy aims to increase gender equality in the family as well as on the labor market, it can effectively do so by implementing policies that set incentives for a more equal sharing of child care and housework.

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Appendix

Figure A1: Division of other tasks among couples with at least one child aged up to 14 years
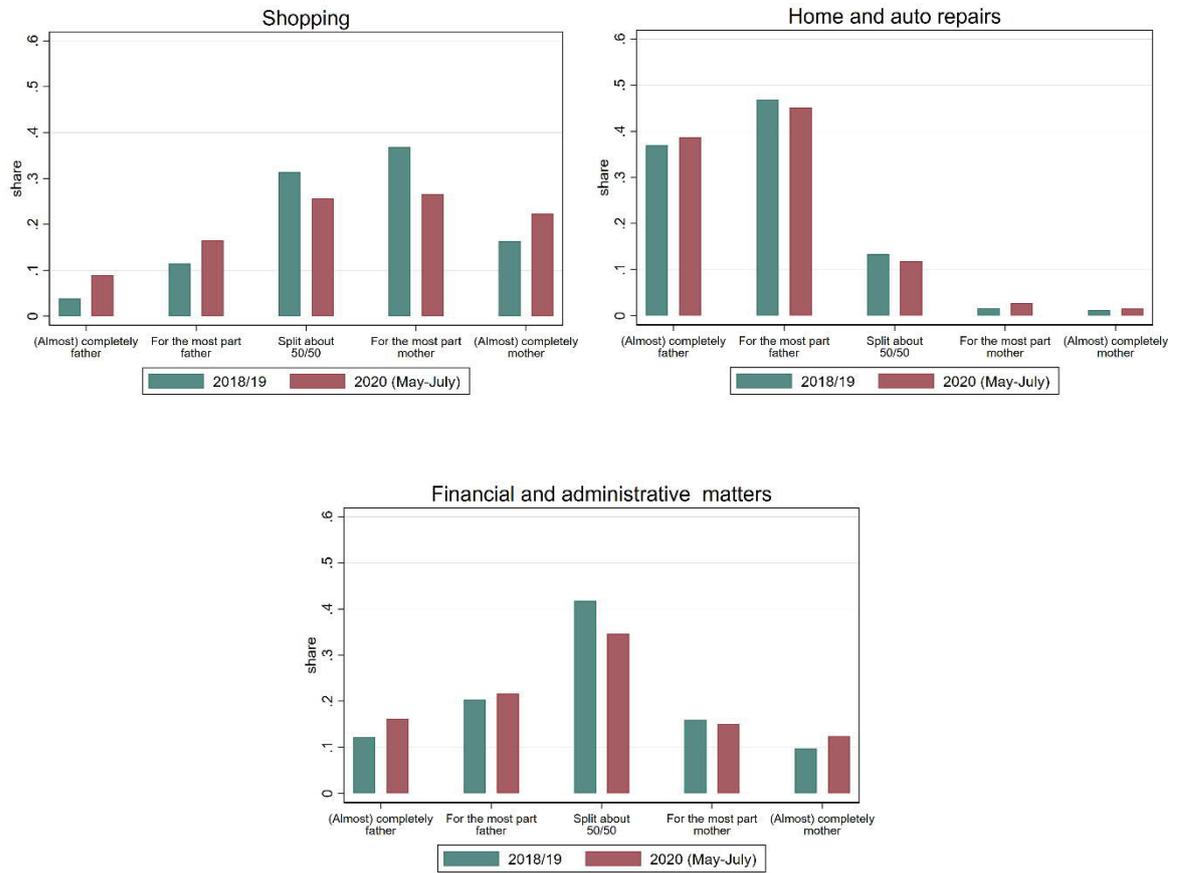
Source: pairfam, wave 2018/19 and pairfam COVID-19 supplementary survey 2020.

Table A1: Regression results: Man does at least half of […]

	Panel A: Child care (pre-COVID mean: 0.309)					
COVID	0.050**	0.049**	0.035*	0.041**	0.020	0.073**
	(0.020)	(0.021)	(0.021)	(0.021)	(0.027)	(0.032)
Observations	1536	4022	4022	4021	2347	1674
	Panel B: Housework (pre-COVID mean: 0.258)					
COVID	0.036**	0.035**	0.031*	0.031*	0.010	0.061**
	(0.016)	(0.017)	(0.018)	(0.016)	(0.020)	(0.027)
Observations	1536	4022	4022	4021	2347	1674
Sample years	2018/19-2020		All			
Linear time trend		Y	Y	Y	Y	Y
Control variables			Y			
Individual FEs				Y	Y	Y
Respondents		Both			Woman	Man

Notes: Table shows results of OLS regressions of the dependent variable on a binary indicator variable for the 2020 survey wave, COVID. Column (I) uses a sample of the last two survey waves only. Columns (II)-(VI) use the last six survey waves. Columns (II), (III), and (IV) reflect regressions of equations (1), (2), and (3), respectively. Columns (V) and (VI) use the specification in column (VI) but focusing only on female or male respondents, respectively. Sample weights provided in the *pairfam* dataset are used. Standard errors clustered at the respondent level in parenthesis. Significance levels: * $p<0.1$, **<0.05, *** $p<0.01$. Source: *pairfam*, waves 2018/19 and COVID-19 supplement.

Table A2: Regression results: Woman for the most part takes care of […]

	Panel A: Child care (pre-COVID mean: 0.588)					
COVID	-0.132***	-0.124***	-0.111***	-0.114***	-0.134***	-0.087**
	(0.023)	(0.023)	(0.024)	(0.023)	(0.032)	(0.034)
Observations	1510	3981	3981	3978	2308	1670
	Panel B: Housework (pre-COVID mean: 0.495)					
COVID	-0.092***	-0.082***	-0.076***	-0.078***	-0.127***	-0.011
	(0.024)	(0.024)	(0.025)	(0.024)	(0.032)	(0.036)
Observations	1516	3981	3981	3977	2306	1671
Sample years	2018/19-2020		All			
Linear time trend		Y	Y	Y	Y	Y
Control variables			Y			
Individual FEs				Y	Y	Y
Respondents	Both		Woman		Man	

Notes: Table shows results of OLS regressions of the dependent variable on a binary indicator variable for the 2020 survey wave, COVID. Column (I) uses a sample of the last two survey waves only. Columns (II)-(VI) use the last six survey waves. Columns (II), (III), and (IV) reflect regressions of equations (1), (2), and (3), respectively. Columns (V) and (VI) use the specification in column (VI) but focusing only on female or male respondents, respectively. Sample weights provided in the pairfam dataset are used. Standard errors clustered at the respondent level in parenthesis. Significance levels: * $p<0.1$, **<0.05, *** $p<0.01$. Source: pairfam, waves 2018/19 and COVID-19 supplement.

Table A3: Regression results: Woman (almost) completely takes care of […]

	(I)	(II)	(III)	(IV)	(V)	(VI)
	Panel A: Shopping (pre-COVID mean: 0.193)					
COVID	0.059***	0.053***	0.048**	0.053***	0.072***	0.027
	(0.018)	(0.018)	(0.019)	(0.018)	(0.028)	(0.021)
Observations	1518	3987	3987	3983	2311	1672
	Panel B: Repairs (pre-COVID mean: 0.013)					
COVID	0.003	0.002	0.003	0.004	-0.006	0.017*
	(0.006)	(0.007)	(0.008)	(0.007)	(0.011)	(0.010)
Observations	1432	3845	3845	3823	2207	1616
	Panel C: Finance (pre-COVID mean: 0.099)					
COVID	0.028*	0.028*	0.021	0.026*	0.043**	0.003
	(0.015)	(0.014)	(0.015)	(0.014)	(0.022)	(0.015)
Observations	1508	3979	3979	3971	2308	1663
Sample years	2018/19-2020			All		
Linear time trend		Y	Y	Y	Y	Y
Control variables			Y			
Individual FEs				Y	Y	Y
Respondents	Both			Woman		Man

Notes: Table shows results of OLS regressions of the dependent variable on a binary indicator variable for the 2020 survey wave, COVID. Column (I) uses a sample of the last two survey waves only. Columns (II)-(VI) use the last six survey waves. Columns (II), (III), and (IV) reflect regressions of equations (1), (2) and (3), respectively. Columns (V) and (VI) use the specification in column (VI) but focusing only on female or male respondents, respectively. Sample weights provided in the pairfam dataset are used. Standard errors clustered at the respondent level in parenthesis. Significance levels: * $p<0.1$, **<0.05, *** $p<0.01$. Source: pairfam, waves 2018/19 and COVID-19 supplement.

Table A4: Regression results: 50/50 division of [...]

		Panel A: Shopping (pre-COVID mean: 0.31)				
COVID	-0.054**	-0.049**	-0.048**	-0.049**	-0.037	-0.067*
	(0.021)	(0.022)	(0.023)	(0.022)	(0.026)	(0.039)
Observations	1536	4022	4022	4021	2347	1674
		Panel B: Repairs (pre-COVID mean: 0.119)				
COVID	0.001	0.001	0.004	-0.003	0.010	-0.020
	(0.015)	(0.015)	(0.016)	(0.015)	(0.023)	(0.018)
Observations	1536	4022	4022	4021	2347	1674
		Panel C: Finance (pre-COVID mean: 0.383)				
COVID	-0.070***	-0.066***	-0.070***	-0.067***	-0.052*	-0.089***
	(0.020)	(0.021)	(0.021)	(0.020)	(0.027)	(0.030)
Observations	1536	4022	4022	4021	2347	1674
Sample years		2018/19-2020		All		
Linear time trend		Y	Y	Y	Y	Y
Control variables			Y			
Individual FEs				Y	Y	Y
Respondents		Both		Woman		Man

Notes: Table shows results of OLS regressions of the dependent variable on a binary indicator variable for the 2020 survey wave, COVID. Column (I) uses a sample of the last two survey waves only. Columns (II)-(VI) use the last six survey waves. Columns (II), (III), and (IV) reflect regressions of equations (1), (2), and (3), respectively. Columns (V) and (VI) use the specification in column (VI) but focusing only on female or male respondents, respectively. Sample weights provided in the pairfam dataset are used. Standard errors clustered at the respondent level in parenthesis. Significance levels: * $p<0.1$, **<0.05, *** $p<0.01$. Source: pairfam, waves 2018/19 and COVID-19 supplement.