



The Gendered Effect of Parenthood on Voting Behaviour in the 2021 German Federal Election

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ABSTRACT

The effect of parenthood on voting behaviour has so far been largely neglected in electoral research or is assumed to have a negligible effect. However, the 2021 German federal election campaign faced the politicisation of two main family- and children-related issues (i.e. the COVID-19 pandemic and climate change). Based on a comparison of data in the 2017 and 2021 German Longitudinal Election Study, we investigate the gendered effect of parenthood on voting behaviour. Our multinomial logistic regression analysis points to a significant parenthood effect for women during the 2021 election: women with at least one child under the age of 11 have an 8-percentage point higher probability of voting for the Greens than women without children in that age group (controlling among other things for education, age, religiosity and left-right identity). We do not find a similar effect for men. Further analyses suggest that this effect is partly due to a larger importance of climate change issues among mothers of young children. We conclude by highlighting the potential relevance of parents as an electorate force when family- and children-related issues are politicised during electoral campaigns.

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Introduction

The 2021 German federal election campaign was marked by the politicisation of two key issues related to family and children: the heavy burden caused by the COVID-19 pandemic on families and the consequences of climate change that will primarily affect younger generations. The repeated closure of schools and childcare during the pandemic together with the accumulation of days of quarantine and sickness of children had significant

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consequences on the learning process and subjective well-being of children (Huebener et al. 2021; Wößmann 2020). Not only children, but also their parents, bore a heavy load during the COVID-19 pandemic. First, parental dissatisfaction with the day care and school situation and worries regarding the education and health of children increased during the pandemic in Germany (Huebener et al. 2021). Despite a large heterogeneity in pandemic-related policy preferences among parents, the education and health of children gained in salience among parents during the pandemic. According to Bastin and Unzicker (2022), this resulted in a growing political dissatisfaction of parents: based on a two-waves survey conducted in 2020, the authors point to a loss in trust in the federal government among parents, and in particular among mothers of children under the age of 15. Furthermore, pandemic-related burdens acted as suddenly imposed grievances on parents in Germany, which fostered the political mobilisation of those with care responsibilities according to survey data collected in late 2020 and early 2021 (Burciu and Hutter 2022).

Besides the COVID-pandemic, climate change and its consequences for future generations was a further politicised topic during the 2021 German federal election campaign (Riebe and Marquardt 2022). The media resonance of the 'Fridays for Future' movement - among others - increased the salience of the environmental issue in public opinion as one of the most important problems faced by Germany (Teney and Rupieper 2021). In addition, the devastating flooding of the Ahr valley in North Rhine Westphalia in July 2021, costing the lives of 134 people, dramatically brought the emergency of climate change to the forefront of the federal election campaign. In particular, younger generations consider the issue of climate change as an urgent matter to be prioritised by policy makers (Hübner, Nicke, and Eichhorn 2021). Furthermore, parents have been shown to be more concerned by climate change than non-parents (Ekholm 2020 for the Swedish case).

Both the particularly heavy burden carried by families through the pandemic and the growing salience of climate change in public debate have increased the visibility of the situation of parents, children and youth in the German public debate (Allmendinger 2020; Andres et al. 2022). The context of the 2021 German federal election was therefore propitious for a rising awareness among parents of their group interests and their offspring's common interests. This, in turn, is likely to have affected their voting behaviour during the 2021 federal election. The effect of parenthood in voting behaviour has been so far largely overlooked in electoral research, as it is usually assumed to have a negligible effect (but see Braml and Fuest 2019; Goerres and Tiemann 2009 for the German case). However, the politicisation of issues directly concerning parents and their offspring during the 2021

German federal election campaign may plausibly have exerted a cueing effect on the role of parenthood in voting behaviour.

Investigating the role of parenthood in voting behaviour is not only of importance for refining the state of the art in electoral research, but is also of societal and political relevance: if parenthood plays a significant role in voting behaviour - in addition to traditional socio-demographic characteristics - this would imply that elected candidates and policy makers in general should consider more carefully the group interests of parents in order to improve their democratic representativeness. In this article we investigate this issue more closely. We assess the extent to which having children that are under voting age when elections take place has a significant effect on the voting behaviour of men and women when controlling for relevant socio-demographic characteristics. For this purpose, we run multinomial logistic regressions with the 2017 and 2021 GLES electoral survey data on the voting behaviour of men and women separately by differentiating between parents with children under the age of 11, parents with children between 11 and 18, and respondents without children in these categories.

In a nutshell, our analysis points to a particularly large motherhood effect in the 2021 federal election when controlling for education, age, religious denomination, attendance at religious services, marital status, economic sector, East/West Germany and left-right political ideology: women with at least one child under the age of 11 have a more than 8 percentage point higher probability of voting for the Green Party than women without children. Further analyses show that this effect is likely due to the fact that mothers with at least one child under the age of 11 considered climate change an important issue to a significantly larger extent than women without children in this age group.

Our study highlights the relevance of considering parenthood as an important factor of voting behaviour when family- and children-related issues are politicised during electoral campaigns. Furthermore, we point to the importance of assessing a parenthood effect on the voting behaviour of men and women separately as well as of differentiating between the age of the children when investigating the role of parenthood.

The Role of Gendered Parenthood in Voting Behaviour

We are only aware of two studies that have looked at the effect of parenthood on voting behaviour in the German context. First, Braml and Fuest (2019) show that parents tend to vote significantly more for the Green Party and significantly less for the SPD based on the 2017 Socio-Economic Panel data. However, they did not differentiate between men's and women's voting behaviour. Second, Goerres and Tiemann (2009) analyse survey data from the 2005 German federal election and show that parents of children under 18 differ

significantly from childless respondents in their voting behaviour when controlling for gender, education, religious service attendance and whether respondents find Angela Merkel and Gerhard Schröder sympathetic. The significant effect of parenthood in their study depends however on the age of the parents and whether they live in East or West Germany. This second study does not differentiate between men's and women's voting behaviour.

From the international literature on the modern gender voting gap (Abendschon and Steinmetz 2014; Giger 2009; Inglehart and Norris 2000), we know that women tend to vote since the 1980's to a significantly larger extent for left-wing parties than men, and this, in most Western European countries (including Germany; see for instance Falter and Schumann 1990; Molitor and Neu 1999). This modern gender voting gap is due to both structural and cultural factors. The structural explanation points to changes in women's position in society (e.g. increasing higher women labour force participation and their greater exposure to labour market inequalities) and changes in family structure (e.g. increase of divorce and single motherhood rates) in explaining the greater tendency of women to vote for left-wing parties (Abendschon and Steinmetz 2014). By contrast, the cultural explanation highlights changes in women's political attitudes in favour of generous social policies and in favour of postmaterialist issues, and a weakening effect of religiosity on voting behaviour (Abendschon and Steinmetz 2014).

In addition to the modern gender voting gap, the effect of parenthood on voting behaviour is likely to be different for men and women, as motherhood has a larger psychological, biological and physical impact than fatherhood (Bhatti et al. 2019). Mothers usually face deeper consequences of having a child because they tend to experience longer career interruptions than fathers and tend to remain the primary caregivers even when both parents hold full-time jobs (Bundesministerium für Familie, Senioren, Frauen und Jugend 2021). Therefore, the socialisation as a new parent is likely to be more intense among women than men (Burlacu and Lühiste 2021). In other words, the role and identity as parent as well as the children's interests are therefore likely to be more salient in women's lives. Hence, it is essential to assess the existence of a gendered effect of parenthood in voting behaviour. While the gendered effect of parenthood on voting behaviour has hardly been investigated, considering the literature on attitudes toward (welfare) policies (such as policies on childcare, parental leave or education) can help us better understand why and how parenthood can affect political preferences among men and women. This literature has repeatedly shown that the effect of parenthood on welfare attitudes is larger among women than among men (e.g. Banducci et al. 2016; Bhatti et al. 2019; Burlacu and Lühiste 2021; Elder and Greene 2012).

The reasons why parenthood can have an effect on political preferences and behaviour are numerous. First, having children shapes identity and

perspective: one carries out the responsibility not only of oneself, but also of one's own children. Parenthood might thus increase for instance the perception of voting as civic duty (Bhatti et al. 2019, 67). Moreover, future-oriented issues such as environmental protection, sustainability, education, and health are likely to play a growing role in the life of a parent, which, in turn, can lead to a higher political mobilisation or a change in political preferences among parents (Micheletti and Stolle 2017). In addition, becoming a parent increases the number and frequency of contact with institutions (such as healthcare, schools). This, in turn, is likely to strengthen the link between individual voter and public institutions, which can increase the perceived relevance of voting for shaping institutions (Bhatti et al. 2019) and shape political preferences. Furthermore, parenthood leads to increasing contacts with other parents through the attendance of common institutions (such as day care or school). Such social networks characterised by other parents are also likely to increase the awareness of group interests, which, in turn, might influence political preferences and behaviour.

Besides the question of why, the mechanisms of a parenthood effect on political preferences and behaviour have also remained relatively understudied. The international literature on the effect of parenthood on welfare policy preferences puts forward three theoretical mechanisms. First, the interest-based perspective (including own interests and interests of own children) assumes that becoming parent implies a change in individual's policy preferences as the own interests have changed (Burlacu and Lühiste 2021). Raising children adds extra (financial and non-financial) burdens and increases the need for additional safety nets (Elder and Greene 2012). Parenthood would lead thus to a larger support of social policies that cover their interests or their children's interest (Burlacu and Lühiste 2021). According to this interest-based perspective, the effect of parenthood would disappear once the parents and their children are unlikely to rely any longer on such social policies (i.e. once children are grown up) (Burlacu and Lühiste 2021).

Second, the adult socialisation theory considers parenthood as a socialisation experience -similar to marriage or entering the workforce- because it modifies the daily life, outlook and identities (Goodyear-Grant and Bittner 2017). Accordingly, becoming a parent implies learning the role of behaving like parents while internalising the values, norms and attitudes from the group (of parents) which, in turn, facilitates the endorsement of group goals (Mortimer and Simmons 1978). From the perspective of adult socialisation theory, new parents face both internal and external pressure to adjust their political attitudes in order to fit the ideal type of a 'good parent' (Burlacu and Lühiste 2021). In contrast to the interest-based perspective, adult socialisation theory assumes the effect of parenthood on policy preferences to remain stable over time and last even when children are grown up. However, assessing this mechanism requires panel data covering a long-time period (Goodyear-Grant and Bittner 2017). Based on Swiss panel data, Burlacu and Lühiste (2021) show that parenthood tends to increase support for family-related policies when the parents or their children are the direct beneficiary from these policies. Moreover, this effect is not stable over time, highlighting the relevance of the interest-based perspective in understanding the effect of parenthood on policy preferences.

The third and last mechanism is cuing of parent-based concerns through politicisation of the family (Goodyear-Grant and Bittner 2017). This mechanism is likely to happen in electoral campaigns in which family-related or children-related issues are particularly emphasised. Accordingly, the effect of parenthood on political preferences or behaviour would only last as long as these family-related issues remain politicised in the public debate. Cueing cannot create attitudinal differences between parents and nonparents, but can mobilise or activate particular preferences in a context in which family-based concerns are made salient (Goodyear-Grant and Bittner 2017). This third mechanism is therefore assumed to work together with one or both of the two other mechanisms (i.e. interest-based and adult socialisation mechanisms) (Goodyear-Grant and Bittner 2017).

These three mechanisms enable us to refine our research question in two ways: first, we should consider children's age when investigating the effect of parenthood on voting behaviour. Indeed, the interest-based mechanism assumes that the effect of parenthood only lasts as long as parents anticipate benefits from particular family-related policies. Family-based policies almost always include a particular children age category (e.g. paid parental leave, child care facilities, compulsory education). According to the interestbased perspective, we would expect the effect of parenthood on voting behaviour to vary along children's age (and become non-significant once children are grown up). Second, according to the cueing mechanism, we would expect to observe a larger effect of parenthood on voting behaviour in the 2021 German federal election than in the previous ones. As mentioned in the introduction, family-based concerns were particularly politicised in the 2021 election campaign.

Assuming that the main findings and mechanisms highlighted in the literature on gendered effect of parenthood on welfare policy preferences also apply to voting behaviour, we can derive several hypotheses. First, we expect the effect of parenthood on voting behaviour to be larger in the 2021 federal election than in the previous one (H1), as family- and children-related issues were more politicised in the 2021 electoral campaign than in the 2017 electoral campaign. Second, we expect the effect of parenthood on voting behaviour to be larger among women than among men (H2). Lastly, we expect that the parenthood effect on voting behaviour can be explained by the politicisation of the issues of pandemic family burden and climate change during the 2021 electoral campaign. Following the cueing mechanism, we expect

parents to vote to a significantly larger extent for parties that held family- and future-oriented positions on and empathised with both (1) childcare and education issues and (2) climate change and environmental issues. We have already discussed in the previous section the positive relationship between parenthood and preferences for childcare and education issues. Several studies also highlighted a positive association between parenthood and attitudes towards and concerns about climate change and environment protection (e.g. Dupont 2004 for Canada; and Ekholm 2020; Micheletti and Stolle 2017 for Sweden). Moreover, the association between attitudes toward climate change and voting behaviour is significantly larger among parents than among non-parents: parents are more likely to translate their concerns about climate change and environment into act such as voting because they have an intrinsic interest in preserving the environment for future generations, particularly one's children (Milfont et al. 2012 for the case of New Zealand).

According to the open expert survey on issue salience and positions of political parties during the 2021 federal election (Jankowski et al. 2022), the Green Party, Die LINKE and SPD were the parties (1) with the most children and family-friendly positions on childcare and compulsory education policies and (2) allocating the largest salience to these education-related policies. By contrast, the Green Party was the party with the largest salience and the most interventionist position on climate and environmental policies. If climate change and environmental issues were the driving force behind the parenthood effect on voting behaviour, we would expect parents to vote to a larger extent for the Green Party (H3a). By contrast, if educational issues were the driving force behind such a parenthood effect, we would expect parents to vote to a significantly larger extent for the SPD, Die LINKE and the Green Party (H3b).

Data and Methods

We use the German Longitudinal Election Study (GLES) cross-section in 2021 and 2017. We use both the GLES pre- and post-election surveys. This ensures a larger sample and, in particular, a larger number of parents in our sample. We restrict our sample to individuals in the age range between 25 and 55 to ensure that the women in our sample have a realistic chance of having children (see our operationalisation of the children variable below). We also restrict our sample of men to this range to ensure comparability to the women sample. At the end of our results section, we discuss robustness checks that use only the post-election survey and two different, but equally justifiable, age restrictions (see Appendix Figure 1). For descriptive average characteristics of our four samples of analysis, and an overview of the variables used, see Table 1. All analyses are weighted by the GLES

Table 1. Mean values for all relevant variables in our sample of analysis: men and women between the age of 25–55 in the GLES cross-section post-election survey 2017 and 2021.

	Women in 2017			Women in 2021			Men in 2017			Men in 2021		
	No child in HH	Child 0– 10	Child 11–18	No child in HH	Child 0– 10	Child 11–18	No child in HH	Child 0– 10	Child 11–18	No child in HH	Child 0– 10	Child 11–18
Party choice (dependent variable):												
CDU/CSU	0.31	0.32	0.37	0.16	0.18	0.18	0.24	0.28	0.34	0.16	0.16	0.21
SPD	0.19	0.18	0.19	0.24	0.19	0.23	0.12	0.16	0.17	0.21	0.19	0.19
Greens	0.15	0.12	0.12	0.26	0.31	0.22	0.13	0.13	0.091	0.21	0.24	0.13
FDP	0.078	0.11	0.037	0.11	0.12	0.13	0.081	0.11	0.13	0.13	0.13	0.20
Linke, AfD, other	0.21	0.20	0.20	0.18	0.17	0.18	0.28	0.23	0.22	0.25	0.25	0.23
Non-vote	0.077	0.073	0.083	0.037	0.027	0.063	0.14	0.093	0.057	0.041	0.025	0.041
Control variables:												
Age	43.3	37.3	45.7	41.1	38.7	46.8	41.2	39.5	47.4	40.4	39.8	47.5
Education												
At most Hauptschule	0.20	0.12	0.21	0.12	0.12	0.17	0.27	0.21	0.29	0.23	0.19	0.23
Realschulabschluss	0.34	0.31	0.46	0.37	0.31	0.44	0.32	0.33	0.36	0.30	0.28	0.38
Fachhochschulreife	0.10	0.11	0.034	0.10	0.090	0.073	0.10	0.079	0.051	0.11	0.15	0.10
Abitur	0.36	0.46	0.30	0.41	0.48	0.32	0.31	0.39	0.30	0.35	0.37	0.29
Marital status												
Married	0.47	0.75	0.66	0.44	0.77	0.73	0.36	0.83	0.77	0.34	0.83	0.79
Unmarried w/partner	0.30	0.18	0.17	0.35	0.17	0.17	0.33	0.15	0.17	0.33	0.15	0.15
Unmarried single	0.24	0.072	0.17	0.21	0.057	0.095	0.31	0.024	0.061	0.33	0.025	0.053
Geographic location												

(Continued)

Table 1. Continued.

	Women in 2017			Women in 2021			Men in 2017			Men in 2021		
	No child in HH	Child 0– 10	Child 11–18	No child in HH	Child 0– 10	Child 11–18	No child in HH	Child 0– 10	Child 11–18	No child in HH	Child 0– 10	Child 11–18
East Germany	0.19	0.26	0.17	0.21	0.24	0.21	0.22	0.19	0.21	0.20	0.19	0.16
West Germany	0.81	0.74	0.83	0.79	0.76	0.79	0.78	0.81	0.79	0.80	0.81	0.84
Economic sector												
Public	0.23	0.27	0.26	0.29	0.33	0.30	0.19	0.20	0.26	0.19	0.27	0.24
Non-profit	0.064	0.062	0.089	0.075	0.085	0.083	0.034	0.036	0	0.031	0.039	0.030
Private	0.48	0.51	0.52	0.48	0.44	0.48	0.57	0.61	0.59	0.60	0.61	0.54
Self-employed	0.070	0.093	0.080	0.066	0.094	0.11	0.098	0.12	0.099	0.087	0.052	0.15
In training, pensioner, never worked	0.15	0.064	0.053	0.089	0.047	0.031	0.12	0.035	0.048	0.089	0.026	0.040
Religios service attendance												
Never/once a year	0.68	0.61	0.62	0.82	0.69	0.66	0.76	0.59	0.60	0.82	0.73	0.66
Multiple times a year	0.25	0.34	0.29	0.14	0.26	0.28	0.19	0.34	0.32	0.14	0.20	0.27
More than twice a month	0.063	0.055	0.087	0.036	0.054	0.062	0.049	0.070	0.083	0.034	0.067	0.066
Religious denomination												
Protestant	0.33	0.32	0.36	0.25	0.27	0.38	0.26	0.29	0.37	0.24	0.27	0.26
Catholic	0.30	0.28	0.35	0.26	0.27	0.29	0.27	0.32	0.25	0.25	0.29	0.28
Other/no religious affiliation	0.37	0.40	0.29	0.49	0.46	0.33	0.47	0.40	0.38	0.52	0.44	0.46
Left-right self-placement Potential mediators:	4.99	5.02	5.30	4.96	5.08	5.22	5.37	5.53	5.62	5.46	5.36	5.77
Pol. do more to fight climate change	7.77	7.83	7.92	8.44	8.58	8.21	7.38	7.31	7.39	7.67	8.13	7.33
Afraid of climate change	_	_	_	5.12	5.47	5.36	_	_	_	4.67	4.89	4.56
Satisf. w/government's pandemic management	-	-	-	5.97	5.94	6.03	-	-	-	5.65	5.75	5.63
Observations	379	252	133	716	435	216	498	287	101	850	442	172

Weighted by GLES survey weights.



that adjust the socio-demographics and regional survey weights composition.

Outcome Variable: Party Vote

We measure party choice in the election in 2021 and 2017 by relying on survey self-reports. In this study, we focus on the so-called 'Zweitstimme' (second vote), which determines the actual seats a party receives in parliament. In the post-survey, respondents were asked whether they participated in the federal election. If they confirmed that they voted by mail or at the ballot, they were asked which party they voted for. We distinguish between voting for the CDU/CSU (Christian conservatives), SPD (social democrats), Green Party, FDP (market-liberals), and 'Other' parties (including small parties such as the left-wing LINKE or the right-wing AfD and intentional invalid votes). Furthermore, we add a category that indicates whether individuals did not vote.

In the pre-survey, respondents were asked about their certainty of participating in the election or whether they already participated by mail. Afterwards, they were asked for the party they would vote for. We coded the voting preference of respondents who voted by mail or at least planned to 'probably' go to vote similar to the responses in the post-survey. Those who did not intend to vote were considered as non-votes. As the coding of pre-survey voting intentions involves a high degree of researcher freedom, we discuss robustness checks in the post sample at the end of our results section (see Appendix Figure 1).

In both pre- and post-election surveys, the tendency of overreporting of turnout or turnout intentions by respondents should be kept in mind when interpreting analyses of voting behaviour. However, we do not see a reason why this tendency should differ between parents and non-parents.

Independent Variable: Children

Our main independent variable captures whether a respondent has children. This variable is created from respondents' reports about the age of other household members. Based on the age of the youngest household member, we differentiate between households without children, households where the youngest child is between the age of 0-10 ('young children'), and households where the youngest child is between the age of 11-18 ('teenage children'). 'Young children' encompasses children in kindergarten and elementary school, whereas 'teenage children' are in the typical age for secondary education. While we acknowledge the broadness of these categories, the low number of parents in the dataset necessitates coarsening this variable to this extent in order to make valid comparisons. To be sure, since the



variable is based on the age of the youngest child, respondents with both teenage children and younger children in their household are categorised as having young children.

A drawback of GLES data is that we do not have information on whether the children in a given household are the actual children of the respondent. This is a further reason why we restrict our sample to respondents in the age range of 25-55. Individuals younger than 25 years living with young or teenage children are likely living with their siblings in their parents' household. Furthermore, individuals older than 55 years living with young or teenage children are likely grandparents instead of parents.

Confounding Variables

Self-selection processes into having children seem less pronounced when compared to other confounding problems in the social sciences. This is because individuals from most social groups and identities tend to have children at some point in their life. For example, even traditional values have been found to be only marginally predictive of fertility decisions (Guetto, Luijkx, and Scherer 2015). However, there are known factors that affect both having children and political behaviour and, thus, have to be considered (see Table 1 for a full overview of the variables in this paper).

Most importantly, we model age as a flexible restricted cubic spline function with four knots at the values of 30, 40 and 50. This ensures that potential non-linearities are adequately captured. Furthermore, parents with higher education are more likely to remain childless (Kreyenfeld and Konietzka 2017). Thus, we control for education, differentiating between school degrees from the Hauptschule (the lowest school track in the German educational system), Realschule (the intermediate track), Fachhochschulreife (degree allowing vocationally-oriented studies) and Gymnasium (the highest school track with degrees after 12-13 years of schooling which ensures university entrance).

Furthermore, we control several socio-demographical characteristics. Marital status captures whether respondents are married, unmarried with partner or unmarried single. Geographical location captures whether a respondent lives in either East or West Germany. Finally, economic sector differentiates between several sectors of the economy (public, non-profit, private), or whether respondents are self-employed or not working (in training/pensioner/never worked). For respondents who are currently on parental leave or do not work, we use information about the sector of the previous job to better capture the conditions of parents who currently do not work before the child was born.

We control for religiosity by using the frequency of church attendance (7point scale coded into the categories 'never/once a year', 'multiple times a



year', 'more than twice a month') and religious denomination (protestant, catholic, other/no religious affiliation). Religiosity has been argued to be a driver of fertility decisions (Guetto, Luijkx, and Scherer 2015), and likely influences voting behaviour. Finally, we control for left-right self-placement (because it might be considered a post-treatment variable, we provide robustness checks without left-right self-placement in Appendix Figure A1).¹

Mediating Variables

If one of our hypotheses should be confirmed, we also aim at shedding light on further potential explanations for the effect of parenthood on voting. The 2021 GLES data includes two important measures of respondents' positions towards climate change (see bottom of Table 1). The first item asks respondents to express their climate policy preferences on a ten-point scale from 'politics should do more to fight climate change' to 'politics has gone too far in fighting climate change' (we recode the variable such that higher values imply more approval to fight climate change). The second item taps respondents' individual worries by stating that 'Sometimes there are worrisome trends in society. How is it with you? How much are you worried about climate change?'. Respondents can respond to this statement on a seven-point scale from 'not worried at all' to 'very much worried'.

Unfortunately, the 2021 GLES data do not provide any questions about the salience or position on educational or childcare-related issues during the Covid pandemic. These issues would be closest to the things that parents care about during the pandemic. However, the GLES data includes an item that captures individual satisfaction with the previous government's 'work on fighting the Covid pandemic'. Respondents were able to respond on a ten-point scale from 'completely dissatisfied' to 'completely satisfied'. While we think that this item is not perfect, the Covid pandemic was among the most important issues in 2021 and, thus, serves as an important reference to compare the results for the climate change items.

Results

Main Results

In our first set of analyses, we investigate the effect of having children on voting behaviour. We stratify all our analyses by respondents' gender (Figure 1 for women, Figure 2 for men) and year of the election (2017 and 2021). We use multinomial logistic regressions to model individual voting behaviour. From these models, we derive predicted probabilities of voting for a specific party for each respondent. We then average the predicted probabilities over the three child-groups, and take the difference between those

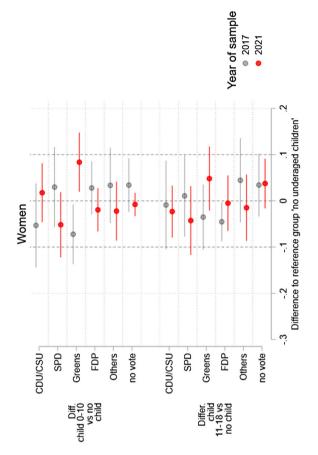


Figure 1. Voting behavior of respondents in the 2017 and 2021 national German elections. Differences in probability to vote for respective party between respondents whose youngest child is 0–10 years or 11–18 years old, and those having no underaged children. Based on predicted probabilities from multinomial logistic regression models. Models control for age (cubic spline), demographic factors, religiosity, and left-right self-placement. For the full models, see Appendix Table A1. Coloured lines indicate 95 per cent confidence intervals. Weighted by GLES survey weights.

with young or teenage children, and those with no children who are under 18.² The regression-adjusted difference in probabilities to vote for a certain party between respondents who have children and those having no children under 18 is our measure of the impact of children on voting behaviour. We primarily focus on our estimates of the effect of children in 2021 (red thick dots in Figures 1 and 2). However, to contextualise our results, we also compare them to 2017 estimates (grey thin dots in Figures 1 and 2). The major topic of the 2017 election was immigration, as it was held in the direct aftermath of the refugee crisis.

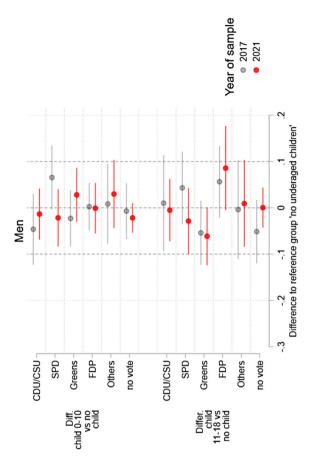


Figure 2. Voting behavior of male respondents in the 2017 and 2021 national German elections. Differences in probability to vote for respective party between respondents whose youngest child is 0–10 years or 11–18 years old, and those having no underaged children. Based on predicted probabilities from multinomial logistic regression models. Models control for age (cubic spline), demographic factors, religiosity, and left-right self-placement. For the full models, see Appendix Table A1. Coloured lines indicate 95 per cent confidence intervals. Weighted by GLES survey weights.

We first focus on the upper part of Figure 1, which shows differences in the probability of voting for certain parties between women with *young* children (0–10 years of age) and women without children under the age of 18. The most striking and important finding in Figure 1 is that women with young children are substantially more likely to vote for the Green Party than women without children in 2021. In particular, the red thick dot in Figure 1 suggests that children increase the probability to vote for the Greens by 8 percentage points in 2021. Furthermore, this effect did not exist in 2017 where the probability to vote for the Greens among mothers

with young children was about 7 percentage points lower compared to women without children (see grey thin dot). Closer inspection of the group-specific predicted probabilities reveals that women without children who are under 18 in our 2021 sample voted for the Greens with a probability of 0.24, whereas this probability is 0.32 for mothers of young children (the marginal voting probabilities are not shown in Figure 1, but are the basis of the differences in Figure 1). In 2017, mothers of young children had a probability of voting for the Greens of 0.09, whereas women without children under 18 had one of 0.17.

Interestingly, women with young children in the 2021 federal election are less likely to vote for the Social Democrats (SPD) in 2021 when compared with women without children (Figure 1, upper part, red thick dot). This suggests a negative effect of children on voting for the SPD. However, the underlying predicted probabilities (not shown) reveal that there were changes in voting behaviour of women without children who were under 18 at the time: in 2017, women without children who were under 18 voted for the SPD with a 0.17 probability, only slightly less than the 0.20 of women with young children. In 2021, women without children in the under 18 category voted for the SPD with 0.25 probability, while those with young children still voted for the SPD with about 0.20 probability. Thus, there was an increase in voting for the SPD among women without children who were under 18 over the two elections. Together with stable SPD support among women with young children, this leads to a higher difference between the two groups. A tentative interpretation of this finding is that women with young children did not penalise the SPD. Rather, women without children in the under 18 bracket increased their SPD vote share.³

While women with young children voted more for the Greens and less for the SPD than women without children in 2021, both groups were equally likely to vote for the FDP and other parties, and to abstain from voting (see the remainder of the upper part of Figure 1). Another interesting finding is that women with young children vote for the CDU to a similar extent as did women without children in 2021, whereas they had a lower tendency to vote for the CDU in 2017. This finding is due to a decrease in voting for the CDU among those without children under 18 from 34 per cent in 2017 to 17 per cent in 2021, whereas parents with young children decreased their probability to vote for the CDU to a slightly smaller degree from 28 per cent in 2017 to 18 per cent in 2021 (again, the marginal voting probabilities are not shown in but are the basis of Figure 1).

We now turn to the results for women with teenage children (11–18 years of age), which are shown in the lower part of Figure 1. These results should be interpreted cautiously because of the small size of this group in our sample. A general, tentative interpretation is that the children effect is less extreme than for women of young children: Most red dots in the lower part of Figure 1 are closer to zero compared to the upper part, indicating no effect of teenage children on voting for most parties in 2021. Most importantly, while we can see that Greens receive more votes from mothers with teenage children than from women without children in 2021, this difference is smaller than between women with young and no children and not statistically significant.

Figure 2 displays our results for male respondents in a similar format to Figure 1. In contrast to mothers of young children, fathers with young children seem to vote for each party with similar probability in 2021 (see upper part of Figure 2, red thick dots). Our results for men with teenage children even suggest a negative effect of voting for the Greens in 2021, and a positive effect on voting for the FDP. However, it should be noted that this effect on FDP voting already existed in 2017, and, thus, is unlikely to be caused by pandemic or education-related issues that gained prominence in the 2021 election.

These findings enable us to evaluate our three hypotheses. First, our results provide support for our first hypothesis that there is something special about the 2021 election. In particular, we found that in 2021 mothers of young children voted for the Green Party substantially more than women without children who were under 18, which was not the case in the 2017 federal election. Second, if we compare our estimates of the effect of parenthood on voting behaviour between women (Figure 1) and men (Figure 2), we can confirm our second hypothesis: the parenthood effect is gendered, we can only find a pronounced effect of young children on Green vote among women. While the FDP is chosen over other parties by men with teenage children, these choices do not seem to hinge on the contextual factors prevalent in 2021. Third, from the finding that the effect of young children in mothers expresses itself in voting for the Greens and not for the SPD or the LINKE, we assume that climate change -rather than family and education-related issues- are an important political issue that might explain this behaviour. The Green Party was indeed the party with the largest salience and the most interventionist position on climate and environmental policies during the 2021 election (Jankowski et al. 2022). We will investigate this issue further in the next section.

In Appendix Figure A1, we provide a variety of robustness checks to investigate whether our main result hold if we use different samples or covariates. In particular, Figure A1 shows estimates of the effect of children on Green vote among women from models that vary the sample (either only the post-election sample, or the pre and post-election sample), the age restriction (either 25-55, 30-52 or 20-50), and covariate selection (either including leftright self-placement or not). Since the pre-survey naturally only includes voting intentions, there might be the potential of bias, for example, if

individuals with children plan to vote but then abstain because of time constraints. Using the post-survey leads to higher children effects in the same direction as our main analysis, but these effects are also estimated with higher uncertainty (see the larger confidence intervals). Furthermore, in both additional age ranges, we find similar effects than in our main sample. Finally, not using left-right self-placement in our set of covariates does not substantially change our estimates.

Possible Explanations of Mothers' Higher Tendency to Vote for the **Green Party**

In the following, we test possible explanations for the association between motherhood and Green vote in 2021. We start by investigating potential attitudinal explanations and then consider candidate effects as an alternative explanation.

To study the extent to which vote choice for the Greens depends on attitudes, we estimate linear regressions of attitudes towards climate change or Covid management on our children variable and the other covariates in our previous analysis (see Appendix Table A2). Furthermore, in Figure 3, we show estimates from our models of women in 2021 from Figure 1, but additionally include one of three additional attitudinal variables.

The first two potential mediators measure respondents' attitudes towards climate change and prove to be likely mechanisms. First, women with young children are significantly more likely to agree that 'politics should do more to fight climate change' and to state that they are 'worried about climate change' compared to women without children in their household who were under 18 at the time (see Appendix Table A2 model 1 and 2). In 2017, there was no effect of motherhood on the agreement to 'politics should do more to fight climate change' (the other items were not available in 2017). Second, including these two variables to our models from Figure 1 leads to a sizable reduction of the effect of young children on Green vote among women. In order to assess their mediating impact, we set the respective mediating variable to its mean value for all respondents when calculating the predicted probabilities. These estimates are illustrated by a blue thick dot and a grey thin square in Figure 3, and should be compared to the red thin dot which is the estimate from the original model from Figure 1. The reduction in the motherhood effect suggests that climate change attitudes are an important channel through which the child effect on Green voting comes into being. Note that climate change worries also explain the smaller effect of having teenage children on Green vote that we found for mothers (see lower part of Figure 3).

In contrast, satisfaction with the previous government in dealing with the pandemic does not seem to be a driving factor of voting for the Green Party.

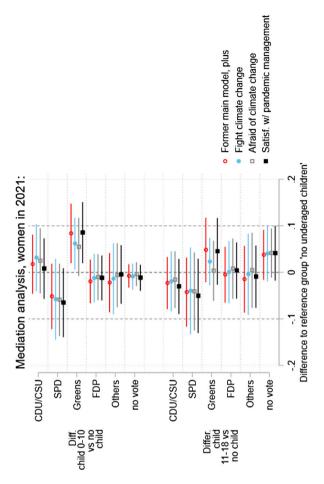


Figure 3. Mediation models for womeńs voting choice in 2021. Multinomial logistic regression models that build on Model 2 for women, but additionally add one of three potential mediators. The respective mediating variable is set to its mean value. Coloured lines indicate 95 per cent confidence intervals. Weighted by GLES survey weights.

Setting the pandemic management variable to its mean for all respondents does not change the difference in probabilities to vote for the Green Party.

These results suggest that the significantly larger probability of voting for the Green Party among mothers during the 2021 election is because they are more concerned about the consequences of climate change. In contrast, a general dissatisfaction with pandemic management was not the main reason. However, our results also show that there is still enough room for other factors to fully explain the child effect. Indeed, it is likely that more specific pandemic management issues (for example, those targeting the

well-being of children) entered the voting decisions in 2021. In particular, opinions about school closures or home-office regulations were certainly in the mind of parents in 2021 and could explain the remaining associations between young children and voting for the Greens.

A second explanation for our proposed child effect on Green voting in 2021 is that the Green Party candidate for the position of German chancellor, Annalena Baerbock, a women and mother of two young children, is particularly attractive to many mothers because they might view Baerbock as a political representative or a role model for politics at large. However, in Appendix Table A3, we show that while mothers of young children (and mothers of teenage children) rate Baerbock more favourably than women without children, they also rate Robert Habeck more favourably as well. In fact, the effect of children on Habeck's rating is even higher than on Baerbock's. Habeck was the main opponent of Baerbock in the race for the German chancellor candidacy in the Green Party. Furthermore, there is no effect of motherhood on rating of the candidates of the other parties (see also Appendix Table A3). While this finding does not completely rule out candidate effects (Habeck is the father of four adult sons), it certainly paints a more complex picture that does not directly involve gender cues.

Discussion

In this contribution, we investigated the gendered parenthood effect on voting behaviour during the 2017 and 2021 German federal elections by using GLES election surveys. We ran multinomial logistic regressions of voting behaviour, stratified our sample by gender, and differentiated between parents of at least one child under 11 years, parents of at least one child that is 11 and 18 years old and respondents without children who were under 18. We did not find any significant association between fatherhood and vote choice in the 2017 and 2021 elections when controlling for several socio-demographic characteristics and left-right ideology (except for a higher likelihood of voting for the FDP among fathers of teenage children in 2017 and 2021). By contrast, we found a significant association between being a mother of children below the age of 11 and voting for the Green Party in the 2021 election. This result points to the importance of a gendered perspective on the effect of parenthood on voting behaviour that interacts with the issues that are prevalent during specific elections.

Our multivariate analyses showed that mothers of children under the age of 11 were significantly more likely than women without children who were under 18 to vote for the Green Party during the 2021 election. The fact that the most substantial and significant effect of parenthood on Green voting was found among mothers of young children seems to correspond at first glance to the interest-based explanation. Accordingly, parents of young

children are more dependent on family- or children-specific social policies and are therefore more likely to vote for the party they perceive as most supportive during the pandemic in these regards. However, further analyses showed that mothers of young children supported stronger interventionist policies to fight climate change and were more worried by climate change than women without children who were then under 18. The attitudes of mothers of young children towards climate change in turn explain part of their larger likelihood to vote for the Green Party. Mothers' focus on climate change issues also explains the absence of a higher likelihood to vote for the social-democratic SPD. While climate change will affect younger generations to a larger extent than older generations due to their longer life expectancy, climate change can nevertheless hardly be seen as an issue specific to young children, which speaks against the interest-based explanation.

This finding is therefore more in line with the adult socialisation mechanism: mothers of young children seem to have adjusted their political attitudes regarding the urgency of fighting climate change in order to fit the ideal type of a 'good parent' caring for the future of their children. According to this adult socialisation mechanism, we would have expected mothers of teenage children to vote more for the Greens than non-mothers. However, this was not the case. Future research based either on larger samples of parents that enable a more fine-grained categorisation along child age, or on panel data would be better suited to disentangle the interest-based mechanism from the adult socialisation mechanism.

Turning to the third mechanism that can explain parenthood effect on voting behaviour, our results based on the comparison of the 2017 and 2021 federal elections provide support to the cueing mechanism. Indeed, the 2021 election was characterised by a much larger politicisation of children- and family-related issues than the 2017 electoral campaign. This might manifest in Green voting if the Greens are perceived as addressing these issues.

However, our analyses face important shortcomings that must be addressed in future work. First, the item on the COVID-pandemic management of the government that we used as a mediating variable does not capture education-related policies during the pandemic. Thus, we did not have any direct measure to test the mediating effect of attitudes toward family- or education-related issues during the pandemic. Second, our sample of women who only have teenage children was particularly small. Future studies with larger samples of parents would be able to refine our findings by providing a more fine-grained operationalisation of child age and more robust analyses. Furthermore, also because of data limitations, we defined the child variable by the youngest age of the child and not the actual age composition of the household. This means that some of the

parents in our young children group might have older children, whereas parents in our teenage children group only have teenage children. Thus, there is still room to explore parents who have younger and teenage children in more detail. Lastly, the GLES data do not provide any way for identifying the relationship of the respondent with the youngest member of the household.

All in all, our study shows that when issues related to children and families are politicised – as in the case of the COVID-pandemic and climate change during the 2021 federal election- parenthood does matter for voting behaviour. Moreover, mothers of young children were significantly more likely to vote for a party more willing to fight climate change. With 20.15 per cent of households in Germany having children under 18 in their household (Destatis 2023), parents of under 18s compose an important electorate that might turn out to be relevant for winning an election when family- and childrenrelated issues are politicised. Our results show that political parties should consider families' and children's interests more consistently if they want to capitalise on this electorate.

Notes

- 1. We are thankful to the reviewers of German Politics for pointing out sector and left-right ideology as two relevant variables to consider in our models.
- 2. This is akin to calculating so-called average marginal effects, where we calculate the predicted probabilities for each individual based on their values on all covariates and then average over those predicted probabilities within the categories of children.
- 3. However, the question remains why mothers of young children did not increase their SPD voting probability parallel to women without underaged children from 2017 to 2021. This could still be due to an effect of children.

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Data Availability

The data used for this analysis can be downloaded by researchers from the GESIS data centre webpage after registration. Data for 2021 are from the pre-released post and pre-election GLES data set (doi:10.4232/1.13864). Data for 2017 are from the cumulative GLES data set 2009-2017 (DOI: 10.4232/1.13648). Stata code will be made is available on Stephan Dochow-Sondershaus' Open Science Framework page.

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