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Esther Geisler and Michaela Kreyenfeld Journal of European Social Policy 2011 21: 88 DOI: 10.1177/0958928710385732

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Article

Against all odds: Fathers' use of parental leave in Germany Esther Geisler*

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Summary This paper investigates fathers' usage of parental leave in Germany based on data from the microcensuses of 1999–2005. Special attention is given to the role that education has in leave-taking behaviour. Our empirical results show that educational differences between the partners are strong predictors of fathers' usage of parental leave. A father is more likely to take parental leave if he has a partner who is more highly educated or older. We also find that employment through a temporary working contract substantially lowers the chances that a man will take advantage of parental leave, while being employed in the public sector increases the likelihood that a man will use his parental leave entitlement.

Keywords parental leave, employment, household labour, fatherhood, Germany

There is a large body of literature that demonstrates that children are an impediment to their mothers' employment careers. Recommendations to policymakers have usually been to increase women's labour force participation by facilitating work-life balance through childcare and parental leave schemes (Burgess et al., 2008; Gornick et al., 1997). In contrast to the strong public interest in mothers' employment, fathers' work patterns have been the focus of the social policy discourse far less often (Gornick and Meyers, 2008). Likewise, the employment behaviour of fathers has attracted much less attention in research than the employment of mothers. It is mainly through studies on the gendered division of household tasks that we have learned how children affect a man's employment behaviour. These studies have demonstrated that the arrival of the first child pushes couples towards traditional gender roles,

even among those who reported a fairly equal division of labour before the child was born (Dribe and Stanfors, 2009; Grunow et al., 2007; Schulz and Blossfeld, 2006). Research has also shown that most fathers do not alter their work schedules very much after becoming a parent. While mothers radically reduce their working hours after childbirth, there is evidence that the working hours of men remain the same (Döge and Volz, 2004; Pollmann-Schult and Diewald, 2007). The general consensus of these studies is that men's and women's attitudes towards gender roles have changed in recent years, with both men and women reporting that they favour a more equal division of household labour. This contrasts, however, with men's real engagement in housework and parenting activities.

The aim of this paper is to shed more light on fathers' parenting behaviour by looking into the

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determinants of men's take-up of parental leave in Germany in the period 1999 to 2005. Parental leave benefits were rather low during this period, and it has been assumed that economic considerations were the main reasons for the low proportion of German men using parental leave (Beckmann, 2001; Institut für Demoskopie Allensbach, 2005; Vaskovics and Rost, 1999). In this paper, we put this assumption to the test, and investigate how education and employment conditions influence men's parental leave choices.

With our study, we seek to contribute to the existing literature in several ways. There are a number of studies that have investigated the determinants of men's parental leave (Lappegård, 2008; Sundström and Duvander, 2002). These studies have been conducted mainly in the Nordic countries, where financial compensation during parental leave is generous. There are only a few studies outside Scandinavia that have looked into men's parental leave behaviour. Therefore, there is no conclusive answer to the question of whether the findings of these prior studies of men's behaviour in universalistic welfare states can be transferred to a familialistic welfare state context, such as that of Germany. Second, our study is the first quantitative study for Germany on the characteristics of men who are on parental leave. Data sets that have previously been used to study mothers' parental leave usage cannot be used for the study of male behaviour. Fathers' usage of parental leave is such a rare event that common survey data sets do not vet include enough cases for a reasonable investigation of fathers' parental leave usage. Thus, researchers who are interested in men's parental leave behaviour have generally focused on qualitative studies (Vaskovics and Rost, 1999). Others have queried respondents about their attitudes towards men on parental leave (Beckmann, 2001; Institut für Demoskopie Allensbach, 2005).

This paper uses data from the microcensus, which is the largest German household survey, to investigate men's parental leave behaviour. The paper is structured as follows. In the next section, we elaborate our main research hypotheses. The following section discusses previous findings, and we then present data, method and variables. We then provide a summary of the findings, and in the final section we discuss the results.

Theoretical considerations

Economic and social determinants of parental leave decisions

According to the economic literature, the main determinants of parental leave decisions are the opportunity costs of forgone income, missed career opportunities and a devaluation of human capital during the parental leave period. The general predictions from this line of thought have been that highly educated women return to the labour market faster than less educated women (Gangl and Ziefle, 2009). Although the same arguments could be transferred to men's parental leave decision-making, men's behaviour tends to be studied using bargaining approaches (Amilon, 2007; Lundberg and Pollak, 2003). In these models, the allocation of time to market work and household activities is a product of intra-family negotiations. The result of the bargaining outcome is determined by the resources that the bargaining partners have when they enter negotiations. The person with the greatest resources will have greater bargaining power, which, in turn, puts him or her in a better position to avoid 'unpleasant' activities, such as housework and childrearing. The predictions from these models are that the person with the higher human capital endowment will work in the labour market.

Sociologists have criticized economic thinking for not adequately accounting for the social embeddedness of employment and parenting behaviour (Brines, 1994; Coltrane, 2000; Duncan and Edwards, 1997; Duncan et al., 2003; Pfau-Effinger, 2004; South and Spitze, 1994). The allocation of labour in the household is not only based on 'rational' considerations, but is, rather, an expression of gender relations in the specific social context. Male and female behaviour is governed by gender-role expectations and normative beliefs about what is appropriate for fathers and mothers. In this sense, behaviour is not solely governed by economic constraints, but also by a cultural understanding of what is assumed to be the 'right' thing for a mother and a father to do. Duncan and Edwards (1997: 35) coined the term 'gendered moral rationalities' in this context, which they define as 'social and cultural collective understandings about what is best, and morally right for men, as well for women'. They agree that economic constraints are important, but they view them as

subordinated to the gendered moral rationalities in guiding women's and men's employment behaviour. In line with the gendered moral rationalities approach, Pfau-Effinger (2004) argues that societal assumptions about correct gender relations and the division of labour between men and women - as well as cultural constructions of childhood, motherhood and fatherhood - influence individual decisions about labour market participation. Kremer (2007) goes a step further and argues that norms about childcare are originated and reproduced within welfare state policies. This is particularly relevant for the western German case, where opinion surveys regularly show how strongly respondents disapprove of public day care (Alwin et al., 1992).

These arguments are very convincing for understanding how childcare and household activities are shaped by gender-role attitudes. Furthermore, they sharpen our understanding of the question of how gender-role attitudes are entrenched in the institutions of the welfare state. However, they are less useful in providing a framework for understanding who will deviate from traditional gender-role behaviour. Duncan et al. (2003: 327) claimed that 'gendered moral rationalities' vary between social groups 'in terms of class, conventionality, ethnicity and sexuality'. However, no comprehensive explanation is given as to why certain subgroups of the population would be more likely to comply with traditional role expectations, while others would be at the vanguard of new behaviour.

More explicit predictions on the social gradient in gender-role behaviour can be derived from value change theory (Inglehart, 1977, 1997). According to this concept, education is the chief driving force behind the move towards a postmaterialistic society (Inglehart, 1977: 78; 1997: 152; Scarbrough, 1998: 155). Value change is part of a 'broader humanistic shift' that, among other things, goes along with more liberal gender-role attitudes (Inglehart and Welzel, 2005: 272). Empirical studies have supported this view as they show that education is strongly correlated with the expression of liberal gender-role attitudes (Inglehart, 1997; Kalmijn and Kraaykamp, 2007). According to these studies, highly educated individuals are more likely to approve of mothers' employment and an equal division of labour between men and women The quintessence of these studies is

that, for men, having a higher level of education goes hand-in-hand with having more liberal gender-role attitudes (Alwin et al., 1992; Bolzendahl and Myers, 2004; Brewster and Padavic, 2000; Hofäcker, 2007).

Social policies and men's parental leave behaviour

Empirical studies on gender-role attitudes suggest that highly educated men are forerunners in adopting egalitarian gender roles. There are also several empirical studies that have found that higher education positively influences the chances that a man will engage in housework (Presser, 1994; South and Spitze, 1994). However, it is unclear to what extent empirical findings on men's household activities can be generalized. Highly educated men might be more likely than others to reduce leisure time to care for their children, but they might be less inclined to reduce their working time for the same reason (Döge and Volz, 2004: 16). In addition, economic constraints might override any impact that egalitarian gender-role attitudes have on behaviour. Highly qualified men might express more egalitarian gender-role attitudes; however, a labour market interruption might be more harmful for their career development than for less educated men. In addition, the fact that higher qualified men earn higher wages is another disincentive for them to leave the labour market to care for their children.

The latter should be particularly true in the context of German family policies, which have provided rather low levels of income replacement during the parental leave period. The German government introduced a parental leave (Erziehungsurlaub) of 10 months in 1986. On the one hand, the regulation gave mothers and fathers an equal right to use leave. On the other hand, the parental leave benefit was – at a maximum of 600 DM (or €300 after 2001) – rather low. Furthermore, it was not tied to prior income. Instead, it was means-tested: benefits were reduced on a sliding scale based on household income. In 1992, the maximum duration of leave was extended to 3 years. The benefit was, however, only granted for a period of up to 2 years. With the 1992 reform, it also became possible for cohabiting fathers to take leave if the mother consented. In 2001, more flexibility was introduced, and both partners were permitted to take leave simultaneously. Parents had the option of receiving 900 DM (or €450 after 2001) per month if they reduced the benefit period to 1 year. In 2004, the income thresholds for receiving the benefit were reduced, which meant that families with higher incomes were less likely to be eligible to collect parental leave benefits (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2002, 2006). Despite these changes, parental leave regulations did not alter significantly during the period 1999-2005, which is the focus of our study. The major characteristic of this period was that parental leave benefits were, at €300, rather low; and the insufficiency of this amount was frequently cited as the main reason for German fathers' unwillingness to take leave (Beckmann, 2001; Institut für Demoskopie Allensbach, 2005; Vaskovics and Rost, 1999).

Hypotheses

Drawing these theoretical threads together, we can derive three hypotheses regarding the role of men's education on leave-taking behaviour.

If we assume that values and beliefs are important for men's parenting activities, and if we further assume that highly educated individuals are forerunners in terms of new values and ideas, and that they act accordingly, highly educated men should be more likely to take leave than their less educated counterparts (Hypothesis 1). The economic approach suggests that economic resources are the driving forces behind employment choices. Highly educated men encounter high opportunity costs when taking parental leave, particularly in Germany, where parental leave benefits were rather low until 2006. Highly educated men are also more likely than others to miss out on crucial careers options when they are on leave. This suggests that, in contrast to Hypothesis 1, men's education is negatively associated with leave-taking (Hypothesis 2).

Based on the idea that the household context is the appropriate reference to study employment choices, it is also possible to assert that the relative level of education determines parental leave decisions. In line with this approach, we assume that men who are less educated than their partners are more likely to be on leave. Apart from education, age is also used in economic models as an indicator for work experience, and, thus, human capital endowment. We therefore assume that men who are younger than their partners are also likely to be on leave. As others have done before (Coltrane, 2000: 1214), we call this assumption the 'relative resources hypothesis' (*Hypothesis 3*).

Apart from education, there are other aspects we account for in our investigation. Employment conditions are important determinants of men's parenting activities (Gesterkamp, 2007: 106ff.). Surveys on the attitudes of men and women towards parental leave have also revealed that fathers who find themselves in precarious and unstable employment situations are less willing to go on leave out of fear of losing their employment (Beckmann, 2001; Vaskovics and Rost, 1999: 43ff.). We take this factor into account by controlling for whether the father has a temporary or permanent working contract, and whether he is employed in the public or private sector. In addition to the employment situation, we account for other factors that have been found to influence men's parenting activities, such as the gender of the children, the number of children and the ages of the children (Harris and Morgan, 1991). Before we put our hypotheses to the test, we briefly summarize prior empirical findings on men's take-up of parental leave.

Studies on men's parental leave usage

Most studies on fathers' usage of parental leave have been conducted for the Nordic countries (Byrgen and Duvander, 2006; Duvander et al., 2010; Duvander and Jans, 2008; Lammi-Taskula, 2008; Lappegård, 2008; Sundström and Duvander, 2002). Results for these countries mainly show a positive impact of education on men's parental leave. Using register data from Norway, Lappegård (2008) finds a clear positive effect of male and female education on men's usage of parental leave. Sundström and Duvander (2002) report similar findings for Sweden; however, in their model the impact of male education on men's uptake of parental leave is only positive after controlling for earnings. Workplace characteristics have also been shown to determine fathers' use of parental leave. Fathers who work in

the public sector, in larger firms, and in female-dominated workplaces seem to be the most likely to use parental leave (Byrgen and Duvander, 2006). Another finding from the Scandinavian literature is that married fathers are more inclined to take longer durations of leave than men in cohabiting unions (Lappegård, 2008; Sundström and Duvander, 2002).

While research on Scandinavian countries has produced considerable evidence on the determinants and durations of fathers' parental leave usage, there are no comparable studies for Germany. However, even though there are no quantitative studies on the determinants of men's parental leave usage, there are studies on the attitudes of German men and women towards fathers on parental leave (Beckmann, 2001; Institut für Demoskopie Allensbach, 2005; Vaskovics and Rost, 1999). A consistent finding of these investigations is that the loss of income is a primary reason for the low levels of acceptance of parental leave among fathers. Another reason that was mentioned frequently, particularly in the eastern states of Germany, is the fear of losing one's job as a consequence of taking parental leave (Beckmann, 2001: 6). Additional reasons given for men's unwillingness to take leave include concerns about parental leave creating career disadvantages, and the fear of being stigmatized for using leave. However, a large proportion of men, as well as women, appear never to have thought seriously about the possibility of men taking leave. It was obvious to them that the mother of the child would use the parental leave entitlement (Institut für Demoskopie Allensbach, 2005; Vaskovics and Rost, 1999).

Data, method and variables

Data

For our analyses, we use data from the German microcensus. The German microcensus is a representative population sample containing 1 percent of the households in Germany. It has been conducted in western Germany since 1957, and in eastern Germany since 1991. Until 2004, the survey was conducted once a year; since 2005, households have been surveyed throughout the whole year. We use the Scientific-Use-File, which is a factual anonymized 70 percent subsample of the original microcensus.

We restrict the investigation to the period 1999–2005. This restriction is made because earlier microcensuses did not include information on parental leave-taking, and later microcensuses were not available yet when this paper was finalized. We furthermore restrict the analysis to men who were aged 18 to 45 years at the time of the interview, and who had a child under the age of 3 years who lived in the same family unit.

A critical issue is the definition of the risk population. Only men who were employed before the child was born are eligible for parental leave. Since the microcensus does not provide detailed retrospective employment histories, we cannot clearly identify who is eligible for leave and who is not. However, we assume that respondents who were not employed at the time of interview were not eligible for leave when the child was born. We therefore exclude this population from the sample. Apart from the non-employed, we also exclude the very small group of single fathers and fathers in homosexual unions from the multivariate analysis. The total sample size consists of 63,662 respondents. Of these 63,662 respondents, 318 are on parental leave, which is 0.5 percent (for a descriptive overview on the sample, see the Appendix). With 318 men on leave, the number of positive events is rather small, but is sufficient for conducting quantitative analysis.

Method

We apply a logistic regression model that distinguishes fathers on parental leave from employed fathers. In our study, we pool the 1999–2005 microcensuses. It should be mentioned here that the microcensus is a rotating panel. A fourth of the sample is replaced every year, which means that households stay in the sample for 4 years. For our investigation, this implies that some respondents might be included several times in the study. Since the information on who is repeatedly interviewed is not provided in the data, we cannot account for this. However, we conducted several checks for the robustness of our results, in which we only included survey years that were at least 4 years apart. The results were in accordance with the results reported in this paper.

Independent variables

Our major independent variable is the level of *education* of the respondent. We distinguish between

respondents with a vocational degree, a university degree and no degree. Combining the fathers' and their partners' educational levels yields the relative education. We distinguish between men living in partnerships in which neither partner has a vocational degree or a university degree; in which both partners have the same level of education, which is either a vocational degree or a university degree; and in which the father is less educated than his female partner, or vice versa. Furthermore, we consider age in the analysis by grouping men into the categories 18-25, 26-30, 31-35, 36-40 and 41-45 years old; and we introduce a variable that accounts for the relative age. Men are distinguished by whether the partner is about the same age (0-1 years younger or older), 2-6 years or 7 or more years older, or 2-6 years or 7 or more years younger. Furthermore, we consider the type of union, which is measured by distinguishing non-marital and marital unions.

Employment conditions are also expected to influence men's take-up of leave. We account for the *type of contract*, distinguishing between respondents with a temporary or a permanent contract, and self-employed respondents. We also use the *type of sector*, differentiating between men working in the private and public sector.

Prior studies have found that children's characteristics have an impact on parenting behaviour (Harris and Morgan, 1991). We control for the *number of children* (one, two, or three or more children), and the *age of the youngest* child in the household (ages zero, one or two years). We also account for the *sex of the youngest child*. For multiple births, we do not make a distinction, however. This leads to the following grouping: boy, girl, multiples.

We also control for the *size of the community* in which the person lives at interview. We distinguish between communities with fewer than 20,000 inhabitants, those with 20,000–500,000 residents, and those with more than 500,000 inhabitants. Furthermore, we take into account *regional* aspects, distinguishing between respondents living in eastern and western Germany. *Citizenship* is also accounted for, distinguishing Germans from foreigners. Another control variable is calendar year. The *calendar year* was grouped into the categories 1999–2000, 2001–3 and 2004–5 to capture the changes in the parental leave regulations.

Multivariate results

Table 1 provides the results of our investigation. We estimated three models. The first model only includes the respondent's characteristics, while Model 2 also accounts for the relative education and the partner's age. Finally, Model 3 controls for the age differences between the partners.

Let us first turn to Model 1 and its control variables. There is an increase in men's chances of taking parental years over time, but this effect is not significant. It appears that the changes in parental leave policies, such as the introduction of greater flexibility in 2001 or the change in the payment system in 2004 did not result in any change in men's behaviour. Foreign men are less likely to be on leave than German men, and eastern German men are more likely to be on leave than western German men. Age has a positive impact: older fathers (age 41-45 years) are more likely to take leave than their younger counterparts, but this effect is not significant. The number of children in the family and the age of the children also affect men's chances of being on leave. Men are more likely to be on leave when the children are younger. It is also more likely that a father will take leave for his first child than for subsequent children. The sex of the child does not have an effect on parental leave usage among men. However, fathers of twins or triplets are more likely to be on leave than other fathers.

Education, which is our central variable, does not affect a man's chances of being on leave. However, size of place of residence and type of union have a strong impact on whether the father takes leave. Men in bigger cities are more likely to take parental leave than fathers in smaller communities. This finding is in line with the idea that in urban areas more modern attitudes are prevalent. Furthermore, men in non-marital unions are significantly more likely to take leave to care for their children than married fathers. This result supports findings for Germany that show a more egalitarian division of labour in cohabiting unions (Lois, 2008; Wengler et al., 2008). However, it contradicts results for the Nordic countries that show a higher use of parental leave among married fathers (Sundström and Duvander, 2002; Lappegård, 2008).

The analysis of workplace characteristics show that the type of contract and the sector people work

Table 1 Logistic regression models, odds ratios, dependent variable: using/not using parental leave

	Model 1		Mode	el 2	Model 3	
	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.
Year						
1999–2000	1		1		1	
2001-3	1.10		1.07		1.07	
2004–5	1.15		1.09		1.09	
Region						
Western Germany	1		1		1	
Eastern Germany	1.44	* *	1.40	* *	1.41	* *
Nationality						
German	1		1		1	
Non-German	0.66	35-	0.71		0.70	
Size of place of residence	0.00		0.71		0.70	
<20,000 inhabitants	1		1		1	
20,000–<500,000 inhabitants	1.35	* *	1.31	N- N-	1.31	3(- 3(-
$\geq 500,000$ inhabitants	1.80	* * *	1.57	* * *	1.56	3(- 3(- 3)-
Age (years)	1.00		1.57		1.50	
18–25	0.65		1.33		0.61	3(- 3(-
26–30	0.67	* *	0.87		0.64	* * *
31–35	1		1		1	
36–40	0.94		0.78	36-	1.03	
41–45	1.24		0.86		1.57	* *
Partnership status	1.21		0.00		1.57	
Married	1		1		1	
Cohabiting	1.79	* * *	1.80	安安安	1.76	* * *
Education	1.//		1.00		1.70	
No degree	1.00					
Vocational degree	1.00					
University	0.79					
N/a	0.83					
Number of children under age 18 years						
1 child	1		1		1	
2 children	0.70	* * *	0.69	***	0.69	* * *
3 or more children	0.70	* * *	0.37	***	0.38	* * *
Age of youngest child (years)	0.36		0.37		0.30	
0	1		1		1	
1	0.99		0.98		0.99	
2.	0.64	* * *	0.62	***	0.63	* * *
Sex of youngest child	0.04		0.02		0.03	
1 boy	1		1		1	
•	0.97		0.97		0.97	
1 girl Multiples	2.55	* * *	2.52	***	2.51	* * *
1	2.33		2.32		2.31	
Type of contract	0.34	* * *	0.33	***	0.31	* * *
Temporary	1		0.33 1		0.51 1	
Permanent	0.47	* * *	0.43	* * *	0.43	* * *
Self-employed N/a	4.00	* *	0.43 4.06	**	0.43 4.17	**
N/a Sector	4.00		4.06		4.1/	- 4
Public	1.72	* * *	1.54	* * *	1.55	* * *
	1.63		1.54		1.55	* * *
Private	1		1		1	

(Continued)

Table 1 (Continued)

	Model 1		Model 2		Model 3		
	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	
Education and partner's education							
Both no degree			0.76		0.74		
Both vocational degree			1		1		
Both university degree			1.32		1.32		
Woman < man			0.39	N-N-N-	0.38	가 가 가	
Woman > man			2.97	安安安	2.95	* * *	
N/a			0.78		0.78		
Partner's age (years)							
18–25			0.39				
26-30			0.87				
31–35			1				
36-40			1.41	* *			
41–45			2.43	35 35 35			
Age difference between the partners							
Partner same age (0–1 year younger/o	lder)				1		
Partner 2–6 years younger					0.83		
Partner ≥7 years younger					0.57	3(- 3)-	
Partner 2–6 years older					1.69	3(- 3(- 3(-	
Partner ≥7 years older					2.19	* * *	
Model summary							
Log likelihood (starting model)	4004.	.76	4004.	.76	4004.	76	
Log likelihood (final model)	3863.73		3747.	3747.24		3747.73	
Cox and Snell R ²	0.002		0.004		0.004		
Number of cases	63,60	_	63,662		63,662		
Number of positive events	318 318		318				

N/a: not available.

Source: Scientific-Use-File German microcensuses 1999–2005 (own estimations).

The sample consists of men aged 18–45 years, living in a heterosexual partnership and with at least one child under the age of 3 years in the family. Unemployed and inactive persons are excluded.

in have significant effects on fathers taking leave. Men working in the public sector are much more likely to take leave than those working in the private sector. The odds that fathers with temporary contracts will take leave are about two-thirds lower than among fathers with permanent contracts. A similar result can be observed for self-employed fathers. Obviously, stable and secure employment contracts enhance the likelihood that fathers will take time off to care for their small children.

In the first model, we introduced only the fathers' characteristics. Model 2 also accounts for the

combination of the man's and his partner's levels of education. This model shows that men whose partners have a higher level of education than they do are significantly more likely to take parental leave than fathers in couples in which both partners have vocational degrees. Conversely, a father with a partner who has a lower level of education is significantly less likely to reduce his work time to care for small children. Obviously, it is not the father's degree per se that plays a role in taking leave, but the 'relative resources' measured by educational differences. The impact of relative age in Model 3

^{***}p < 0.01; **p < 0.05; *p < 0.1.

supports this notion. Having an older partner increases considerably the likelihood that the father will use parental leave, while having a younger partner decreases it. This indicates that power differences due to different experiences in the labour market play an important role in a father's parenting activities.

Summary and discussion

In this paper, we have used data from the microcensuses of 1999-2005 to investigate the role of education in the take-up of parental leave by men in Germany. We have contrasted three hypotheses. Our first hypothesis asserts that highly educated men take the lead in supporting egalitarian gender roles, and are therefore front-runners in the take-up of parental leave. We based this hypothesis on prior empirical findings, which show a clear positive association between male education and egalitarian gender-role attitudes (Alwin et al., 1992; Bolzendahl and Myers, 2004; Brewster and Padavic, 2000; Hofäcker, 2007). The second hypothesis stipulates that higher education leads to lower levels of engagement in parenting activities, because higher education also increases the income and opportunity costs of career interruptions. The third hypothesis deals with the relative resources of the partners. Men who are more educated or older than their partners are expected to be less willing to take leave than others.

The results show that men's education does not influence parental leave decisions per se. Contrary to our expectations we find that the odds are not higher for highly educated men taking leave, despite the fact that they are more open to egalitarian gender roles. However, we find that 'relative education' does matter. Men who are more educated than their partners have the lowest chances of being on leave. The highest chances of being on leave can be found among the group of men who have more highly educated partners. A straightforward interpretation of this finding could be that earning potential is the most important determinant of parental leave decisions. The idea that economic factors are important for fathers' employment choices is also buttressed by the finding that employment characteristics – such as whether the person is employed in the public sector or whether he is holding a temporary working contract – strongly influence the chances of a man being on leave.

Does this mean that cultural factors and genderrole attitudes are not important for shaping men's employment behaviour? Obviously, the microcensus is not a good data set for testing the influence of values and ideas on behaviour. However, our results might nevertheless provide some room for speculation on the interplay of values and constraints. Prior research has shown that education is correlated with egalitarian gender-role attitudes. In addition, an urban environment and living in a cohabiting union have been found to be predictors of a more egalitarian understanding of gender-role behaviour. While we find that living in an urban environment or in a non-marital union increase the likelihood that fathers will take advantage of their parental leave entitlement, we do not find the same for fathers' higher education. Highly educated men lead the way in terms of egalitarian gender attitudes, but their high earning potential seems to draw them back into the labour market and away from being an 'involved father' (Kaufman and Uhlenberg, 2000: 932). It is only among highly educated men who also have highly educated partners that we observe high odds of taking leave. Only this group of highly educated men can afford to live up to their ideals because they have partners who can provide for the family.

If this interpretation is correct, it will be interesting to see how the parental leave benefit reform in 2007 has affected the educational gradient in fathers' use of leave. In 2007, Germany introduced a radically new pay scheme that grants 67 percent of former net income for 14 months. The parental leave reform of 2007 shifts Germany more in the direction of the Nordic countries. With this reform, parental leave benefits have greatly increased for high earners. Given that the opportunity costs of being on parental leave have declined, it might be expected that highly educated fathers will now take leave more frequently than was previously the case. An examination of the influence of the reform on men's parental leave behaviour must, however, be left for future research, when data for this period become available.

Appendix Description of the sample

	1999	2000	2001	2002	2003	2004	2005	Total
Region								
Western Germany	88.8	88.7	88.5	88.2	87.4	87.3	86.2	87.9
Eastern Germany	11.2	11.3	11.5	11.8	12.6	12.7	13.8	12.1
Citizenship								
German	87.1	86.4	86.4	87.2	86.6	86.9	85.9	86.7
Non-German	12.9	13.6	13.6	12.8	13.4	13.1	14.1	13.3
Size of place of residence								
<20,000 inhabitants	47.3	46.5	45.9	46.3	45.5	44.8	45.2	46.0
20,000-<500,000 inhabitants	40.7	41.4	41.4	41.3	41.4	41.9	41.5	41.4
≥500,000 inhabitants	11.9	12.1	12.7	12.4	13.0	13.3	13.3	12.6
Age (years)								
18–25	5.7	5.4	5.3	5.8	6.0	5.5	4.8	5.5
26-30	23.2	22.9	20.4	18.7	17.9	18.7	18.7	20.2
31–35	40.8	40.0	39.3	38.6	37.8	35.8	33.8	38.2
36-40	23.1	24.6	26.8	27.8	28.9	30.2	31.2	27.3
41–45	7.2	7.1	8.2	9.1	9.4	9.8	11.4	8.8
Partnership status								
Married	91.4	90.6	89.9	88.5	87.5	87.4	86.7	89.0
Cohabiting	8.6	9.4	10.1	11.5	12.5	12.6	13.3	11.0
Education								
No degree	12.1	11.6	12.1	11.9	11.5	11.8	14.1	12.1
Vocational degree	64.7	64.5	64.0	64.6	63.0	61.8	63.7	63.8
University	18.7	18.7	19.6	19.4	20.8	21.6	21.9	20.0
N/a	4.5	5.3	4.3	4.1	4.7	4.9	0.2	4.1
Number of children under age 18		3.3	1.0		1.,	1.,,	0.2	
1 child	43.9	43.9	43.0	43.3	43.6	45.5	46.1	44.1
2 children	40.2	40.2	40.1	40.9	40.5	39.0	39.4	40.1
3 or more children	15.9	15.9	16.9	15.8	15.9	15.5	14.5	15.8
Age of youngest child (years)	13.7	13.7	10.7	13.0	13.7	13.3	11.5	13.0
0	34.9	36.0	34.9	34.1	35.4	34.2	32.2	34.6
1	34.8	34.2	35.6	34.8	33.8	35.1	36.6	34.9
2	30.3	29.8	29.5	31.1	30.8	30.7	31.2	30.5
Sex of youngest child	30.3	27.0	27.3	31.1	30.0	30.7	31.2	30.3
1 boy	50.5	50.6	49.2	49.6	50.0	49.8	51.0	50.1
1 girl	47.7	47.6	49.2	48.5	48.0	48.3	47.3	48.1
Multiples	1.8	1.8	1.7	1.8	2.1	1.8	1.7	1.8
Type of contract	1.0	1.0	1.7	1.0	2.1	1.0	1.7	1.0
Temporary	7.4	7.3	7.0	6.7	6.9	7.0	7.7	7.1
Permanent	80.6	80.4	80.5	80.9	80.4	79.9	79.2	80.3
Self-employed	11.7	12.0	12.3	12.2	12.5	12.9	13.0	12.3
N/a	0.3	0.4	0.2	0.1	0.3	0.2	0.1	0.2
Sector	0.3	0.7	0.2	0.1	0.3	0.2	0.1	0.2
Public	13.6	12.4	12.6	12.8	13.0	13.1	13.0	12.9
Private	86.4	87.6	87.4	87.2	87.0	86.9	87.0	87.1
Respondent's and partner's educat		0/.0	0/.7	0/.4	0/.0	00.7	07.0	0/.1
	8.0	7.8	7.8	7.8	7.2	7.3	9.2	7.8
Both no degree	51.9	51.3	51.7	51.7	49.9	48.8	51.1	51.0
Both vocational degree	8.6	8.2	8.9	9.1	49.9 9.9	11.2	11.2	9.5
Both university degree		19.3	8.9 19.1		9.9 19.7	18.7	19.2	9.3 19.1
Woman < man	18.9			18.9				
Woman > man	6.7	6.4	6.8	6.9	7.3	7.6	8.9	7.2
N/a	5.8	7.0	5.8	5.6	6.0	6.4	0.4	5.4

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Appendix	(Continued)

	1999	2000	2001	2002	2003	2004	2005	Total
Partner's age (years)			,					
18–25	13.3	14.2	13.2	13.5	14.0	13.7	12.8	13.5
26-30	34.5	32.5	29.9	28.9	27.9	29.1	28.5	30.3
31–35	38.1	38.0	38.8	38.3	38.4	36.2	36.2	37.8
36-40	12.5	13.7	16.3	17.3	17.7	18.7	20.0	16.4
41–45	1.6	1.6	1.9	2.0	2.0	2.2	2.5	2.0
Age difference between the partn	ers							
Partner same age (0–1 year younger/older)	30.6	30.5	30.7	30.7	31.3	30.2	29.7	30.6
Partner 2–6 years younger	47.3	46.8	45.3	45.4	45.1	45.5	45.1	45.8
Partner ≥7 years younger	12.5	12.8	13.4	13.7	13.8	14.7	15.4	13.7
Partner 2–6 years older	8.6	9.0	9.3	8.9	8.8	8.7	9.0	8.9
Partner ≥7 years older	1.0	0.9	1.3	1.2	1.0	0.9	0.8	1.0
Sample size								
Number of cases	9882	9951	9613	9375	8768	8348	7725	63,662
Number of men on leave	45	44	45	52	44	41	47	318
Percent of men on leave	0.5	0.4	0.5	0.6	0.5	0.5	0.6	0.5

N/a, not available.

Source: Scientific-Use-File German microcensuses 1999–2005 (own estimations).

Notes

 Another issue concerns the fact that the kin relationship within a family cannot be clearly assessed with the microcensus. Therefore, it is not possible to identify stepfathers who, until the year 2000, were only eligible to take parental leave if they were married to the mother of the child.

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