Part V
Consequences of Childlessness

Chapter 15
What's a (Childless) Man Without a Woman? The Differential Importance of Couple Dynamics for the Wellbeing of Childless Men and Women in the Netherlands

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15.1 Introduction

Parenthood is often seen as being a core element of a "normal" adult life (Dykstra and Hagestad 2007). This notion has coloured both scientific and societal views on people who will never make the transition to parenthood. Childless individuals, especially childless women, are depicted as "others", and even as deviants (Letherby 2002). They are also perceived as being disadvantaged and as having weaker support networks. It is often assumed that childless adults are more likely than parents to suffer from isolation, loneliness, and physical and mental ill health (see for review Dykstra and Hagestad 2007).

Since being a parent is considered to be more central to the life of a woman than to the life of a man (Veevers 1980; Hird and Abshoff 2000; Letherby 2002; Bulcroft and Teachman 2003), the ramifications of not having taken on a parental role are generally assumed to be more disadvantageous for a childless woman than for a childless man. Scholars have often asserted that among men, circumstances and behaviours in the domain of paid employment have a much stronger influence on their identity and wellbeing than those in the domain of family life (e.g., Gilford 1986; Thomson and Walker 1989). Most studies on the impact of childlessness have

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therefore examined the effects on women only, and have overlooked or simply neglected men (for a review, see Greene and Biddlecom 2000). Recent studies which have investigated the extent to which men's lives are affected by remaining childless have concluded that the implications of childlessness are no less significant for men than for women, but that the effects may be different (e.g., Eggebeen and Knoester 2001; Keizer et al. 2010).

These studies have revealed that the impact of childlessness among men is conditioned to a much larger extent by partner status than it is among women (Dykstra and Wagner 2007; Kendig et al. 2007; Wenger et al. 2007; Umberson et al. 2010). For example, Kendig et al. (2007) showed that never-married and formerly married childless men were more likely than married childless men to report being in poor physical health, whereas among women there were no significant differences in self-reported health among childless women based on partner status. Other studies have shown that the life outcomes of never-married childless women are much more favourable than those of their married counterparts (Koropeckyj-Cox and Call 2007). Taken together, these findings suggest that the presence of a partner is more important to the wellbeing of childless men than of childless women. If the presence of a partner indeed plays a bigger role in the life outcomes of childless men than of childless women, then are childless men also more affected by couple dynamics than childless women? Moreover, does relationship satisfaction have a greater impact on the overall wellbeing of childless men than on that of childless women?

Understanding the importance of couple dynamics for relationship satisfaction and, subsequently, overall wellbeing is important, especially for middle-aged and elderly couples. With increasing age, the social network of an individual becomes smaller and the relative importance of the partner increases (Carstensen 1992). This may be particularly true for childless couples, whose social networks are already more limited because of the absence of children and grandchildren. By studying the potential gender differences in the effects of couple dynamics and relationship satisfaction, our work addresses the pertinent issue of whether there are particular individuals within the childless population who are "at risk" of maladjustment.

Using a couple perspective, we investigate in the current study the differential importance of couple dynamics for relationship satisfaction among childless couples. Subsequently, we investigate whether relationship satisfaction has different effects on the well-being of the male partner and of the female partner in a given couple. As studies on the impact of parenthood on the wellbeing of adults have shown that the consequences of having or of not having children are not necessarily uniform across life outcomes (Dykstra and Wagner 2007; Kendig et al. 2007; Wenger et al. 2007), we focus on both physical and mental wellbeing. In our analysis, we use of multi-actor data from the Netherlands Kinship Panel Study (NKPS), a nationally representative survey conducted in 2002–2004.

15.2 Theoretical Background

15.2.1 Gendered Benefits of Marriage?

Being in a relationship is thought to be beneficial for individuals because a partnership represents an important source of both social support and financial stability, factors which are linked to higher levels of physical and mental health (e.g., Stimpson and Peek 2005). Bernard (1972) was one of the first scholars to explore the idea that relationships are more beneficial for men than for women. Based on her belief that marriage oppresses women because the wife is subordinate to the husband, she concluded that women tend to be less satisfied with marriage than men. Bernard (1972) also argued that men derive greater health benefits from marriage than women, and that marriage is harder on women than on men because women shoulder the majority of the household and childcare tasks.

In Bernard's work, which was published in the 1970s, gender balance and an equal division of tasks were the key factors used to explain the differences between men's and women's levels of satisfaction with marriage. Today, however, there is a much greater degree of gender equality in relationships than was the case in the period in which Bernard wrote her seminal studies (Sullivan 2006). The overwhelming majority of contemporary mothers are no longer confined by the role of housewife, but are actively involved in the labour market. In addition, while women still shoulder the majority of childcare duties, men have taken on a greater share of household and childcare tasks (e.g., Hook 2006). These trends suggest that couples today are much more gender-equal than they were four decades ago. Thus, based on the argumentation of Bernard, we would expect to find that gender differences in marital satisfaction are weaker today than they were in previous generations. Indeed, recent meta-analyses (Jackson et al. 2014) have reported that within non-clinical samples, no gender differences in marital satisfaction could be found. In line with these findings, and given that childless couples are viewed as being more gender-egalitarian than couples with children (e.g., Grunow et al. 2012; Schober 2012), we should not observe any gender differences in relationship satisfaction levels among contemporary childless couples. However, the question of whether experiences *within* the partnership might affect the two partners differently remains.

15.2.2 Gender Differences in the Importance of Relationship Characteristics

Following up on the arguments of Bernard, numerous studies have investigated the implications of partner status for wellbeing (e.g., Coombs 1991; Kiecolt-Glaser and Newton 2001). Recently, however, scholars have shifted their attention to investigating the impact on wellbeing of *within*-relationship dynamics. The majority of these studies have shown that positive marital relations (characterised by support

and closeness) are protective for relationship satisfaction and wellbeing, whereas negative marital relations (characterised by disagreement and distress) are associated with poor outcomes for one or both members of the couple (e.g., Acitelli and Antonucci 1994; Ducharme 1997; Miller et al. 2004; Henry et al. 2005; Whisman et al. 2006).

Scholars have argued that what is going on in the relationship tends to have a greater impact on the female partner's than on the male partner's satisfaction with the relationship (e.g., McRae and Brody 1989). They often explain this difference by claiming that women tend to do more of the emotional work in the relationship than men (Thomson and Walker 1989), i.e., that women are generally more aware than men of the emotional climate of the relationship, and are more likely to monitor the relationship's emotional quality. While it has been shown that the perception of problems is associated with lower levels of relationship satisfaction and higher levels of stress among both women and men, women have been found to be more likely than men to perceive problems in the relationship (McRae and Brody 1989). In line with these findings, other studies have revealed that women initiate relationship therapy and file for divorce more frequently than men (e.g., Rokach et al. 2004). Scholars have further observed that a woman tends to be at a double disadvantage in a relationship relative to her male partner, not only because she is more likely to perceive problems in their relationship, but because these problems are more likely to have a detrimental impact on her wellbeing (e.g., Gove and Hughes 1979; McRae and Brody 1989). In other words, as Rae and Brody (1989) have put it: "Women's marriages are more negative than men's marriages and the negatives translate into more distress for women than men" (ibid.: 246).

Most studies which have examined the extent to which characteristics of the relationship affect relationship satisfaction have focused on negative marital relations, such as relationship problems and conflicts (for a critique, see Cramer 2004). Although the ways in which partners experience conflict and handle relationship problems are strong predictors of satisfaction with the relationship, recent studies have found that the ways in which partners provide emotional support to one another may be equally or even more important determinants of satisfaction (e.g., Cramer 2004; Hilbert et al. 2013). Findings in this area complement the findings on the impact of conflict and problems in the relationship: i.e., a woman's level of relationship satisfaction is not only more likely than a man's to be negatively affected by relationship conflict and problems; it is also more likely to be positively affected by partner support (e.g., Julien and Markman 1991).

Furthermore, scholars have argued that the physical and mental wellbeing of a woman is more strongly affected than that of a man by relationship quality because marriage is considered a more central component of a woman's than a man's life (Gilford 1986). Women are socialised to derive their wellbeing from close interpersonal relationships, whereas men are encouraged to derive their sense of self through more autonomous pathways, such as paid labour (Quirouette and Gold 1992). It has therefore been posited that while men tend to benefit from marriage regardless of the quality of the relationship, women may derive mental and physical health benefits from marriage only if the relationship is satisfying (Hess and Soldo

1985). Some scholars have even found that positive relationship characteristics such as high levels of closeness, while beneficial for a woman, are actually detrimental to the wellbeing of a man, as intense intimacy with a partner may interfere with the man's ability or desire to maintain his autonomy (Quirouette and Gold 1992).

15.2.3   Is the Picture Different for Childless Couples?

Although the literature has shown that childless couples exhibit higher levels of relationship satisfaction than parents (see Wagner et al. 2015 for a recent exception), it is not yet clear whether the previously described gender differences in the effects of relationship characteristics on relationship satisfaction – and, subsequently, on wellbeing – also apply to childless couples. Although childless couples (perhaps in part because of the greater degree of gender equality in their relationship) may be expected to report having fewer relationship conflicts and problems, there is no basis for assuming that the existence of relationship problems or conflicts would have different effects on the relationship satisfaction levels of childless couples than on those of parents. Therefore, we hypothesise that the link between relationship satisfaction and both positive and negative relationship dynamics will be stronger for childless women than for childless men (*H1*).

In terms of the effects of relationship satisfaction on physical and mental wellbeing, the literature suggests that previous findings for couples with children should not be extrapolated to childless couples. Compared to childless men, childless women are often better off economically and have substantially larger networks (e.g., Dykstra and Hagestad 2007). This might indicate that the overall wellbeing of childless women is less dependent than that of childless men on what is going on in their romantic relationship. We therefore hypothesise that the link between relationship satisfaction and both physical and mental wellbeing will be stronger for childless men than for childless women (*H2*).

In the current study we address two main questions: (1) do relationship dynamics have different effects on the relationship satisfaction levels of childless women than of childless men; and, (2) does the link between relationship satisfaction and mental and physical wellbeing differ between childless men and childless women? These questions were investigated by estimating couple-level random effects models using data on 163 Dutch childless couples from the first wave of the nationally representative Netherlands Kinship Panel Study (NKPS). Our work therefore helps to answer the question of whether previous findings on the importance of relationship dynamics and relationship satisfaction for couples with children also apply to the rather distinct population of childless partnerships.

15.3 Method & Method

15.3.1 Data

The data used in this chapter come from the first wave of the Netherlands Kinship Panel Study (NKPS; Dykstra et al. 2005). The NKPS is a longitudinal, nationally representative study. In wave one of the NKPS, 8161 individuals aged 18–79 participated. The respondents (also referred to as "anchors") were selected from a random sample of private addresses in the Netherlands. The first wave was conducted in 2002–2004 and had a response rate of 45% (Dykstra et al. 2005), which is not atypical for the Netherlands. Dutch response rates tend to be lower than elsewhere and have been declining over time, likely because the Dutch are particularly sensitive about privacy issues (De Leeuw and De Heer 2001 (fehlt); Stoop 2005 (fehlt)). The anchor data were collected via computer-assisted face-to-face interviews, as well as through separately completed questionnaires. Data were also collected from a number of significant others (also referred to as "alters"), including the anchors' current partner.

For our analyses, we focused on anchors who had partners at the time of the first wave of data collection, and whose partners were also participating in the NKPS (51.4% of the wave one sample, $n = 4194$). We further restricted our sample to couples in which neither partner was a parent (i.e., neither had children, including with an ex-partner) and the female partner was age 40 or older at the time of the interview. This restriction was made because we were interested in the couple dynamics of permanently childless individuals. Earlier research has shown that the proportion of couples who make the transition to parenthood after the age of 40 is small (Landry and Forrest 1995; Garssen et al. 2001). These selections resulted in a final sample of 163 childless couples. In our work, we used the data provided by both partners; thus, our sample consisted of 326 individuals nested in 163 couples.

15.3.2 Measures

Relationship Satisfaction Both partners provided answers to the following four items: "We have a good relationship", "The relationship with my partner makes me happy", "Our relationship is strong", and "The relationship with my partner is very stable". The responses were coded from 1 = *strongly agree* to 5 = *strongly disagree*. Developed specifically for the NKPS, the reliability and validity of this scale were tested during pilot studies (Verweij 2002), and it has been used successfully in other studies (Komter et al. 2012). The scale was created based on the mean of the items ($\alpha = .95$ for anchors and $\alpha = .92$ for alters). The items were recoded so that a higher value represented higher relationship satisfaction. The correlation between the partners' answers was $r = .55$, $p < .05$.

Self-Reported Health The partners' health was assessed based on the following question: "How is your health in general?" The respondents could choose from $1 = excellent$ to $5 = very\ poor$. Self-assessed health has been shown to be a strong indicator of general health (Ferraro and Farmer 1999; McHorney 2000), and this NKPS item in particular has been validated in previous research on the link between family of origin and health (e.g., Monden 2010). The question was recoded so that a higher value corresponded to better health. The correlation between the partners' responses was $r = .05, p > .05$.

Mental Well-Being The partners' mood in the past 4 weeks was assessed using the following five questions: "How often have you felt particularly tense in the past 4 weeks?", "How often have you felt so down in the dumps in the past 4 weeks that nothing could cheer you up?", "How often have you felt calm and peaceful in the past 4 weeks?", "How often have you felt downhearted and miserable in the past 4 weeks?", and "How often have you felt happy in the past 4 weeks?". The answer categories ranged from $1 = all\ the\ time$ to $6 = never$. Two of the items were recoded so that a higher value on this scale indicated a better mental wellbeing. The scale was created based on the mean of the items ($\alpha = .82$ for anchors and $\alpha = .85$ for alters). The correlation between the partners' answers was $r = .24, p < .05$.

Support from the Partner Both the anchor and the alter provided information about the level of support they received from their partner by answering the following five questions: "To what extent does your partner support you: (a) in decisions about your work or education; (b) when you have worries or health problems; (c) in your leisure time activities and social contacts; (d) with all kinds of practical things you need to do; and (e) in personal matters that are on your mind?" ($1 = no\ support$ to $4 = a\ lot\ of\ support$). The scale was created based on the mean of the items. The reliability of the measure was high both for the anchors and alters ($\alpha = .84$ for both). The correlation between the partners' responses was $r = .30, p < .05$.

Relationship Conflict The level of conflict in the relationship was assessed using the following three items: "Please indicate whether the following situations have occurred between you and your partner in the past 12 months: (1) heated discussions between you and your partner; (2) one of you putting down and blaming the other; and (3) you didn't want to talk to each other for a while". Both partners responded to these questions on a scale from $0 = not\ at\ all$ to $2 = several\ times$. The scale was created based on the mean of the items. The reliability of the scale in our analytical sample was slightly under the conventionally established .70 threshold, but was still acceptable ($\alpha = .63$ for anchors and $\alpha = .66$ for alters). The correlation between the partners' answers was $r = .48, p < .05$.

Control Variables In all of our analyses, we controlled for the age of the reporting partner (in years), the highest attained level of education of the reporting partner (coded as $1 = (incomplete)\ elementary\ only/lower\ vocational/lower\ general\ second-ary$, $2 = intermediate\ general\ secondary/upper\ general\ secondary/intermediate$

vocational, and 3 = *higher vocational/university/post-graduate*), and for the duration of the current relationship in years (from the start of the partnership to the date of the interview).

In the analyses focusing on self-reported health, we also controlled for the reporting spouse's informal social capital and level of agreement with child-endorsing norms. The informal social capital of each partner was measured based on four questions which referred to the extent to which the anchor/alter was able to rely on his or her friends ("When I am troubled, I can always discuss my worries with my friends", "I place confidence in my friends", "Should I need help, I can always turn to my friends", and "I can always count on my friends"; rated from 1 = *strongly agree* to 5 = *strongly disagree*). The items were recoded so that a higher value corresponded to a large amount of informal social capital. A similar scale based on the NKPS data has been successfully used in earlier works on the impact of social contexts on romantic relationships (e.g., Hogerbrugge et al. 2012). The reliability of the scale was high both for the anchor and alter ($\alpha = .92$ for anchors and $\alpha = .93$ for alters). Finally, our measure of child-endorsing norms was constructed based on the partners' responses to the following four statements: "A person's life is not complete if s/he has not had children", "People have a duty to society to have children", "I believe that in this world a person can feel totally at ease only in his or her own family with children", and "If a person never has children, s/he can never be really happy" (rated on a scale from 1 = *strongly agree* to 5 = *strongly disagree*). The items were recoded so that a higher value corresponded to a higher level of agreement with the child-endorsing norm. The reliability of the scale was high for both partners ($\alpha = .77$ for anchors and $\alpha = .87$ for alters). Table 15.1 displays descriptive information about all of the variables used in the analyses.

Table 15.1 Descriptive statistics for variables used in the analyses

	Female partners		Male partners	
	n	M (SD)	n	M (SD)
Relationship satisfaction	161	4.57 (0.53)	160	4.64 (0.56)
Self-reported health, 1 (lowest)-5 (highest)	163	3.91 (0.86)	163	4.03 (0.72)
Mental wellbeing, 1 (lowest)-6 (highest)	161	4.90 (0.70)	162	4.98 (0.74)
Support from partner, 1 (lowest)-4 (highest)	159	3.40 (0.55)	159	3.49 (0.48)
Relationship conflict, 0 (lowest)-2 (highest)	159	0.40 (0.42)	156	0.43 (0.41)
Age (in years)	163	51.29 (8.99)	163	53.02 (10.52)
Informal social capital, 1 (lowest-5 highest)	162	3.92 (0.67)	162	3.78 (0.71)
Child-endorsing norm, 1 (lowest-5 highest)	161	1.41 (0.54)	161	1.45 (0.63)
Duration of the partnership (in years)	163	24.92 (13.43)	163	24.92 (13.43)
	n	**% of n**	**n**	**% of n**
Educational attainment	163		163	
Elem only, lower voc, lower general secondary		43.6%		30.7%
Intermediate, upper general secondary, interm. voc.		16.6%		27.0%
Higher voc., university, postgraduate		39.9%		42.3%

15.3.3   Analytical Approach

We carried out our analyses in two steps. In the first step, we examined whether gender differences could be observed in the association between aspects of the relationship (i.e., conflict and support) and relationship satisfaction (*H1*). In the second step, we examined whether the link between relationship satisfaction and self-rated physical and mental health differed between the male and the female partners (*H2*). The research questions were addressed using linear regression models with couple-level random effects. We did not estimate fixed-effects models because there was little variation in the covariates of interest *within* couples (e.g., level of conflict, support from the partner), which could have resulted in standard errors which were too large (Allison 2009). The models were fitted using *xtreg* in STATA, Version 13.1. In all of the models we included control variables for the age of the partner whose relationship satisfaction/wellbeing was being examined, as well as his/her educational level and the duration of the relationship. Additionally, in the models which addressed the link between relationship satisfaction and wellbeing we controlled for the individual's level of agreement with child-endorsing norms (as a proxy for whether the respondent's childless status was (in)voluntary) and social capital.

To test the hypotheses, we included interaction terms in our models (i.e., between the gender of the partner and the covariate of interest, such as conflict, support, or relationship satisfaction). To facilitate the interpretation of the significant interaction terms, we used the *margins* command in STATA to estimate and plot the marginal effects at representative values for the female and the male partners. All of the marginal effects were estimated for the reference categories of the categorical control variables, and the continuous variables were kept at the sample mean.

15.4   Results

Detailed descriptive information about the measures used in this study is displayed in Table 15.1. The table clearly shows that, by and large, the childless NKPS participants reported rather high levels of relationship satisfaction (*M* for female partners = 4.57 (*SD* = .53) and *M* for male partners = 4.64 (*SD* = .56)). Furthermore, there were no gender differences in the mean levels of any of the central covariates of interest (i.e., relationship satisfaction, self-reported health, mental wellbeing, support from the partner, and relationship conflict).

In the first step of our analyses we focused on the question of whether there were gender differences in the association between relationship dynamics and relationship satisfaction. The results addressing this question are displayed in Table 15.2. The first two models in the table display the main effects of gender (Model 1) and of support from the partner and relationship conflict (Model 2). As was mentioned earlier, the gender of the partner was not associated with the self-reported level of

Table 15.2 Estimates from relationship-level Random-Effects Regression Models with relationship satisfaction as dependent variable

	Model 1		Model 2		Model 3		Model 4	
	Gender		Relationship dynamics		Interaction with support		Interaction with conflict	
	B	SE	B	SE	B	SE	B	SE
Gender (ref. = female partner)	0.05	(0.04)	0.01	(0.04)	−0.17	(0.30)	0.10[+]	(0.06)
Support from partner			0.45**	(0.05)	0.43**	(0.06)	0.45**	(0.05)
Relationship conflict			−0.19**	(0.07)	−0.19**	(0.07)	−0.09	(0.08)
Interactions								
Gender × support from partner					0.05	(0.09)		
Gender × relationship conflict							−0.21*	(0.10)
Controls								
Age (in years)	0.01	(0.00)	0.01[+]	(0.00)	0.01[+]	(0.00)	0.01[+]	(0.00)
Educational level (ref. = highest)								
Lowest	0.05	(0.07)	−0.03	(0.06)	−0.03	(0.06)	−0.04	(0.06)
Middle	0.00	(0.07)	−0.01	(0.06)	−0.01	(0.07)	−0.02	(0.06)
Duration of relationship (in years)	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)
Constant	4.23**	(0.20)	2.80**	(0.25)	2.88**	(0.28)	2.77**	(0.25)
Miscellaneous parameters								
Residual SD of random intercept (sigma_u)	0.42		0.31		0.31		0.31	
Residual intraclass correlation (rho)	0.58		0.47		0.47		0.47	
R^2 within unions	0.03		0.16		0.16		0.17	
R^2 between unions	0.01		0.39		0.39		0.41	
R^2 overall	0.01		0.31		0.32		0.33	

Note. [+] $p<0.10$, [*] $p<0.05$, [**] $p<0.01$

relationship satisfaction, whereas the self-reported level of support received from the partner and the level of relationship conflict were associated with relationship satisfaction in the manner predicted (i.e., a one point increase in partner support was linked to a .45 point increase in the dependent variable, and a one point increase in relationship conflict was linked to a .19 decrease in relationship satisfaction). Our first research question is, however, addressed in the subsequent models, which

included an interaction between the gender of the partner and the indicators of relationship dynamics (Model 3 for support and Model 4 for conflict). All of the results discussed below were found after accounting for the individual and relationship level control variables.

As can be seen in Model 3, the association between the level of support received from the partner and the level of self-reported relationship satisfaction did not differ between the male and the female childless partners. In other words, we did not find evidence that childless women were more strongly affected than childless men by the positive aspects of their relationship. While we did find evidence of gender differences in the association between conflict and relationship satisfaction, these differences were not in the expected direction (Model 4 of Table 15.2). For ease of interpretation, the estimated marginal effects at representative values are plotted in Fig. 15.1. A post-estimation examination of the slopes for the two groups showed that only the slope for the male partners ($b=-.31$, $SE=.08$, 95 % CI [$-.47 - -.14$]) was significant (slope for female partners: $b=-.09$, $SE=.08$, 95 % CI [$-.25 - .06$]). An additional check demonstrated that the difference between the partners was significant ($p<.05$) only at particularly high levels of conflict (i.e., two), and that the magnitude of the difference was not large (i.e., a difference of .32 points at *frequency of conflict*=2).

The subsequent models addressed the second research question: namely, whether there were gender differences in the link between relationship satisfaction and the partners' wellbeing. Our findings are displayed in Table 15.3, Model 2 and Fig. 15.2 for physical health; and in Table 15.3, Model 4 and Fig. 15.3 for mental health. Model 2 of Table 15.3 and Fig. 15.2 show that relationship satisfaction was found to be positively associated with self-rated health, but only among the childless men. A post-estimation examination of the slopes indicated that whereas the slope for the male partners was significant ($b=.25$, $SE=.11$, 95 % CI [.03 -- .47]), the slope for the female partners was not ($b=-.08$, $SE=.12$, 95 % CI [$-.30 - .15$]). Our findings in Model 4 of Table 15.3 also demonstrated that there was a (borderline) significant gender interaction for the link between relationship satisfaction and self-rated mental wellbeing. Once again, whereas the slope for the male partners was significant ($b=.33$, $SE=.10$, 95 % CI [.14 – .52]), the slope for the female partners was not ($b=.09$, $SE=.10$, 95 % CI [$-.11 – .29$]; also see Fig. 15.3). In other words, our results indicated that the link between (physical) wellbeing and relationship satisfaction was stronger for the male than for the female childless partners.

15.5   Discussion

In this chapter, our goal was to test to what extent gender differences in couple dynamics exist within childless couples. In our analyses we found that male and female childless partners reported similar levels of relationship satisfaction, a result which is in line with the findings of recent studies on gender differences in marital satisfaction of partners with children (e.g., Jackson et al. 2014). The key
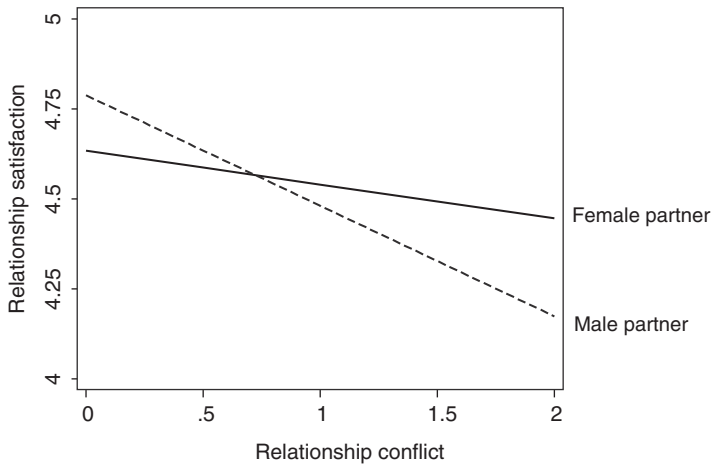
Fig. 15.1 Plot of estimated values for relationship satisfaction, based on estimates from Model 3, Table 15.2 (control variables at representative value)

contribution of our work however, is our finding that there were gender differences in the link between relationship dynamics and relationship satisfaction and in the link between relationship satisfaction and wellbeing.

First, in contrast to our expectations, we found that the link between relationship conflicts and relationship satisfaction was stronger for the childless men than for the childless women. Interestingly, no gender differences were found in the link between partner support and relationship satisfaction. In other words, the positive aspects of the partnership were equally important for both the male and the female childless partners studied. These findings were surprising, as most of the previous literature has stressed that female partners are more strongly affected by both the positive and the negative aspects of their romantic relationships (e.g., McRae and Brody 1989). Our finding concerning relationship conflict could be interpreted in two ways. As we noted above, compared to childless men, childless women have been reported to be economically better off and, even more importantly, to have larger networks (Dykstra and Hagestad 2007). Therefore, it is possible that childless men depend heavily on their intimate partnerships, and are thus, more sensitive to the internal dynamics of these relationships than childless women. Another possible interpretation of this finding is that it is not the case that childless *men* are more strongly affected by relationship conflicts, but rather that childless *women* are less strongly affected by conflicts. In other words, we suggest that previous evidence that mothers are more sensitive than fathers to relationship conflict might be attributable to a heightened preoccupation among mothers with the potential impact of those conflicts on the wellbeing of their children. As childless women do not face this concern, they might be less sensitive to conflicts. These interpretations are, however, highly speculative. Future research may want to examine whether the gender difference we found here is robust, and to investigate to what extent it is driven by a

Table 15.3 Estimates from relationship-level Random-Effects Regression Models with self-reported health and mental wellbeing as the dependent variables

|	Model 1		Model 2		Model 3		Model 4	
	Gender		Relationship dynamics		Interaction with support		Interaction with conflict	
	B	SE	B	SE	B	SE	B	SE
Gender (ref. = female partner)	0.16[+]	(0.09)	−1.34[+]	(0.72)	0.12	(0.07)	−1.00	(0.63)
Support from partner	0.09	(0.08)	−0.08	(0.12)	0.22**	(0.07)	0.09	(0.10)
Relationship conflict			0.33*	(0.16)			0.24[+]	(0.14)
Interactions								
Gender×support from partner	0.06	(0.07)	0.07	(0.07)	0.20**	(0.06)	0.20**	(0.06)
Gender×relation-ship conflict	−0.17*	(0.08)	−0.16*	(0.08)	−0.12[+]	(0.07)	−0.12[+]	(0.07)
Controls								
Age (in years)	−0.01*	(0.01)	−0.01*	(0.01)	0.00	(0.01)	0.00	(0.01)
Educational level (ref. = highest)	−0.09	(0.10)	−0.09	(0.10)	−0.06	(0.09)	−0.05	(0.09)
Lowest	−0.16	(0.12)	−0.15	(0.12)	−0.09	(0.10)	−0.08	(0.10)
Middle	0.00	(0.00)	0.01	(0.00)	0.00	(0.00)	0.00	(0.00)
Duration of relationship (in years)	4.13**	(0.50)	4.90**	(0.63)	3.07**	(0.46)	3.65**	(0.56)
Constant	4.23**	(0.20)	2.80**	(0.25)	2.88**	(0.28)	2.77**	(0.25)
Miscellaneous parameters								
Residual SD of random intercept (sigma_u)	0.18		0.20		0.27		0.24	
Residual intraclass correlation (rho)	0.06		0.07		0.17		0.14	
R^2 within unions	0.10		0.12		0.04		0.04	
R^2 between unions	0.04		0.04		0.14		0.18	
R^2 overall	0.06		0.07		0.11		0.12	

Note. [+] $p<0.10$, * $p<0.05$, ** $p<0.01$

heightened sensitivity to relationship dynamics among childless men or by a lower sensitivity to relationship dynamics among childless women.

The second main finding of our work concerned the link between relationship satisfaction and self-reported mental and physical wellbeing. In line with our hypothesis, we found that the association between relationship satisfaction and health was stronger for the childless men than for the childless women, and that this
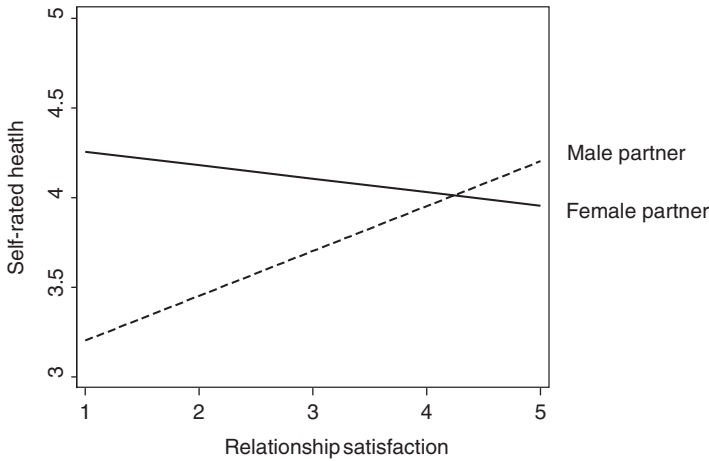
Fig. 15.2 Plot of estimated values for self-rated health, based on estimates from Model 2, Table 15.3 (control variables at representative values)
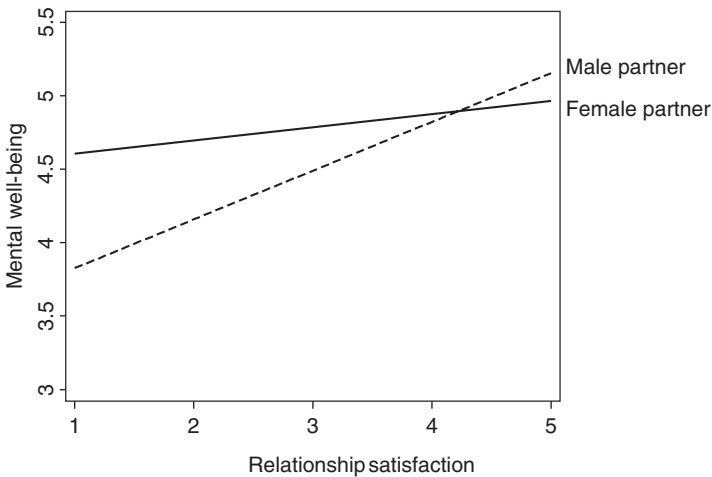
Fig. 15.3 Plot of estimated values for mental well-being, based on estimates from Model 4, Table 15.3 (control variables at representative values)

difference was particularly evident when the levels of relationship satisfaction were low. These results indicate that when they are in unsatisfying romantic relationships, childless men are at greater risk than childless women of physical and mental ill health. Again, future research should investigate in detail the mechanisms underlying this pattern. Are childless men indeed more affected by being in an unsatisfying relationship because they rely on their wife as their chief source of social support (Pugliesi and Shook 1998), and are these men therefore especially vulnerable when

that support weakens or dissipates? Or is it the case that compared to fathers and childless women, childless men place a higher value on their romantic relationship than on other domains of life, and are therefore be more affected by what is going on in their relationship? Yet regardless of the underlying mechanisms, our study reveals that when childless men are dissatisfied with their romantic relationship, they are at risk of physical and mental maladjustment.

Some limitations of our study should be mentioned here. First, it is important to note that we did not strictly compare each childless man to his *own* female partner, who was also childless. As was previously stated, the optimal way to test for possible gender differences in the link between relationship dynamics and relationship satisfaction, and between relationship satisfaction and wellbeing, is to utilize couple-level fixed effects. However, given the very limited variability in the constructs of interest which we observed *within* our units of analysis (i.e., the partnerships) and due to concerns about the possibility of inflated standard errors, we opted to run random effect models (Allison 2009).

Another methodological concern which might be raised about our work is the fact that we did not address the question of possible reverse causality. In other words, we cannot exclude the possibility that what we are seeing is, for example, a gender difference in the impact of mental and physical wellbeing on relationship satisfaction. We chose to use data from the Dutch NKPS survey because they provide high-quality, *dyadic* information on the concepts of interest. However, as the data were cross-sectional in nature, we have taken great care throughout our work to avoid implying that we have found evidence of any causal links.

Despite these limitations, our results suggest that childless men may be more affected than childless women by negative couple dynamics. Using a rich couple-level data set, we showed that the link between relationship conflict and relationship satisfaction was stronger among the childless men than among the childless women. In addition, we found that the childless men who reported experiencing low levels of relationship satisfaction were also in worse physical and mental health than the childless women. Currently, approximately one in five men will remain childless (Keizer 2010), and divorce rates remain high. Thus, it appears that entry into fatherhood could become even more selective in the future (e.g., Rønsen and Skrede 2006). Future studies should therefore investigate in greater detail how childless men of middle and older ages function in romantic relationships.

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Chapter 16
Fertility and Women's Old-Age Income in Germany

Tatjana Mika and Christin Czaplicki

16.1 Introduction

In Germany, the average woman earns far less than the average man (Finke 2011). This large gender gap in earnings is attributable in part to the tendency of German women to work part-time and to take employment breaks. So far, however, there has been little research on the "motherhood penalty": i.e., on the additional costs associated with having a child, relative to remaining childless (Waldfogel 1998). It is clear that the impact of having a child on a woman's life course goes beyond an immediate reduction in income when she withdraws from labour market after giving birth. The shift to part-time employment that many mothers make not only reduces a woman's gross income because she works fewer hours; it also damages her long-term career prospects (Brenke 2011). Moreover, even women who work full-time earn less on average than men, in part because they often choose to study disciplines that channel them into professions that are lower paid than those typically chosen by their male counterparts (Begall and Mills 2012; Busch and Holst 2011; Petersen and Morgan 1995; Trappe 2006).

The two regions of Germany have different histories with respect to female, and particularly maternal employment (Rosenfeld et al. 2004). In the German Democratic Republic (GDR) women were expected to work full-time and to return to work after taking a single year of leave; the so-called "Babyjahr" (Rosenfeld et al. 2004). Part-time work was not common in the GDR, and not encouraged by the government (Drasch 2011). In the Federal Republic of Germany (FRG), by contrast, women of the cohorts born around 1930 often exited the labour market upon marriage (Lauterbach 1994). Until 1972, a husband was allowed to forbid his wife to work if he was able to provide sufficient household income from his own salary. This had a

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negative effect on employment among married women in western Germany. Although western German women started entering the labour market in greater numbers starting in the 1970s, full-time employment continued to be rare among mothers (Allmendinger 2011: 47). Only a small minority of working-age women in western Germany were in continuous full-time employment (Simonson et al. 2011). Most women who had children returned to work after spending a shorter or a longer period of time raising children, or left the labour market permanently after having their first child (Stegmann and Mika 2013: 239). A large share of working mothers in western Germany were in "marginal" part-time employment. In most marginal employment arrangements, a worker's hours and income are capped (currently at 450 euros per month). Moreover, workers in these jobs accrue very little pension benefits.

After German reunification, the employment patterns of mothers continued to differ in the two parts of the country, as the full-time employment rates remained higher in eastern than in western Germany. In recent years, however, the rates of unemployment and of part-time employment among women have been increasing in the east, and women in eastern Germany have lower earnings than their western German counterparts. It is therefore very difficult to determine how the recent employment patterns of mothers in eastern and western Germany will affect their old-age pension benefits (Allmendinger 1994). In particular, it is unclear whether the welfare state will be able to buffer the adverse effects that career interruptions are expected to have on the old-age pensions of western German women.

Research on the effects of motherhood on employment has often focused on the years immediately after childbirth. In this paper, we focus on the lifetime employment and earning patterns of German women with and without children. We investigate the long-term effects of motherhood on women's earnings during their working years, and on their income in retirement. Because the employment patterns of mothers in eastern and western Germany have long differed, we conduct the analysis separately for the two parts of Germany. The data for this analysis come from a unique dataset that contains linked survey and register data. In this dataset the Survey of Health, Ageing, and Retirement in Europe (SHARE) is combined with information from the pension insurance records (SHARE-RV). Using these data, we are able to examine the lifetime employment patterns and earning profiles of the cohorts born between 1919 and 1982; although most of the women in our sample were born between 1930 and 1965. We explore the question of whether eastern German women who are more likely than western German women to be employed face a less severe "motherhood penalty" than their western counterparts. We map each woman's gross earnings (as recorded in the pension insurance data), as well as household information on her partner's income and earnings record. The last and major step in our investigation is an analysis of the lifetime income of women according to the number of children they have and the region where they live. For 2 years after a child is born, the German state provides mothers with relatively generous pension benefit subsidies. The benefits each woman accrues are equivalent to the national average income in those years. As most women earn less than the national average income, the benefits a mother accrues during this period

may supplement her pension entitlement more than if she had continued to work. We analyse the question of to what extent these subsidies bridge the old-age income gap between mothers and childless women. We also seek to determine whether the loss of income among mothers is offset at the household level by the higher earnings of fathers.

16.2   Institutional Background

In Germany, the size of each individual's old-age statutory pension is mainly based on the compulsory contributions he or she has made while in paid employment. However, an individual may qualify for additional top-ups on the grounds of social hardship. For example, a person may be entitled to receive additional pension benefits if he or she has a low income, is caring for a child or another family member, or is engaged in military and civil service. In Germany, women have been included in the old-age pension scheme since it first began in 1895. However, women's pensions have always been smaller than those of men because the average woman has always earned less than the average man. After the Second World War, pension funds were structured differently in the GDR and in the FRG. In western Germany, contribution levels were raised from 1957 onward to allow for increases in old-age pension benefits. In eastern Germany, contribution levels were considerably lower, and pension benefits were correspondingly low. The old-age income levels of women in eastern and western Germany also differed because of the differences in the employment patterns of women in the GDR and the FRG.[1]

Under the German Unification Treaty, the eastern and western pension systems were largely harmonized. However, the old-age income levels of women in eastern and western Germany who are now reaching retirement age still differ because of their different employment and earning histories. Particularly notable is the high share of western German women who have spent many years in marginal employment arrangements with very low gross income. The income a worker earns in these so-called "mini-jobs" is usually exempt from taxation and full social security contributions, unless he or she makes these contributions voluntarily. Thus, mothers in western Germany who work primarily in marginal employment may be expected to have much lower old-age income levels than childless women who work full-time.

However, some of these differences in employment patterns are offset by the additional pension benefits women accrue after the birth of each of their children. The German pension insurance scheme awards mothers special benefits for each child they have. First, when each child turns 1 year old, the retired mother (or father)

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[1] In the Federal Republic of Germany, a special provision in the social security code actually offered married women the option of cancelling their personal pension insurance account and getting a refund of the contributions they made while in socially insured employment. As a result, a considerable number of western German women from the cohorts born around 1930 had no pension fund account in their own name.

receives pension benefits equivalent to 2 years of the national average income (Dünn and Stosberg 2014). Since women's earnings are usually lower than the national average income, this credit typically compensates the mother for more than 2 years of complete income loss. In addition, the mother usually qualifies for a top-up for low-income individuals from a social insurance employment fund. Through 1991, the maximum pension insurance credit was equivalent to 75 % of the national average income. After 1992, a similar top-up was introduced for parents who work while their child is under age 12. Until the child turns 12, one person in the family is considered the child's main caregiver for the purposes of accruing pension insurance benefits. This is usually the mother.

16.3 Data, Variables, and Methods

16.3.1 Data

The data for our investigation comes from SHARE-RV. SHARE-RV stands for the direct linkage of survey data of the Survey of Health, Ageing, and Retirement in Europe (SHARE: www.share-project.org) with administrative data of the research data centre of the German Pension Insurance (FDZ-RV). The combination of information about different aspects of the respondents' life with accurate administrative data has several advantages, and can provide scholars with a wide range of research options. The survey data of SHARE are used in Germany for the direct linkage. For data protection reasons, administrative records are collected only for those respondents who gave their written consent during the interview.[2]

Launched in 2004, SHARE is an innovative and multidisciplinary panel survey that has so far collected micro-data on the health, the socio-economic status, and the social and family networks of more than 45,000 individuals aged 50 or older. Face-to-face interviews are conducted not only with each sampled individual, but also with each respondent's partner or spouse who lives in the same household. Instead of relying on a standard questionnaire that only collects current information, in the third wave (called SHARELIFE) the survey has used a retrospective questionnaire that covers each respondent's life from birth up to the time of the current interview (Schröder 2011). The longitudinal and multidisciplinary design of SHARE sheds light on how different areas of a respondent's life interact as he or she ages. As they are central elements of social life and economic security, the survey focuses on the respondents' family relationships and their level of integration into the labour market. To learn more about lives of older people, SHARE collects information on the respondents' partnership status, personal networks and intergenerational support, labour market participation, economic situation, and health (Malter and Börsch-Supan 2015).

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[2] For more details on linking procedures see Korbmacher and Czaplicki (2013).

The FDZ-RV provides cross-sectional and longitudinal micro-data in areas such as retirement, disability, and rehabilitation. These data are available as scientific use files (SUFs) and as public use files (PUFs). The data are process-produced and were originally compiled for the purposes of administering pension insurance benefits. Because the statutory pension scheme is mandatory for all private sector employees and for some public sector workers, the FDZ-RV contains data on most German employees (Rehfeld and Mika 2006). The administrative data that are linked with SHARE have the same format and content, but refer only to those SHARE respondents who agreed to the linkage. The FDZ-RV provides SHARE with two different datasets: namely, the longitudinal dataset constructed according to the so called sample of the insured population (Versichertenkontenstichprobe, or VSKT) and cross-sectional pension data (Versichertenrentenbestand, or RTBN) on people who have already retired. The VSKT is one of the longitudinal data sources of the FDZ-RV, and includes information on individuals insured under the statutory pension scheme, and on their pension entitlements.[3] The data cover virtually all employees in Germany, with coverage being slightly higher in the eastern states because there are fewer civil servants and self-employed in this part of the country. As the VSKT contains information on all pension-relevant activities, it is the best source of information on the public pension benefits each individual has accrued. Moreover, because these activities are covered on a separate timeline, any overlapping activities can be analysed. The VSKT contains a wide range of information on each individual, including on his or her contributions to the pension system; his or her employment or unemployment status by month; and periods the individual spent outside of the labour market because of sickness, childrearing responsibilities, and education and training.

The monthly earnings biographies included in the data make it possible to analyse individual gross wages. The gross wages recorded in the VSKT are also linked to the official average income of the particular calendar year. Each pension insurance credit point that appears in a pension insurance record in a given year is equivalent to the national average income for the year. Because the official national average income is adjusted every year, the credit points are an adjusted measure of the individual's personal gross income over time. These credit points can be accumulated over the individual's life course until retirement, and represent the person's complete gross income from the start of his or her working career. However, the amount of income for which credit points can be earned is capped at about twice the national average income. Thus, on average men who retired in 2013 accumulated 40 credit points. Among the women, who spent fewer years in employment and earned less than men, the average number of credit points accumulated for those who retired in 2013 was 23.

The longitudinal information ends when the individual transitions into retirement, but it is supplemented with cross-sectional pension data. These data, which

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[3] A few categories of employees, like civil servants, have their own pension systems, and thus do not appear in the social security data; or, like miners and employees of the federal railways, are treated differently from other insured individuals.

include information on the pension payments made by the German pension insurance and the concrete steps followed in the pension calculation, allow us to analyse the respondents' pension income after they have retired. In particular, information on the size of each respondent's pension is useful for evaluating the individual's economic situation. With a few exceptions e.g., for individuals who were self-employed throughout their life and for people who refused to participate in the data linkage pension insurance data are available for all of the SHARE respondents who have a record, regardless of whether they are still actively insured or have retired.

SHARE-RV shows that combining survey and administrative data is useful, as doing so enables us to benefit from the advantages associated with different data sources. The administrative data enrich the survey data as they include very detailed information on, for example, lifelong earnings broken down by month. In addition, because some types of information are included in both datasets (like an individual's job history), combining the data make it possible to validate retrospectively collected data. The administrative data are also improved through the linkage with the survey data. Previous analyses focused on how the labour biography or accrued benefits of individuals influenced their income in old age. Important information is also added on all sources of individual and household income, partnership, or health status.

16.3.2   Variables

A great advantage of using SHARE-RV for fertility analysis is that it contains fertility, employment, and household information (Czaplicki and Post 2015). One of our key variables of interest in the analysis is the number of children per woman. A peculiarity of the information in the dataset on children is that in SHARE's first, second, fourth, and fifth waves, only information on living children was gathered. Because deceased children were not reported, a fertility analysis may be expected to underestimate the number of children born. Moreover, the administrative data include information on the children in a given family for only one of the parents; in most cases the mother. Thus, in a first step we validate both types of information and create a valid number of children. Since the number of children in the register data is verified in the process of account clarification, we use VSKT's information on children as basic information for the retirees as well as for the individuals for whom the data in SHARE indicate that they have more children, but for whom no account clarification has yet taken place. In all other cases, we determine the number of children based on information from SHARE.

In order to examine the effects of having children on the lifetime employment patterns and earning profiles of mothers, we use the employment and earnings information from the longitudinal register data of the VSKT. We narrow our focus to women's regular employment, as workers in regular employment make social insurance contributions. We also include women's lifetime income from employment. One pension insurance credit point is equivalent to the average annual income of a

Table 16.1 Number of children, eastern and western German women

	Western German women (%)	Eastern German women (%)
No children	11	5
1 child	20	25
2 children	40	46
3 or more children	29	25

Source: FDZ-RV, SHARE-RV-3-0-0, n = 1,943, own calculations

full-time, year-round employee. On average, men earn one credit point per year, and women earn less than one point. The differences between the credit points earned in eastern and western Germany are harmonized in order to make the income analysis comparable.[4]

For the multivariate analysis, we also consider the highest level of education. As the information on education in the register data is often not available due to missing information from the employer, we take it from the survey. We distinguish between individuals with a low level of education (no degree, primary school, eighth-grade polytechnic high school), a medium level of education (secondary school), and a high level of education (high school). To control for work experience we use the years of employment, which are generated by counting the number of months of employment subject to social security contributions, and dividing this sum by 12.

The analysis is carried out separately for eastern and western Germany. The region is identified by the place of residence at the date of data collection. The SHARE-RV sample contains 3717 cases, or 1983 women and 1734 men born between 1919 and 1982. Thus, 40 % of the sample (1502) are western German women and 13 % (481) are eastern German women. While 54 % of the total sample are retired, the share is lower for the women in the sample because they are usually the younger partner in the relationship. The sample consists of 1121 couples, and register and survey data are available for both partners. In addition, we have data on 862 women (43 %) and 609 men (35 %) who either have no partner in the linked dataset, or who have a partner who did not give his or her consent for the linkage. Table 16.1 shows the distribution of the number of children in the sample in western and eastern Germany: 11 % of the western German women and 6 % of the eastern German women are childless, 20 % of the western German women and 25 % of the eastern German women have one child, 40 % of the western German women and 46 % of the eastern German women have two children, and 29 % of the western German women and 25 % of the eastern German women have three or more children.

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[4] The income ceiling (set roughly at double the national average income) for insurance contributions is lower in eastern Germany. Western German women therefore reach the highest income levels only. Since very few women in Germany earn double the national average income, the point at which the upper limit has been set, this difference does not affect our analysis much.

16.3.3 Methods

Our analysis consists of a descriptive part and a multivariate part. In the descriptive part, we map labour market participation rates and earnings across the life course. The labour market participation rate is defined as the ratio of individuals who are in the labour force to the total working-age population. Thus, this rate measures the extent to which an economy's working-age population are actually working. In order to investigate the influence of childbearing on employment patterns, we group labour market participation rates by the number of children. In addition, we generate individual wage histories and group these histories by the number of children. We then compare these profiles with the reference average wage from 2013. In the multivariate analysis, we use OLS regression to investigate the effects of having a certain number of children on the number of points a woman earns over her lifetime. The dependent variable is the sum of the points earned over the woman's whole employment career from spells of employment subject to social insurance contributions. To account for east-west differences in income dynamics and employment patterns, all of the models are estimated separately for eastern and western German women. The regression analysis consists of three parts. In the first step, we use OLS regression to study the effects of having children on women's lifetime earnings. In a second step, we investigate how the results change if the pension insurance points women earn for childrearing periods are accounted for. In the final step, we also consider the income of the male partner.

16.4 Descriptive Results

16.4.1 Mothers' Labour Market Participation in Eastern and Western Germany

Figure 16.1 maps the employment patterns of western German women between the ages of 25 and 60 by their final number of children. We have chosen to disregard periods under age 25 because most women are in education or training at this age, and are thus not employed. Similarly, we have chosen to disregard periods over age 60, as most women at this age are retired.

Figure 16.1 shows that some of the women had already reached retirement age at the time of the SHARE interview. For the others, the calculation of the participation rate is shown until the actual age is reached. The four lines represent women with zero, one, two, or three or more children. The lines differ greatly by age. At ages 25–45, the employment participation rate is around 75 % among childless women, and is around 60 % among women with one child. However, among women with two or more children the pattern is more irregular: their labour market participation rate declines until they reach their mid-thirties, and increases gradually there-after.
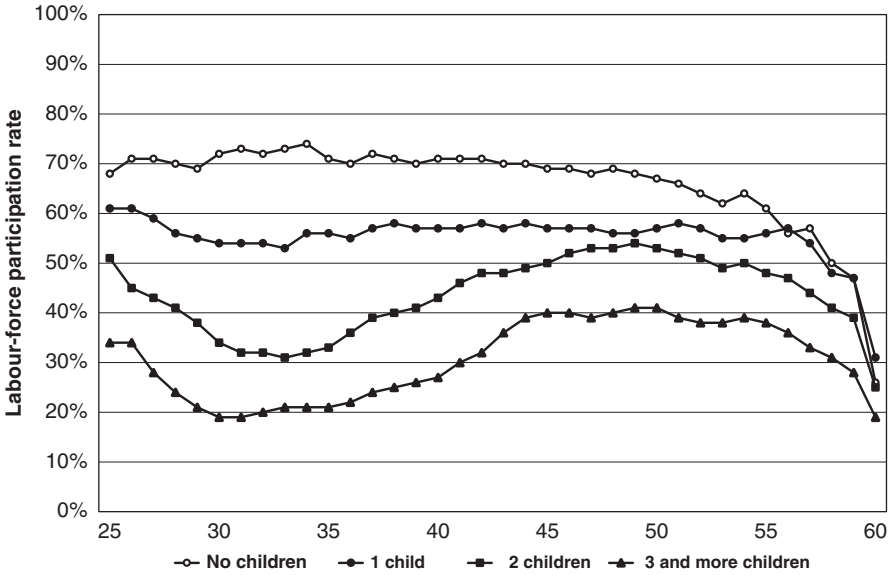
Fig. 16.1 Labour market participation of western German women by number of children (Source: FDZ-RV, SHARE-RV-3-0-0, n = 1,486, own calculations)

At age 35, only about 30 % of the women with two children and 20 % of the women with three or more children are working.

Figure 16.2 shows the labour market participation patterns for eastern Germany. Because fewer eastern than western German women participated in the SHARE survey, the line for eastern Germany fluctuates more than the line for western Germany. It is also important to note that the cohorts born from 1930 to 1950 had their children and spent most of their working years in the German Democratic Republic (GDR). These parts of the life course are included in this analysis. In the GDR, a woman was entitled to a maternity leave (Babyjahr) of 12 months after the birth of a first or a second child, and of 18 months after the birth of a third or a subsequent child (Drasch 2011). The labour market participation rates of women between the ages of 25 and 33 who had no children or fewer than three children were roughly the same in the GDR. Only women who had three or more children had lower labour market participation rates.

However, the proportion of eastern German women in employment decreased after age 55. This is because after 1990 unemployment was more common in eastern than in western Germany, and women with low qualification levels had difficulties finding employment (Bielenski et al. 1995; Diewald and Sorensen 1996). This effect was particularly strong among childless women.
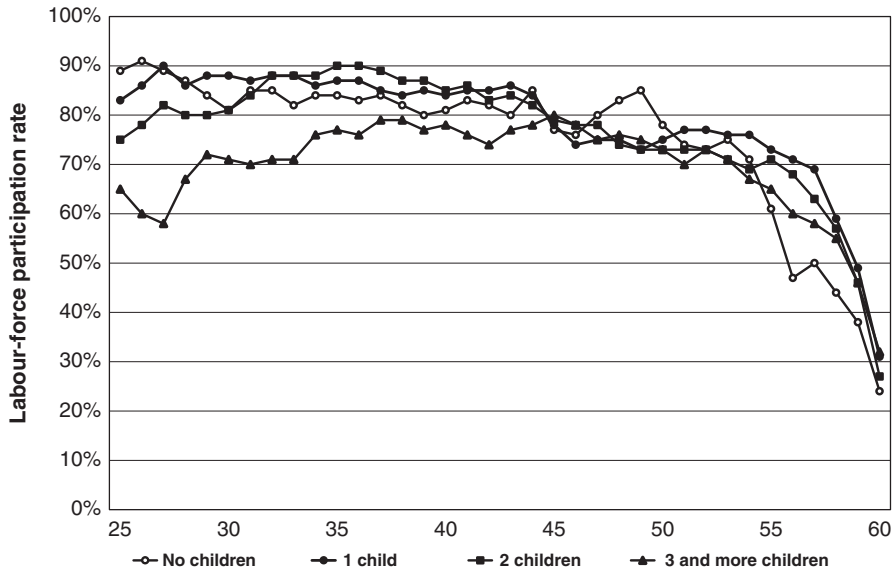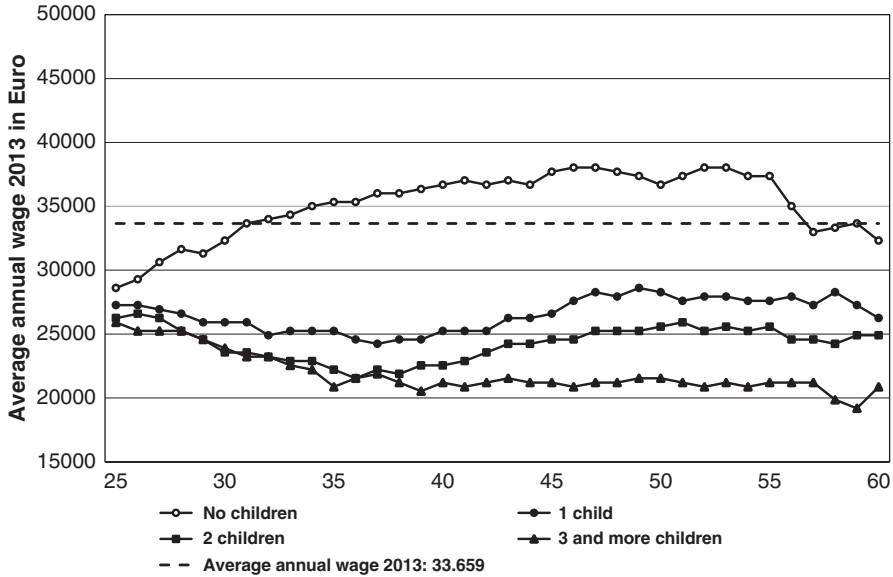
Fig. 16.2 Labour market participation of eastern German women by number of children (Source: FDZ-RV, SHARE-RV-3-0-0, n = 497, own calculations)

16.4.2   *The Earnings of Mothers Compared to the Earnings of Childless Women*

The statutory pension insurance records contain information on the gross income of each individual who works in socially insured employment. The income is then measured each year against the average income, which is set by the Ministry for Social Affairs based on national-level income trends. A worker with the average gross income earns one credit point in his or her personal record. These points are therefore not affected by inflation, and can be compared over the life course and between different birth cohorts. Figure 16.3 shows the development of income across the life course of western German women, by their number of children. The average income is represented as the dotted line. For the sake of illustration, the income is standardized by the average gross yearly income of 2013; the year the survey was conducted. The calculation for the average income of each group includes only those women who were participating in the labour market at this age. The women who were not employed were not included in the calculation. As the gross income is not adjusted for the number of hours worked, it is not a measure of hourly wages.

Childless women, who are represented by the top line, had the highest average annual income by far. The line shows that having a steady career path is associated with increasing wages. At age 30, the earnings of childless women had reached the

Fig. 16.3 Average income of western German women by number of children (Source: FDZ-RV, SHARE-RV-3-0-0, n = 1,486, own calculations)

level of the national average income. Moreover, at around age 45, childless women were earning as much as the average man (Fachinger and Himmelreicher 2008). Mothers with one child, whose labour market participation levels were not much lower than those of childless women, nonetheless saw their wages decline between the ages of 25 and 40, and increase slightly at later ages. They never came close to having the average income, which is represented by the dotted line. The income trajectories of mothers with two children were similar to those of mothers with one child, but their wages were lower. The steady decline in their income stopped at age 35, and their wages increased from that point onwards. Mothers with two children reached their highest earnings level, of about 60 % of the national average income, between ages 50 and 55. Mothers with three or more children had a distinct income path. Their income declined steadily until they reached age 40, and then remained at a low level of around half of the national average income. This suggests that the relatively small number of mothers with three or more children who were working were mainly in low-income jobs or part-time employment (Fig. 16.4).

The dotted line is again an indicator of the set value of the average gross income. At first glance, the graph appears to show that earnings of women in eastern Germany hardly ever reached the level of the national average income, regardless of the number of children they had. This was particularly true among women who were working in the GDR. Thus, the income differences between mothers and childless women were rather small. Only women with three or more children had consistently lower levels of gross income.
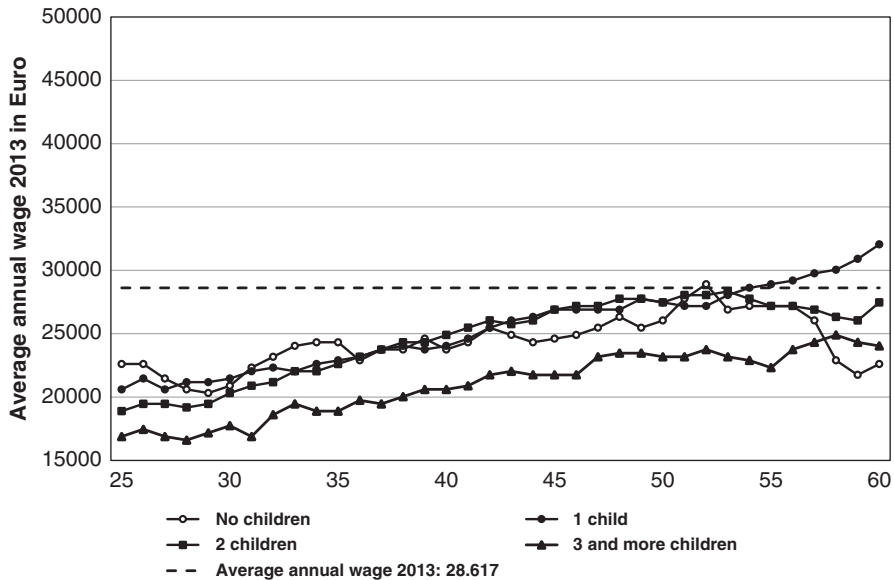
Fig. 16.4 Average income of eastern German women by number of children (Source: FDZ-RV, SHARE-RV-3-0-0, n = 497, own calculations)

In the pension insurance records, income in eastern Germany is measured on a different scale than income in western Germany. This was done in order to raise the pension benefits of eastern Germans to those of western Germans. To help offset the lower income levels in the former GDR and in eastern Germany after reunification, the scale is roughly 20 % higher. The scale on the left-hand side of the graph therefore shows different gross income levels for 2013.

16.5   Multivariate Analysis

16.5.1   Determinants of Lifetime Credit Points

Model 1 in Table 16.2 shows the effects of having children on a woman's lifetime gross income (measured in terms of credit points). The dependent variable is a measure of a woman's gross income from periods of socially insured employment over her entire insurance record, starting at age 14 and ending at age 67, or at the time of the interview. One year of full-time employment resulted in one credit point. Among men, the average number of years spent in employment was about 40 in western Germany and was slightly higher in eastern Germany.

The regression was conducted separately for eastern and western Germany, and controlled for the level of education. Having children had a negative impact on women's lifetime earnings. In western Germany, the lifetime earnings of a woman

Table 16.2 Linear regression with the lifetime earnings of women, as recorded in the pension insurance registers, as the dependent variable

	Western Germany		Eastern Germany	
	Model 1	Model 2	Model 1	Model 2
Number of children				
No children	Ref.	Ref.	Ref.	Ref.
1 child	−8.530***	−6.200***	1.520	−1.986
2 children	−13.251***	−7.243*	0.016	−2.416*
3 or more children	−17.681***	−7.648***	−2.812	−3.024*
Education				
Low education	−2.117**	−4.189***	−7.223***	−10.652***
Medium education	1.600	−1.763***	−5.490***	−6.901***
High education	Ref.	Ref.	Ref.	Ref.
Years of employment		0.799***		0.905***
Years until retirement (65)		−0.041		0.068
Constant	27.769***	8.578***	25.654***	2.855
R^2	0.20	0.76	0.08	0.69

Source: FDZ-RV, SHARE-RV-3-0-0, own calculations
*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$

declined significantly with the birth of each additional child. In eastern Germany, having children did not have a significant effect on a woman's lifetime earnings. While the effect of education on lifetime earnings was more pronounced in eastern than in western Germany, it is important to note that the group of less educated eastern German women of these cohorts was still rather selective. Model 2 additionally controlled for the duration of employment over the life course. After these variables were included, the effect of having children on a western German woman's earnings was greatly reduced. In eastern Germany, the negative effect of having three children disappeared after duration of employment was controlled for. This suggests that in eastern Germany the average woman with a large number of children also had reduced earnings. The introduction of the length of employment into the regression also increased the effect of education. This shows that among the older cohorts of women in both parts of Germany, blue-collar workers spent more years in employment than white-collar workers. The fact that blue-collar workers were employed for more years helped to offset their lower gross wages.

16.5.2 Determinants of Lifetime Credit Points Including Child-Related Pension Points

In the next step, we explore how the results change if we consider the additional pension points women receive for having children (which we refer to as "child benefits" in the following). For each child registered in the pension insurance records, the mother receives two credit points. Table 16.3 shows the results of this analysis.

Table 16.3 Linear regression with lifetime earnings of women, as recorded in the pension insurance registers, by number of children and length of employment, including benefits for childrearing periods

	Western Germany		Eastern Germany	
	Model 3	Model 4	Model 3	Model 4
Number of children				
No children	Ref.	Ref.	Ref.	Ref.
1 child	−6580***	−4.277***	3.542	0.031
2 children	−9292***	−3.351***	4.049	1.605
3 or more children	−10,653***	−0.731	4.386*	4.161***
Education				
Low education	−1883	−3.963***	−7.017***	−10.490***
Medium education	1588	−1.755***	−5.468***	−6.863***
High education	Ref.	Ref.	Ref.	Ref.
Years of employment		0.791***		0.906***
Years until retirement (65)		−0.047		0.058
Constant	27.693***	8.754***	25.554***	2.803
R^2	0094	0.72	0071	0.69

Source: FDZ-RV, SHARE-RV-3-0-0, own calculations
*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$

The findings indicate that having children had a negative impact on the lifetime credit points of women in Germany. However, the effect is more modest than in the prior analysis. For example, the previous analysis showed that compared to their childless counterparts, western German women with three or more children had 18 fewer credit points. If we factor in the additional credit points these women received with the birth of each child, the difference shrinks to 11 credit points (see Model 1, western Germany). If we control for both length of employment and educational level (Model 2), we still find that the effect of having children was negative in western Germany. However, the coefficient for having three or more children is no longer significant, compared to the reference category of childless women. Thus, it appears that the old-age income of mothers with three or more children was boosted by the child benefits they received, and that their periods of non-employment and their lower income levels in times of employment were fully offset by these child benefits. However, the coefficient for one-child mothers in western Germany remains large and significant. These women suffered from a "motherhood penalty" on the labour market, but received little compensation for having raised a child.

For eastern Germany, the prior analysis showed that having children had a smaller impact on women's credit points. Only women with three or more children saw a significant reduction in their accumulated credit points. In this analysis, which factors in the credit points for children, we see that having children actually had a positive impact on the overall number of pension points women received. On average, mothers with three or more children had three more points than childless women because they received child benefits. Thus, the average childless woman appears to have collected a smaller number of pension points than the average

woman with children. It is important to note, however, that childlessness was very uncommon among the eastern German cohorts we consider here. We can therefore assume that many of the childless women of these cohorts had a health impairment, which may have also affected their employment career.

16.5.3   Couples' Pension Income

Table 16.4 addresses the question of whether within a given family, a husband's old-age income can compensate for the lower old-age income of his wife. It is important to note that this part of the analysis is descriptive, and is also restricted to women and men who were living as a couple at the time of the interview in 2014. As we can see in the table, in western Germany the average personal statutory insurance old-age pension of a childless woman was higher than that of the average mother (865 euros versus 684 euros). These differences are hardly surprising given the higher lifetime income levels found among childless women in the regression analysis. The relationship between the number of children a woman had and the size of her pension appears to be almost linear: i.e., the more children that are registered in a woman's pension insurance account, the lower her statutory pension benefits. This is because the effects of low earnings are stronger than the effects of the childrearing benefits provided in the pension insurance scheme.

While having children had a negative impact on women's statutory pension benefits, this relationship did not exist for men. The average western German man with children had higher pension insurance benefits than the average childless man, even though he did not receive additional credit points from social insurance funds. Generally, the size of a man's old-age pension varied little depending on the number of children he had. The personal old-age pension benefits of western German men ranged from 1295 to 1342 euros per month. The old-age income levels of couples with no children or with one or more children also did not vary much. In eastern Germany, the overall effect of having children on the pension benefits of women was considerably weaker than it was in western Germany.

Table 16.4 Couples statutory pension income by region, gender, and number of children

Children registered in women's accounts	Western Germany			Eastern Germany		
	Women	Men	Couples	Women	Men	Couples
No children	871 €	1117 €	1904 €	(1012 €)	(1089 €)	(1971 €)
1 Child	713 €	1306 €	2025 €	893 €	1068 €	1954 €
2 Children	592 €	1249 €	1889 €	926 €	1074 €	1977 €
3 or more children	550 €	1231 €	1812 €	894 €	1017 €	1981 €
Number of cases	815	815	815	306	306	306

Source: FDZ-RV, SHARE-RV-3-0-0, own calculations, N = 1,121 couples. Pension calculation in Euro on the basis of pensions insurance credits points, including additional credit points granted after the "Mütterrente" reform in 2014. Numbers in brackets: Number of cases below 50

16.6   Conclusion

For both men and women, the number of years they spent in employment and their earnings over the course of their career forms the basis of their personal retirement income. For mothers, the pension credits they accrue through employment are supplemented by credits for childrearing periods. In Germany, the pension benefits of mothers have often been considered insufficient because they are on average lower than those of childless women. In this chapter, we examined the reasons why mothers tend to have a relatively small pension, and how having children affects their employment career. We also explored the question of whether public transfers are sufficient to offset the disadvantaged position of women with children.

The results of the descriptive analysis show that on average in western Germany, childless women had higher pension benefits than women with children, largely because their income increased more over their life course, especially up to age 45. By contrast, western German mothers had relatively low labour market participation levels and far lower average lifetime earnings. While the average mother with one child worked for most of her life course, she received just 60 % of the national average income. In many cases, this low earnings level was not just difficult to live on while the mother was employed; it also resulted in relatively low pension benefits. Thus, our first conclusion is that motherhood, even when the mother has only one child, exacts a high price in western Germany. Because most women earn less than the national average, they tend to be economically dependent on either their partner or the welfare state, and this dependency continues into old age.

The results of our analysis of eastern German women indicate that their employment histories differed far less than those of western German women depending on the number of children they had. First, mothers in eastern Germany were more likely than mothers in western Germany to have been employed. The only group of eastern German women with below-average levels of employment during certain parts of their life course were women who had three or more children; but even they had an employment level of nearly 85 % at age 35. The rates of participation in socially insured employment were consistently high among eastern German women. Thus, their biographies differ sharply from those of their western German counterparts. Moreover, the income levels of eastern German women were far less dependent than those of western German women on the number of children they had. However, while most eastern German women saw their gross income rise continuously over their life course, only a small share of these women were earning the national average income by the end of their career.

In the regression analysis, we explored the determinants of lifetime credit points. Our findings indicate that in the calculation of old-age pension benefits, western German women faced a heavy motherhood penalty. Between the ages of 25 and 40,

when most workers are making career advancements, western German mothers with two or more children worked very little. It is therefore not surprising that mothers with two or more children had gross earnings that were one-third or one-quarter of the national average income. This gap is reduced if we consider the additional pension credit points women received for each childrearing period. On average, however, only women with three or more children were able to collect as many credit points as childless women. To a large degree, the old-age income of a mother with three or more children depended on the points she received from the statutory pension insurance fund for childrearing periods. Indeed, many of these women had little or no earned income across their life course. For these women, the points they received for childrearing periods represent not just a form of a compensation for their loss of income during the periods when their children were young, but an independent source of old-age income.

In eastern Germany, we find that mothers and childless women had similar numbers of life-time credit points. If we consider the additional credit points women collected for each childrearing period, we find that the average mother had more credit points than the average childless woman. Women with three or more children were especially likely to have accumulated more credit points than childless women. The policy measure that awards mothers the equivalent of the national average income for each childrearing period appears to have imposed a childlessness penalty on eastern German women. Thus, as a consequence of the latest pension insurance reform, motherhood has become a positive factor in old-age income in eastern Germany. However, this surprising finding should be put into context. Earnings in eastern Germany were and are much lower than in western Germany, and there is a gender gap in earnings across Germany. Thus, in eastern Germany, the earnings of women including of those with very few interruptions in their employment career rarely reach the national average.

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Chapter 17
Childlessness and Intergenerational Transfers in Later Life

Marco Albertini and Martin Kohli

17.1 Introduction

After reaching a low point among the 1935–1945 birth cohort, childlessness has increased significantly in recent decades in most European societies (Rowland 2007; OECD 2010; Tanturri et al. 2015). In previous research on childlessness, a recurring theme has been the consequences for an individual's risk of social isolation and insufficient informal support, particularly in later life (Kohli and Albertini 2009). From the perspective of public policy, childless elderly people are usually seen as a problem group. It has been shown that parent-child relations are central to the social embeddedness of elderly people. Thus, it is generally assumed that compared to adults who have children, childless adults are at higher risk of lacking the social and emotional support they will need when they become frail and dependent. Citing the negative effects of the absence of children on social inclusion, policy makers have expressed concerns that increasing rates of childlessness among the elderly population will lead to increasing demands for public social care and health services.

There are, however, two reasons why this assumption may be flawed. First, childless elderly people are not only on the receiving end of support; they also give to their families and to society at large by establishing strong linkages with next-of-kin relatives, investing in non-family networks, and participating in voluntary and

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charitable activities. Taking these transfers and activities into account, we have found that the differences in the support exchange behaviours between parents and childless adults are small (Albertini and Kohli 2009). Second, childless elderly people are not a homogenous group. Childlessness should be seen as a life course process across a series of decision and bifurcation points (Kreyenfeld and Konietzka 2007). The social consequences of being childless in later life depend on the specific paths into childlessness (Dykstra and Hagestad 2007; Keizer et al. 2010; Mynarska et al. 2015), and they may also depend on the specific family and kinship constellations of each childless individual.

The aim of the present chapter is to address these two points. We report the results of a new study that deals with the social consequences of childlessness in later life by looking at the support given *and* received, and that examines parenthood and childlessness not as two exclusive alternatives, but as a continuum across a range of intermediate statuses. Thus, we analyse not only the financial and social support childless elderly people receive, but also the support they provide to their kin and friends, and to the society in which they live; and we map the patterns of support onto the different types of parental and childlessness status.

17.2   Social Consequences of Childlessness: Patterns of Support

The social consequences of childlessness in old age are multiple and complex. They vary with the specific institutional setting, and, at the individual level, with the specific motivation for and the pathway to childlessness. *How* someone ends up with no children may be more important than not having a child *per se*. Choosing not to have children, being unable to find a partner, not being fecund, surviving the death of one's children, and being socially childless because of early divorce represent different paths to childlessness, and each of these paths has different connotations. Marital history and gender also mediate the consequences of childlessness for individuals, as do the usual cleavages of education, income, and health.

Raising children requires the investment of substantial financial and time resources by parents, and there is a general recognition that the costs associated with parenthood outweigh the benefits, at least while children are young (for a literature review on the costs of children see Folbre 2008). At the same time, research on well-being in old age has shown that adult children have a positive impact overall on parents' well-being (for a review of studies on parenthood and well-being over the last decade, see Umberson et al. 2010) and even on mortality: People tend to live longer if they have a surviving adult child. This effect of children on life expectancy is mediated by people's perceptions of the emotional and social support that is available to them in case of need. The effect also extends to parents who have survived, abandoned, or lost contact with their children (Weltoft et al. 2004). One explanation

for parents' higher life expectancy may be the healthier behaviour that parenthood encourages (Dykstra and Hagestad 2007).

According to an influential theory of the modern transition to low fertility, one of the main reasons why people had children in the past was because the children were expected to provide social and economic support when the parents became old and frail and were no longer able to be self-sufficient (Caldwell 1976); whereas today older people no longer depend on the support of their descendants in old age because they can now rely on pensions, health care, and social services provided by the welfare state (Nuget 1985). Some authors have argued that such old-age security motives for having children – ensuring material support and care in old age – still apply today, not just in low-welfare developing societies, but to some extent also in affluent societies with extensive welfare states (Kreager and Schröder-Butterfill 2004; Boldrin et al. 2005). While this controversy has yet to be resolved, it has been documented that elderly people in affluent societies continue to be embedded in dense intergenerational family networks of support, especially between parents and their children (Albertini et al. 2007; Kohli et al. 2010). Apart from providing direct support, children can serve as important intermediaries between their parents and health and social care services, and can thus help their parents gain access to the public resources available to the aged population (Choi 1994).

Given that adult children continue to represent an important source of support for elderly parents, we may assume that childless older people have a higher risk than parents of lacking social and moral support when they become frail and dependent. The evidence to date only partially confirms this expectation. Generally, the childless do not appear to have larger support deficits than parents (Albertini and Mencarini 2014). Childless people tend to compensate for the absence of exchanges with adult children by having frequent contact with neighbours and friends, and by developing strong ties with other family members, including with their parents, their siblings, and their nephews and nieces (Albertini and Kohli 2009; Schnettler and Woehler 2015). Moreover, despite the stigma that may still be attached to voluntary childlessness and the distress that may accompany involuntary childlessness (Dykstra and Hagestad 2007), recent empirical evidence does not support the assumption that childless older people have lower levels of economic, psychological, or social well-being than their counterparts who have children (Hank and Wagner 2013).

However, the evidence also indicates that when intensive support is needed, these compensatory strategies work only partially. When they become frail and limited in their ability to carry out the activities of daily living, childless people receive less support and are more likely to enter residential care, and do so at lower levels of dependency compared with people who have children (Wenger 2009). If the share of the childless population increases, we may expect that the share of those who lack family support – and thus the demand for public health and social care services – will also grow. Given the constraints on welfare state spending, it is possible that this additional demand will not be met, and that childless older people will have to look to the private market for alternative solutions. Even in an advanced welfare state such as Sweden, public home help services have not been able to fully

compensate for the lack of family support among the childless (Larsson and Silverstein 2004).

At the same time, however, the debate about the effects of increasing levels of childlessness on the future demand for social care has neglected the opposite flows of support: How the absence of children affects what older people give. Contrary to widespread perceptions, on balance elderly people make more transfers and provide more support than they receive (Kohli et al. 2010). We have shown that although childless elderly people are less likely than parents to provide financial transfers and social support to others, these transfers and supports are still substantial (Albertini and Kohli 2009). A study conducted in the United States found that compared with parents, childless older people are more likely to make financial transfers to other kin, friends, and neighbours; and that they transfer larger amounts (Hurd 2009). A considerable share of these transfers still go to descendants such as nephews and nieces, and can therefore be considered intergenerational giving. Moreover, because they have a greater need to construct social networks outside of their families, child-less people may be expected to give more of their time and money to charitable and community activities, and thus contribute more to society at large. Hurd (2009) shows that childless older people in the U.S. indeed donated larger amounts of money to charities than parents. To the extent that these organizations focus on young people, this type of giving is again intergenerational.

17.3 Parenthood as a Continuum

As we noted above, a large body of previous research on childless people has treated non-parents and parents as two homogeneous groups, distinguishing only between those who had and those who did not have living children at the time of the inter-view. There is, however, increasing evidence that there are different pathways to childlessness, and that the consequences of childlessness vary depending on these pathways and their endpoints. The same is true for parents. There is no straightfor-ward distinction between being or not being a parent: a person can become a parent as the result of having a natural child (with or without the help of assisted reproduc-tion technologies), but also by adopting a child or becoming a stepparent of a part-ner's child. Thus, people can have children through different routes and at different points in their life course. A person can also cease to be a parent. The most obvious case in which this occurs is when a parent has survived his/her children. But there are also parents who, due to life events such as a divorce or an intense family con-flict, have lost track of their children and no longer have contact with them. Other parents have children who live very far away (see Schnettler and Woehler 2015). These situations may have different effects on support networks and exchanges. Our empirical analysis is a first step towards taking these different situations into account. We distinguish between those who have natural children and stay in

contact with them; those who have had natural children but have survived them, have lost contact with them, or live far away from them; those who did not have natural children but have adopted, foster, or stepchildren; and, finally, those who never had any children, natural or otherwise. Thus, we conceptualise parenthood and childlessness not as two fully separate conditions, but as a continuum of parental statuses.

17.4   Analytic Approach, Data, and Variables

The data for this analysis is drawn from the first three regular waves of the Survey of Health, Ageing and Retirement in Europe (SHARE) collected in 2004, 2007, and 2011; and from the retrospective third wave (SHARELIFE) collected in 2009. We use data from the 11 European countries that participated in the first wave of SHARE: Austria, Belgium, Denmark, France, Germany, Greece, Italy, the Netherlands, Spain, Sweden, and Switzerland.

SHARE is a longitudinal, cross-national survey representative of the population aged 50 and older; the partners of the respondents (regardless of their age) are also included. SHARE contains detailed information on the financial transfers and social support (including formal and informal care) given and received during the 12 months prior to each interview. Using the combined information of SHARE and SHARELIFE, we were able to distinguish between different types of parenthood and childlessness. We created six subgroups of respondents: (a) those who never had natural children and had no adopted, foster, or stepchildren at the time of the interview (*fully childless*); (b) those who had natural children, but no living children at the time of the interview (*survived all children*); (c) those who never had natural children, but who at the time of the interview had adopted, foster, or stepchildren who were living less than 500 km away with whom they had contact at least once a month (*social parents*); (d) those who had natural children, and who at the time of the interview still had at least one child who was living less than 500 km away with whom they had contact at least once a month (*natural parents*); (e) those who had at least one living child at the time of the interview (natural, step, adopted, or foster), but who had lost contact with all of their children (i.e., less than one contact per month or no contact at all during the 12 months prior to the interview) (*parents no contact*); and (f) those who had at least one living child at the time of the interview (natural, step, adopted, or foster), but who were living more than 500 km away from their nearest child (*parents geographical distance*).

Our final sample consists of 50,358 person years of data. Table 17.1 provides the main descriptive statistics. Of the cases in the sample, 85 % are parents, 9 % are fully childless, and 4 % are social parents. A further 3 % can be considered "de facto childless": those who had survived all of their children, those who had children but had no contact with them, and those who were living at a considerable geographical distance from their nearest child each make up around 1 % of the sample.

Table 17.1 Sample characteristics, column per cent

	%
Female	40.9
Parental status	
Fully childless	9.1
Survived all children	0.9
Social parents	3.5
Natural parents	84.7
Parents who have lost contact with children	1.2
Parents who live at >500 km away from children	0.7
Marital status	
Married or in registered partnership	73.0
Separated/divorced	7.7
Widowed	14.0
Never married	5.4
Education	
None (ISCED 0)	4.7
Low (ISCED 1 & 2)	43.7
Intermediate (ISCED 3 & 4)	30.7
High (ISCED 5 & 6)	20.9
Has at least one limitation	58.8
Age (mean, SD)	65.5 (10.0)
Household equivalent income (ppp), (mean, SD)	23,311 (27,787)
Household per-capita wealth (ppp), (mean, SD)	146,041 (309,684)
Person-years	50,358

First, we report some descriptive statistics on the support networks of the six types of parents/non-parents. The second step consists of multivariate analyses of support exchange. The previous literature has consistently shown that elderly parents and non-parents differ systematically in their characteristics, such as economic resources, health, and partnership status. These characteristics are also important factors that influence personal support networks. Therefore, in order to analyse the relationship between parental status and support exchange, we need to control for a number of possible compositional effects. We introduce the following control variables into our multivariate analyses: age, marital status (i.e., married or in a registered partnership, separated or divorced, widowed, never married), educational level (measured according to the ISCED-97 scale), health status (measured as the presence of at least one limitation on the Global Activity Limitation Index [GALI], or on the Activities of Daily Living [ADL] or Instrumental Activities of Daily Living [IADL] indicators, or on the indicator of mobility and fine motor limitations), the natural logarithm of household equivalent income, household net per capita wealth, and the country of residence.

The multivariate analyses are carried out by using population-averaged logit and linear regression models for binomial and continuous variables, respectively, on the

unbalanced sample of respondents taking part in at least one of the first three regular waves of SHARE. We consider several dependent variables: the likelihood of giving/receiving social support (i.e., help with paperwork, household chores, personal care) to/from non-coresiding individuals; the natural logarithm of the amount of social support given/received expressed as the estimated number of hours per year (this variable is only available for the first two waves of the survey); the likelihood of giving/receiving financial support to/from others; the likelihood of participating in the activities of charitable or voluntary organizations in the 4 weeks prior to the interview, and the likelihood of providing this support on a weekly or daily basis (these variables are only available for the first two waves of the survey); and the likelihood of receiving professional or paid home help, or of staying overnight in a nursing home in the last 12 months (this variable is only available for the first two waves of the survey). Because the previous literature has shown that the lack of children has different effects for men and women, we estimate separate models for these two groups. Due to space limitations we report below only the regression coefficients for the different parental statuses, while omitting those for the controlling variables.[1]

17.5   Results

Even though they are largely overlooked by the literature, the contributions of non-natural parents to family, friends, and society at large are far from negligible (Table 17.2). Thus, for instance, while they were less likely than natural parents to have provided support to others, 17 % of the fully childless respondents in our sample gave financial support in the 12 months prior to the interview, and more than 30 % helped with household work or personal care – a share that is very close to that of natural parents. The shares of respondents who performed charitable or voluntary work were similar across the different parental status groups (with the exception of parents who had lost contact with their children), and the analysis of the amount of this work provided some surprising results: 70 % of the fully childless who participated in these activities contributed to their community on a daily or weekly basis; a share that is higher than the figure found among natural parents.

Moving the focus to the support received, Table 17.2 indicates that contrary to expectations, non-natural parents and parents who had lost contact with their children were more likely than natural parents to have been receiving social support. These groups, together with the group of parents who were living more than 500 km away from their children, were also more likely to have been receiving formal care support.

Clearly, all of these differences between the types of parenthood or childlessness could be the result of systematic compositional differences. For instance, natural and social parents might, on average, be younger and/or in better economic and

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[1] The full regression results are available from the authors upon request.

Table 17.2 Characteristics of the respondents' support network by parental status

Childlessness typology	Fully childless	Survived all children	Social parents	Natural parents	Parents no contact	Parents geo distance
Support given						
% Giving economic support	17.2	16.7	35.8	32.9	17.2	33.8
% Giving social support	31.4	26.5	32.8	33.5	23.5	31.1
Mean amount of social support given	484	326	468	563	1474	245
% Participating in charitable or voluntary work	14.7	13.6	14.8	15.0	9.7	12.4
% Participating in charitable or voluntary work on a daily or weekly basis	70.7	64.3	62.6	65.1	65.9	57.5
Support received						
% Receiving economic support	4.5	3.6	4.9	6.1	4.9	8.0
% Receiving social support	23.6	25.3	16.5	18.8	29.2	19.4
Mean amount of social support received	279	596	280	495	531	354
% Receiving professional or paid care support (home care or nursing home)	8.8	10.3	4.2	5.1	14.9	13.8

health conditions than the other respondents, and these differences could explain why they were less likely to be receiving formal and informal social support. For this reason, the next step of our analysis is to investigate the relationship between childlessness and support networks in a multivariate framework.[2]

17.5.1 What Childless People Give

One of the most overlooked topics in the study of childless elderly people is the extent to which they contribute to others (relatives and non-relatives) and to society at large. Most of the previous research on elderly non-parents has focused on the challenges they face later in life. As we have shown (Albertini and Kohli 2009), however, the amount of support provided by non-parents to others is far from

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[2] Given the small size of some of our groups, the statistical power of the data set is low. We will therefore show and comment on coefficients that are significant at the 5 or 10 % level.
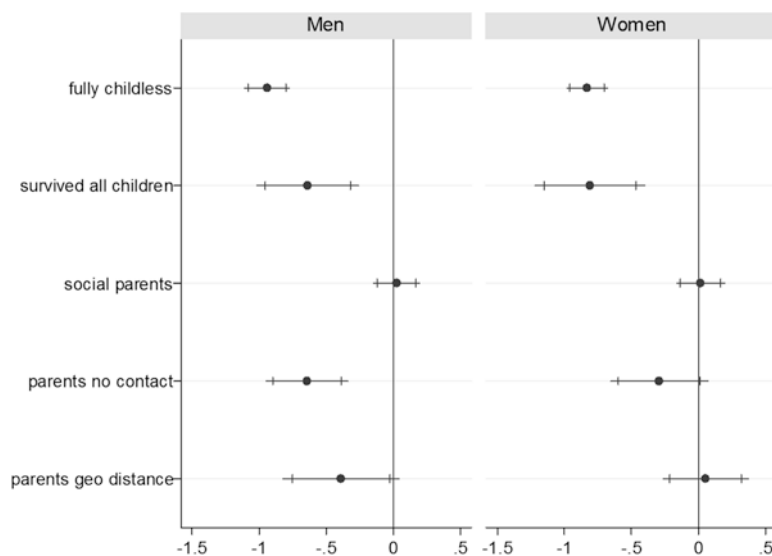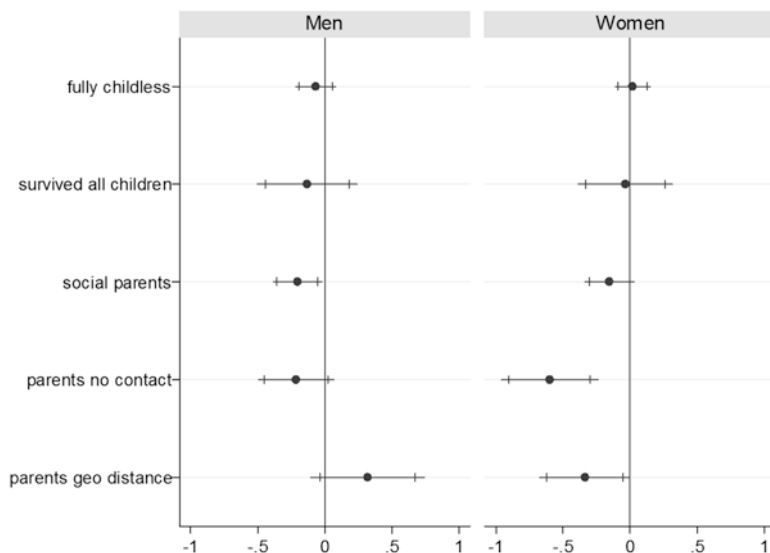
Fig. 17.1 Effects of parental status (reference: natural parents) on the likelihood of making a financial transfer to others, by respondent's gender. Beta coefficients and 90 and 95 % confidence intervals from logit models (Note: Further variables in the models are: marital status, educational level, health status, income, wealth, country of residence)

negligible. In the present section, we want to address this issue by examining the contributions of elderly people based on their parental status.

The multivariate analyses on the financial support provided to others confirm that, in general, the fully childless were giving less than natural parents (Fig. 17.1). Among fathers, only those who had step or adopted children were providing financial help to others to the same extent as natural fathers; those who had lost contact with their children or lived more than 500 km away were significantly less likely to have been providing financial support. Among women, only those who were fully childless or who had survived their children were less likely to have been doing so. In other words, among parents who lived far away from their children or had lost contact with them, the transfer behaviour of the mothers was similar to that of natural mothers, whereas the transfer behaviour of the fathers was in-between that of fully childless men and natural fathers.

With regard to social support provided to others, the differences between parents and non-parents were either very small or absent (Fig. 17.2). There is no clear polarisation of transfer behaviour between the fully childless and natural parents, and there is no clear gradient among the different parental statuses. Only two groups provided significantly lower levels of social support than natural parents: namely, social fathers and mothers who had lost contact with their children. Marginally significant negative effects are also found for social mothers and mothers who were living more than 500 km away from their children. The weakness of the relationship between parental statuses and the provision of social support is further confirmed by
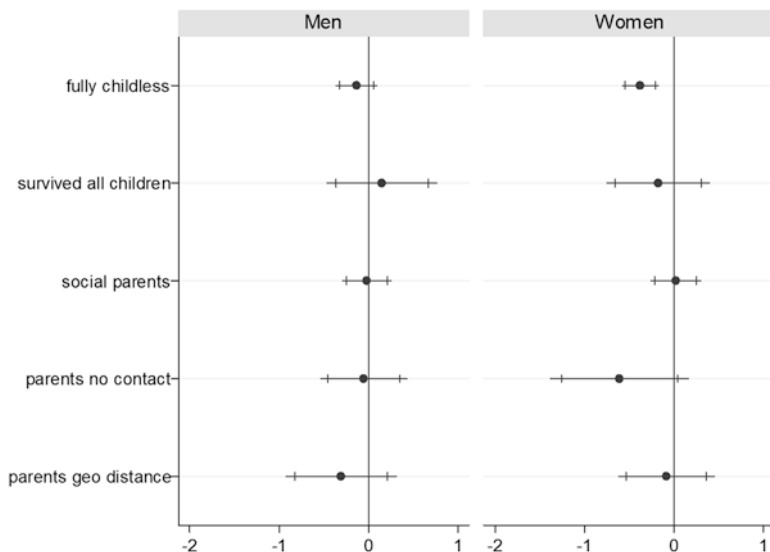
Fig. 17.2 Effects of parental status (reference: natural parents) on the likelihood of providing social support to others, by respondent's gender. Beta coefficients and 90 and 95 % confidence intervals from logit models (Note: For further variables in the models, see Fig. 17.1)

the finding that in terms of the hours of social support provided, just one subgroup is significantly different from natural parents: Fully childless women transferred less time to others than natural mothers (Fig. 17.3).

Providing social or financial support to family and friends is not the only way in which individuals can contribute to society. As we have argued previously (Kohli and Albertini 2009), childless elderly people may be the pioneers of a new form of post-familial civic engagement in which they devote their resources to public instead of private concerns by donating to foundations, participating in the activities of charitable organizations, or doing voluntary work. However, the results of the present analysis provide only weak support for this hypothesis. SHARE has no information on charitable donations, so the analysis is restricted to participation in the activities of charitable or voluntary organizations. As is shown in Fig. 17.4, the behaviour of the different subgroups is similar. Only mothers who survived their children seem to be slightly more likely to have participated in the activities of charitable or voluntary organizations. Fathers who had lost contact with their children tended to participate less than the other fathers. When we look at the intensity of support provided to others through this type of participation (Fig. 17.5), we find that – partially in line with our hypothesis and with previous findings – there is a marginally significant (10 % level) positive relationship between being a fully childless man and engaging in the activities of voluntary organizations on a daily or weekly basis. In other words, fully childless men may be the only group who compensated for the absence of children by involving themselves more intensively than natural parents in these forms of post-familial civic engagement.
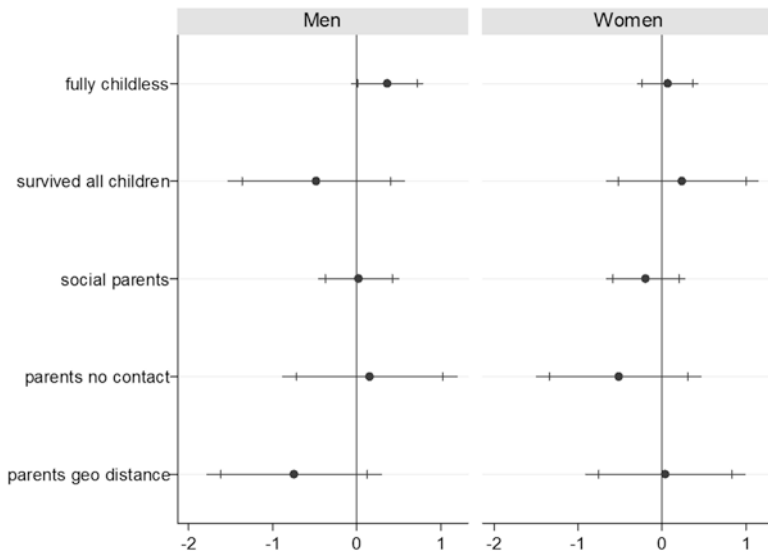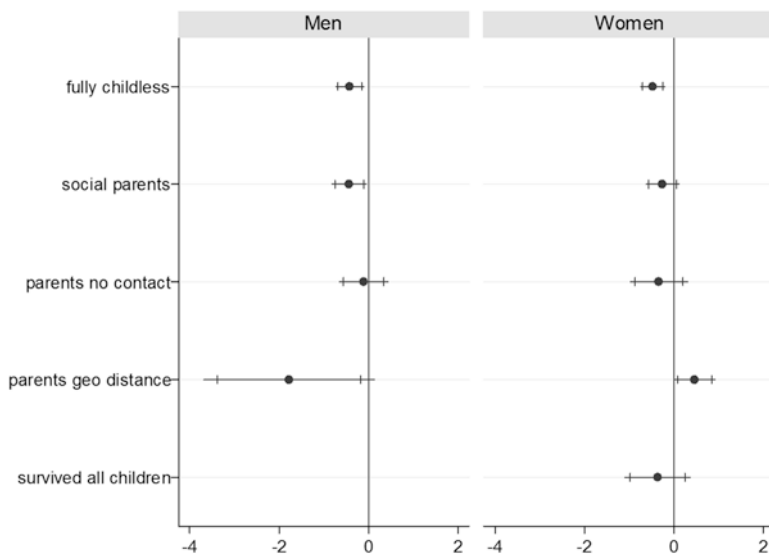
Fig. 17.3 Effects of parental status (reference: natural parents) on the amount of social support provided to others (as the natural log of hours per year), conditional on having provided at least 1 h of support, by respondent's gender. Beta coefficients and 90 % and 95 % confidence intervals from OLS regressions (Note: For further variables in the models, see Fig. 17.1)
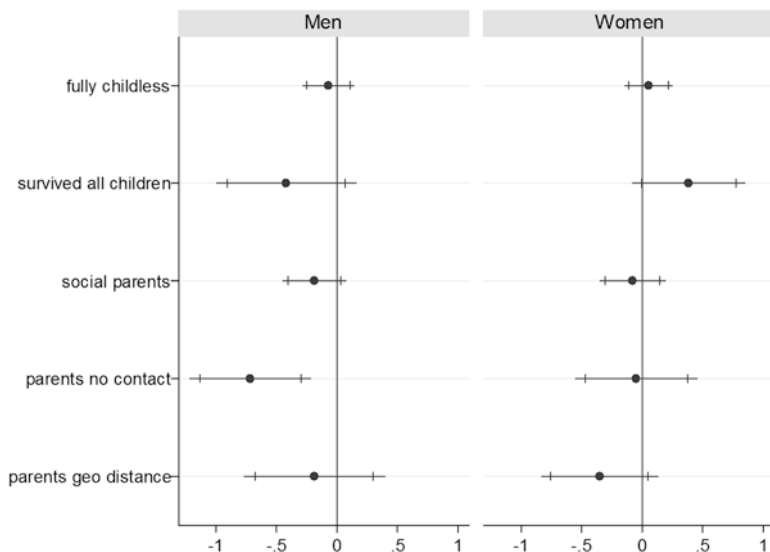
Fig. 17.4 Effects of parental status (reference: natural parents) on the likelihood of participating in the activities of charitable or voluntary organizations in the 4 weeks prior to the interview, by respondent's gender. Beta coefficients and 90 % and 95 % confidence intervals from logit models (Note: For further variables in the models, see Fig. 17.1)

Fig. 17.5 Effects of parental status (reference: natural parents) on the likelihood of participating in the activities of charitable or voluntary organizations at least on a daily or weekly basis (vs. less often) in the 4 weeks prior to the interview, by respondent's gender. Beta coefficients and 90 % and 95 % confidence intervals (Note: For further variables in the models, see Fig. 17.1)

In sum, these results show that the likelihood of financial support to others is clearly associated with having or not having children, and that for fathers whether they had regular contact with their children is also a factor. Generally, the fully childless, those who had survived their children, and those who had lost contact with them are less likely to have been making financial transfers than parents. It seems that the two latter groups of fathers are located between the two extremes of the financial transfer behaviour of natural fathers and fully childless men. In contrast, social support is less clearly connected with the presence of children, except among fully childless women and mothers who had lost contact with their children. The results for participation in charitable or voluntary work are similar: while we find little evidence that the childless were playing a special role in these forms of social engagement beyond their immediate circle of family and friends, our findings do contradict the common assumption that childless people are ego-centred and isolated members of contemporary societies.

17.5.2   *What Childless People Receive*

As was mentioned above, most previous research on the social networks of the childless has focused on what they lack in terms of informal social support. Here we complement this approach by including in our analysis both the formal and the
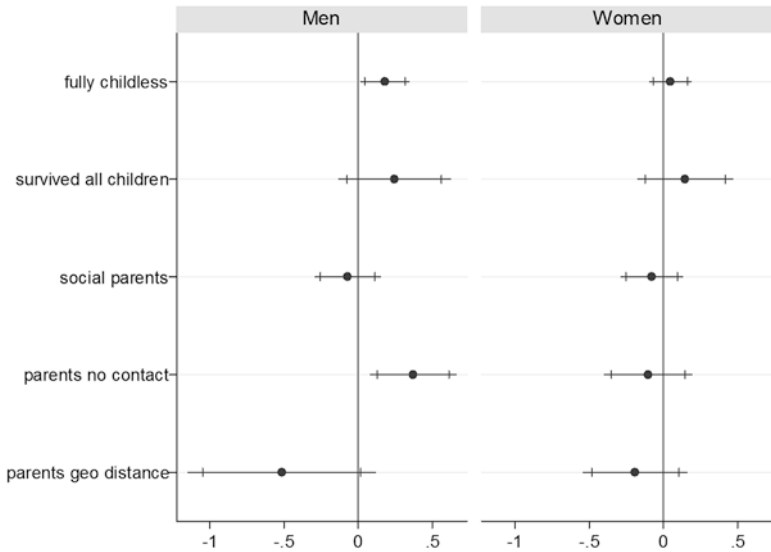
Fig. 17.6 Effects of parental status (reference: natural parents) on the likelihood of receiving a financial transfer from others, by respondent's gender. Beta coefficients and 90 % and 95 % confidence intervals from logit models (Note: For further variables in the models, see Fig. 17.1)

informal types of support the childless receive, and by investigating how the levels and the types of support they receive differ across the range of parental statuses.

Figure 17.6 shows that our results for the financial support given – namely, that the absence of children is negatively associated with it – also applies to some extent to the flow of resources in the other direction. We find a significant negative relationship between having received financial support and having been fully childless for both women and men, as well as for social fathers and for fathers who were living more than 500 km away from their children. This latter finding mirrors the finding that these fathers are also less likely to have been providing economic support to others. An opposite pattern is found for mothers: i.e., mothers who were living far away from their children are more likely to have been receiving financial support.

Regarding the likelihood of having received informal social support (Fig. 17.7) we find that the patterns differ between men and women. While both fully childless men and fathers who had lost contact with their children are more likely than natural parents to have been receiving social support, among women none of the subgroups' coefficients is significant. In other words, motherhood status does not affect the likelihood of having received help from outside of the household. The picture becomes more complex when we also take into consideration the intensity of these time transfers (Fig. 17.8). For both fully childless men and fathers with no contact with their children we observe a significant negative coefficient; thus, while they are

Fig. 17.7 Effects of parental status (reference: natural parents) on the likelihood of receiving social support from others, by respondent's gender. Beta coefficients and 90 % and 95 % confidence intervals from logit models (Note: For further variables in the models, see Fig. 17.1)
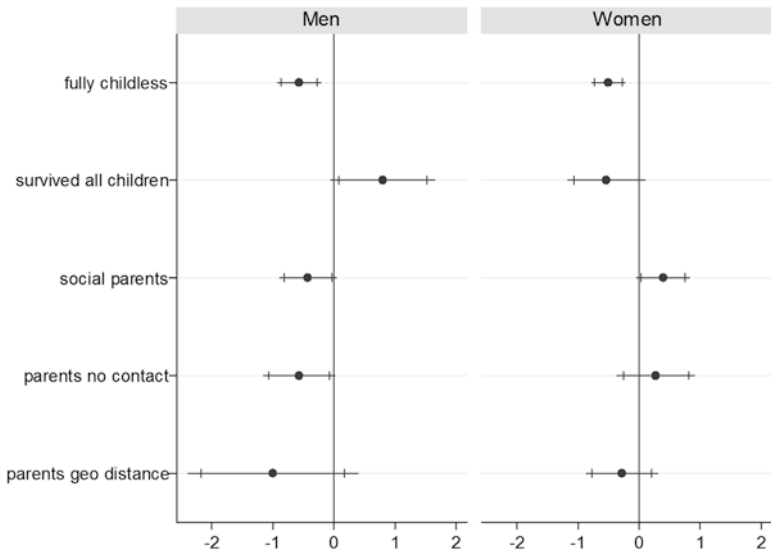
Fig. 17.8 Effects of parental status (reference: natural parents) on the amount of social support received from others (as the natural log of hours per year) conditional on having received at least 1 h of support, by respondent's gender. Regression coefficients and 90 % and 95 % confidence intervals (Note: For further variables in the models, see Fig. 17.1)
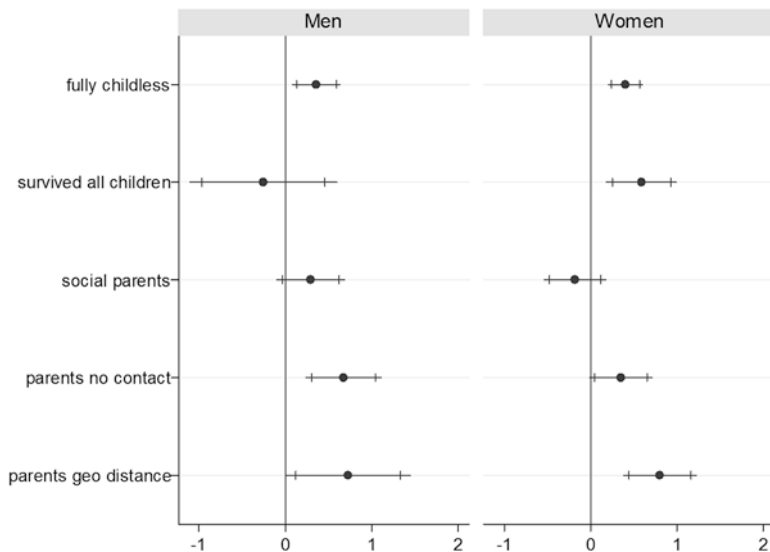
Fig. 17.9 Effects of parental status (reference: natural parents) on the likelihood of receiving professional or paid home care or staying overnight in a nursing home, by respondent's gender. Beta coefficients and 90 % and 95 % confidence intervals (Note: For further variables in the models, see Fig. 17.1)

more likely than natural parents to have received help, among those who did receive it the number of hours of help was significantly lower. A marginally significant negative association is also observed for mothers who survived their children and for social fathers, whereas a positive association is found for fathers who survived their children and for social mothers. In sum, when we look at the likelihood of having received support we can see that none of the different groups of parents and non-parents is disadvantaged relative to natural parents, with some even being more likely to have received help. On the other hand, some weakness in the support networks of the non-parents can be seen when we shift the focus to the intensity of the support received: fully childless men and women received a significantly lower amount of social support than natural parents.

It is clear from our results that some types of elderly non-parents are more likely than natural parents to lack informal social support when they become old and frail. This finding resonates with results from previous research. The question then arises whether someone else provides the non-parents with the help they need when they get old. The answer is given in Fig. 17.9. The fully childless men and women are more likely than natural parents to have spent some time in an old-age home or to have received some professional or formal care support (acquired on the market or received from public institutions). This is also the case for women who have survived their children, parents who do not have contact with their children any more and parents who live far away from their children[1]. For long-term care policies, it is thus not only the increasing number of fully

childless people that will challenge the supply of formal care services, but also the increasing number of parents who do not live close to their children or have lost contact with them.

[1] The latter finding confirms the results of a recent study of the elderly Dutch population by van der Pers et al. (2015) which showed that having children living close by was negatively associated with the likelihood of moving to a care institution.

17.6   Conclusions

Childlessness in later life is a topic that has been attracting increased levels of attention from researchers and policy makers. It is also still the subject of widely held misconceptions. Two of the most misleading ones are that childless elderly people are only or mainly at the receiving end of intergenerational exchanges, and that they are all of one kind. Contrary to these assumptions, we find that elderly childless people give as well as receive support, and that parental status is a continuum, ranging from full childlessness across several intermediary conditions to full current natural parenthood.

In a study of the elderly population across 11 European countries, we have shown that non-parents make significant contributions to their social networks of family and friends through financial and time transfers, and that their contributions of time in particular differ little from those of natural parents. The same applies to participation in charitable and voluntary work. Different parental statuses are significantly associated with the various dimensions of giving and receiving. The patterns across these dimensions and statuses need to be examined in detail, but two general results stand out. The first is that social parents (i.e., people who have no natural children but who have adopted, foster, or stepchildren) are more similar to natural parents than to non-parents. Family recomposition thus does not seem to inhibit intergenerational exchanges as long as social parents have sufficient contact with their social children. The second result is that parents who have lost contact with their children – natural or otherwise – are an overlooked group in terms of their heightened demand for formal care in later life. As this group may be increasing in size, it represents a special challenge for policy.

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