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PATHWAYS INTO CHILDLESSNESS: EVIDENCE OF GENDERED LIFE COURSE DYNAMICS

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Summary. Using data from the first wave of the Netherlands Kinship Panel Study (NKPS) for 2867 women and 2195 men aged 40 to 79, this study examines to what extent educational, employment and marital pathways shape the likelihood of remaining childless, and whether these pathways are gendered. The findings indicate that women and men have distinctive pathways into childlessness. Educational attainment increases the likelihood of remaining childless among women only. A stable career increases the likelihood of remaining childless among women, but it increases the likelihood of entering fatherhood. Years without a partner is positively associated with childlessness among both women and men. Not having had a partnership and having had multiple partnerships are strong determinants of childlessness, especially among men.

Introduction

The last decades have witnessed the emergence in life course theorizing of the do-it-yourself biography, which assumes that people have ample possibilities to shape the direction of their lives (Giddens, 1991; Beck & Beck-Gernsheim, 2002). This agentic point of view on the life course is reflected in the emphasis that is placed on *choice* in going through demographic transitions, such as the entry into parenthood. The emphasis in the fertility research literature on voluntary versus involuntary childlessness is exemplary for the agentic perspective on the life course (Rovi, 1994; De Meester *et al*., 2005; Abma & Martinez, 2006).

Researchers have pointed to the difficulties of framing childlessness in terms of choice (Morgan, 1991; Hobcraft & Kiernan, 1995; Toulemon, 1996; Letherby, 2002; DeOllos & Kapinus, 2002). Issues of choice are obviously irrelevant to those who are biologically unable to conceive. Only a small group of individuals expresses at an early age that they do not intend to have children, the so-called 'early deciders' (Veevers, 1980; Houseknecht, 1987; Kemkes-Grottenthaler, 2003). A larger group ends up childless without having explicitly pondered the decision whether or not to

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become a parent (Toulemon, 1996). For that reason it is more appropriate to speak of 'remaining childless' than choosing childlessness (DeOllos & Kapinus, 2002; Letherby, 2002). The perspective adopted here is that remaining childless is not the outcome of a single decision not to have children, but rather the outcome of never having made the decision to actually have children. Several authors have suggested that rather than explicitly choosing childlessness, people make choices about delaying marriage and focusing on educational and occupational careers, and then end up childless (Morgan, 1982, 1991; Gerson, 1985; Toulemon, 1996; DeOllos & Kapinus, 2002; Kemkes-Grottenthaler, 2003; De Meester *et al*., 2005). In line with the previous considerations, a focus on life pathways should be helpful to understand why people remain childless.

Two life course principles inform thinking about remaining childless. The first is that of 'cumulative contingencies': previous experiences shape ensuing behaviour (O'Rand, 1996; Heinz, 1997; Dannefer, 2003). The second is that of 'interdependencies' between pathways: behaviour in one pathway shapes behaviour in another (Willekens, 1991; Elder, 1994). Both principles imply that successive steps in life increase (or decrease) the likelihood of remaining childless.

Being male or female shapes the nature, organization and patterning of roles, resources, relationships and identities throughout life (Moen, 1996). Moreover, gender sets the context of lives, reflecting not only physiological differences, but also unique structural circumstances. For example, in society, the gender-based division of tasks leads to greater restrictions on combining work and childcare responsibilities for women than men (Wetzels, 2001; Hakim, 2003; Kemkes-Grottenthaler, 2003; Schippers, 2003). Previous studies have rarely considered the gendered life course processes though which people remain childless: women are the primary focus in childlessness research, and men have been largely neglected (Greene & Biddlecom, 2000; Forste, 2002). It is therefore important to examine separately the pathways of women and men to understand the recruitment into childlessness.

In summary, this work makes two contributions to existing studies. First, it aims to explain childlessness by focusing on behavioural pathways leading to childlessness rather than considering contemporary correlates of childlessness or preferences for a childless lifestyle. Second, both women and men are included in the research design, which enables gendered pathways into childlessness to be examined. The analyses are based on data from the Netherlands Kinship Panel Study (NKPS), a nationally representative survey conducted in 2002–2004, from which 5062 persons (2867 women and 2195 men) between the ages of 40 and 79 were selected.

Pathways into childlessness

As much as possible, existing theoretical arguments are drawn upon to explain why people with different educational, occupational and marital backgrounds have different likelihoods of remaining childless. Nevertheless, previous explanations are also extended. By focusing on behavioural pathways, previous studies are transcended that focus solely on current behaviour in order to explain childlessness (Heaton *et al*., 1999; Schoen *et al*., 1999; Kemkes-Grottenthaler, 2003; De Meester *et al*., 2005). Since pathways pertain to experiences across the life course, using only current statuses may

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obscure important past events (Kiernan, 2004). For example, knowing whether a woman has a partner at any one point in time may be less useful for understanding childlessness than knowing the duration and patterning of her marital history throughout adulthood. Thus, this study's pathway perspective looks at how people came to be recruited into the childless state (Hagestad, 2007).

Educational pathway. For women, the positive relationship between education and childlessness is well documented both in The Netherlands (Liefbroer & Dykstra, 2000; De Meester *et al*., 2005) and in other Western countries (Feldman, 1981; Bloom & Trussell, 1984; McAllister & Clarke, 1998; Heaton *et al*., 1999; Kemkes-Grottenthaler, 2003; González & Jurado-Guerrero, 2006). For men, however, results are less straightforward. Some researchers find positive (Ritchey & Stokes, 1974), others negative (Feldman, 1981; Heaton *et al*., 1999), and one Dutch study reports no impact of education on childlessness for men (De Meester *et al*., 2005).

The literature presents opposing views on the way in which education shapes the likelihood of remaining childless. One view is that the better educated are less likely to make the transition to parenthood than those with lower levels of education. Given that being enrolled in education is perceived to be incompatible with family formation (Rindfuss *et al*., 1988; Blossfeld & Huinink, 1991; Sobotka, 2004), people with higher levels of education are more likely to postpone and eventually cancel the idea of having children. Moreover, through education, people are exposed to value orientations representing a wide range of lifestyles. It has been argued that a high level of education is related to roles and value systems more strongly directed towards the occupational career than towards parenting, and particularly so among women (De Jong & Sell, 1977; Heaton *et al*., 1999). The opposing view is that higher levels of education increase the likelihood of making the transition to parenthood (Heaton *et al*., 1999). For both women and men, higher levels of education and the associated career prospects make it easier to support a family.

The literature suggests that educational attainment serves as a restriction on women's entry into parenthood, given a stronger orientation towards a working career and the difficulties of combining job and parenting responsibilities. Therefore, it is hypothesized that educational attainment increases the likelihood that women remain childless. Higher levels of education might both encourage and discourage men from having children. A hypothesis is therefore not formulated, and the link between men's education and the likelihood of remaining childless will be explored.

Employment pathway. Research has consistently shown that working women (Rhee, 1973; Ritchey & Stokes, 1974; De Jong & Sell, 1977; Veevers, 1979; Houseknecht, 1987; Heaton *et al*., 1999) and women in high-status jobs (De Jong & Sell, 1977; Bloom & Pebley, 1982; Callan, 1986; Friedman *et al*., 1994) are more likely to remain childless than their female counterparts. Associations between employment and childlessness are less well documented for men. Common to studies in this area is that only current job characteristics are used as indicators of childbearing behaviour. This study focuses on (dis)continuity in the occupational career to capture (in)security of job prospects.

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As was the case for educational attainment, opposing predictions can be derived regarding the impact of continuity of employment on the likelihood of remaining childless. Discontinuity implies having experienced a period of unemployment. On the one hand, continuity of employment might decrease the likelihood of remaining childless. Those who have been employed continuously are more likely to have had a stable flow of income and are therefore better able to support a family (Heaton *et al*., 1999). On the other hand, employment continuity might be associated with value orientations that increase the likelihood of remaining childless. The greater the continuity and the more constant the flow of income, the more likely it is that a lifestyle is developed that is perceived to be incompatible with having children (De Jong & Sell, 1977). People may be so attached to this lifestyle that they are not willing to give it up to start a family (DeOllos & Kapinus, 2002).

The reasoning underlying the employment pathway hypotheses is similar to that for educational attainment. The combination of having children and being employed is more difficult for women than men, given the gender-based division of tasks in society. Therefore, it is expected that women with continuity of employment are more likely to remain childless than women who have experienced career breaks. Financial considerations suggest a negative impact of discontinuity of employment on men's likelihood of remaining childless, whereas lifestyle considerations suggest the opposite. A hypothesis is therefore not formulated, and the link between discontinuity in men's employment careers and childlessness will be explored.

Marital pathway. Numerous studies have shown that childlessness rates are higher among the unmarried than among the married (Schoen *et al.*, 1997, 1999; Barber, 2001; Kemkes-Grottenthaler, 2003; Parr, 2005). Common to studies in this area is that only current characteristics are taken into account. This study focuses on marital pathway characteristics to capture the full dynamics of people's marital history.

During the last decade, the link between marriage and childbearing has increasingly weakened. Non-marital childbearing has risen drastically, both as a consequence of the greater number of years young adults spend unmarried, and of increased birth rates among unmarried women (Smith *et al*., 1996; Smock, 2000; US Census Bureau, 2004; Kiernan, 2004). The rise in the rates of unmarried childbearing suggests that people perceive the absence of a partner as less of an obstacle to childbearing now than in the past. However, most unmarried childbearing still occurs within a union (Bumpass & Lu, 1999; Smock, 2000; Kiernan, 2004). Moreover, the practical considerations of caring for children are most easily resolved within a partnership. For these reasons, it is hypothesized that people who have never had a partner are more likely to remain childless compared with people who ever had a partner.

Prior research on the fertility of married and cohabiting couples indicates that childbearing is still more common in legal marriages than in cohabiting unions (Manning, 1995; Smock, 2000). Some have argued that because unmarried cohabitation is less institutionalized than marriage, there are no strong normative expectations that cohabiters should become parents (Beets *et al*., 1999). Others have posed that cohabitation is selective of individuals who are less committed to marriage and parenthood (Rindfuss & VandenHeuvel, 1990; Axinn & Thornton, 1992; Smock, 2000). Fertility desires may be the most crucial difference between cohabiters and

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married couples (Bachrach, 1987). For the above reasons, it is hypothesized that people who have ever married are less likely to remain childless compared with people who have ever cohabited, but never married.

Besides increases in the occurrence of non-marital childbearing, the timing of childbearing has changed over the past decades, with people entering their first relationship at later ages (Liefbroer, 1999; Sardon & Robertson, 2002; US Census Bureau, 2003; CBS, 2005, 2006). The literature presents opposing views on the way in which delayed entry into first union shapes the likelihood of remaining childless. One view is that it indicates the postponement and possible renunciation of having children. People who enter their first relationship at a later age might be a selective group of individuals who do not want to commit themselves to a relationship and children. Moreover, if people marry or find a partner too late, they may miss critical opportunity deadlines, both due to biological constraints and a shrinking pool of potential partners (Hagestad, 2007). Biology presents women with non-negotiable deadlines, through permanent loss of fecundity (Frank *et al*., 1994; Te Velde & Pearson, 2002). Given that men do not have biological restrictions and more often find partners who are younger than they are, they are able to 'catch up' the years in which they did not have a partner. The opposing view is that an older age at the start of one's first relationship decreases the likelihood of remaining childless, as people who want children, do not want to further delay having them. This is particularly so for women, whose biological clocks are ticking more loudly with increasing age than men's.

In summary, a late entry into the first relationship might both encourage and discourage individuals from having children. A hypothesis is therefore not formulated, and the linkage between a late entry into the first relationship and the likelihood of remaining childless will be explored. Irrespective of the direction, findings suggest that the linkage between a late entry into the first relationship and childlessness is stronger among women than among men.

Higher divorce rates (Latten & Kreijen, 2001; Sardon & Robertson, 2002; US Census Bureau, 2003; CBS, 2006) also result in a greater number of years spent without a partner. Women, in particular, may miss deadlines for having children. Moreover, those who spend many years without a partner may develop a lifestyle that is perceived to be incompatible with starting a family. For these reasons, it is hypothesized that more years without a partner increase the likelihood of remaining childless, and particularly so among women.

Finally, people are re-marrying and re-partnering more often than in the decennia before, leading to complex marital histories (Liefbroer, 1999; Liefbroer & Dykstra, 2000; Latten & Kreijen, 2001; Sardon & Robertson, 2002; US Census Bureau, 2003; Dykstra, 2004). Studies at the micro-level on linkages between discontinuous marital careers and childlessness are rare.

The literature presents opposing views on the way in which having multiple relationships shapes the likelihood of remaining childless. One view is that individuals with a discontinuous marital career are less likely to make the transition to parenthood, because they are a selective group who do not want to commit themselves to a relationship and children. The opposing view is that a discontinuous marital career creates new opportunities for having children. When the first relationship did not yield a child, starting a new relationship may generate new

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Table 1. Expected effects of variations on the likelihood of being childless, by gender

	Women	Men
Educational attainment	+	?
Uninterrupted occupational career	+	?
Ever married	−	−
Age at start first union	?	?
Years without partner in fertile years	++	+
No unions in fertile years	+	+
Multiple unions in fertile years	?	?

opportunities to have a child (Latten & Kreijen, 2001). Thus, commitment considerations suggest a positive impact of a discontinuous marital career on the likelihood of remaining childless, whereas opportunity considerations suggest the opposite. A hypothesis is therefore not formulated, and the linkage between discontinuity in people's marital career and childlessness will be explored.

Given the aforementioned demographic changes, current marital status may have become less helpful for explaining childlessness. It is therefore expected that this study's marital pathway characteristics help to explain childlessness beyond the explanation current partner status yields. Table 1 provides a summary of the hypotheses.

Methods

Data source

Data from the public release file of the Netherlands Kinship Panel Study (NKPS) have been used. The NKPS is a large-scale panel survey on family ties, conducted between 2002 and 2004 among a representative sample of adults aged 18 to 79 residing in private households in The Netherlands (Dykstra *et al*., 2005). The data were collected by means of computer-assisted personal interviews supplemented with self-completion questionnaires. The overall response rate was 45%, which is lower than in comparable surveys in the United States, but similar to comparable large-scale family surveys in The Netherlands (De Leeuw & De Heer, 2001; Dykstra *et al*., 2005). Data were used from main respondents only, not their partners. The men and women in the study form independent samples.

For the analysis of remaining childless, the sample was restricted to women (n=2884) and men (n=2233) aged 40 up to 79 (birth cohorts 1923–1963). It was chosen to omit individuals under the age of 40 at the time of the interview because their childlessness status is probably not permanent. Dutch, American and Australian research has shown that the likelihood of having a first child at age 40 and over is very small (Landry & Darroch Forrest, 1995; Garssen *et al*., 2001; Parr, 2005). Analyses using NKPS data confirm this finding: the majority of fathers (97·5 %) and mothers (99·5 %) had their first child before the age of 40.

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Measures

Remaining childless. Having no biological children at the age of 40 is the dependent variable. Those who had their first child beyond the age of 40 were excluded from the analyses (17 women and 38 men), leading to the final sample of 2867 women and 2195 men. Those who had outlived all of their children ($n=11$) were placed in the category of parents. In the final sample, 918 individuals were childless (18·1%): 436 men (19·9%) and 482 women (16·8%).

Educational attainment. Information about education of the respondent was delineated via the question: 'What is the highest level of education that you pursued?' Answers ranged from 1=*did not complete elementary school* to 10=*postgraduate*. Preliminary analyses (not shown) using dummy variables for each educational level showed a linear association between women's educational attainment and childlessness, but no clear pattern for men. Level of education was included as a linear variable in the model.

Employment pathway. The survey had only limited information on respondents' employment pathways. Information was collected on employment status: never, currently, or previously gainfully employed. In addition, information was collected on the number and duration of periods of unemployment, but not their timing. The survey also had questions on the age at entry into the labour market, and for those who were not working at the time of the interview there was information on the age at which the labour force had been left. On the basis of this information, a dichotomous variable for the employment pathway was constructed: *continuity of employment*, that is, having no or only one-month spell of unemployment. Note that information is lacking on whether the unemployment periods occurred specifically in childbearing years. Note also that interruptions other than unemployment, such as leaving the labour market because of occupational disability or full-time homemaking, could not be identified. Finally, note that it was not possible to establish whether those who left the labour market before the age of 40 left the labour market permanently.

Marital pathway. The survey had detailed information on current marital status (never married, married, divorced, widowed), the age at which respondents first started living with their current partner, and the age at which previous marriages and unwed cohabitations started and ended.

Given the expectation that marriage has a stronger impact on the likelihood of remaining childless than unwed cohabitation, an entry into unwed cohabitation should be differentiated from an entry into a marriage. Unfortunately, however, differentiating unwed cohabitation from marriage for each partnership in the marital career led to too many careers and to too few respondents per career. It was decided to only compare those who had ever cohabited but never married with those who had ever married. In the following, *unions* (partnerships in which the respondents lived together married or unmarried), and the marital career as the history of all these unions, are spoken of. The age span of 20–40 is used to indicate the fertile years. *Ever married* is a dichotomous variable indicating whether a person has ever been married

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between the ages of 20 and 40. *Years without a partner* is a continuous variable indicating the number of years without a partner between the ages of 20 and 40. In preliminary analyses (results not shown) the linearity of this variable was checked and confirmed. *Age at first union* is a continuous variable measured in years. People who had never cohabited or started their first union after the age of 40 were assigned a score of 40. *Number of unions* is a set of three dummy variables. Around 80% of the respondents had one union during their fertile years; 10% had no union and about 10% had more than one union. For this reason, three categories were made: zero, one, and multiple unions between the ages of 20 and 40.

Birth year. Birth year was included as a control variable because childlessness rates showed a steady increase after the Second World War (Rowland, 2007). Among Dutch women in the 1921–1930 birth cohort 17% are childless, compared with 11% in the 1931–1940 birth cohort, 15% in the 1951–1960 cohort, and an expected number of 20% in the 1961–1970 birth cohort (Liefbroer & Dykstra, 2000). The antecedents of childlessness have changed over time (Rowland, 2007). In the pre-1950 birth cohorts not marrying was the reason why many remained childless, whereas in more recent cohorts increasing proportions of women remained childless even though they were in stable partnerships.

Results

Preliminary analyses

Means and standard deviations for the independent and control variables are shown in Table 2, separately for women and men. To find out whether the impact of having ever married is greater than that of having ever cohabited but never married, analyses on a sub-sample of ever-partnered individuals were performed. Confirming expectations, the odds of remaining childless are significantly higher among individuals who have only ever cohabited than among ever-married individuals: 7·5 times and 11·6 times higher odds for women and men respectively. Whether the inclusion of marital history had explanatory power beyond current marital status was also checked. With the inclusion of years without a partner and number of partnerships, the impact of current marital status weakened, confirming the expectation that a focus on marital history helps to explain childlessness beyond the explanation current partner status yields. Given that current marital status is significantly correlated with the marital career characteristics, current marital status was not included as a variable in the primary analyses.

Primary analyses

Next, binary logistic regressions were conducted to examine the educational, occupational and marital pathways to remaining childless for women and men separately. Column 5 in Table 3 indicates whether the difference between women and men is statistically significant. For ease of interpretation, the results are discussed in terms of odds ratios. The results of the regression analyses are summarized below.

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Table 2. Mean and standard deviations for predictors in the analysis, by gender

Variable	Mean (SD)		Significance[a]
	Women	Men	
Educational attainment[b]	5·2 (2·4)	6·0 (2·5)	*
Uninterrupted occupational career (1=yes)	0·4 (0·5)	0·6 (0·5)	*
Ever married[c] (1=yes)	0·9 (0·3)	0·9 (0·2)	
Years without a union	4·7 (6·0)	6·5 (6·2)	*
Number of unions in fertile years			
0	0·1 (0·3)	0·1 (0·3)	
1	0·8 (0·4)	0·8 (0·4)	
>1	0·1 (0·3)	0·1 (0·3)	
Age at start first union	23·6 (3·9)	25·2 (3·6)	*
Age	23·6 (11·1)	23·9 (10·5)	
N	2867	2195	

[a]The difference between women and men is significant at $p<0{\cdot}001$.
[b]Educational attainment: 1=did not complete elementary school; 10=postgraduate.
[c]Analysis on a subsample of individuals who have ever been partnered.
Source: Netherlands Kinship Panel study, wave 1.

Table 3. Logistic regression analysis for variables predicting remaining childless for women ($n=2867$) and men ($n=2195$), controlling for birth year

Predictor	Women		Men		Difference[a]
	B	e^B	*B*	e^B	
Educational attainment	0·10***	1·14	0·02	1·02	0·09**
Uninterrupted occupational career	0·27**	1·31	−0·45***	0·64	0·72***
Age at start first union	0·03	1·03	−0·01	0·99	0·03
Years without partner in fertile years	0·14***	1·15	0·16***	1·17	0·02
Number of unions in fertile years[b]					
0	1·93***	6·90	3·17***	11·50	1·24*
>1	0·48***	1·61	0·77***	2·16	0·29*
Constant	−4·01***		−3·17***		
χ^2	769·4		773·7		
df	7		7		
% remained childless	16·8		19·9		

[a]These differences are tested by looking at the significance level of the gender interaction in an interaction model.
[b]Reference category: 1 union.
Source: Netherlands Kinship Panel Study, wave 1.
*$p<0{\cdot}05$; **$p<0{\cdot}01$; ***$p<0{\cdot}001$.
Note: e^B=exponentiated *B*.

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It was expected that education would increase the odds of remaining childless for women, whereas there were no clear expectations for men. The results are in line with this expectation for women; every extra level of educational attainment increases the odds of remaining childless by 14%. Educational attainment does not significantly increase men's odds of remaining childless.

Confirming expectations, women with continuous employment have a 1·3 times higher odds of remaining childless. The opposite effect is observed among men with continuous employment: they have a 0·64 times lower odds of remaining childless. Having been continuously employed reduces men's odds of remaining childless by 36%.

It was expected that more years without a partner would increase the odds of remaining childless, and that women's odds would be stronger than men's odds. The first expectation is confirmed: every extra year without a partner increases women's odds of remaining childless by 15% and men's odds by 17%. But the second is not: the impact of years without a partner does not significantly differ between women and men.

There were contrasting expectations regarding the impact of the age at start of the first union on childlessness. Nevertheless, it was expected that women's odds would be stronger than men's. The results show that age at first union does not significantly change women's or men's odds of remaining childless. The odds do not vary by gender.

It was expected that no unions in the fertile years would strongly increase the odds of remaining childless, and that women's odds would not significantly differ from men's. The results are in line with the first expectation: never having had a partner increases the odds of remaining childless by about 7 times for women and 11·5 times for men. Contrary to the second expectation, men's odds of remaining childless are significantly higher than women's.

Finally, there were conflicting expectations regarding the impact of having had multiple unions during the fertile years on childlessness. The results show that multiple unions increase both women's and men's odds of remaining childless: women's odds increase by about 1·6 times, whereas men's odds increase by about 2·2 times. Men who have had multiple relationships have significantly higher odds of remaining childless than their female counterparts.

Discussion

Conclusions and implications

This study reveals gendered pathways into childlessness. Men and women who have followed similar life pathways nevertheless have disparate chances of remaining childless. First, women with higher levels of educational attainment are more likely to remain childless, whereas men's educational attainment does not shape their likelihood of remaining childless. Apparently, men do not experience the childbearing–work nexus in the way women do. Second, women who have no breaks over the course of their employment career are less likely, whereas their male counterparts are more likely to enter parenthood. A stable career seems very important for men's

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transition to parenthood in The Netherlands, which confirms recent German findings (Tölke & Diewald, 2003). Third, the impact of marital history on childlessness varies by gender. Remaining without a partner during the fertile years is a major restriction for having children for women. Noteworthy, it appears to be an even larger restriction for men. Men's childlessness seems to be shaped primarily by the circumstances of their marital career, as De Meester *et al.* (2005) also stated. Concerning their childbearing outcomes, men appear to depend heavily on what, or better said who, crosses their life path. The finding that men who have had multiple relationships are more likely to remain childless compared with their female counterparts reflects this notion. Women are somewhat more likely than men to seize second chances to have a child, which confirms other Dutch findings (Kalmijn & Gelissen, 2002).

Not all pathways are gendered. For example, the impact of years without a partner is similar for women and men. Furthermore, the findings show that age at first union is unrelated to childlessness among both women and men.

What can be learnt from a focus on gendered pathways into childlessness? For the past decade, in many high-income industrialized countries, policies have been adopted to facilitate the combination of working and childrearing in an effort to encourage women to have children (Gauthier, 1996; McDonald, 2006a, b). Although most children in these countries are nowadays born of working women (Castles, 2003), childlessness rates have not gone down. To understand contemporary rates of childlessness, it is argued that people's work, parenthood and marital histories should be studied jointly. For example, women who perceive their career as incompatible with childrearing may delay entering a serious relationship, because it might be a route toward parenthood. Men's childbearing behaviour should also be positioned within the marital domain. It has been suggested that men aim for a stable occupation, then a partner and subsequently want children to complete the 'package deal' (Townsend, 2002). Both a stable career and a partner need to be present for them to start a family (Tölke & Diewald, 2003). This study's results suggest that childlessness debates require a shift in focus. Concerns about the incompatibility of work with caring tasks need to be supplemented with concerns about entering and remaining in partnerships.

People are now seen as pilots in charge of their life travels, creating their own biographies through personal choice and individual decisions. But they do not always turn out to be successful. In Western countries many fail to achieve the number of children that they anticipated having (Van Peer, 2002). Coordinating educational, occupational and marital careers is not a simple task. Furthermore, people do not always succeed in finding and keeping a potential significant other. Among people who experience the dissolution of a partnership, the proportion who remain childless is much higher than among those who have one lasting partnership (Latten & Kreijen, 2001). The agentic point of view of the do-it-yourself biography does not do justice to demographic reality. Psychologically based factors do not provide a sufficient explanation for why people remain childless.

As yet, the extent to which developments in childlessness rates contribute to declining fertility rates is an open question for demographers. Cross-national comparative analyses reveal dissimilar trends (Billari, 2005). Spain, for example, has one of the lowest total fertility rates in Europe (between 1·2 and 1·3) and a relatively

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low childlessness rate (10·5% in the 1960 birth cohort). Germany also has a low fertility rate, but a relatively high childlessness rate (21·5% in the 1960 birth cohort). The United Kingdom has a moderate total fertility rate (between 1·7 and 1·8) and a high childlessness rate (20·5% in the 1960 birth cohort). The Netherlands also has a moderate total fertility rate, and a childlessness rate of 17·7% for the 1960 birth cohort. This study provides the insight that childlessness is not only about 'choice'. Restrictions play a non-negligible role in why people remain childless.

Limitations and future directions

Three limitations of this study should be noted. First, because of the study's cross-sectional design, inferences regarding the extent to which the educational, employment and marital pathway lead to the outcome of remaining childless are tenuous. The possibility of reversed causation cannot be ruled out. This may especially be true for the measurement of continuity of employment. Investments in the occupational domain may be the result of remaining childless instead of its cause. Only longitudinal data will allow such linkages to be unravelled. Nevertheless, the findings are in line with previous research. Gerson (1985) has shown that commitment to work, of which continuous employment can be seen as an indicator, increases the likelihood of remaining childless for women. Tölke & Diewald (2003) have recently shown that having a stable job increases the likelihood of entering a partnership, and subsequently, having children.

Second, because of the low numbers of cohabiters in the sample, it was not possible properly to examine the role of unwed cohabitation versus marriage in the pathways to childlessness. The low proportion of people who have only cohabited and never married is characteristic of the cohorts under investigation. The sample includes people born between 1923 and 1963. For them, cohabitation is a less conventional living arrangement than it is for cohorts that have succeeded them (Bumpass & Lu, 1999; US Census Bureau, 2003; CBS, 2006). The question of whether new forms of partnership contribute to childlessness requires a focus on younger cohorts than the ones considered here.

Finally, there are caveats regarding the categorization of childlessness used here. The present analysis centres on biological parenthood and does not take into account the possibility of parenthood of non-biological children, such as step-children and adopted children. The number of respondents in these groups is very small. Of all women and men aged 40–79, 1·2% have adopted children only and 2·4% live with step-children. Given the small numbers, these parents were excluded from the analyses. As the prevalence of non-traditional families has risen in the last decade, research that compares pathways into childlessness with pathways into non-biological parenthood would be particularly welcome.

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