The Impact of Recohabitation on Fertility: Evidence from Life History Data in the Netherlands

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INTRODUCTION

Due to the rise in divorce, people more often have children with more than one partner and fertility has become more dependent on reproductive behaviour in unions after the first (Coleman, Ganong, & Fine, 2000). Studies examining fertility decisions in second unions have primarily focused on the effect of children from a prior union on fertility decisions in later unions (e.g. Griffith, Koo, & Suchindran, 1985; Vikat, Thomson, & Hoem, 1999). This small but growing literature has been dominated by two hypotheses: the parenthood hypothesis and the commitment hypothesis. The parenthood hypothesis argues that people want to have a child because it renders them adult status. The commitment hypothesis emphasizes the meaning of a shared biological child for the union and argues that people want to have children to confirm or strengthen the union (Friedman, Hechter, & Kanazawa, 1994).

In normal circumstances, these considerations coincide: a couple decides to have a child to confirm or continue the relationship, whereas a child also serves the desires of the two individuals to become a parent. In recohabitation, which we conceive in the following as referring to both unmarried and married new unions after divorce, individual and couple considerations are sometimes disconnected and that is what makes fertility decisions after divorce interesting. When people enter a new union with a child from a prior marriage, a situation is obtained in which there are couple considerations, without individual considerations. When this is compared to a situation in which both considerations are relevant—when one enters a new union without a child from a prior marriage—it is possible to assess how important individual and couple considerations are for the decision to have a child.

The evidence that has so far been accumulated across different societies does not support one hypothesis more than the other. Evidence in favour of the commitment hypothesis was originally found by Griffith et al. (1985), who analysed life history data on remarried women in the United States and showed that remarried women's prior number of children did not reduce their fertility in remarriage. Another piece of evidence for the commitment hypothesis

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comes from a more recent analysis of the Swedish Fertility Survey. In this analysis, Vikat et al. (1999) found no significant difference in the fertility rate between remarried women with two or more prior children compared to remarried women without a prior child. The authors even found an elevated rather than depressed fertility rate for women with one prior child. A third study comes from Jefferies, Berrington, and Diamond (2000) who analyzed divorced and widowed women in Great Britain. Although this analysis is a little different in that it also includes women who did not remarry, they found little effect of the presence and number of children at divorce on women's subsequent fertility.

Evidence against the commitment hypothesis, and favouring the parenthood hypothesis, first came from Wineberg (1990) in his analysis of remarried women in the American Current Population Survey. Wineberg showed that remarried women with prior children are less likely to have a child in the new marriage, although he only observed this effect for women who had two or more prior children. For women with one prior child, no difference was found. Similar results were later obtained in France (Toulemon, 1997) and in Austria (Buber & Prskawetz, 2000). Toulemon (1997) observed that divorced men and women with prior children were less likely to have new children, regardless of how many prior children they had. Buber and Prskawetz (2000) also found that pre-union children had a negative effect on subsequent fertility, but the effect was again limited to two or more prior children. Interesting is that the French survey found weaker effects for men, while the Austrian survey did not find such a difference.

All in all, the literature so far provides mixed evidence. Some authors find a significant difference between persons with and without prior children, in line with the parenthood hypothesis, whereas others find no significant difference and regard this as evidence favouring the commitment hypothesis. Effects also differ depending on the number of prior children. Studies rejecting the commitment effect sometimes make an exception for people with one prior child and studies favouring the commitment effect find an elevated birth risk for people with one prior child. In other words, people with only one prior child are generally somewhat more likely to have a shared child in the new union compared to people without prior children. Although this may be the result of a commitment effect, it has been interpreted by a different hypothesis, the so-called sibling hypothesis. This hypothesis assumes that there is a norm for couples not to have an only child, which implies that people who are divorced and who have already one child, will have a child as a half-sibling for the prior child (Griffith et al., 1985; Thomson, 1997; Vikat et al., 1999).

In this contribution, we assess how divorce and prior children affect subsequent fertility by analysing data from a national life history survey among first-married and ever-divorced persons in The Netherlands. Our analysis is a replication and extension of earlier studies on recohabitation fertility. A novel feature of our analysis is that we extend comparisons from recohabitation to first marriages. More specifically, we compare three groups of individuals: people in their second union with a child from a previous marriage, people in their second union without a prior child, and people in their first marriage without a child. We compare these groups with respect to the risk of having a first shared birth in the current union. This comparison results in a more balanced research design and allows us to assess not only if prior children affect subsequent fertility, but also whether the order of a union affects the risk of having a first child in a union. In other words, we analyse effects of prior children as well as effects of prior unions.

In comparison to earlier studies, our data have both strengths and weaknesses. On the positive side, we have data on both married and cohabiting unions after divorce, we have data on both men and women, we have full information on the ages and residence status of all prior children of the respondent, and we have good measures of relevant control variables, such as economic opportunity costs and proxies for reproductive ideals. On the more negative side, we have no data on whether the new partner has prior children, something only the French and Austrian data had. We note that divorce rates in The Netherlands are about average for the Western World, although lower than in the United States. Remarriage rates are average as well, although cohabitation after divorce appears quite common (Uunk, 1999). With respect to fertility, The Netherlands is a special case in that it has the highest age at first birth of all European countries. Delayed fertility is therefore quite common and, as will be discussed shortly, this has important ramifications for the link between divorce and fertility.

HYPOTHESES

People can have various motives for wanting to have a child. Below we focus on two specific motives which are often emphasized in the literature on fertility decisions (cf. Bulatao, 1981; Friedman et al., 1994; Morgan & Berkowitz King, 2001): people want to become a parent and couples want to confirm or celebrate their union. To formulate hypotheses, we begin by making two distinctions: whether the union is a first or second union and whether the person has a child from someone else before the current union. Cross-classifying these two distinctions results in four situations, as the table below illustrates:

	no prior children	prior children
first union	(a)	(d)
second union	(b)	(c)

a) A person is in his/her first union and does not have prior children,

b) A person is recohabiting without prior children,

c) A person is recohabiting with prior children,

d) A person is in his/her first union and already has a child from someone else.

By comparing (b) to (c), we are able to assess the effect of prior children, as is most often done in the literature. By comparing (a) to (b), we are able to assess the effect of the union order, an effect that has not often been studied. Since cell (d) contains few people, we disregard them here, although this group is interesting for theoretical reasons as well. We also limit second unions to unions after a divorce.

To systematize ideas from previous studies, we propose four types of utility of a first (shared) child in a union and compare these across the three groups above: individual benefits, individual costs, couple benefits, and couple costs (cf. Thomson, 1983).

We start by considering individual benefits, which largely consist of the parenthood effect. These benefits are obviously highest for first-married and recohabiting persons without children (a and b), and lowest for recohabiting persons with prior children (c). Note that individual benefits are not absent for persons with prior children because a person may wish to have more than one child. Another individual benefit lies in the difference between recohabiting and first-married persons without children. We assume that divorced persons without children (b) have not realized their preferred level of fertility in their previous marriage, which causes a pent-up demand for children in the new union. They will therefore try to 'catch up' in the second union. It is likely that only one of the two former partners will have unrealised fertility preferences, but as a group, they still will have stronger preferences for a child than first-married persons (a).

There are also individual costs involved in having children. Recohabiting women are, on average, older than first-married women, which makes it more difficult to have (another) child because of lowered fecundity. This age effects translates into higher individual costs of childbearing for the recohabiting (b, c) than for the first-time married (a). After age differences are controlled, however, this difference should not be present.

Couple benefits of children arise from the commitment effect, but this effect is complex. On the one hand, couples may decide to have children if their relationship goes well; in this case, the birth of a child is seen as the confirmation or completion of the union. On the other hand, couples may decide to have children to cement the union. Children are relation-specific capital and make partners more dependent on one another. Having a child can then be used as a strategic way of locking one-self and the other into a union that is not going well (Friedman et al., 1994). Whether these couple benefits are different or similar for the three groups is unclear. On the one hand, one could argue that second unions need more consolidation because they are more fragile (Booth & Edwards, 1992). On the other hand, one could argue that there is more social pressure on first-married couples to have a child together to complete the union. It is not immediately clear which argument is stronger or more appropriate so we assume equal couple benefits across groups.

To arrive at predictions, we combine the two types of benefits in Table 1. It is obviously not feasible to assign values to labels such as 'high' and 'low,' but the relative order can be established without much problems.

We predict that recohabiting persons with prior children are less likely to have a child than recohabiting persons without prior children (b > c; the parenthood effect). Next, we predict that recohabiting persons without prior children are more likely to have a child than first-married persons without prior children (b > a; the catching-up effect). An additional prediction from Table 1 is that recohabiting persons with a prior child are less likely to have a child than first-married persons without a child (c < a). This is an implication of the parenthood effect. Note that the commitment effect predicts that recohabiting persons with prior children have the same birth risk as recohabiting persons without prior children (b = c).

Additional hypotheses can be formulated based on the characteristics of the prior children. If someone has older prior children, a new child will extend the period of childbearing to a

Table 1

Hypothesized Individual and Couple Utilities of Having a First Child in a First or Second Union.

		Net individual benefits	Net couple benefits	Total	In words
(a)	First married without prior child	+	+	++	High
(b)	Recohabiting without prior child	++	+	+++	Very high
(c)	Recohabiting with a prior child	–	+	0	Low
(c1)	Recohabiting with already a young child	–	+	0	Low
(c2)	Recohabiting with already an old child	–	+	–	Very low
(c3)	Recohabiting with 1 prior child	–	++	+	Medium
(c4)	Recohabiting with ≥ 2 prior children	–	+	0	Low
(c5)	Prior child living with respondent	–	+	0	Low
(c6)	Prior child living elsewhere	–	0	–	Very low
(c6a)	Prior child living elsewhere (women)	–	0	–	Very low
(c6b)	Prior child living elsewhere (men)	+	0	+	Medium

degree that may be undesirable. A woman who had her first child at age 20, for example, and remarries at age 35, would have children at home for more than 30 years if she has another child in the new marriage. Hence, individual costs are higher and net benefits of a new child will be lower (Table 1). We predict that women with an older prior child are less likely to have a child in the new union than women with a younger child (c2 < c1).

The number of children is an important factor as well. If someone has one child from a prior union, the couple may want to have another child together as a sibling for the prior child (Thomson, 1997; Vikat et al., 1999). This so-called sibling hypothesis is based on the assumption that parents think that being an only-child is undesirable for the child. We conceptualise this as an increased couple benefit, even though strictly speaking it is a benefit to the child. When comparing the costs and benefits in Table 1, we can predict that persons with two or more prior children will be less likely to have a child in the new union than recohabiting persons with one prior child (c4 < c3). More difficult is the comparison between recohabiting persons with one prior child (c3) and recohabiting persons without a prior child (b). If the assumptions in Table 1 are true, recohabiting people with one prior should also have a lower rate of fertility than recohabiting people without prior children, even if we disregard the catching-up effect (c3 < b).

Finally, the place where previous children live may affect the likelihood of a first child in the new union. If a prior child is living with his or her stepfamily, the couple already forms a (step) family together. If the prior child is not living with the person anymore, the couple does not yet form a family and a new child implies the transition to becoming a family. The couple

costs of a new child will then be higher (Table 1). We predict that recohabiting persons whose prior child lives in the current household are more likely to have a child than recohabiting persons whose prior children are living outside the household (c5 < c6).

It is interesting to explore the effects for men and women separately, but it is difficult to formulate hypotheses with much certainty. Recent evidence shows that childbearing desires are more or less the same for husbands and wives (Thomson, 1997), but how this works out for divorced men and women is not yet known. Composition effects play a role here as well since divorced men's prior children usually do not live with the father. If we compare men and women, we should probably focus on prior children who do not live at home. Because father-child ties after divorce are known to be weaker than mother-child ties (Lye, 1996), we expect that such children have weaker effects on divorced men's behaviour. Divorced men's individual benefits of having new children will therefore be higher, as is shown in Table 1, and the effect of prior children (vis-à-vis no prior children) will be less negative.

ANALYSES AND RESULTS

To test the hypotheses, we use data from the survey Divorce in The Netherlands (Kalmijn, de Graaf, & Uunk, 2000). The sample for this survey was drawn from, 19 municipalities, which are representative of the Dutch population with respect to region, urbanization, and political party preference. From the population registers of these municipalities, three random samples were drawn: a sample of first married persons, a sample of divorced persons who were not remarried, and a sample of divorced persons who were remarried. The second sample includes persons who were cohabiting at the time of the survey. All respondents were interviewed at home using structured questionnaires. Interviews lasted an average of 90 minutes.

We analyse three groups. The first group consists of persons who are currently in their first marriage (which means that they were never divorced or widowed). For this group, we have information on the respondent's children with the first partner and we also have information on possible children before the first marriage. We exclude people who had prior children from someone else before they first married. Next, we consider people who were ever divorced and who, at the time of the survey, were recohabiting i.e., in a new marriage or cohabiting relationship. For these persons, we have two fertility histories: data on children born in the first marriage and data on children born in the current marriage or cohabiting union. Using this information, we make a distinction between persons who never had children in their first marriage (and not before either), and persons who had one or more child in the first marriage (and no children before the first marriage). We consider current unions (i.e., at time of the survey) of persons who are divorced from their first marriage. We note that of this group, 99 persons (11 per cent) recohabitated earlier between their divorce and their current union; of these, only 13 instances were marriages. Because ever-divorced persons were oversampled, we have a substantial number of remarried divorcees in our sample (776), about half of whom had prior children. We further have 518 persons who were in their first marriage at the time of the survey.

We have no information on whether the new partner already has children from a prior union. Whether this affects our estimates depends on the question of whether there is an association

between partners with respect to the chance of having a prior child. If people with prior children are more likely to repartner with each other than to people without prior children, the effect of prior children is probably overestimated. This would then be a case of omitted variable bias in an upward direction. How the presumed positive effect of union order is affected is unclear since both the recohabiting and the first married may have partners with prior children. Omitted variable bias here is less clear.

Figure 1 will show the relationship between the birth of a first child and the duration of the union for those who are currently in their first marriage, for recohabiting men, and for recohabiting women. The group of first married persons in the figure is weighted to correct for the oversampling of ever-divorced persons.

The left part of the figure shows the year-specific birth risks, the right part of the figure shows the cumulative percentages. The year-specific risks show that the annual risk of having a first child in a union first increases and then declines with the length of the union (measured from the moment the couple started living together). The risks are higher at all durations for first married persons than for recohabiting persons, with recohabiting women having a somewhat higher risk than recohabiting men. The patterns of duration dependency are quite similar for first and second unions. The cumulative figure on the right hand side shows that 50 percent of those in their first marriage have a first child within 3 years after the beginning of their union. The recohabiting have a lower level of fertility: the number of unions to which a first child is born stabilizes around 43 percent for recohabiting women and to 38 for recohabiting men. This compares to 82 for the first time married (after ten years). All these results are bivariate so that they are heavily affected by age differences between first-married and recohabiting persons.

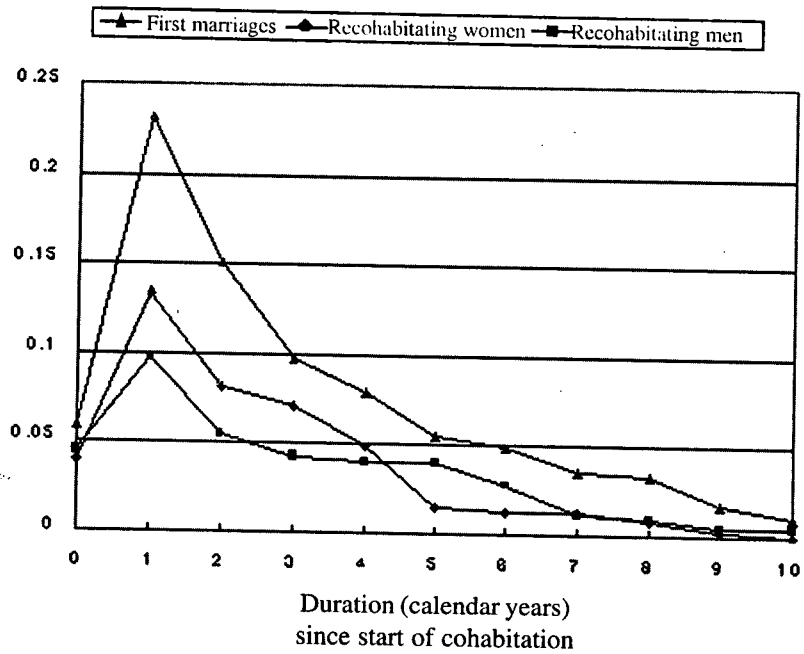
Event History Models

To analyse fertility in a multivariate framework, we use a discrete-time version of event history analysis (Allison, 1984; Brown, 1975; Yamaguchi, 1991). Discrete-time versions are simple and good approximation of continuous-time models as long as the conditional probabilities of experiencing the event are reasonably small at the discrete time points (Yamaguchi, 1991, p. 17). The event is defined as having a first child in the current union. The risk period for this event starts at the time the marriage began and ends after the birth of the first child. Note that for divorced persons, we consider cohabitation as equivalent to marriage since cohabitation is quite common after divorce and also more likely to be a permanent rather than a transitory state. Observations are censored if the couple has no children together. The date of censoring can either be the time of the survey or the year of divorce (for the first risk period of ever-divorced respondents). The risk period also stops when women pass the age of 45 and when the partners of male respondents pass the age of 45.

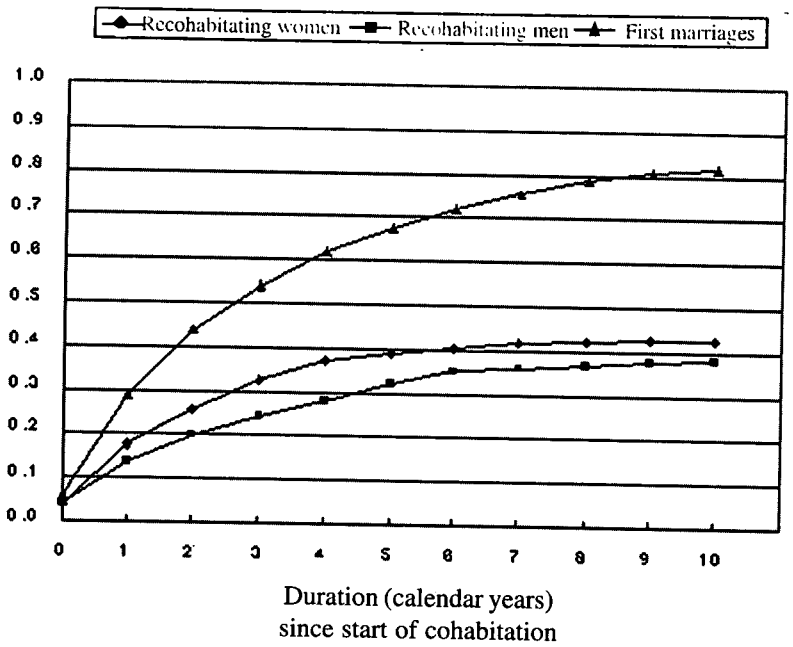
For recohabiting persons, we include two risk periods, one for their first marriage and one for their second union. Divorced persons who did not recohabit also contribute to the first-married episodes. Because divorcees are oversampled, the episodes of first marriages contain an oversample of divorced persons as well. Since we want to compare recohabiting persons with a representative sample of first marriages, we needed to correct the oversample. Rather

Figure 1

Conditional annual probabilities of a first birth in first marriages and recohabitation by sex.



Cumulative births (%) in first marriages in and recohabitation by sex.



than including the first-married episodes of all ever-divorced persons, we therefore took a (random) sample of these episodes. The sampling fractions were based on figures from Statistics Netherlands and were calculated separately for men and women and for educational groups. For the recohabiting episodes, we used all respondents because that is what makes our analyses statistically powerful.

The estimation of discrete-time event history model comes down to creating a person-period file and applying logistic regression to this file (Allison, 1984, pp. 18-19). A person-period file contains a record for each person for each time unit in which this person is at risk. Duration dependency is analysed by including dummy-variables for the length of the marriage or cohabitation. This takes into account the pattern of birth risks as shown in the left part of Figure 1. Next to duration effects, we include age effects, which are obviously important in a comparison of first and second unions. To model age-dependency, we followed the method proposed by Blossfeld and Huinink (1991). Two age-variables are included for women:

b1 x ln (current age – 16) + b2 ln (46 – current age).

This approach assumes that women are at risk of a first birth between ages 16 and 46 and that the risks follow a bell-shaped curve. The curve is symmetric if the two age-terms have equal effects (b1 = b2), the curve is left skewed when the first effect is smaller and skewed to the right when the second effect is smaller (Blossfeld & Huinink, 1991, p. 153). The top of the curve is located at (46 x b1 + 16 x b2) / (b1 + b2) (Kalmijn, 1996, p. 56). For men, we used 66 rather than 46 for the second term[1].

The analysis proceeds in several steps. In the first step, we estimate a model which only includes age, duration, and year of birth. The order and child status of the union are represented by two dummy-variables: whether a person is in his/her first marriage without prior children (group a) and whether a person is in his/her second union and has prior children (group c). People in their second union who have no prior children are the reference group (group b). The contrasts chosen imply that the first dummy-variable captures the difference between recohabitation and first marriage (the prior union effect), while the second dummy-variable captures the effect of having or not having prior children (the prior children effect).

In a second step, we disentangle the category of recohabiting persons with prior children along three distinctions: the age of the (youngest) prior child (under or over 12), the number of prior children (1 or 2 and more), and where the prior child is living (with the respondent or elsewhere). For each of these three distinctions, we estimate separate models, which include dummies for the specification of group -(c).

In the final model, we control for a set of important social and economic fertility determinants. The first variables are economic factors which affect fertility: wife's education, wife's labour

[1] The use of the exact age of 66 is of course arbitrary, but it is true that fertility after that age is negligible. Choosing a different upper limit (e.g. 70) would not affect the results presented in this paper. It is merely a technical requirement for the model to set this age. By doing this, the typical age-fertility curve can be approached quite well.

force participation, and husband's occupation (Blossfeld & Huinink, 1991; Corijn, Liefbroer, & Jong Gierveld, 1996; Hoem, 1986; Thomson, 1997)[2]. Information on the labour force participation of the respondent comes from a full work history so that this is a time-varying covariate. For the (former) spouse, we only have information on labour force participation in the beginning of the union. We also include several other (respondent) characteristics which are related to cultural variations in fertility: church attendance in the beginning of the union, level of urbanization of the place where the respondent grew up, the number of siblings of the respondent, and whether one or both parents were born abroad (in a non-Western country, which is mostly Turkey, Morocco, Suriname, and the Antilles). Descriptive statistics of these variables are presented in Table 2.

Table 2

Descriptive Statistics of Variables in the Analysis.

Variable	Minimum	Maximum	Mean	Standard deviation
Sex	0	1	.51	.50
Year of birth	23	70	51	10
Age†	16	65	43	8
Men's age†	16	65	32	8
Women's age†	16	45	29	7
Duration of union since start of cohabitation†	0	29	4	4
First marriage without prior child†	0	1	.45	.50
Recohabitation without prior child†	0	1	.24	.43
Recohabitation with prior child†	0	1	.31	.46
Age of prior child ≤ 12†	0	1	.17	.37
Age of prior child > 12†	0	1	.15	.35
1 Child from previous union†	0	1	.10	.30
2 or more children from previous union†	0	1	.21	.41
Previous child living with respondent†	0	1	.18	.39
No previous child living with respondent†	0	1	.13	.33
Occupational status of husband†	13	87	46.00	17.95
Occupational status of husband missing	0	1	.14	.35
Highest level of education of wife	1	3	1.99	.72
Paid labour by wife†	0	1	.72	.45
Church attendance by respondent	1	3	1.56	.77
Number of siblings	0	10	3.53	2.54
Level of urbanization at age 15	1	11	8.00	2.97
Father/mother born abroad (non-Western)	0	1	.07	.26

† Denotes a time-varying covariate. In this case, the mean applies to the first year of the union. Units in the table are (first or second) unions (N=1485).

[2] For husbands without an occupation, we included a dummy-variable. We assigned the mean occupation for these husbands which implies that the effect of the dummy-variable captures the difference between husbands without an occupation and husbands with an average occupation.

Results

In Table 3, we present parameter estimates of the models for women, in Table 4 we present estimates for men.

Table 3

Parameter Estimates for Logistic Regression Models of having a First Child – Models for Women.

	Model 1	Model 1a	Model 1b	Model 1c	Model 2
Basic control variables:					
Year of birth	-.030**	-.030**	-.030**	-.030**	-.024**
Log (current age-15)	.654*	.518*	.652*	.619*	.897**
Log (46-current age)	2.133**	1.888**	2.123**	2.103**	2.277**
Duration since start of cohabitation					
First year of union	-1.321**	-1.342**	-1.315**	-1.347**	-1.376**
Second year of union	.467**	.450**	.472**	.444**	.421**
Third and fourth year of union	.225	.213	.229	.207	.206
Fifth and sixth year of union	.103	.104	.106	.089	.101
Seventh year and later (ref.)	.000	.000	.000	.000	.000
Order of union and child status:					
b) Recohabitation without prior child (ref.)	.000	.000	.000	.000	.000
a) First marriage without prior child	-.333*	-.311*	-.330*	-.340*	-.371*
c) Recohabitation with prior child	-.519**				-.706**
c1) Age of prior child ≤ 12		-.306			
c2) Age of prior child > 12		-1.054**			
c3) 1 Child from previous union			-.480*		
c4) 2 or more children from previous union			-.555**		
c5) Previous child living with respondent				-.461**	
c6) No previous child living with respondent				-2.042*	
Extended control variables:					
Occupational status of husband					-.001
Husband no occupation					-.315*
Highest level of education of wife					-.241**
Paid labour by wife					-.164
Church attendance by respondent					.161*
Number of siblings					.020
Level of urbanization at age 15					-.005
Father/mother born abroad					.688**
Constant	-7.599***	-6.538**	-7.574**	-7.393**	-8.434**
Number of person-years	3999	3999	3999	3999	3999
Number of events	440	440	440	440	440
Number of unions	714	714	714	714	714
Model Chi^2 (df)	342.2(9)	347.8(10)	342.3(10)	346.3(10)	378.4(17)

*** p < .01 * p < .05 (one-tailed test)*

Table 4

Parameter Estimates for Logistic Regression Models of having a First Child – Models for Men.

	Model 1	Model 1a	Model 1b	Model 1c	Model 2
Basic control variables:					
Year of birth	-.029**	-.030**	-.030**	-.029**	-.027**
Log (current age-15)	.760**	.698*	.742*	.761**	.524
Log (66-current age)	3.341**	3.137**	3.246**	3.344**	3.174**
Duration since start of cohabitation					
First year of union	-.748**	-.758**	-.735**	-.744**	-.881**
Second year of union	.452**	.446**	.465**	.456**	.328*
Third and fourth year of union	.296*	.294*	.309*	.301*	.217
Fifth and sixth year of union	.261	.262	.273	.263	.206
Seventh year and later (ref.)	.000	.000	.000	.000	.000
Order of union and child status:					
b) Recohabitation without prior child (ref.)	.000	.000	.000	.000	.000
a) First marriage without prior child	.271*	.287*	.282*	.253	.167
c) Recohabitation with prior child	-.156				-.175
c1) Age of prior child ≤ 12		-.017			
c2) Age of prior child > 12		-.291			
c3) 1 Child from previous union			.056		
c4) 2 or more children from previous union			-.289		
c5) Previous child living with respondent				-.546	
c6) No previous child living with respondent				-.116	
Extended control variables:					
Occupational status of husband					.002
Husband no occupation					-.460**
Highest level of education of wife					.050
Paid labour by wife					-.021
Church attendance by respondent					.216**
Number of siblings					.038*
Level of urbanization at age 15					-.011
Father/mother born abroad					-.086
Constant	-14.552**	-13.654**	-14.168**	-14.544**	-13.809**
Number of person-years	4176	4176	4176	4176	4176
Number of events	431	431	431	431	431
Number of unions	690	690	690	690	690
Model Chi^2 (df)	228.7(9)	229.8(10)	230.6(10)	230.9(10)	252.4(17)

*** p < .01 * p < .05 (one-tailed test)*

As is shown in Model 1, year of birth, age, and duration all affect the likelihood of having a first child. Members of more recent birth cohorts are less likely to have a first child than members of older birth cohorts, a reflection of the decreasing level of fertility. We further find significant positive effects of the two age-terms. For both men and women, the first effect is smaller than the second, showing that the curve is skewed to the left. There is also clear evidence for duration dependence. The effects of the dummy-variables show that birth risks are low in the very first year, high in the second year, and decline from that point on. These effects correspond well with the bivariate findings in Figure 1.

We now turn to the substantive effects which relate to our hypotheses. We first find that for women, being in a second union with a prior child negatively affects the likelihood of a birth compared to being in a second union without a prior child (Table 3). More specifically, the conditional odds of having a child for women are 41 percent lower if there already is a child from a prior union [1-exp(–0.519]. Thus, we have positive evidence for the parenthood hypothesis and negative evidence for the commitment effect.

A second important observation is that we find a significant negative effect of being in a first marriage without prior children. Because recohabiting women without prior children are the reference group, this implies a *higher* level of fertility for recohabiting childless women. More specifically, childless women in their second union have a 40 percent higher odds of having a first child than first married women without a child [exp(–1 x –0.333)-1]. This finding substantiates the existence of a divorce effect. If people are in their second union and they do not have children yet, they may be more eager to become a parent than those who are in their first marriage without children. Our interpretation of this effect is that recohabiting people without prior children want to catch-up what they failed to realize in their first marriage.

The relative order of the three groups is more or less in line with the predictions in Table 1. The highest level of fertility is observed for recohabiting women without prior children (the reference group; b=0), the second highest level is observed for first married women without prior children (b=–0.33), and the lowest level is observed for recohabiting women with a prior child (b=–0.52).

When looking at the effects for men in Table 4, we see important differences. For divorced men, the conditional odds of having a new child are 14 percent lower [1-exp(–0.156)] if they already have a child and this effect, although in the predicted direction, is not significant. This leads to the conclusion that the parenthood effect is stronger for women and—by implication—that the commitment effect is stronger for men. Second, the effect of being in a first marriage is positive rather than negative. In other words, recohabiting men without a child have a lower rate of fertility than first-married men without a child. Catching-up fertility is apparently not applicable to men.

In Models 1a to 1c, we differentiate the category of those who are in their second union with a child from a previous union. Specifically, we examine whether the age of a prior child, the number of previous children, and the place of residence of prior children differentially affect the likelihood of having a child in the new union. As we did in the first model, in these models we also control for year of birth, age, and duration. The effects of the latter variables are very

similar to the results of the first model. Therefore, we only discuss the effects of the dummy variables which disentangle the prior child effect.

As is shown by the results in Model 1a in Table 3, if the prior child is 12 years of age or younger, women are less likely to have another child in a new union, compared to women in their second union without a prior child. This effect, however, is not significant. If the prior child is older than 12, in contrast, the negative effect is strong and significant. In other words, the negative effect of prior children on subsequent fertility in a new union is stronger the older the children. This is in line with our hypothesis. When comparing the results of women to those of men in Table 4, we observe the same pattern: the effect is more negative for older children. However, differences in the effects of the two dummy-variables are smaller for men than for women. This suggests that age effects of prior children are strongest for women.

Model 1b shows that the number of children from a previous marriage also significantly affect the likelihood of having a first child in a new union, but the results are less conspicuous than they were in studies from other countries. Women who have one child from a previous union are significantly less likely to have a first child in a new union compared to those who are recohabiting without a child from the previous union. Women who have two children are even less likely to have a new child. The reduction is 38 percent for one prior child [1-exp (–0.480)] and 43 percent for two prior children [1-exp(–0.555)]. This difference is in line with the sibling hypothesis, but the differences is small. We also observe that recohabiting women with one prior child do not have a higher level of fertility than recohabiting women with no prior child. Results for men are similar in that the effect for two children is more negative than the effect for one prior child. A difference is that for men, the effect of one prior child is no longer negative.

Finally, we look at the effects of where the prior children are living (Model 1c). We expected that recohabiting persons whose children are living elsewhere would be less likely to have new children than recohabiting persons whose children are living with them. In line with this hypothesis, we find a strong difference. Recohabiting women whose children are living elsewhere are much less likely to have a first child in their new union than recohabiting women who have children living with them. The difference between these two effects is substantial (–2.042 versus –0.461). Although the number of women under 45 whose children are living elsewhere is small, this finding is interesting and in line with the hypothesis.

More interesting is that we observe more or less the opposite pattern for men. The effect of prior children is negative and almost significant (p=0.06) when the children are living at home (a reduction of 42 percent compared to recohabiting men without a child). When the children are living elsewhere, the effect on fertility is much smaller, a reduction of 11 percent. Hence, the effect of prior children on men's subsequent fertility is less negative if these children are living elsewhere. Starting a new family for men apparently is easier if his prior children are not living with him. For women, this is the other way around. These results are in line with our ideas about reduced father-child ties after divorce.

In Model 2 we control for several individual characteristics of the respondent and his or her partner. The effects of age and duration remain largely unchanged, while the effect of year of

birth for women is reduced by about 20 percent, showing that fertility declines can partly be attributed to rising levels of education and female labour force participation, which are the variables that were added in the last model. More importantly, we find that the effect of being married for the first time without prior children and the effect of recohabitation with children are not reduced once the extended control variables are added to the model. In fact, the effects of prior children become somewhat stronger. The effects of the order of the union (first versus second) also becomes larger for women, showing that the catching-up effect cannot be explained away by economic or social correlates of fertility. For men, we found a positive effect of the first marriage, and this effect is not significant anymore in the full model.

We also find several significant effects of the control variables which we included in the final model. The results are more or less in line with standard findings in the research literature on fertility in first marriages. If the wife is more highly educated and if she is employed, she is less likely to have a child, consistent with well-known micro-economic theorizing about price effects on fertility. The effect of work, however, is not significant. In addition, these effects are only observed when women were respondents, not when men were respondents. This is probably due to the fact that we have complete work histories for respondents only, not for partners. We do not find that husband's occupational status has an impact on fertility, but we do find that husbands without an occupation are less likely to have a child than husbands with an average occupation (this is found in both the male and female regression models). Finally, we find evidence for cultural variations in fertility. Respondents who go to church are more likely to have a first child than those who do not go to church. Men who come from larger families are more likely to have a first child than men who come from small families. Finally, we find that minority women have a higher birth risk as well, in line with previous research. Urbanization, however, does not appear to affect fertility.

CONCLUSION AND DISCUSSION

Fertility after divorce is an interesting phenomenon because it allows us to separate individual and couple considerations in the decision to have a child. People may want a child to become a parent and people may want a child to confirm the relationship. If people recohabit and have children from a prior relationship, these considerations are disconnected, allowing the researcher to compare the relevance of the two types of considerations. Several studies in the past have confirmed the commitment effect by observing no reduced level of fertility for remarried persons who already had a child from a prior partner (Griffith et al., 1985; Vikat et al., 1999).

We have re-examined these hypotheses using new national data from The Netherlands and we have proposed additional hypotheses about the effects of divorce on subsequent fertility. Our findings show that divorced women and—to a lesser extent—men are less likely to have a child in a new union when they already have a child from a previous marriage. This confirms the parenthood hypothesis and refutes the commitment hypothesis. Our findings thereby emphasize the importance of individual vis-à-vis couple considerations in the decision to have a child in recohabitation. The Dutch findings are in line with the findings for France and for Austria (Buber & Prskawetz, 2000; Toulemon, 1997), while they contrast with the findings for Sweden and for Great Britain (Jefferies et al., 2000; Vikat et al., 1999). The American

evidence has been ambivalent but our findings are more in line with Wineberg (1990) than with Griffith et al. (1985).

The negative effects of prior children on subsequent fertility also depend on characteristics of these children. The effects are more negative if the child is older and if the child is not living with the respondent. We interpret this in terms of the higher individual costs when prior children are older and when the birth of a child implies the transition to becoming a family (again). We also find that having two prior children reduces subsequent fertility more than having one prior child, but these differences are small and persons with one prior child still have a significantly lower rate of fertility than recohabiting persons without a prior child. This is positive evidence for the sibling hypothesis, but the added sibling benefits apparently do not outweigh the individual parenthood benefits.

Although our findings suggest that individual considerations dominate couple considerations in second unions in The Netherlands, the conclusions are different for men. When the prior children are living at home, the negative effects show up for both men and women and they are significant for both (although only marginally for men). When the prior children are living elsewhere, however, the negative effect was much weaker for men than for women. This result is partly in accordance with previous findings by Toulemon (1997). These differences presumably reflect differences in the individual costs and benefits of children for men and women. Divorce weakens the ties between fathers and children which makes it easier and perhaps even more attractive to have new children for men. We need to caution that some men may not have spoken about their previous children when they do not cohabit with them, but it is difficult to say how common this would be.

We also found evidence for the existence of a catching-up effect, at least for women. Specifically, recohabiting women without prior children are significantly more likely to have a child in their (new) union than first-married women without children. We interpreted this difference as an indication of the individual benefits which a divorced woman may have from the birth of a child in a new union. If divorced women have not been able to realize their preferred family size in their previous marriage, their demand to still have a child in the new union will be stronger than for once-married women without prior children. The catching-up effect is another individual consideration in the decision to have child, and further underscores the dominance of the parenthood hypothesis.

Our findings must be seen in the light of changes in people's life course that have characterized The Netherlands in the past three to four decades. With respect to fertility, the birth of a first child is postponed extensively and also the number of children has decreased (Kalmijn, 2002). The Total Fertility Rate has dropped from 3.12 children in 1960 to 1.75 in 2003. Most European countries have experienced such a significant drop in fertility rates, and this drop was strongest for the countries with relatively high fertility rate, such as The Netherlands. Differences in the fertility rates among European countries have decreased because of this (Statistics Netherlands, 2005).

With respect to divorce and remarriage, distinctive changes have also occurred in The Netherlands. Since the 1970s the number of divorces has increased considerably, with currently three out of ten marriages ending in divorce (Latten, 2004). The proportion of divorcees

among those marrying has also increased. In 1970, for 12 per cent of the marrying men this involved their second or next marriage, whereas in 2003 this had increased to 23 per cent. Among women, the increase was from 8 to 19 per cent. However, remarriage probabilities have dropped from 78 per cent in 1970 to 54 per cent in 2003 for divorced men, and from 69 to 44 per cent for divorced women. More and more divorcees also opt for recohabitation and other forms of permanent unions instead of marriage (de Jong Gierveld, 2004). Partners in these new unions are also often confronted with the decision whether to have children or not. Consequently, the study of childbearing after divorce forms an important field of study within the general research on fertility problems with which Western societies are currently confronted.

In future research on the impact of recohabitation on fertility, investigators would do well to include explicit measurements of motives for having children. In this contribution, we have indirectly tested the parenthood hypothesis and commitment hypothesis using a theory on the utility of children. Our research data did not include direct measurements of these and other motives for childbearing. Thus, a more direct test could involve subjective evaluations of the positive and negative consequences of having a child in a—first or new—union (see, for example, Miller, 1992) for the individual and the couple. Such an extension needs to be undertaken to reach more definite conclusions regarding the explanation of the impact of recohabitation on fertility.

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