

WOMEN'S HOME ATTACHMENT AT FIRST BIRTH The Case of Sweden

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Abstract. The impact of the transition to parenthood on the labour-force activity of Swedish women one year after first birth is studied using data from the 1981 Swedish Fertility Survey. The probability of remaining at home one year after delivery is found to be significantly affected by length of education, marital status, early labour-force withdrawal and duration of union. Highly educated women seem to have already established a pattern of low home attachment by the mid-50s. Women with less education have tended to 'catch-up' with this low home attachment over time. For women with a medium level of education there is, however, a slight reversal of this downward trend toward the end of the 1970s.

Résumé. *L'attachement des femmes à leur foyer lors de la première naissance. Le cas suédois.*

A l'aide des données de l'Enquête Suédoise de Fécondité de 1981, l'auteur étudie l'impact de l'accès à la maternité sur l'activité économique des Suédoises un an après la naissance de leur premier enfant. La probabilité d'être mère au foyer un an après l'accouchement s'avère nettement sensible à la durée des études, au statut matrimonial, à la précocité de la cessation d'activité et à la durée de l'union. Les femmes qui ont le

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plus haut niveau d'instruction semblent avoir adopté dès le milieu des années 50 un modèle de faible attachement au foyer. Les moins instruites se sont peu à peu emparées de ce modèle. Mais, chez les femmes de niveau d'instruction moyen, on observe un léger retournement de cette tendance descendante vers la fin des années 70.

1. Introduction

Most women stop working at the time of delivery, if not before. Some do it only temporarily, others for an extended period of time. In the heyday of the 'breadwinner system' [Davis (1984)], a woman was expected to leave the labour market at the arrival of her first child, if not at marriage, and then stay at home to take care of her family. Such permanent home attachment has become relatively rare in Western industrialized countries, as more and more women have come to regard work outside the home and childbearing as complementary activities, rather than as substitutes [Mott and Shapiro (1983)].

As Davis pointed out, the dramatically decreasing median age of mothers at last birth combined with the extension of life has led to a situation in which a woman can expect to live well over 30 years after her last child has left home. With such a time perspective it is not surprising that many women strive to limit their work-life interruption as much as possible without jeopardizing the welfare of their children. Many studies have indicated negative effects of such interruption on future earnings and career possibilities [see for example Gustafsson (1981)]. There seems to be no doubt, however, that the transition to motherhood still constitutes a watershed in the lives of most women. Even if they no longer withdraw from employment for the rest of their lives, 'role incompatibility' [see for example Weller (1977) and Sweet (1981)] often makes them limit their extra-familial activities while they have children of pre-school and/or school age at home.

Waite et al. (1984) venture to summarize previous research on the causal relationship between parenthood and employment as follows: 'Fertility influences work but work has no measurable impact on fertility'. We would strongly question whether it is possible, in the present state of knowledge, to make such a flat statement concerning the lack of influence of women's work on their fertility behaviour. Recent results from Sweden [B. Hoem (1985)] indicate, for example, that the propensity of one-child mothers to have a second child is

clearly influenced by their labour-force status. However, that part of the causal relationship is not our concern here, as this paper focusses on the impact of parenthood on women's labour-force participation.

Several recent studies address the effect of parenthood on women's employment [Shapiro and Mott (1979), Jones (1982), McLaughlin (1982), Mott and Shapiro (1982, 1983), Sorensen (1983) and Waite et al. (1984)]. They all find that the arrival of the first child in particular leads to a dramatic reduction in women's labour-force participation. Waite et al. indicate that, at least for the US, the effect of parenthood is restricted largely to a sub-group of women who leave work before first birth: women who continue to be employed work roughly the same hours per week after the birth as before. McLaughlin found that the negative effect of motherhood on employment decreases considerably with increasing years of education. Work experience and economic well-being also seem to be of some importance.

Not only is the immediate effect of new motherhood on employment interesting in itself, but in addition we share the view that 'a woman's employment choices around the birth of the first child are important as predictors of the extent of her later work activity' [Waite et al. (1984)]. The Swedish case is particularly interesting because of Sweden's relatively egalitarian sex-role patterns and high level of female employment.

2. The Swedish setting

Sweden has one of the highest female employment rates in the world. Approximately half the economically active women work full-time. The activity rate among women has increased rapidly from the 1950s, particularly in the 1970s (fig. 1). Even mothers with pre-school children now have activity rates (rates are defined as including women on maternity leave as in the labour force) close to those of the male population. From the labour-force survey figures for 1981 (table 1) it is obvious that the degree of economic activity among Swedish women with children is generally quite high. Even in the family-status category with the lowest proportion of women in the labour force (mothers with at least three children whose youngest child is under three years), the labour-force participation rate is as high as 63%. Only one out of five women stays at home until her oldest child is about to start school, and

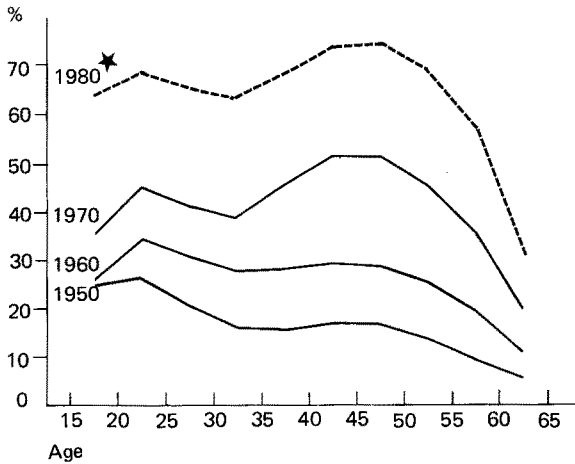


Fig. 1. Labour-force participation rates among married women.

Source: Bernhardt (1984).

*1980 refers to married and cohabiting women.

most women work in the interval between first and second birth [Bernhardt (1984)]. During the 1970s, the proportion of mothers with at least one child under three years who were actually at work during the survey week increased only moderately, from 30% (1970) to 39% (1980), but many of the women not at work – especially at the end of the 1970s – were on paid maternity leave. The proportions not in the labourforce declined dramatically – from 57% to 26% – between 1970 and 1980.

Table 1

Labour-force participation rates (%) for women with children, 1981. ^a

Number of children	Age of youngest child				Total
	0–2	3–6	7–10	11–16	
1	85.9	87.1	89.2	88.5	87.8
2	78.6	78.9	85.5	89.0	82.6
3 or more	63.3	69.4	74.4	80.9	69.0
<i>At least one child</i>					
Not married	81.0	83.7	88.1	89.2	84.9
Married	77.3	77.9	83.8	88.2	82.4

^a Includes women on maternity leave, whether paid or unpaid.

Source: Swedish Labour Force Survey, *Årsmedeltal 1981*, Statistics Sweden.

Thus the overwhelming majority of Swedish mothers have an attachment to the labour force, regardless of their marital status, number of children and age of youngest child. The reverse of labour-force attachment can be called 'home attachment'. Of course, persons may be out of the labour force for many reasons, including studies and military service, but for mothers with young children, not being in the labour force almost always means that they are 'homemakers'.

Sweden is probably one of the countries where the old 'breadwinner system' has given way most to the emerging 'egalitarian system' [Davis (1984)]. In a recent review of the status of women in Europe [Höhn (1982)], it was assumed that equality among the sexes was already more or less achieved in Sweden. This is no doubt an exaggeration [Gustafsson (1984)]; nonetheless it is of particular interest to study the impact of parenthood on the work activity of Swedish women. Are there still women who focus on home and family in such a society?

This paper examines and attempts to determine the characteristics of women who leave work at the time of their first birth for a period of at least one year. We limit the time perspective to one year for a number of reasons. Firstly, previous studies [Bernhardt (1984)] have shown that the major return flow to work outside the home occurs between 6 and 12 months after the birth, after which it stabilizes at a low level. Secondly, women who have not gone back to work within one year of their first birth most likely plan to have a second child without working in the interval between births. Thus still being at home 12 months after delivery would seem to indicate a relatively strong orientation towards home and family. A third reason lies in differences over time and between sub-groups of the population with respect to provisions for maternity leave. Paid maternity leave has been both extended progressively in duration during the period covered by our data and also extended to more women.¹ By taking a one-year period, *our definition of home attachment refers consistently to women who stayed at home after*

¹ Starting in 1955 with three months, paid maternity leave was increased to six months in 1963. Further improvements were implemented in the second half of the 1970s, and since 1980 it has been 12 months. Strictly speaking, it is parental rather than maternal leave [Nilsson (1984)]. However, only about 5% of the fathers concerned took parental leave in the period 1978–1983 [Gustafsson and Lantz (1985)]. Payment used to be restricted to women with at least nine months of gainful employment immediately prior to childbirth. Since 1974, all women receive some payment after childbirth, although the sums paid to those without nine months prior employment are largely symbolic; those employed receive 90% of their prior wage (for nine of their 12 months' leave since 1980).

first birth for a period definitely longer than that for which they received economic compensation at roughly the level of their previous wage. Note that any women on *unpaid* maternity leave more than one year after the birth are considered here as exhibiting home attachment, although they are still employed in the sense that they have a job to return to.²

3. Data and methods

The analysis presented here is based on data from the 1981 Swedish National Fertility Survey, in which 4,300 Swedish women between ages 20 and 44 were interviewed [WFS (1984)]. The information collected includes detailed retrospective work-life histories which, when combined with the women's cohabitation and fertility histories, make possible an in-depth analysis of the interaction between labour-force participation and fertility over the life cycle.

We use logistic regression to investigate which factors influence the probability that a women is still at home one year after the arrival of her first child. This probability is specified as $p = 1/(1 + \exp(-2U))$, where U is the sum of the parameters for the model specified. Assume that we have a model with three explanatory factors, A , B , and C , with levels i , j , and k , respectively; also that we want to include the interaction between A and B . The model then takes the form

$$0.5 \ln\left[\frac{P_{ijk}}{1 - P_{ijk}}\right] = \Gamma + A_i + B_j + C_k + AB_{ij}.$$

We used the LOGLIN programme to fit various models with main effects and interaction effects.³

Of the 4,300 women interviewed in the Swedish Fertility Survey, 2,875 could be included in the analysis because they had given birth to

² Women employed in the public sector have long had the right to *unpaid* leave for up to 18 months after delivery. This was extended to those in the private sector in 1979.

³ LOGLIN automatically produces the current value of a likelihood ratio and its degrees of freedom. The difference between the likelihood statistics for two different models (for example one with and one without a specific interaction term) was used as a test criterion (using the chi-square distribution with d.f. equal to the difference between the number of parameters estimated for the two models) of whether the term by which they differed improved the fit of the model significantly and should, therefore, be kept.

at least one child and were interviewed at least one year after their first birth. However, as we wanted to concentrate on substantively significant processes rather than isolating very unusual groups, we decided to limit the analysis to those women who were married or cohabiting one year after first birth. Only women who live in a partner relationship have any real choice to stay at home and take care of their baby themselves for any length of time: single women usually need to provide both for themselves and the baby. That they tend to return to the labour market more quickly was confirmed by our preliminary analyses [Bernhardt (1985)]. Mothers who were single one year after delivery were, therefore, excluded from the analysis presented here.

Preliminary analyses also showed that early labour-force withdrawal made a statistically significant additional contribution to the probability that a woman is still at home one year after her first birth. A woman was defined as exhibiting early labour-force withdrawal if she became a housewife more than three months prior to the birth of her first child. Early labour-force withdrawal was found to be very strongly associated with the woman's subsequent home attachment in all educational groups (table 2). Only 15% of the women actually stopped working or studying more than three months before the birth of their first child, but these women seem more determined than others to devote their energies to their homes and families. Two possible explanations for early withdrawal – other than more traditional familial and sex-role values – are poor health and a high level of economic well-being. As these two explanations cannot be disentangled from each other with the available data, it was considered more meaningful to focus in the subsequent detailed analysis on the 'mainstream' behaviour exhibited

Table 2

Observed frequencies of home attachment (%) one year after first birth, by level of education and early labour-force withdrawal. ^a

Education	Early labour-force withdrawal		
	No	Yes	Total
Low	60.0 (1069)	90.0 (290)	66.4 (1359)
Medium	43.7 (728)	86.4 (103)	49.0 (831)
High	28.8 (399)	73.9 (23)	31.3 (422)
All women	48.9 (2196)	88.2 (416)	55.2 (2612)

^a Data exclude single, non-cohabiting women. Sample sizes in parentheses.

Table 3
Numbers of observations, Swedish Fertility Survey, 1981.

	Level of education			
	Low	Medium	High	Total
Total number of women ^a	1547	890	438	2875
Single women ^b	188	59	16	263
Women with ELFW ^c	290	103	23	460
Women analyzed	1069	728	399	2196

^a Women born in 1936–1960 who had given birth to at least one child (twin births excluded) and were interviewed more than one year after first birth.

^b Neither married nor cohabiting one year after first birth.

^c Early Labour-Force Withdrawal = stopping work (or study) more than three months prior to first birth.

by those women who continue working or studying until just before the arrival of their first child.

The numbers of women excluded from the following analysis because of single status or early labour-force withdrawal are shown in table 3. Both these characteristics are most common among women with a low level of education and among women who gave birth before 1968 (not shown here).

4. The model

Previous analyses of how parenthood affects women's employment behaviour have included factors such as marital status, education, work experience and financial well-being as potentially significant independent variables. The data from the Swedish Fertility Survey do not contain any measure of financial well-being at the time of first birth. We can extend the analysis, however, by including the woman's age at first birth, social background and duration of union. In addition we include a time variable indicating the calendar period in which the birth occurred. All the variables are categorical (see table 4 for the categories used and sample sizes).

Higher *education* is expected to entail higher work commitment and greater opportunity cost of absence from the labour market. Earlier studies [Bernhardt (1984)] have shown that there are substantial differences between women with different levels of education in the extent

Table 4
Observed frequencies of home attachment (%) one year after first birth.^a

	Level of education ^{b,c}		
	Low (< 1 year)	Medium (1–3 years)	High (4+ years)
<i>Period (date of first birth)</i>			
–1967	70.0 (485)	54.8 (166)	30.4 (69)
1968–1974	55.6 (403)	39.5 (304)	25.9 (166)
1975–1980	43.6 (181)	41.5 (258)	31.1 (164)
<i>Union duration at first birth</i>			
Short (< 8 months)	68.3 (401)	53.2 (156)	42.9 (42)
Long (8+ months)	55.1 (668)	41.1 (572)	27.2 (357)
<i>Civil status one year after first birth</i>			
Cohabiting	49.2 (317)	40.2 (179)	24.5 (49)
Married	64.6 (752)	44.8 (549)	29.4 (350)
<i>Age at first birth</i>			
< 20	66.9 (314)	53.3 (75)	0.0 (0)
20–22	61.5 (369)	49.6 (242)	26.1 (46)
23–25	53.6 (235)	40.3 (231)	28.6 (154)
26+	52.3 (151)	36.1 (180)	29.6 (199)
<i>Social background (socio-economic group of family of origin)</i>			
Unskilled worker	59.3 (391)	47.9 (190)	32.7 (49)
Skilled worker/Lower-level employee	60.6 (305)	41.1 (219)	29.8 (84)
Middle/Higher-level employee	59.7 (72)	43.4 (106)	27.3 (143)
Farmer/Self-employed	60.5 (301)	42.7 (213)	28.5 (123)
All women	60.0 (1069)	43.7 (728)	28.8 (399)

^a Figures exclude both unmarried, non-cohabiting women and those with early labour-force withdrawal. Sample sizes in parentheses.

^b Defined in terms of years of education after the school-year in which the women reached age 16.

^c For details, see Jan. M. Hoem, 1985, The impact of education on modern union initiation, *Stockholm Research Reports in Demography*, no. 27.

of their labour-force participation over the life cycle (fig. 2). Among women born in 1941–1945, the average time devoted to full-time housework between ages 17 and 35 was 7.3 years for women with a low level of education, 5.6 years for women with a medium level, and only 2.1 years for women with a high level. It can be anticipated, therefore, that the longer the woman's education, the less likely she is to remain at home one year after her first birth. The observed marginal frequencies of home attachment one year after first birth suggest that length of education plays a decisive role for Swedish women (table 4). This was

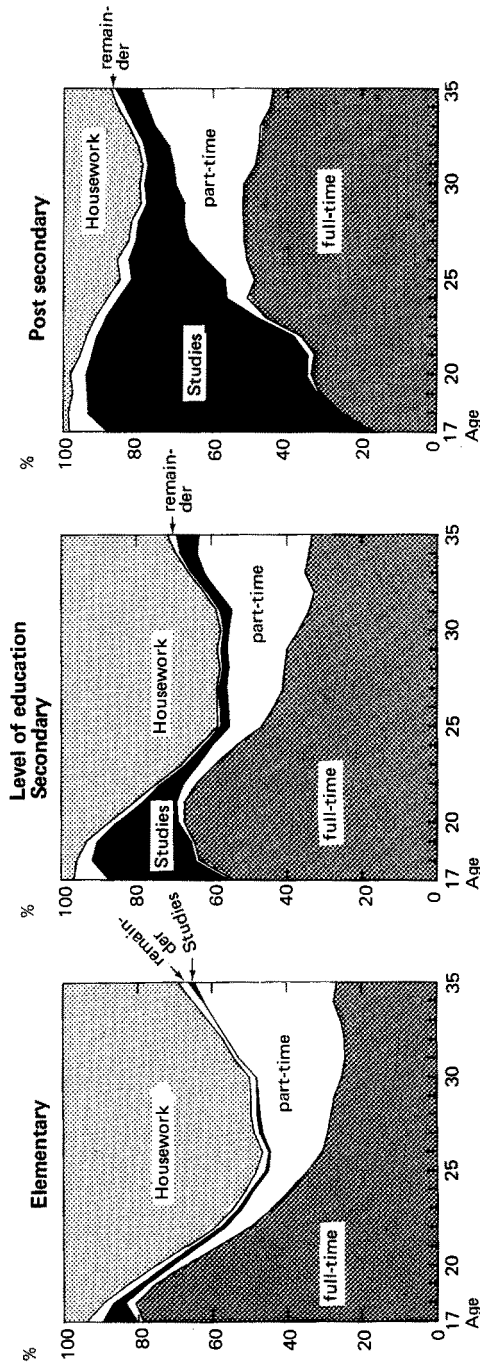


Fig. 2. Employment patterns over the life cycle among different educational groups.

Source: Bernhardt (1984), women born 1941-1945.

confirmed by our preliminary multivariate analyses [Bernhardt (1985)].

To investigate whether women in different educational groups exhibit decisively different patterns of home attachment, our analysis here is performed separately for each educational group. This also enables us to disentangle the effect of education from that of other variables with which it might be correlated, such as social background.

The marital status dimension merits a few extra comments in the Swedish context, since cohabitation without marriage has become such a common phenomenon in Sweden. The women were characterized as being single (i.e., not married and living alone), cohabiting (not married but living with a man) or married (living with a husband). This *civil status* variable is defined here as status one year after the birth.⁴ Thus women single at first birth but married or cohabiting one year later were included in the analysis, while women who had changed status from married or cohabiting to single were excluded.

Marriage has generally been found to reduce women's labour-force participation. However, the relevant comparison here is between married women and unmarried cohabiting women, not between married and single women. In objective terms, there is nowadays little difference between the situation of married and cohabiting women in Sweden. With a few exceptions, such as inheritance (a cohabiting woman does not automatically inherit from her partner), the same public rules and benefits apply. Subjectively, one might suspect, however, the cohabiting women feel less 'secure' than those who are married. There is also reason to believe that women who are strongly work-motivated feel less need to get married, as they intend to work and support themselves anyway. In the Swedish context, it can therefore be anticipated that married women are somewhat more likely to stay at home one year after first birth than are cohabiting women.

McLaughlin (1982) found that *work experience* reduced home attachment. In our preliminary analyses [Bernhardt (1985)], both work experience and *age at first birth* were included as explanatory factors. This is problematic, however, since there is a high correlation between these two variables: the lower the age at first birth, the shorter the time available for the woman to accumulate prior work experience. The time available also depends on the age at which the woman finishes school,

⁴ Inclusion of civil status at the birth in addition to status as one year later [Bernhardt (1985)] complicated the analysis without corresponding benefits.

which in turn determines her achieved level of education. It can safely be assumed that given the age at which the woman finished school (which does not vary much within each of our educational groups), age at first birth and work experience measure more or less the same thing.⁵ We chose to use age at first birth as an indicator of work experience rather than a more direct measure of work experience, because age is always measured exactly whereas work experience is reported retrospectively. Very low age at first birth is likely to mean a tenuous labour-force attachment, whereas very long work experience might indicate a more responsible position in the labour market and thus a tendency to return to work more quickly.

As to *social background*, women growing up in working-class homes can be expected to have different attitudes about appropriate sex roles than daughters of salaried employees, especially middle and high-level employees. The sex-role attitudes of women from a working-class background (also of daughters of farmers and the self-employed) are likely to lead to greater incompatibility between the roles of worker and mother and therefore to a higher level of home attachment.

A short *union duration* (defined as less than 8 months at first birth) means that the woman was pregnant when she started the union. This might indicate an unplanned pregnancy, whereas a long union duration, if deliberate, is indicative of a higher degree of planning. We expect a negative association between union duration and home attachment. Our preliminary analysis [Bernhardt (1985)] showed that there was no difference between union durations longer than 8 months: in the analysis presented here, therefore, we distinguish only between short (less than 8 months) and long (8+ months) union duration.

Finally, the *calendar period* in which the birth took place was included since during the period under study, i.e., from the mid-50s up to 1981, the general trend has been toward more work outside the home among mothers with young children.

To summarize, five independent variables were included in a logistic regression model of factors affecting the probability that a woman is still at home one year after the birth of her first child. The variables were calendar period, civil status, age at first birth (reflecting work experience), social background and union duration. The dependent

⁵ In Sweden it is rare for women to have long periods at home before their first birth. Moreover, our analysis excludes those who left employment more than three months before the birth.

variable, home attachment, distinguished between women who in their work-life histories reported themselves as 'housewives' one year after first birth and those who did not. Some of these housewives may have been on unpaid (and in rare cases on paid) maternity leave. However, the important point for the analysis is that they were *not at work* (nor full-time students). The analysis was carried out separately for each of three education groups (level of education achieved at first birth). In addition to the main effects, certain interactions were also tested, namely those that had been found significant in our preliminary analyses [Bernhardt (1985)]. These were the interactions between period and union duration, period and social background, period and civil status, civil status and social background, and civil status and age at first birth. Utilizing this advance information we started with the 'maximum' model, which included all main effects and relevant interactions, and worked backwards sequentially excluding interactions and main effects that were not found necessary for the fit of the model. In the end we were left with the 'best' model for each educational group.

5. Findings

The estimated coefficients for the final model for each education group are given in table 5.

5.1. *Women with a low level of education*

Women with a low educational level (defined as no more than one school-year's education after age 16) start working at an early age. They also tend to have their first birth relatively early. Of the women who were married or cohabiting one year after their first birth, almost 30% had given birth to their first child before their 20th birthday, two-thirds under 23 years of age and only 14% over age 25 (table 4). Thus, although they left school early, most of them had not accumulated very long work experience by the time they became mothers.

The observed proportions at home decline with our indicator of work experience, age at first birth (table 4), as do the parameters in the model (not shown). However, the age-at-first-birth factor was not found necessary for the fit of the model and was therefore dropped. Longer work experience does not seem to make women with low

educational levels significantly more prone to be back at work one year after first birth. Neither does social background play any significant role for these women.

The only interaction found necessary in the model was that between *period and union duration* (table 5). The main-effect parameters for union duration show that women who were pregnant when they started living with a man were more prone to stay at home one year after delivery, while the period effect indicates that home attachment has decreased over time. The parameters of the interaction switch signs in the intermediate period (1968–1974). The positive effect of having a short union duration is strongest in the middle period. During the first period, i.e., the period when it was most common to be pregnant at the beginning of marriage or cohabitation,⁶ a pre-union pregnancy had less effect on home attachment than later on when a short union duration became more ‘deviant’ (and consequently more selective of certain types of women). The effect was also smaller in the last period (1975–1980), however, when the proportion of women with pre-union pregnancies had declined even further: by then the association between pre-union pregnancy and subsequent home attachment had weakened.

In addition to calendar period and union duration, civil status was found to be of importance for women with a low level of education (main effect only). Married women are more inclined to stay at home one year after first birth than are cohabiting women. This could also be interpreted to mean that among women who get married before or right after the arrival of their first child, there is a selection of more home-oriented women.

The effects that make significant contributions are generally in the expected direction and fairly easily interpretable. The one exception is union duration. It is not immediately clear to us why women who are pregnant when they start living with a man should be more inclined to stay at home one year after delivery. If a pre-union pregnancy is part of a life-style marked by a lack of planning, it is likely that such women are less able than others to make the child-care arrangements that are necessary if they are to work outside the home. Although Swedish public policy has put considerable emphasis on establishing a system of

⁶ The proportion of women with a low educational level who were pregnant at the start of cohabitation decreased from 55% in the period before 1968, to 26% in 1968–1974 and 17% in 1975–1980.

Table 5
Regression coefficients, final model, by educational group.

		Education		
		Low	Medium	High
<i>Intercept</i>		-0.153	-0.082	-0.318
<i>Main effects</i>				
<i>Period</i>			($p = 0.015$) ^{c3}	
-1967		0.175	0.169	a
1968-74		0.044	-0.111	a
1975-80		-0.218	-0.058	a
<i>Union duration</i>				($p = 0.017$) ^{c5}
Short		0.110	a	0.175
Long		-0.110	a	-0.175
<i>Civil status</i>		($p = 0.0008$) ^{c1}		
Cohabiting		-0.128	a	a
Married		0.128	a	a
<i>Age at first birth</i>			($p = 0.029$) ^{c4}	
< 20		a	0.148	a
20-22		a	-0.094	a
23-25		a	-0.088	a
26+		a	-0.153	a
<i>Interactions</i> ^b				
<i>Period</i>	<i>Union duration</i>	($p = 0.023$) ^{c2}		
-1967	Short	-0.082	a	a
	Long	0.082	a	a
1968-74	Short	0.125	a	a
	Long	-0.125	a	a
1975-80	Short	-0.043	a	a
	Long	0.043	a	a

^a Variable excluded from final model because it did not significantly improve the fit.

^b Only the one interaction found necessary to fit the models is listed here.

^{c1-c5} Comparison of the results shows that in each case the model cited second below gives a significantly better fit than that cited first: ^{c1} Period, union duration and period/union-duration interaction - same plus civil status; ^{c2} Period, union duration and civil status - same plus period/union-duration interaction; ^{c3} Age at first birth - same plus period; ^{c4} Period - same plus age at first birth; ^{c5} No covariates - union duration.

communal day-care centres, they are by no means adequate to meet the demand: parents cannot count on being able to place their firstborn in such a centre as soon as the need arises. This was even more the case in the beginning of the period under study than later in the 1970s. If on

the other hand the pre-union pregnancy is deliberate, this would indicate that the woman (or couple) is in a hurry to start a family, and such a family-oriented attitude may be accompanied by a high degree of home attachment. In both cases, there would seem to be a selection effect more than a direct causal effect of short union duration on home attachment. A third possibility is that the short union duration is neither planned nor completely unplanned – the pregnancy just occurred a little earlier than intended. In such cases there might be a 'suddenness' or 'overload' effect: the task of setting up a new home and arranging for a new family member all at once may be so absorbing that it acts as a deterrent to an early return to the labour market.

We find none of these explanations terribly convincing. Each may play a role, but even taken together they seem unlikely to account for the strength of the factor. It seems more probable that what is captured here is, to a large extent, an age effect, since short union durations are concentrated at young ages (table 6). A combination of little work experience with the sort of relatively uninteresting routine work generally available to women with low education, could make the opportunity costs of an unplanned pregnancy and withdrawal from the labour market rather low. Another phenomenon that may have been of importance is the increased accessibility of abortion during the 1970s, in combination with better methods of contraception. This is likely to have reduced the proportion of births from accidental pregnancies at short union durations, so that the ever smaller proportion of women who had births at short durations were increasingly selected for little motivation to prevent an early pregnancy.

Table 7 illustrates the combined effect of the significant factors (and the one interaction). The standardized proportion exhibiting home

Table 6
Percentage pregnant at the start of their union.

Age at first birth	Level of education		
	Low	Medium	High
< 20	68	65	–
20–22	36	31	33
23–25	15	8	10
26+	12	7	6

Table 7

Standardized frequencies of home attachment (%) one year after first birth among women with a low level of education.^a

Union duration:	Cohabiting		Married	
	Short	Long	Short	Long
<i>Period</i>				
-1967	61.2 (44)	58.5 (20)	72.4 (221)	70.2 (200)
1968-1974	64.8 (65)	41.7 (84)	75.4 (41)	54.4 (213)
1975-1980	43.7 (23)	37.3 (81)	56.4 (7)	49.8 (70)

^a Calculations are based on model parameters in table 5, and exclude both unmarried, non-cohabiting women and those with early labour-force withdrawal. Sample sizes in parentheses.

attachment for a given category of women is simply the home attachment probability for that category as estimated by the fitted model. Table 7 clearly demonstrates that before 1968 there were relatively small differences: married women with little education were slightly more inclined to be at home than cohabiting women, but the effect of union duration was trivial. Between 60% and 70% of the women were full-time housewives one year after first birth, regardless of their combination of attributes.

In the 1968-1974 period, women who were not pregnant at the start of cohabitation became much less inclined to stay at home, while pregnant women stuck to their previous behaviour pattern. This holds for both married and cohabiting women. Towards the end of the 1970s, women with a pre-union pregnancy almost caught up with the others. The level of home attachment was then down to less than 50% except for married women with a pre-union pregnancy (who formed a distinctly minority group in that period).

It may seem surprising that women pregnant at the start of their union, who have become an ever more select group, exhibit such a noticeable decrease in their level of home attachment at the end of the 1970s. One may speculate that counteracting effects of an economic nature have induced these women, most of whom can be assumed to have a rather weak work commitment, to resume working within one year of first birth.

5.2. *Women with a medium level of education*

Women with between one and four school-years of education between their 16th birthday and their first birth rarely give birth before

age 20. Two-thirds of them are between 20 and 25 years of age when they become mothers, about evenly distributed between the two age groups 20–22 and 23–25 (table 4).

Again we found that social background was of no importance for the degree of home attachment at first birth. In contrast to women with a low level of education, however, the behaviour of those with a medium level did not seem to be significantly influenced by either civil status or union duration. No interactions were found to be necessary, only the two main factors *period* and *age at first birth* (table 5). The parameters of the age-at-first-birth factor, reflecting work experience, show a systematic pattern of decline with age. We find this negative effect of work experience on home attachment of considerable substantive interest. That women with longer work experience are less likely to be housewives one year after first birth may well be a selection effect more than a causal one though: work-motivated women may tend to make sure that they have enough work experience before they take on the responsibilities of motherhood.

The period effect is significant, as it was for the low education group, but the parameters show quite a different pattern. There is a decline in home attachment between period 1 (before 1968) and period 2 (1968–1974), but after that there is a *reversal* rather than continued decline. It is hard to interpret this slight increase in home attachment. Perhaps these women have reached the limit, or the optimum level ('this far but no further') and that, taking advantage of the improvements in maternity provisions, slightly more were able to stay at home for at least one year after first birth in the 1975–1980 period. This does not mean that there has been an increase in permanent or long-term

Table 8

Standardized frequencies of home attachment (%) one year after first birth for women with a medium level of education.^a

Period	Age at first birth			
	< 20	20–22	23–25	26 +
–1967	61.5 (28)	59.0 (62)	50.0 (53)	46.7 (23)
1968–1974	47.7 (34)	45.1 (92)	36.3 (101)	33.3 (77)
1975–1980	50.4 (13)	47.7 (88)	38.8 (77)	35.7 (80)

^a Calculations are based on model parameters in table 5, and exclude both unmarried, non-cohabiting women and those with early labour-force withdrawal. Sample sizes in parentheses.

home attachment. To the extent that this apparent trend reversal is real, we suspect that it is more a matter of extending the period of work interruption from less than one year to a slightly longer period.

5.3. *Women with a high level of education*

A high level of education is defined here as more than four school-years of education between age 16 and first birth. No woman in this education group could give birth before age 20; almost 90% were at least 23 before they became mothers.

Very little seems to affect the determination of these women to start working within one year after first birth. We find no significant period effect, the propensity to be at home one year after delivery being low throughout the period. Nor do social background, civil status or age at first birth appear to influence behaviour significantly in this group.

The only factor found necessary in fitting the model was *union duration*. This positive effect of a short union duration on home attachment is at least as strong for highly educated women as for women with a low level of education. As highly educated women tend to be more efficient contraceptors [Jones et al. (1980)], accidental pregnancies are less likely to occur among them, and unwanted pregnancies are more likely to be terminated by abortion because an unplanned birth would entail a higher opportunity cost. Although the effect of a pre-union pregnancy is strong, it should be recalled that only about 20% of women in this educational group are pregnant at the start of the union. The effect thus only marginally changes the overall impression that highly educated women have a low degree of home attachment one year after first birth, no matter what.

5.4. *The changing pattern over time*

The preceding account demonstrated a distinct period effect for women with a low or medium level of education (highly educated women already had low levels of home attachment at the beginning of the period covered). In particular it seems to make a difference whether the birth occurred before or after 1968. What makes the 1968–1974 period in particular different from that before 1968? One aspect that would seem to be relevant in this connection is the availability of modern contraception and legal abortion. The contraceptive pill was

introduced in Sweden in 1964, the IUD in 1967, and abortion was liberalized in practice in the late 1960s and early 1970s (although the law was not formally changed until 1975). In a period with less efficient contraception and strictly limited availability of legal abortion, it was presumably more of a random event if premarital/precohabitational sex resulted in a birth. There may have been some selection of the super fecund and of women or couples with little motivation to prevent an early pregnancy, but the second of these selection processes must have been greatly strengthened with the improvement in fertility-control possibilities from the mid-1960s.

To analyze the changing pattern over time better, we grouped the births according to whether they occurred in the period before or after 1968, and fitted logistic regression models to these two periods separately. The main factors included in the 'maximum' model, with which we started our fitting experiments, were education, civil status, work experience and union duration.⁷ For the 1968–1980 period we also had a time variable indicating whether the birth took place in 1968–1974 or in 1975–1980. All possible pairwise interactions were added one at a time, but none was found necessary for the fit of the model.

For the period before 1968, both *education* and *civil status* made a statistically significant contribution to the probability that a woman was still at home one year after first birth. These two factors were also significant in the period 1968–1980, although the parameters (table 9) indicate that they had less effect after 1968 than before. The main difference between the two periods is that *short union duration* was found to increase our measure of home attachment significantly in the period 1968–1980 but not in the earlier period. Work experience was not found necessary for the fit of the model in either period. In the 1968–1980 period it made no difference if the birth took place before or after 1975. Thus the reversal of the trend towards the end of the 1970s which was found for women with a medium level of education did not come through here, probably because it was counteracted by the simultaneous decline in home attachment among women with a low level of education .

⁷ Social background was omitted since it was not a significant factor for any educational group. Achieved level of education at first birth was included. Since age at first birth is strongly correlated with achieved level of education, it was not possible any more to use age at first birth as a proxy for work experience. Instead we used a direct measure (less than two years versus two or more years).

Table 9
Regression coefficients, final model, by period.

	Period	
	-1968	1968-1980
<i>Intercept</i>	-0.131	-0.113
<i>Main effects</i> ^b		
<i>Education</i>	$(p = 0.16 \times 10^{-12})^{c1}$	$(p = 0.16 \times 10^{-9})^{c3}$
Low	0.412	0.242
Medium	0.063	0.011
High	-0.476	-0.253
<i>Civil status</i>	$(p = 0.0014)^{c2}$	$(p = 0.011)^{c4}$
Cohabiting	-0.198	-0.079
Married	0.198	0.079
<i>Union duration</i>		$(p = 0.30 \times 10^{-6})^{c5}$
Short	a	0.187
Long	a	-0.187

^a Variable excluded from final model because it did not significantly improve the fit.

^b No interactions were found necessary to fit the models.

^{c1-c5} Comparison of the results shows that in each case the model cited second gives a significantly better fit than that cited first: ^{c1} Civil status - same plus education; ^{c2} Education - same plus civil status; ^{c3} Civil status and union duration - same plus education; ^{c4} Education and union duration - same plus civil status; ^{c5} Education and civil status - same plus union duration.

When present, the union-duration factor is not only significant but also rather strong. This confirms our previous expectation of a strengthened selection mechanism in a period of modern contraception and free abortion. Women who are planning-minded and anxious to have both a secure job attachment and a well-tested partner relationship before they get pregnant, would tend to have a long union

Table 10
Standardized frequencies of home attachment (%) one year after first birth: births before 1968.^a

Education	Cohabiting	Married
Low	54 (64)	72 (412)
Medium	37 (14)	56 (152)
High	17 (1)	31 (68)

^a Calculations are based on model parameters in table 9, and exclude both unmarried, non-cohabiting women and those with early labour-force withdrawal. Sample sizes in parentheses.

Table 11
Standardized frequencies of home attachment (%) one year after first birth: births in 1968–1980.^a

Education	Union duration	Cohabiting	Married
Low	Short	62 (88)	69 (48)
	Long	43 (165)	51 (283)
Medium	Short	50 (47)	58 (43)
	Long	32 (118)	40 (354)
High	Short	37 (13)	45 (16)
	Long	22 (35)	28 (266)

^a Calculations are based on model parameters in table 9, and exclude both unmarried, non-cohabiting women and those with early labour-force withdrawal. Sample sizes in parentheses.

duration and are highly likely to resume work again within a year of their first birth. On the other hand, women who are less anxious to maintain an attachment to the labour market would see no particular reason to postpone the start of family building. They intend to have children and may feel that you might as well have them sooner rather than later. It therefore seems reasonable that a pre-union pregnancy is associated with a high degree of home attachment in the later period.

The decreasing importance over time of the education and civil-status factors may be related to a more even distribution between the categories in the later period. Before 1968, the low education group was dominant (67%), as was being formally married (89%). In other words, both a high educational level and informal cohabitation were more 'deviant' before 1968 than in the later period. This will have tended to change the meaning of high education and informal cohabitation, or – put in other words – to change the selection mechanism to be less restricted to women with strong work motivation.

6. Summary and conclusions

Our analysis has revealed that the degree of women's home attachment one year after first birth is strongly related to their educational level. Highly educated women seem to have established a pattern of low home attachment already by the mid-1950s, while women with little education exhibit a progressively decreasing tendency to remain at home. Women in the intermediate educational group first became less

prone to stay at home, comparing the 1968–1974 period with that before 1968. After 1974, they showed a reversal of this trend however. This may be due to improvements in the rules for paid and unpaid maternity leave and/or the persistent problems of the emerging egalitarian system [Davis (1984)]. Home duties are unevenly distributed between the mates in Sweden, especially when there are small children in the household [Nordenstam (1984)], and improvements in child-care provisions have been inadequate to meet the rising demand.

The differential impact of transition to parenthood has become less pronounced over time, with different groups of women tending to become more alike in their behaviour. Still, highly educated women continue to have a substantially lower degree of home attachment than other women.

Women who focus on home and family have tended to become an ever smaller and more select group. Many of these women seem to manifest their intention to stay at home by leaving work well before their first birth and by starting a family as soon as possible. In fact, the most pervasive of all predictors of home attachment one year after the first birth is early labour-force withdrawal. The 15% of women who stop working more than three months before their first birth are significantly more inclined to be at home one year after it. This result would seem to corroborate the finding of Waite et al. (1984) for the US that the effect of parenthood is restricted largely to a sub-group of women who leave work before first birth.

For the other women (excluding those single one year after first birth, most of whom are obliged to be at work to support themselves and their child), marriage is associated with higher home attachment for women with a low level of education but not for other women. Longer work experience, as measured by age at first birth, is of importance in decreasing home attachment only for women with a medium level of education. Social background was not found to have any significant effect by itself in any educational group. Thus hypothesized social-background differences in sex-role attitudes and in perceived role incompatibility for working mothers were not confirmed in this analysis, except via the intervening educational variable.

On the other hand, being pregnant at the start of the union is associated with a significant increase in the degree of home attachment. Although this effect was not significant for the intermediate education group, it was strong for both the high and the low education groups.

The effect is, however, difficult to interpret, since pre-union pregnancy is strongly related to age at first birth. Women who are pregnant at the start of a family union tend to be young (and possibly selected for high fecundity). It is difficult to disentangle the effect of young age, short work experience and early pre-union pregnancy.

Separate analysis of the periods before and after 1968 showed that the effects of education and civil status were significant in both periods, but their importance has decreased over time. In contrast, the effect of being pregnant at the start of the union was significant in the 1968–1980 period but not before. We interpreted this to mean that modern contraception and free abortion have strengthened the mechanism which selects women or couples with little motivation to prevent an early pregnancy and that the latter is associated with weak work commitment.

As the attributes that have tended to increase home attachment have become ever rarer phenomena in Swedish society, women's home attachment at first birth is likely to remain at a low level. We expect, however, to find far-reaching implications of home attachment at first birth for both the subsequent labour-force activity and family building of the women concerned.

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