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*Research Materials*

**Life-table representations of family  
dynamics in Sweden, Hungary, and 14  
other FFS countries:  
A project of descriptions of demographic  
behavior**

**Gunnar Andersson**

**Dimiter Philipov**

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**Life-table representations of family dynamics in Sweden, Hungary,  
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A project of descriptions of demographic behavior**

**Gunnar Andersson<sup>1</sup>**

**Dimiter Philipov<sup>2</sup>**

**Abstract**

In this study, we present a system of descriptions of family-demographic behavior in developed countries. We use life-table techniques in order to describe the experience of men, of women, and of children in processes related to family formation and family dissolution. We develop a large number of descriptive measures, and apply them to survey data from Sweden, Norway, Finland, France, the USA, Austria, Germany (East and West Germany separately), Flanders, Italy, Spain, the Czech Republic, Hungary, Slovenia, Latvia, Lithuania, and Poland, in order to describe patterns in the family-demographic behavior during the late 1980s - early 1990s. We use Sweden and Hungary as examples when presenting the outline of our system of tabulations and provide results for the whole set of countries in an Appendix to the paper.

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## 1. Introduction: Creative description

Any sound investigation of a demographic phenomena must originate from some knowledge about its very basic patterns: how common the demographic event of interest is, at what ages it typically occurs, and how such patterns in a country differ from those in other countries and periods. During the last few decades we have witnessed an upsurge in research on family dynamics in developed countries. This is following an observed, or at least perceived increase in the diversity that people tend to organize their family lives. A vast amount of research has been carried out in order to explain the character of this “second demographic transition” (using the terminology of van de Kaa 1987 and Lesthaeghe 1995), and to examine the role of different determinants of, for example, union formation and union dissolution in explaining new patterns of behavior.

The role of the present study is not to provide any further investigation of determinants of family-demographic behavior. It is instead carried out in the belief that there is still a need for more and better basic descriptions of the actual state of family dynamics and of life courses of individuals in Europe and in other developed countries. We think it is important, still, to have a better overall picture of the state of affairs in family demography. Then one knows exactly *what* there is to explain before one starts to look for explanations for various types of phenomena and before one turns to more sophisticated means of analysis. The aim of our study therefore is to provide a detailed picture of existing patterns of family-related life trajectories of people in a wide range of European countries and in the US.

Various related descriptions of family-demographic behavior in developed countries have been presented elsewhere. Inspiring examples are, for example, the large number of descriptive tabulations on cohabitation and extra-marital childbearing in a range of Western European countries provided by Kiernan (1999a,b, 2000), the description of patterns in cohabitation in the United States by Bumpass and Lu (2000), and a recent set of comparisons of children’s experience of family structure in a large number of developed countries by Heuveline et al. (2001). In the present study, we aim at getting a coherent system of description of family-demographic behavior by covering a large number of countries as well as a variety of event-history processes with a standard set of descriptive measures. We cover different aspects of family formation and of family dissolution from the point of view of men, of women, and of children, and describe these processes by applying well-known life-table techniques to available survey data. We believe that the use of life-table estimates on family-demographic topics might become more useful as standards in family-demographic description than they are today. We hope that our elaborated set of descriptive devices can serve as a raw model when producing further descriptions of demographic behavior in other countries, and in other periods than those we cover. In any case, we are confident that the richness

of our tabulations will provide for a better picture of the actual state of family dynamics in the countries concerned and that they can serve as a basis for more in-depth cross-country comparisons.

In our presentation, we develop our descriptive measures and apply them to data from 15 of the countries that participated in the last round of Fertility and Family Surveys (FFS) conducted in Europe between 1989 and 1997. In addition, we use corresponding data from the US National Survey of Family Growth of 1995 in order to contrast patterns in Europe to those prevailing on the other side of the Atlantic. We use the data from just two countries, Sweden and Hungary, in order to present the outline of our system of demographic description and to give an example of what kind of cross-country comparisons that can be made with it. This pair of countries offers a contrast between the demographic regime of one modern Western European country and that of one former Soviet Bloc country. Both countries have a long tradition of demographic research so we are well equipped to judge the validity of the results we present. We provide the complete tabulations covering all countries examined, in a readable manner in an Appendix to this paper. As an additional service, we offer our tabulations in the form of a set of Excel files to those who want to use our results for further purposes. These files can be downloaded from the present online article in Section 9. The Appendix as well as the Excel files are also made available at the article's HTML start-up page.

## **2. Life-table descriptions**

Most of our descriptive measures are based on well-known life-table techniques. The life table is as old as important basic tool for the analysis of any survivor pattern of a population. In addition, it can readily be linked to modern event-history analyses where explanatory variables are brought into the picture in order to explain existing patterns of decrements from the study population. While originally being used in studies of mortality, it can be used as well to describe any type of survival in a certain state. We will make ample use of such applications by depicting the survival of individuals in various family-demographic states. We discuss different versions of life-table descriptions as they appear in our presentation but refer to standard text books in demography and statistics, like that of Preston et al. (2001), for a more in-depth technical description of the foundations of the life table. Hoem (2001) gives a neat overview of the topic.

In our study, we have constructed our life tables from the notion of a synthetic cohort, based on the information pertaining to a period immediately before each FFS survey of interest. While a calculation of life tables for a real birth cohort of men,

women, or children, or a real marriage cohort, is a straightforward matter, it requires that one can follow the cohort of interest up to the highest age limit of the tabulation, for example up to age 40. We prefer to be able to say something about the demographic behavior during the most recent calendar period. For that purpose, we construct a life table based on transition probabilities calculated from reported events of a specific kind and recorded months of exposure to that event during our period of interest, i.e., during the latest period for which we have data, so that we can describe the most recent patterns of family-demographic affairs. As any synthetic-cohort measure, our life tables thus give information on the demographic pattern that would arise if the calculated age-specific transition probabilities prevail during a generation or so.

In principle, we present three broad groups of tabulations. First, we give a number of measures of various aspects of family formation of men and of women in the countries under investigation (Tables 1-16, presented in Section 5). These show the cumulative percent of men and of women who would have experienced a specific demographic event by single-year ages from the 15<sup>th</sup> to the 40<sup>th</sup> birthday. As a matter of fact, we would like to extend these tabulations beyond age 40, but since most family related surveys are directed only to respondents at “reproductive ages” (for actual age ranges, see Table A), we have to end our calculations at that age. Secondly, we present a number of measures of various experiences of men and women in unions at these ages, by duration of union, from union formation up to 15 years after that event (Tables 17-28, presented in Section 6). Here we use the union as our unit of observation and we pool the information on unions as reported by women and men. We report various types of experiences in different types of unions. For example, we report the cumulative percent of consensual unions who are being dissolved or are being transformed into a marriage by single-year durations up to the 15<sup>th</sup> birthday of the union. Again, we would actually like to extend our tabulations into higher duration intervals but the age profile of existing survey respondents also makes that kind of extension unfeasible (Note 1). Thirdly, we present various life-table measures of children’s experience of family formation and of family dissolution (Tables 31-44, presented in Section 8). These measures are all calculated from the information given by their mothers’ reports of union events during their reproductive ages and they are in most cases presented by single-year ages for the child, from birth to the 15<sup>th</sup> birthday (Note 1). We present separate calculations for children born to a lone mother, children born to a cohabiting mother, and children born in marriage so that we can depict the different family-transformation events that can occur in each type of family. Finally, we summarize with a number of tables and figures that give the fractions of total time that men, women, and children reportedly spend in various family types during their reproductive ages or during childhood (see Sections 7 and 8.5).

In our tables, we present measures such as “the cumulative percentage of men and women who have ever experienced the event of entering a first union”, by single-year ages attained from the situation at the 15<sup>th</sup> birthday to the 40<sup>th</sup> birthday. In the tabulations, we also present a number of mean and percentile values in order to derive some summary information from our life tables. For example, we present values of mean ages of transition for those men and women who actually experience the event of interest before the upper age limit of 40 years. For children the upper age limit is 15 years, and we also follow unions until their 15<sup>th</sup> anniversary. We may refer to these mean values as conditional means in that they are conditional on the occurrence of an event before the upper age limit of the table. We also present the first exact age where at least 10, 25, 50, and 75 percent of the synthetic life-table population have experienced the event under study, i.e., ages of the first decile, the first quartile, the median, and the third quartile.

When we follow unions, and also when we follow children, we sometimes give yet another type of mean value. This value is calculated at the upper age limit of the life table as the mean duration of all episodes of the synthetic population, regardless of whether they are censored at that time horizon or whether individuals have experienced the event under study before that age. These truncated mean values give information on the average amount of time that is spent in a certain family status during the interval we study, i.e., during the first 15 years from union formation or birth.

### 3. Data

Our tabulations are based on raw data gathered at the Fertility and Family Surveys that were conducted in a large number of European countries in 1989-1997. We have used comparable data from the US National Survey of Family Growth in order to derive corresponding tabulations for the USA. The data have been provided to us by the Population Activities Unit in Geneva. However, for Sweden we have used instead a cleaned national version of the data.

We have calculated life tables for the following countries: Sweden, Norway, Finland, France, the USA, Austria, Germany, Flanders (Note 2), Italy, Spain, the Czech Republic, Hungary, Slovenia, Latvia, Lithuania, and Poland. In our calculations of life tables for Germany, we have treated the Eastern and Western parts of the country as two separate entities. We have not used existing FFS data from Bulgaria and Portugal since they do not contain union histories of respondents and thus are not suitable for calculations like ours. Existing data from the Netherlands are, at present, unavailable to

researchers outside that country, but it is still possible to add data from a number of other countries to our descriptive analysis (Note 3).

### **3.1 Cleaning procedures**

Before calculating the various life-table measures we present, it was necessary to perform a considerable amount of data cleaning. As a result, we have removed a number of respondents from the initial study population with incomplete information or illogical sequences of events. The raw data for Austria and Germany, just to mention one example, contained a large number of observations with no dates of union formation for respondents who reported that they had experienced at least one union, so we had to exclude them from our study population. Table A contains the total number of male and female respondents, mothers, and children of female respondents that, for each country, remain in our data set after our cleaning. It also gives the age ranges of respondents. We use the available demographic information of these remaining individuals, pertaining to the calendar-period that we want to investigate, when we perform our calculations. We do not include any children as reported by fathers since children more often co-reside with a mother than with a father and therefore larger segments of children's lives are missing in their reports.

When we found a case with missing information, suggesting that we could not use it in our computations of life tables, we first tried to impute the piece of information that was missing, or we had to exclude the individual from our study population. Most of our cleaning procedures refer to cases that are lacking dates of reported events. In cases where we know the year of a reported event but not its month, we can often impute the value of the latter. This is possible when there is no other family-demographic event reported for the same year or when we know if any other event has occurred before or after the incompletely reported event (for example, if we know a date that refers to a preceding or a subsequent union). In the case of remaining inconsistency in reports of childbearing, union formation, or union dissolution, we exclude the erroneous individual from all our life-table calculations even if the said individual could perhaps be used for the estimation of some sub-set of life tables. However, in the case of missing information on just the date of leaving the parental home, we drop only the information that pertains to the nest-leaving so that we can use the individual for the calculation of all remaining life tables. A more detailed summary of our data-cleaning procedures is given in the Appendix 1 of this paper.



**Table A:** Size of remaining study population, by country

	<u>Men</u>	<u>Women</u>	<u>Mothers</u>	<u>Children</u>	<u>Ages of respondents</u>	
					<u>Men</u>	<u>Women</u>
Austria	1428	4260	3217	6485	20-54	20-54
Flanders	2104	3143	1911	3602	20-40	20-40
Czech Rep.	--	1719	1222	2331	--	15-44
Finland	1592	4040	2895	6043	25-49	22-51
France	1915	2930	2194	4527	20-49	20-49
E Germany	1875	2810	2025	3437	20-39	20-39
W Germany	1863	2743	1223	2113	20-39	20-39
Hungary	1899	3498	2622	4908	20-44	19-40
Italy	1175	4745	2858	5410	20-49	20-49
Latvia	1338	2622	2080	3787	18-49	18-49
Lithuania	1948	2924	2113	3742	18-49	18-49
Norway	1515	3969	2367	4523	28-43	20-43
Poland	--	4165	3184	6752	--	18-49
Slovenia	1716	2761	2116	3953	15-45	15-45
Spain	1951	3981	2450	4991	18-49	18-49
Sweden	1495	2986	2247	4638	28-43	23-43
USA	--	10510	6609	14357	--	15-44

For Poland and the Czech Republic, we have excluded all male respondents from our calculations since they are all partners to the female respondents there. It makes no sense to study family-formation events of a population where we have no information on individuals who have not experienced the events of interest. There are no men in the study population for the US either but this is just because no men were interviewed in the survey that had been launched in the USA.

For Sweden, we have used a data set that has already been cleaned in more detail at Statistics Sweden and at the Stockholm University Demography Unit. In this case, we have also excluded all respondents who immigrated to Sweden when being older than 15 years. (In Table A1 of Appendix 1, these and other omissions show up under the heading *miscellaneous*.) In our study of Swedish children's experience of various family events, we have only included children who were born in Sweden. In the case of migration during the age segments that we want to study, we expect to find some interdependence between migration and family formation, yet we do not intend to deal with such issues here. For other countries of the FFS (Standard Recode Files), we have

no information on country of birth of survey respondents, nor any information about actual dates of migration. This means that possible immigrants are included in our study and that we cannot distinguish between demographic events that occurred in the country of origin and in the country of destination. This is a less desirable feature of our data, which we unfortunately cannot deal with further.

### **3.2 Synthetic cohorts**

In our calculations, we have subsequently used the parts of the data that refer to the six-year period immediately before each interview. Initially we aimed at estimating measures for a five-year period before each survey but in order to cover the demographic histories of men and women from ages as low as (exact) 15 years, we needed to go back six years in time. Most countries do not include very young respondents in their surveys. For Finland we had to use an even longer period for the construction of our synthetic cohort since the male respondents of that country all were 25 years or older. The same holds for Norway and Sweden where the youngest male respondents were 28 years old. The samples from Norway and Sweden differ also from those of other countries in the respect that they cover respondents from just a selected number of birth cohorts of men and women (Note 4). In principle, this makes these data sets more suitable for an analysis of the behavior of real birth cohorts of men and women but we also apply our idea of a synthetic cohort to the data of these countries since we aim at comparability over our whole range of countries. However, in any comparison between countries, we need to be aware that our life tables for Sweden, Norway, and Finland are based on longer calendar periods than those of the other countries and that important changes in behavior may have occurred during such extended study periods. (When we study unions and children of respondents from these countries, we can use a shorter period for our synthetic-cohort measures, better corresponding to the six-year period of the other countries.) Finally, for East Germany, we use the six-year period that refers to the time immediately before the political turnaround in November 1989 as our study period, which thus describes the situation in the last years of the former GDR (Note 5). In Table B, we report the calendar periods that we use in order to construct our synthetic cohorts for each country in our study.

**Table B:** *Study period of life tables of men, of women, of unions, and of children*

<b>Country</b>	<b>women/men</b>	<b>unions</b>	<b>children</b>
Austria	1990-1996	1990-1996	1990-1996
Flanders	1985-1992	1985-1992	1985-1992
Czech Rep.	1992-1997	1992-1997	1992-1997
Finland	1979/83-1989/92	1983-1992	1983-1989
France	1988-1994	1988-1994	1988-1994
E Germany	1984-1989	1984-1989	1984-1989
W Germany	1986-1992	1986-1992	1986-1992
Hungary	1988-1993	1988-1993	1988-1993
Italy	1990-1995	1990-1995	1990-1995
Latvia	1989-1995	1989-1995	1989-1995
Lithuania	1989-1995	1989-1995	1989-1995
Norway	1974-1989	1983-1989	1983-1989
Poland	1986-1991	1986-1991	1986-1991
Slovenia	1989-1995	1989-1995	1989-1995
Spain	1989-1995	1989-1995	1989-1995
Sweden	1978-1993	1985-1993	1987-1993
USA	1989-1995	1989-1995	1989-1995

We calculate our life tables from estimated probabilities of exit from each study population separately, caused by a specific event under study, and probabilities of surviving in the original state during the period we study. If the number of persons under risk of experiencing the specific event decreases to less than 15 individuals (at some higher duration or age segment), we freeze our life-table estimates at that stage. We are unable to present any further figures for durations above that time horizon. This can occur, for example, when the number of unions of a specific type, such as consensual unions in a Southern European country, is too small for an extended investigation of their destinies. It can also occur when practically the whole study population experiences a particular event already at a relatively early stage, like the process of leaving the parental home in the Nordic countries. If the data is too tiny to give information on what is happening at the higher intervals of the actual life table, we are also unable to calculate any of the two mean values that we introduced at the end of Section 2.

We have applied weights in our calculations of life-table estimates for France and the US since the sampling procedures in these countries were performed in a way that were dependent on the outcomes we want to study. As a final remark, we want to point out the need for further data validation in this project – as in most other projects that use standard files of FFS data (see Lesthaeghe 2000 for more comments on this issue). Despite our cleaning efforts, we have not been able to go through all details at all corners of our data sets. We have also not been able to deal with all types of differences that exist in sampling procedures between countries. One important issue is to what extent immigrants tend to show up in the various data sets we have used. In our case, we have just used the data provided to us but have at least removed a number of evident cases of inconsistencies in it.

#### **4. Outline of the study**

The rest of our paper is devoted to the presentation of our life-table estimates. In Sections 5-8, we give a detailed description of the different types of life tables and other measures that we include in our system of demographic description. We use data from Sweden and Hungary as an illustration when presenting our system. As a consequence, we also offer a detailed comparison of the family-demographic behavior in these two countries. In Section 9, we give access to the same type of tabulations for all countries we have performed our calculations for – that is for 17 different geographical entities (when we count Western and Eastern Germany separately). The whole amount of life tables is offered in a manner of a number of Excel files that can be downloaded directly from the present online article. In addition, the same set of tabulations is given in Appendix 2 of this paper in a readable manner. In Table C below, we give an overview of the tabulations we present. We provide 45 different sets of tables.

**Table C:**     *List of contents*

*Section 5, Tables 1-16: Single-sex tables of family formation of men and women*

- 5.1     Experience of nest-leaving**
- 1.       Leaving the parental home

**5.2 Experience of union formation**

2. First union, as a cohabitation (censoring at marriage)
3. First union, as a marriage (censoring at cohabitation)
4. First union, as a cohabitation (competing-risks model)
5. First union, as a marriage (competing-risks model)
6. First union, as a marriage or a cohabitation (4+5)
7. First marriage

**5.3 Experience of becoming a parent**

8. First child

**5.4 Experience of the combination of being a parent and being in different union statuses**

9. Parent and in a union
10. Parent and married
11. Parent and not in a union (lone parent)

**5.5 Experience of specific contexts of family-formation/childbearing events**

12. Marriage during a first union
13. First child during a first union
14. First child during any union
15. First child during any marriage
16. First child when out of union

*Section 6, Tables 17-28: Pooled tables of union transformation and union disruption*

**6.1 Childless couples: Experience of childbearing or separation**

17. First child of a childless couple
18. Separated before a birth, childless couple

**6.2 Consensual unions: Experience of marriage formation or separation**

19. Married before dissolution
20. Separated before marriage
21. Married (competing-risks model)
22. Separated (competing-risks model)
23. No longer in a consensual union (21+22)

**6.3 Couples' experience of union disruption**

24. Separation for unions begun as a cohabitation
25. Separation for unions begun as a marriage
26. Separation for all unions
27. Separation for all marriages
28. Separation of parents in union (duration since union/parenthood)

*Section 7, Summary measure*

29. Percent of time spent in different family types (men, women)

*Section 8, Tables 30-45: Children's experience of family dynamics*

- Family type at birth**
- 30. Percent of births by family type
- 8.1 Experience of family disruption**
- 31. Ever out of union (all children)
- 32. Ever out of marriage (all children)
- 33. Out of union (children born in union)
- 34. Out of union (children born in consensual union)
- 35. Out of union (children born in marriage)
- 8.2 Experience of family formation**
- 36. In union (children born to lone mother)
- 37. In marriage (children born to lone mother)
- 38. In marriage (children born to cohabiting mother)
- 39. In marriage (children born to non-married mother)
- 8.3 Competing-risks model for children born in consensual union**
- 40. In marriage
- 41. Out of union
- 42. No longer in consensual-union family (40+41)
- 8.4 Experience of family re-formation**
- 43. Again in union (after parental separation)
- 44. In marriage (after parental separation)
- 8.5 Summary measure**
- 45. Percent of time spent In different family types

The FFS of Hungary and Sweden were conducted more or less at the same time, in 1992/1993. In the subsequent cross-country comparison between Hungary and Sweden, we have to keep in mind that our life tables for the former country are based on the demographic situation in the six-year period that ends in 1993, i.e., in the years just before and after the political and economical turnaround in that country, while the life tables of family formation of adult Swedes describe the demographic situation in the more extended period of 1977/1978-1992/1993 (a consequence of the particular sampling procedure of the Swedish FFS). When our unit of observation is unions of Swedes, we can use a shorter period for our synthetic-cohort measures that better corresponds to that of Hungary. When we describe the family-transformation experiences of children in Sweden, we use the six-year period before the survey in 1992/1993, as we do for Hungary.

In the next four sections, we will discuss various aspects of our data and describe what our estimates stand for as our presentation evolves. In addition, we will make limited comments on substantive issues, i.e., on the demographic patterns that we observe in our tabulations.

Before we start, we want to make a short comment on the effects of the Swedish marriage boom in 1989 on estimated patterns of family transformations for Sweden. Since an unusually large number of marriages were formed in that year (see Hoem 1991), and since these marriages occurred in the period for which we estimate our synthetic-cohort measures, these measures will be strongly influenced by that specific event. We would get a different picture of the marriage-formation patterns in Sweden if this event had not occurred. Our estimates of union-disruption patterns are also affected by this event since divorce risks of the marriage cohort of 1989 have been generally lower than for other marriage cohorts (Andersson 1998). Similarly, in the case of Hungary, there have been a number of changes in demographic behavior during our study period that will not be accounted for explicitly by our tabulations. These changes have occurred more gradually over time, however, so that in any case we are able to derive meaningful information on patterns of demographic behavior during this transitional period. As an initial check, we have performed separate calculations for the first and the second half of the study period we use (not shown here) in order to be sure that the basic patterns that we observe have not changed extensively over time.

In the final presentation of life tables for all countries we cover, we do not even try to make any comments or reflections on the abundance of information that arises from the tabulations we give. We merely present our results to a broader audience in order to invite to further contemplation. It is our hope that the tabulations we produce will provide a better picture of various aspects of family dynamics in the countries we study and that they can serve as a basis for a number of more specific cross-country comparisons (see Andersson 2001 for an example). Evidently, if one choose to focus on just a subset of our tabulations, one can derive detailed information on a certain topic in family demography – as seen from the point of view of men, of women, or of children.

## **5. Single-sex tables of family formation, men and women**

Our measures of family formation are all cumulative proportions of men/women who would ever have experienced a particular family-formation event at the exact ages of 15-40 years, had the observed period transition probabilities prevailed for a longer period of time. In our tables, we present such proportions at every even age from age 16 to 30, with additional information given for ages 25, 35, and 40.

## 5.1 Experience of nest-leaving

We begin with a presentation of patterns of leaving the parental home in Sweden and Hungary (Table 1). The two countries provide a clear contrast. Sweden has a pattern where home-leaving occurs very rapidly around the age of 20, and where practically everybody has left their parental home at age 25-26 while in Hungary home-leaving takes place at a much slower pace and substantial fractions of young people never leave the parental home at all during the life segment considered. In the latter case, family formation may occur anyway but then within the original home.

**Table 1:** *Cumulative percent ever leaving the parental home*

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	4	6	1	2
18	19	29	2	7
20	46	73	7	25
22	78	93	19	46
24	91	98	35	63
25	94	99	43	69
26	96	99	49	72
28	98	--	58	77
30	98	--	65	80
35	--	--	74	83
40	--	--	75	84
Mean age: (at transition, conditional on transition before age 40)	20	19	25	22
1st decile at age:	17	17	21	19
1st quartile:	19	18	23	20
Median at age:	21	19	27	23
3rd quartile at:	22	21	39	27



## **5.2 Experience of union formation**

We proceed with a presentation of measures on (i) the cumulative percent ever starting a first union as a cohabitation by single year of age, and (ii) the cumulative percent ever starting a first union as a marriage according to age. In a case like this, when there is more than one way of exiting from the original state of “never having lived in a union”, we can describe the decrements by using two different sets of life tables. First, we present a single-decrement life table for each of the two events (Tables 2 and 3) where we censor an individual at the occurrence of the competing event and otherwise ignore this decrement. The separate tables then describe the family-formation intensities by just one way of entering a union for people who have never yet lived in a union. It is important to be aware that these tables thus cover a hypothetical situation which describes how family formation would look like if the alternative way of entering a union did not exist (would there be independence between the event and the censorship). The purpose of such a tabulation is to get a picture of the “pure” propensity to enter a union in a specific way so that one can compare it to similar propensities in other populations. Such models are often used in multivariate analyses to get at the underlying propensities in different sub-populations. In reality, the existence of different decrements results in observed outcomes of real populations that differ from those depicted by the life-table methods used in Tables 2 and 3.

When describing what proportion would marry if no one was to cohabit and vice versa, we again discover huge differences between the risk patterns for Sweden and for Hungary. The propensity of people who have not lived in a union, to enter a first union as a cohabitation is very strong in Sweden, while the propensity there to enter it as a marriage is quite unimportant. For Hungary, there is instead a much stronger tendency for never-partnered people to enter into a marriage than into a consensual union.

**Table 2:** *Cumulative percent ever starting a first union as a cohabitation, single-decrement life-table method with censoring at direct marriage*

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	2	0	1
18	3	12	1	6
20	16	38	5	14
22	40	62	12	24
24	60	76	20	34
25	67	81	25	38
26	72	84	30	42
28	80	88	37	45
30	84	91	39	51
35	90	94	48	55
40	92	95	53	62
Mean age: (at transition, conditional on transition before age 40 and disregarding competing decrement)	23	22	26	25
1st decile:	20	18	22	20
1st quartile:	21	20	25	23
Median:	23	21	37	30
3rd quartile:	27	24	--	--

**Table 3:** *Cumulative percent ever starting a first union as a marriage, single-decrement life-table method with censoring at entry into cohabitation*

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	0	0	5
20	0	1	3	24
22	1	2	12	46
24	2	4	29	65
25	3	4	37	71
26	4	5	44	75
28	7	6	55	78
30	8	9	61	79
35	14	12	67	82
40	18	15	68	84
Mean age:	30	29	25	22
(at transition, conditional on transition before age 40 and disregarding competing decrement)				
1st decile:	32	31	22	19
1st quartile:	--	--	24	21
Median:	--	--	27	23
3rd quartile:	--	--	--	26

Next, we give the patterns of entering a first union as they appear when we describe them with a competing-risks (double-decrement) life-table method. This method gives a good description of the actual fractions of people who will end up either in a marriage or in a consensual union when they enter their first union. Both risks are estimated jointly, with each decrement related to the same risk population of never-partnered individuals. One advantage with this description is that the cumulative percentages of the two tabulations now add up to the cumulative percent of people who ever enter a union at all. When applied to a real birth cohort of individuals, the methodology gives a straightforward description of how people actually enter into unions. In our case, we derive a synthetic measure based on observed probabilities of exit at different ages during a specific calendar period and thus depict how patterns of decrement would appear if these probabilities had prevailed for a longer period of time. Below, we present the fractions of men and women who enter their first union either by starting a cohabitation (Table 4) or by a direct marriage (Table 5) at each age. This is followed by

a tabulation of the sum of the two, i.e., the fractions who ever enter any union at all (Table 6).

**Table 4:** *Cumulative percent ever starting a first union as a cohabitation, competing-risks life-table method with direct marriage as a competing event*

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	2	0	1
18	3	12	1	5
20	16	38	4	12
22	40	62	11	19
24	59	76	17	24
25	66	80	21	25
26	72	83	24	26
28	78	87	27	27
30	83	90	28	28
35	88	92	31	29
40	89	93	33	30
Mean age: (at transition, conditional on transition before age 40)	23	21	25	22
1st decile:	20	18	22	20
1st quartile:	21	20	27	25
Median:	23	21	--	--
3rd quartile:	27	24	--	--

**Table 5:** *Cumulative percent ever starting a first union as a marriage, competing-risks life-table method with entry into cohabitation as a competing event*

<b>Age</b>	<b>Swedish men (1978-93)</b>	<b>Swedish women (1978-93)</b>	<b>Hungarian men (1988-93)</b>	<b>Hungarian women (1988-93)</b>
16	0	0	0	0
18	0	0	0	4
20	0	0	3	22
22	1	1	11	40
24	1	2	25	53
25	1	2	32	57
26	2	2	37	59
28	3	2	44	61
30	3	2	48	62
35	3	3	51	63
40	4	3	52	64
Mean age: (at transition, conditional on transition before age 40)	27	25	25	22
1st decile:	--	--	22	19
1st quartile:	--	--	24	21
Median:	--	--	32	24
3rd quartile:	--	--	--	--

=> **Table 6:** *Cumulative percent ever in a union*

<b>Age</b>	<b>Swedish men (1978-93)</b>	<b>Swedish women (1978-93)</b>	<b>Hungarian men (1988-93)</b>	<b>Hungarian women (1988-93)</b>
16	0	2	0	1
18	3	12	2	10
20	16	39	8	34
22	41	63	22	59
24	61	77	43	77
25	68	81	53	82
26	73	85	60	85
28	81	89	71	88
30	86	92	76	90
35	91	94	82	92
40	93	96	85	94
Mean age: (at transition, conditional on transition before age 40)	23	22	25	22
1st decile:	20	18	21	18
1st quartile:	21	20	23	20
Median:	23	21	25	22
3rd quartile:	27	24	30	24

From Table 6 we can see that men in Sweden enter their first union at a faster pace than men in Hungary, while patterns for women are quite similar in the two countries. We can also see that practically all people in Sweden actually start their first union as a cohabitation, while the majority of Hungarians do so by direct marriage. In these tabulations it would have been nice if we were able to present results also for ages above the upper limit of 40 years of age since, at least for men in Hungary, union formation might continue above that age.

Our next life tables give information about the cumulative percentages who will ever enter a marriage (Table 7), regardless of whether this occurs as an entry to a direct marriage in the first union, as a transformation of a first consensual union into a marriage, or as a marriage at any higher union order.

**Table 7:** *Cumulative percent ever married*

<b>Age</b>	<b>Swedish men (1978-93)</b>	<b>Swedish women (1978-93)</b>	<b>Hungarian men (1988-93)</b>	<b>Hungarian women (1988-93)</b>
16	0	0	0	0
18	0	0	0	5
20	1	2	4	26
22	2	8	15	48
24	7	16	35	67
25	11	20	42	74
26	16	28	51	78
28	24	38	62	82
30	35	46	69	84
35	55	60	76	88
40	62	70	77	89
Mean age: (at first transition, conditional on transition before age 40)	29	28	25	22
1st decile:	25	23	22	19
1st quartile:	29	26	23	20
Median:	33	31	26	23
3rd quartile:	--	--	34	26

It is evident that the differences between Hungary and Sweden in the fractions of people who eventually have any experience of marriage formation are less pronounced than the differences in marriage-formation patterns that appear when one only studies entries into a first union. Evidently, a lot of people in Sweden marry at some point in time even though this normally does not occur at entry to a first union. Still, the fractions of never married people in Sweden are higher at every single age of study than they are in Hungary. (Remember that they would have been yet higher without the impact of the increased marriage intensities that are observed for 1989.)

### 5.3 Experience of becoming a parent

Next, Table 8 reports the cumulative percent who ever become a parent, for men and women, separately, where entry into parenthood includes the arrival of both biological and adopted children. This table mainly reveals differences in timing between the two countries. Childbearing in Hungary starts at much earlier ages than in Sweden.

**Table 8:** *Cumulative percent ever parent (including adoptions)*

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	1	0	3
20	1	6	4	17
22	6	15	9	38
24	15	29	25	57
25	21	36	34	64
26	26	43	41	71
28	40	57	55	81
30	54	68	63	84
35	74	83	75	91
40	79	87	79	93
Mean age: (at transition, conditional on transition before age 40)	28	26	26	24
1st decile:	23	21	23	20
1st quartile:	26	24	24	21
Median:	30	27	28	24
3rd quartile:	36	32	35	27



#### **5.4 Experience of the combination of being a parent and being in different union statuses**

We proceed to present three measures that combine information on the status of being a parent and the union status during parenthood. We present tables that give information about experiences of the combination of being a parent and being in any union (Table 9), a parent in a marital union (Table 10), or a parent outside any union (Table 11), with the attainment of the combination of these states at either a childbirth (or adoption) or a union event (union formation or union dissolution), whichever comes last. The entry into the state of ever being both a parent and in a union can thus occur at the childbirth of a partnered person or by the union formation of a lone parent. Similarly, the entry into the state of ever being a parent out of a union, i.e., a lone parent, can occur by the entry into parenthood by a person who does not live in a union or by the union dissolution of a parent. We do not discriminate between union orders so any combination of interest can be attained at any union order.

Note that these measures of parenthood do not give full information on the real living arrangements of people, i.e., on whether parents actually live together with their children in a specific type of family. In this data representation, we have not, for example, used information on whether children continue to live with a parent after a union disruption or whether new stepchildren arrive to a family. We just use the information on parity changes of the adult respondents in order to define their parenthood status.

Differences between Hungary and Sweden are not that dramatic in these tabulations. They mainly reflect differences in patterns of entry into parenthood, union formation, and marriage formation as they have already appeared in the tables presented so far. Women in Hungary, for example, start childbearing at much earlier ages than women in Sweden do. Table 11 also reflects patterns of union dissolution in the two countries and we can see that around one quarter of women in both Hungary and Sweden will have some experience in being a lone parent before age 40. In these countries, such a situation most often appears as a result of union dissolution. We will return to patterns of union transformations in Section 6.

**Table 9:** Cumulative percent ever "parent and in a union"

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	1	0	3
20	1	5	3	16
22	6	14	9	36
24	15	28	25	54
25	20	35	34	62
26	26	41	41	70
28	39	55	55	80
30	53	66	63	83
35	72	81	75	90
40	77	85	79	92
Mean age: (at transition, conditional on transition before age 40)	28	26	26	24
1st decile:	23	22	23	20
1st quartile:	26	24	24	21
Median:	30	28	28	24
3rd quartile:	37	33	35	27

**Table 10:** *Cumulative percent ever "parent and married"*

<b>Age</b>	<b>Swedish men (1978-93)</b>	<b>Swedish women (1978-93)</b>	<b>Hungarian men (1988-93)</b>	<b>Hungarian women (1988-93)</b>
16	0	0	0	0
18	0	0	0	2
20	0	1	3	14
22	1	5	7	34
24	5	11	23	52
25	7	15	32	60
26	11	21	38	68
28	17	31	51	77
30	29	40	61	81
35	51	56	72	87
40	60	67	76	90
Mean age: (at transition, conditional on transition before age 40)	30	29	27	24
1st decile:	26	24	23	20
1st quartile:	30	27	25	22
Median:	35	32	28	24
3rd quartile:	--	--	39	28

**Table 11:** Cumulative percent ever "parent and not in a union" (lone parent)

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	0	0	1
20	0	2	0	3
22	1	4	1	5
24	2	7	3	8
25	3	8	3	9
26	4	10	4	10
28	8	12	4	13
30	10	15	7	16
35	16	21	10	22
40	22	27	14	26
Mean age: (at transition, conditional on transition before age 40)	31	29	30	28
1st decile:	30	26	35	26
1st quartile:	--	38	--	39
Median:	--	--	--	--
3rd quartile:	--	--	--	--

### 5.5 Experience of specific contexts of family-formation/childbearing events

We conclude this section with the presentation of a number of tabulations that give information on the experience of different combinations of family contexts and order of events. As life-table representations these measures are a bit more problematic than the tables presented so far, since the populations that are under "risk" of experiencing such combinations of statuses and events consist of very different mixes of people. In these computations we do not censor for the attainment of any specific single demographic event, say, so our "risk population" might include persons who are no longer under active risk of experiencing the particular combination of events and statuses that we look for (Note 6). We are aware of this issue but still think these tabulations give valuable information about the context in which families are formed. As purely descriptive devices reflecting the experience of the populations considered, they give telling information on differences in actual experience of family formation in Sweden

and Hungary. However, since our exposure groups contain very different types of persons, it is difficult to know the reason why one gets a specific pattern and why patterns look different in different study populations.

The first table of this kind (Table 12) presents the cumulative percentages by age who ever get married while also living in a first union. (The decrement under study is the combination of an event and a family context and the risk population consists of those who have never experienced that particular combination.) In Sweden, just around half of both men and women ever experience such a combination before age 40 despite the fact that around two thirds of them eventually get married (Table 7). Evidently, first marriage in Sweden often occurs in higher-order unions.

**Table 12:** *Cumulative percent ever "married ever during a first union" (including those who marry directly)*

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	0	0	5
20	1	2	4	26
22	2	7	15	48
24	7	14	34	66
25	10	18	42	72
26	15	24	48	76
28	21	31	59	80
30	29	36	64	81
35	43	45	69	84
40	48	53	71	86
Mean age: (at transition, conditional on transition before age 40)	29	28	25	22
1st decile:	25	23	22	19
1st quartile:	29	27	23	20
Median:	--	36	27	23
3rd quartile:	--	--	--	26

The next four tables (Tables 13-16) all give information about the experience of the combination of becoming a parent and of living in different family contexts. We present the cumulative percentages of men and women who will ever have the experience of entry into parenthood while living in a first union (Table 13), in any union at all (Table 14), in a marriage (Table 15), or not in a union (Table 16). Again, the decrement under study is the combination of an event and a family context and the risk population consists of those who have never experienced that particular combination (Note 7).

**Table 13:** *Cumulative percent ever "having a first birth ever in a first union"*

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	1	0	3
20	1	5	3	15
22	5	12	8	34
24	13	23	23	52
25	17	28	31	59
26	21	33	37	65
28	31	44	50	74
30	42	52	55	76
35	55	60	65	81
40	57	62	68	82
Mean age: (at transition, conditional on transition before age 40)	28	26	26	23
1st decile:	24	22	23	20
1st quartile:	27	25	25	22
Median:	33	30	28	24
3rd quartile:	--	--	--	29

**Table 14:** Cumulative percent ever "having a first birth ever in any union"

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	1	0	3
20	1	5	3	15
22	5	13	8	35
24	14	27	23	53
25	19	33	32	60
26	25	39	39	67
28	38	53	52	76
30	51	63	61	80
35	69	76	73	86
40	73	79	76	87
Mean age: (at transition, conditional on transition before age 40)	28	26	27	24
1st decile:	24	22	23	20
1st quartile:	26	24	25	21
Median:	30	28	28	24
3rd quartile:	--	35	37	28

**Table 15:** *Cumulative percent ever "having a first birth ever in any marriage"*

<b>Age</b>	<b>Swedish men (1978-93)</b>	<b>Swedish women (1978-93)</b>	<b>Hungarian men (1988-93)</b>	<b>Hungarian women (1988-93)</b>
16	0	0	0	0
18	0	0	0	2
20	0	1	2	13
22	1	2	6	32
24	3	5	21	49
25	4	7	29	57
26	5	9	36	64
28	9	15	48	72
30	14	20	57	76
35	23	26	68	81
40	26	28	72	83
Mean age: (at transition, conditional on transition before age 40)	30	28	27	24
1st decile:	29	27	23	20
1st quartile:	37	33	25	22
Median:	--	--	29	25
3rd quartile:	--	--	--	30



**Table 16:** Cumulative percent ever "having a first birth ever out of a union"

Age	Swedish men (1978-93)	Swedish women (1978-93)	Hungarian men (1988-93)	Hungarian women (1988-93)
16	0	0	0	0
18	0	0	0	1
20	0	1	0	2
22	1	2	1	3
24	1	3	2	4
25	1	3	2	4
26	2	3	2	4
28	2	4	2	4
30	2	4	2	4
35	3	4	2	5
40	3	5	2	5
Mean age: (at transition, conditional on transition before age 40)	26	25	22	22
1st decile:	--	--	--	--
1st quartile:	--	--	--	--
Median:	--	--	--	--
3rd quartile:	--	--	--	--

The tables that describe the combination of entry to parenthood and living in different family contexts (Tables 13-16) reveal, among other things, that first childbearing in Sweden is not confined to a first union and certainly not to marriage, but nevertheless to a union. For Hungary, on the other hand, Tables 13-15 look very similar to each other simply because there is hardly any distinction between a first union, any union, or any marriage for most people in that country. For both Hungary and Sweden, the fractions of men and women who report that they have become a parent while not living together with a partner are very small.

In our next section of tabulations, we will proceed with a presentation of the fates which men and women face after they have entered a union.

## **6. Pooled tables of union transformation and union disruption**

In this section, we describe various experiences of men and women at reproductive ages after they have entered a union. We use information on unions as reported by both men and women, but pool them together as each heterosexual union consists of one man and one woman. We thus present life-table estimates for persons in unions and report the cumulative percent who experience a certain event at every exact single year of union duration for the first five years of a union and then at exact durations of 7, 10, and 15 years after union formation. In all our life-table estimations, we censor our observation at the possible but rare event of a reported partner's death.

Concern is sometimes expressed regarding the reliability of men's reporting about issues such as union formation, and even about the possibility of non-reporting of unions that do not lead to marriage or to childbearing. We have experimented with separate life tables for unions reported by the two sexes in Hungary and Sweden but have found no really striking differences in patterns of union transformations. We conclude that there should be no problem in combing information on heterosexual unions as reported by men with those reported by women.

### **6.1 Childless couples: Experience of childbearing or separation**

Our first two life tables take the formation of a union of a childless person as the starting point. In Table 17, we present a single-decrement life table that captures how such unions are transformed into unions where people have children when we censor our observations at the competing event of union dissolution and otherwise ignore this decrement. The table thus depicts patterns of entry into parenthood in the hypothetical situation where no one is to separate. (See Section 5.2 for a discussion of this methodology when we deal with various ways of union formation.) Toulemon and Lapierre-Adamcyk (2000) have previously presented a number of tabulations of this kind for France. We notice that practically all remaining unions eventually end up in childbearing in Hungary and Sweden. The pace of entry into parenthood is much faster in Hungary than in Sweden: In more than half of Hungarian childless unions a child arrives already within two years from union formation, and 72 percent of couples have a child after three years from the formation of their union. In Sweden, it takes seven years before three out of four unions that start as childless result in childbearing.

**Table 17:** *Cumulative percent parents, by time since formation of a union by a childless couple, single-decrement life-table method with censoring at union dissolution*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	8	28
2	23	56
3	38	72
4	51	81
5	61	86
7	75	90
10	86	93
15	91	95
Mean duration: (to first childbirth /conditional on childbirth within 15 years and disregarding union disruption)	4	2
1st decile at dur:	2	1
1st quartile:	3	1
Median at dur:	4	2
3rd quartile:	7	4

In Table 18, we similarly describe the patterns of how unions of a childless person are dissolved, if we instead ignore the competing event of childbearing and censor at that event. We thus present a single-decrement life table of the cumulative percent separated among childless unions. (The purpose of such a table is to depict the “pure” propensity of union dissolution in the hypothetical situation where no one is to have children.) Evidently, childless unions are relatively unstable and large fractions of them get dissolved, just half of them remain after 7 years in Sweden and after 12 years in Hungary.

**Table 18:** *Cumulative percent separated, by time since formation of a childless union, single-decrement life-table method with censoring at childbirth*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	9	5
2	19	13
3	29	20
4	36	26
5	42	28
7	52	36
10	60	48
15	72	54
Mean dur: (at union disruption /conditional on disruption within 15 years and disregarding childbearing)	5	5
1st decile:	2	2
1st quartile:	3	4
Median:	7	12
3rd quartile:	--	--

The presentation of single-decrement life tables, above, could be duplicated with a presentation of patterns as they appear in the case of a multi-decrement analysis without censoring for the competing event, as we do in Section 5.2, and in our following section. However, in order to curb the amount of our tabulations, we refrain from this additional option.

## **6.2 Consensual unions: Experience of marriage formation or separation**

We proceed with a description of the destiny of consensual unions: how they are either transformed into a formal marriage, or get dissolved. As in Section 5.2, we describe this pair of decrements by using two different life-table methods. Our first table (Table 19) is a single-decrement life-table of the cumulative percent married, by time since formation of the consensual union. Individuals under risk are censored at the alternative event of union disruption, so this table gives information on the “pure” propensity of partners in consensual unions to transform their union into a marriage (would there be independence between the two events) in the hypothetical situation where no one is to face a dissolution of their union. The table reveals that high fractions of remaining unions eventually end up in a marriage, both in Hungary and in Sweden. However, the transformation occurs at a much faster rate in Hungary than in Sweden, and is concentrated to the first few years of the union. Again, we need to keep in mind that the patterns of marriage formation, as they appear for Sweden, are still affected by the extraordinary marriage boom in 1989.

In Table 20, conversely, we present the cumulative percent of consensual unions that are dissolved if we ignore the alternative event of a transformation of the union into a marriage and censor at that event. This single-decrement life-table thus depicts the propensities of union dissolution in the situation where no one is to marry. It shows that consensual unions are very unstable in both countries. Union disruption is common and the majority of remaining consensual unions are dissolved at a duration of 5-7 years from union formation. Consensual unions in Hungary are less stable than those in Sweden.

Evidently, our life tables related to consensual unions in Hungary cannot give a complete picture of union dynamics. Since consensual unions are relatively rare in Hungary and also more short-lived there than in Sweden, we can only follow them during their early phases. The size of our data does not allow for more: The number of exposures soon becomes very small and we have to stop our computations. As a consequence, we cannot calculate comparable mean values of union duration (conditional on exit within 15 years or on truncation after 15 years) in the manner that we can for Sweden.

**Table 19:** *Cumulative percent married, by time since formation of a consensual union, single-decrement life-table method with censoring at union dissolution*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	6	25
2	14	40
3	23	49
4	32	53
5	40	58
7	53	63
10	67	67
15	78	--
Mean dur: (at marriage /conditional on marriage within 15 years and disregarding union disruption)	6	--
1st decile:	2	1
1st quartile:	4	1
Median:	7	4
3rd quartile:	13	--

**Table 20:** *Cumulative percent separated, by time since formation of a consensual union, single-decrement life-table method with censoring at marriage formation*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	8	11
2	19	26
3	28	35
4	36	45
5	41	50
7	50	56
10	56	68
15	64	--
Mean dur:	5	--
(at union disruption /conditional on disruption within 15 years and disregarding marriage formation)		
1st decile:	2	1
1st quartile:	3	2
Median:	7	5
3rd quartile:	--	--

We complete our presentation of patterns of transformations of consensual unions with two life tables that are estimated by the competing-risks life-table method. This gives a description of the actual fractions of partners in consensual unions who eventually end up either in a marriage (Table 21) or in disruption (Table 22) at various durations since union formation. In addition, we present a table that reflects the fractions of consensual unions that stop being a union of that kind (Table 23 = the sum of Tables 21 and 22), irrespective of the cause of cessation. As elsewhere in our presentation, these tables are based on information pertaining to a specific calendar period and depict the family-transformation patterns that would arise if the duration-specific transition intensities of that period had prevailed.

**Table 21:** *Cumulative percent married, by time since formation of a consensual union, competing-risks life-table method with union dissolution as a competing event*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	6	24
2	13	36
3	20	42
4	26	44
5	31	47
7	38	50
10	44	51
15	49	--
Mean dur: (at marriage /conditional on marriage within 15 years)	5	--
1st decile:	2	1
1st quartile:	4	2
Median:	--	7
3rd quartile:	--	--



**Table 22:** *Cumulative percent separated, by time since formation of a consensual union, competing-risks life-table method with marriage formation as a competing event*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	8	10
2	17	20
3	25	25
4	31	30
5	34	32
7	39	34
10	41	38
15	43	--
Mean dur: (at union disruption /conditional on disruption within 15 years)	3	--
1st decile:	2	1
1st quartile:	3	3
Median:	--	--
3rd quartile:	--	--

=> **Table 23:** *Cumulative percent no longer in a consensual union, by time since union formation*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	14	34
2	30	55
3	45	67
4	57	74
5	65	79
7	77	84
10	86	90
15	92	--
Mean dur: (at exit /conditional on exit within 15 years)	4	--
1st decile:	1	1
1st quartile:	2	1
Median:	4	2
3rd quartile:	7	5
Mean dur: (of all episodes /truncated after 15 years)	5	--

Once more, these tables demonstrate that a consensual union most often is a transitional state in peoples' lives even in a country like Sweden. In both countries, around 40 percent of such unions end in disruption and most of the remaining unions are transformed into marriages, with a much faster rate of the latter type of union transformation in Hungary than in Sweden.

### **6.3 Couples' experience of union disruption**

Next we provide a number of life tables that give more information on patterns of union dissolution in Sweden and Hungary. The life tables concern disruptions of (i) unions begun as a consensual union (including disruptions occurring after any transformation of that union into a formal marriage), (ii) unions begun as a direct marriage, and (iii) all unions taken together, regardless of how they were started. Again we use unions of all orders as the basis for our computations and the possible event of union disruption is assigned to the date when respondents reported that they stopped living with their partner.

Table 24 displays very similar patterns of union dissolution for unions started as a consensual union in Hungary and Sweden. In the same way, both countries have very similar patterns of union dissolution for unions begun as a marriage (Table 25). The rate of union dissolution is much higher for the former type of union: More than half of these unions eventually end in disruption while only a fifth of unions begun as a marriage end in this manner within a period of 15 years.

Since patterns of union formation are very different in Hungary and Sweden (Section 5), we find very different levels of overall rates of union dissolution between the two countries nevertheless (Table 26). Since practically all unions in Sweden start as cohabitation, the overall pattern of union dissolution will be very similar to that of Table 24. In contrast, more unions in Hungary are started as a direct marriage, so the overall union-dissolution rate for Hungary is much lower than that for Sweden. More than half of all unions formed in Sweden end in dissolution within a period of 15 years while less than a third of Hungarian unions end in the same way (Table 26). When we follow unions beyond the duration of 15 years, we get even higher fractions of unions being dissolved. In an earlier version of our tabulations (Andersson and Philipov 2001) we presented union-dissolution patterns up to a duration of 20 years. However, the tiny and selected data at the highest durations makes the results at these later stages a bit unreliable (Note 1), so we are restricting ourselves here to giving a picture of the dynamics at reproductive ages during the first 15 years from union formation.

**Table 24:** *Cumulative percent separated, by time since union formation, for unions begun as a cohabitation (without censoring at marriage formation)*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	8	10
2	18	20
3	26	26
4	32	32
5	37	35
7	43	40
10	49	46
15	55	53
Mean dur: (at union disruption /conditional on disruption within 15 years)	4	4
1st decile:	2	1
1st quartile:	3	3
Median:	11	14
3rd quartile:	--	--
Mean dur: (of all unions /truncated after 15 years)	9	9

**Table 25:** *Cumulative percent separated, by time since union formation, for unions begun as a marriage*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	3	2
2	5	4
3	5	6
4	5	7
5	5	9
7	8	12
10	14	16
15	20	20
Mean dur: (at union disruption /conditional on disruption within 15 years)	7	6
1st decile:	8	6
1st quartile:	--	--
Median:	--	--
3rd quartile:	--	--
Mean dur: (of all unions /truncated after 15 years)	14	13

=> **Table 26:** Cumulative percent separated, by time since union formation, all unions

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	8	5
2	17	10
3	26	14
4	32	16
5	36	19
7	42	22
10	48	26
15	54	30
Mean dur: (at union disruption /conditional on disruption within 15 years)	4	5
1st decile:	2	2
1st quartile:	3	9
Median:	12	--
3rd quartile:	--	--
Mean dur: (of all unions /truncated after 15 years)	9	12

We conclude our presentation of estimates of union-dissolution patterns with two further life tables. The first one (Table 27) gives estimates of union dissolution of marriages by time since marriage formation. This includes all marriages, whether they are preceded by cohabitation or not. Close to 30 percent of all marriages in Sweden end up in divorce/dissolution, while around a fifth of Hungarian marriages are dissolved after a period of 15 years from the marriage date. The propensity to divorce is a bit higher in Sweden than in Hungary at the higher marital durations.

**Table 27:** *Cumulative percent separated, by time since marriage formation, all marriages*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	2	2
2	5	4
3	7	6
4	9	7
5	11	9
7	15	13
10	21	17
15	28	21
Mean dur: (of marriage, at union disruption /conditional on disruption within 15 years)	7	6
1st decile:	5	6
1st quartile:	13	--
Median:	--	--
3rd quartile:	--	--
Mean dur: (of all marriages /truncated after 15 years)	13	13

In Table 28 we finally report the cumulative percent of *unions of parents* who experience the dissolution of their union after union formation and entry into parenthood. This table gives information on disruption behavior from yet another important date of the union-formation process, but as a measure it is a bit difficult to interpret when our purpose is that of cross-country comparison. In this case, the population under risk may either enter the risk population by childbirth or by union

formation, whichever comes last, and is then followed until union disruption or censoring. Nevertheless, our tabulation demonstrates that unions of parents are dissolved at a much higher rate in Sweden than in Hungary (Note 8). We present more family-formation and family-dissolution measures in Section 8, where we study the experience of various family-transformation events from the point of view of children.

**Table 28:** *Cumulative percent separated, by time since union formation/entry into parenthood, unions of parents*

<b>Duration (years)</b>	<b>Sweden (1985-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	4	3
2	8	5
3	12	7
4	16	9
5	20	11
7	24	14
10	29	18
15	36	21
Mean dur: (at union disruption /conditional on disruption within 15 years)	6	6
1st decile:	3	5
1st quartile:	8	--
Median:	--	--
3rd quartile:	--	--
Mean dur: (of all episodes /truncated after 15 years)	12	13

All tables concerning the experience of men and women in unions, as presented so far, give information on any union regardless of union order. In addition, we have calculated the same set of tables for Hungary and Sweden, restricting ourselves to first-order unions, but we do not show these results here. For Sweden, the patterns do not change much when we exclude higher-order unions from our calculations. For Hungary, on the other hand, some deviations do occur since many consensual unions there are formed only after the dissolution of a previous union. Such consensual unions are less stable



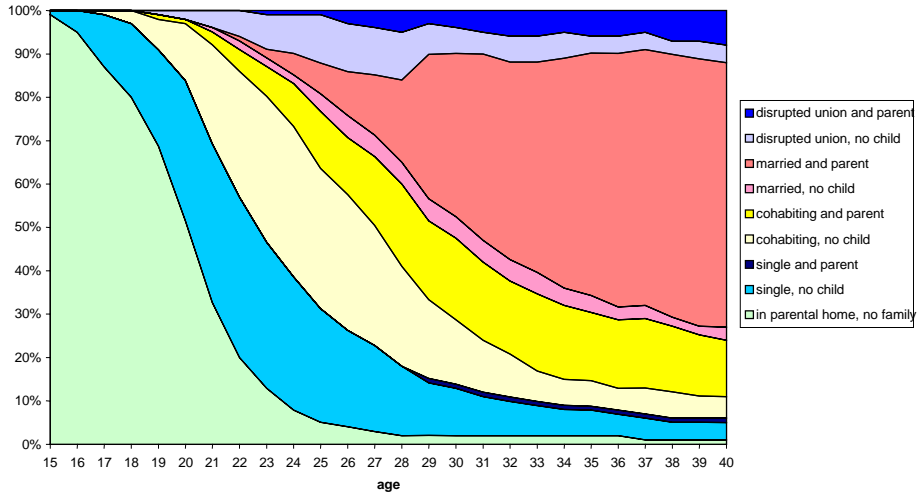
than first-order ones, which more often end up in marriage. However, an exclusion of higher-order unions in Hungary results in even smaller number of exposed individuals and thus gives even less information on consensual-union behavior in that country than what we now can provide.

## **7. Summary measures of time spent in various family statuses**

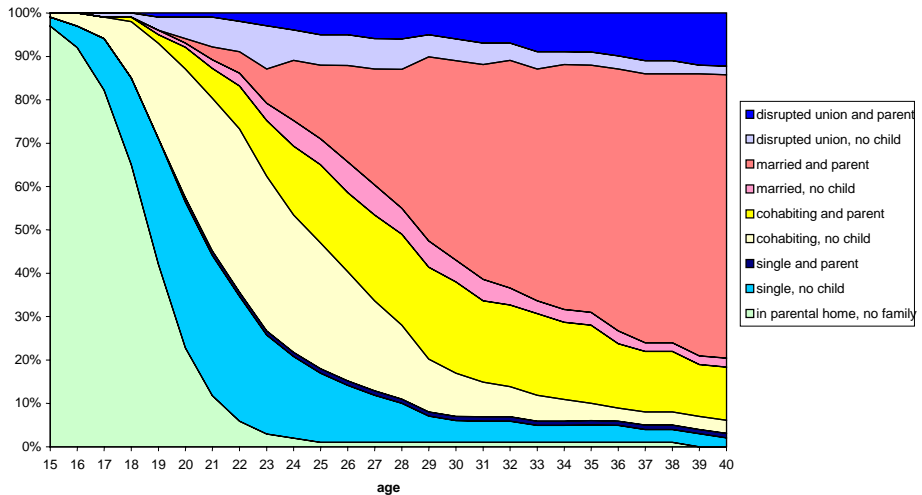
Before turning to our presentation of children's experience of various family transformations, we complete our presentation of the adult individuals' experience of different family-demographic events by displaying a few diagrams which present fractions of time spent in different family types at different ages. We present two diagrams for Sweden and two for Hungary, with one diagram for each sex and country. The diagrams display the observed distribution of men and women over family types at each exact age from age 15 to age 40, as given by the family statuses that respondents reported that they had at ages that fall in the calendar period we study (Note 9). Finally, the information in these diagrams is summarized directly in Table 29, which thus shows the total fraction of time that adult individuals spend in different family types during their reproductive ages if the distributions remain like those presented in our diagrams.

Both the diagrams and Table 29 reveal very contrasting patterns of family experience of Swedes and Hungarians. Swedes have a much more extended period of family formation during which they spend considerable amounts of time in different family states. They leave the parental home much earlier than people in Hungary do and then typically live on their own for a while, then live in a consensual union without children for another segment of time, and only later live in a union with children and/or in a marriage. By contrast, people in Hungary stay longer in their parental home and then almost immediately enter a marital union, which very soon also results in childbearing. We therefore find much larger variation over states for Swedish adults than for their Hungarian counterparts. Swedish adults also spend less time as parents during the actual age segment, simply because they start childbearing at higher ages. The same holds for men as compared to women.

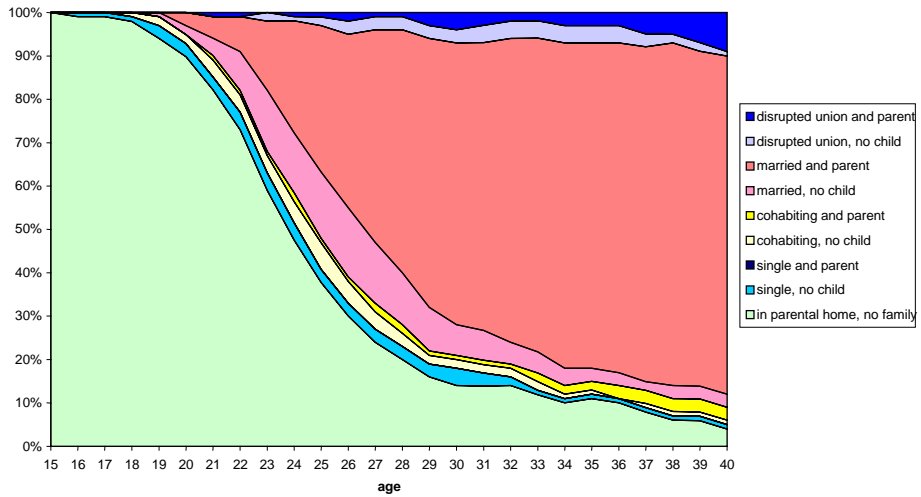
**Figure 1:** Distribution of Swedish men, by family type, ages 15-40 years



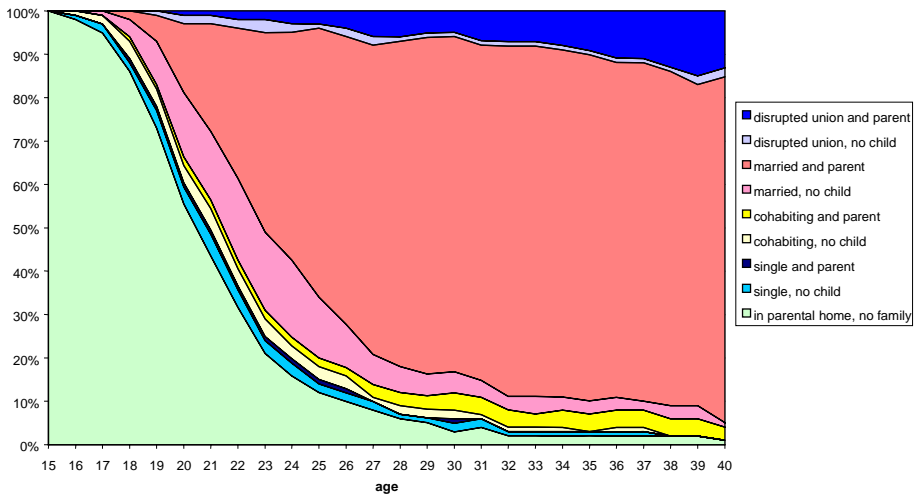
**Figure 2:** Distribution of Swedish women, by family type, ages 15-40 years



**Figure 3:** *Distribution of Hungarian men, by family type, ages 15-40 years*



**Figure 4:** *Distribution of Hungarian women, by family type, ages 15-40 years*



**Table 29:** *Percent of time spent in different family types at ages 15-39 years*

	Swedish:		Hungarian:	
	men	women	men	women
	(1978-93)		(1988-93)	
In parental home /no family	23	17	41	26
Single and never in union/ no child	15	12	2	2
Single and never in union/ parent	0	1	0	1
In consensual union /no child	14	14	2	2
In consensual union /parent	11	13	1	3
In marriage /no child	3	3	6	7
In marriage /parent	26	31	43	54
Single after family disruption/ no child	5	4	2	1
Single after family disruption/ parent (Note 10)	3	6	2	5
Time in union	54	61	52	65
- in union as a parent	37	44	44	56
- in union but no child	17	18	8	9
Time as parent	41	50	46	62
- as parent in union	37	44	44	56
- as parent out of union	4	6	2	6

## 8. Children's experience of family dynamics (as reported by their mothers)

In this last section of life-table presentations, we present various estimates of children's experience in different types of families: experience of family dissolution and of family (re-)formation. We use children from the mother's birth records as our units of observation. We leave out children from the fathers' records since children live separated from their fathers more often than from their mothers (e.g., in case of union disruption) and we lack information on large segments of these latter children's lives. Again we present estimates for a synthetic cohort corresponding to the period shortly before each survey date. In this section, our period of study is the six-year period just before the survey both for Hungary and for Sweden, relating to children's experiences during the late 1980s to early 1990s.

Our tables describe the family-transformation experience of biological children in Hungary and Sweden (of women at reproductive ages born in any country of the world). For Hungary, we have no information about the migration histories of mothers so we do not know to what extent reported children really have lived in the country that we study. For Sweden, we have access to such information and we have included all children that were born in that country in our study population. For both countries, we censor observation at the child's 15<sup>th</sup> birthday. Likewise, we censor a record when a child dies and, where appropriate, when a child stops living with its mother. We do not include any information on the family experience of stepchildren or adopted children. We report the cumulative percent of a given group of children who have experienced a particular event by each of their first four birthdays, followed by exact ages 6, 9, 12, and 15 years.

Table 30 presents the distribution of births that mothers had reported for the six-year period immediately prior to the survey(s).

**Table 30:** *Relative distribution of births (percent)*

	<b>Sweden (1987-93)</b>	<b>Hungary (1988-93)</b>
Children born to mother never in union	1	2
Children born after union disruption	3	2
==> Children born to lone mother	5	3
Children born in marriage	51	90
Children born in a consensual union	45	6

Very few children in both countries are born to a lone mother. In Hungary, the great majority of children are born to a married mother while almost half of the children born in Sweden reportedly are born to a mother in a consensual union.

### 8.1 Children's experience of family disruption

In our first two life tables related to children's family experience, we describe their experience of living outside a traditional family of two (married) biological parents. We present the cumulative percent of children who have ever lived outside a union (Table 31) and outside a marriage (Table 32), by age of child. In these first two tabulations, we count children born to a lone mother, or to an unmarried mother, already at age 0, i.e., we allow the starting values of our life tables to be positive.

In all our tabulations of children's subsequent experience of family disruption, we account for three different ways that a child can leave the union of its family of origin, namely (i) the departure of the father from the family in connection with union dissolution / divorce, (ii) the death of the father, and (iii) the separation of the child itself from its mother. The latter event can occur either in connection with a union dissolution of the parents, namely if the child leaves the mother in order to live with the father, or when the child leaves the mother in order to live on its own or with some other person.

**Table 31:** *Cumulative percent ever out of union, by age of child*

Age	Sweden (1987-93)	Hungary (1988-93)
0	5	3
1	7	5
2	9	6
3	13	8
4	15	10
6	20	13
9	24	17
12	30	21
15	34	24

Table 31 demonstrates that around one third of all children born in Sweden will experience not living with both parents in a union before their 15<sup>th</sup> birthday, while around one quarter of children in Hungary will have this experience. If we focus just on marital status, we see that around 60 percent of all children in Sweden will have the experience of not living with two married parents (Table 32).

**Table 32:** *Cumulative percent ever out of marriage, by age of child*

Age	Sweden (1987-93)	Hungary (1988-93)
0	49	10
1	50	11
2	51	11
3	52	13
4	53	15
6	55	18
9	57	21
12	60	25
15	61	28

Next, we produce life tables that show patterns in family dissolution when we only include children who were actually born in a union or a marriage, as the case may be. These tables thus start with a fraction of 0 percent having experienced a family dissolution. We present the cumulative percent of children who experience family dissolution for children born in a union of any kind (Table 33) and for children born in a marriage (Table 35), by age of child. In addition, we present a separate tabulation for children born in a consensual union (Table 34). This gives us an opportunity to compare the family-disruption experiences of children who are born in different types of unions. In the case of children born in a consensual union, we do not censor for the possible event of a subsequent transformation of the parental union into a marriage. Rather, we continue to follow them until either a family dissolution occurs or until their 15<sup>th</sup> birthday (or until censoring because of their own death).

**Table 33:** *Cumulative percent ever out of union, by age of child, for children born in a union*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	2	1
2	5	2
3	9	4
4	11	7
6	16	10
9	21	14
12	26	18
15	30	22
Mean age: (at union disruption /conditional on disruption during childhood)	6	7
1st decile at age:	4	6
1st quartile:	11	--
Median at age:	--	--
3rd quartile:	--	--
Mean duration: (of all episodes /truncated after 15 years)	12	13

Children born in unions in Sweden more often experience family disruption than children born in Hungarian unions. The cumulative percent who have ever moved out of the original union are higher in Sweden at every single age. Around 30 percent of all children would experience such an event before their 15<sup>th</sup> birthday – if the disruption rates observed for 1987-93 had prevailed. For Hungary, around 20 percent of children born in a union would have that experience.

However, if we focus only on children born in consensual unions, we find that a higher fraction of such children in Hungary will experience a family disruption than corresponding children in Sweden (Table 34). Relatively few children in Hungary are born in that type of union (Table 30) and, evidently, they constitute a relatively select group that will experience very unstable family behavior. Finally, in Table 35, we see that the difference between Hungary and Sweden is not that important as concerns the family-dissolution experiences of children born in marriages. Around a fifth (Hungary)



or a fourth (Sweden) of such children experience a family dissolution of some kind before they turn 15.

**Table 34:** *Cumulative percent ever out of union, by age of child, for children born in a consensual union*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	4	7
2	8	11
3	13	17
4	17	26
6	23	42
9	27	48
12	32	52
15	38	58
Mean age: (at union disruption /conditional on disruption during childhood)	6	5
1st decile:	3	2
1st quartile:	8	4
Median:	--	11
3rd quartile:	--	--
Mean duration: (of all episodes /truncated after 15 years)	12	9

**Table 35:** *Cumulative percent ever out of union/marriage, by age of child, for children born in a marriage*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	1	1
2	2	2
3	5	4
4	6	5
6	10	9
9	15	12
12	21	17
15	24	20
Mean age: (at union disruption /conditional on disruption during childhood)	7	7
1st decile:	6	7
1st quartile:	--	--
Median:	--	--
3rd quartile:	--	--
Mean duration: (of all episodes /truncated after 15 years)	13	13

## 8.2 Children's experience of family formation

In this sub-section we begin with a description of the family-formation experience of children born to a lone mother. We describe to what extent these children subsequently experience a union-formation event by their mother (Table 36) and to what extent they experience the marriage formation by their mother (Table 37). In our description of entries into a marital family, we do not distinguish between those who enter it after one or more period(s) of cohabitation and those who enter it via the direct marriage of their mother. In some cases, union formation by a lone mother involves the father of the child but we have no information on whether this is the case. We can only describe children's experience of transformation of their families from a lone-parent family to a two-partner family (and a marriage, respectively). In these computations we censor our observation if a child dies or if it stops living with its mother.

Births to lone women are relatively uncommon both in Sweden and in Hungary. In addition, substantial fractions of these children experience a family-formation event after some time, so we are faced with data subsets that are too tiny for any extended analyses of these children's family-formation experience. We have to stop observation at a relatively early stage in these groups of children's lives. Nevertheless, we can notice that the family-formation process of children born to lone women in Hungary appears to be faster than that of children born to lone women in Sweden.

**Table 36:** *Cumulative percent ever in union, by age of child, for children born to a lone mother*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	19	23
2	27	37
3	29	52
4	41	62
6	43	--
9	52	--
12	--	--
15	--	--
Mean age: (at entry to union /conditional on union formation)	--	--
1st decile:	1	1
1st quartile:	2	2
Median:	9	3
3rd quartile:	--	--
Mean duration: (of all episodes /truncated after 15 years)	--	--

**Table 37:** *Cumulative percent ever in marriage, by age of child, for children born to a lone mother*

<b>Age</b>	<b>Sweden (1987-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	1	11
2	3	18
3	7	30
4	11	39
6	15	--
9	25	--
12	32	--
15	35	--
Mean age: (at entry to marriage /conditional on marriage formation)	6	--
1st decile:	4	1
1st quartile:	9	3
Median:	--	--
3rd quartile:	--	--
Mean duration: (of all episodes /truncated after 15 years)	12	--

For children born into a consensual union, we can estimate these children's experience of marriage formation in a similar way. In Table 38 we present the cumulative percent of these children who ever experience the marriage of their mother, no matter whether this occurs in the original union, with the father, or in any other later union.

**Table 38:** *Cumulative percent ever in marriage, by age of child, for children born in a consensual union*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	17	11
2	27	18
3	38	22
4	45	25
6	56	36
9	68	49
12	76	--
15	81	--
Mean age: (at entry to marriage /conditional on marriage formation)	5	--
1st decile:	1	1
1st quartile:	2	4
Median:	5	--
3rd quartile:	12	--
Mean duration: (of all episodes /truncated after 15 years)	7	--

The table demonstrates that marriage formation actually is very common in Swedish child families: Eventually, around 80 percent of Swedish children from a consensual union would at some point in time live in a marital family – if the transition patterns as observed in 1987-1993 had prevailed. In Hungary, on the other hand, this process appears to take place at a much slower pace. Again, this might reflect that non-marital unions in that country are not as common as in Sweden and that they mainly occur to a select group of people, with a behavior of relative family instability.

We conclude this sub-section with Table 39, which presents the cumulative percent who ever enter a marital family, based on all children born out of wedlock. In this presentation, we merge children born to a lone woman with those born to a cohabiting woman into one single category. Since the mixture of this category may be very different in individual countries, we want to make the reader aware that it might be difficult to interpret differences in such marriage patterns between various countries. In

the case of Sweden, and to some extent also for Hungary, the patterns of this table very much resemble those of Table 38, since most children who are born out of wedlock here are born in a consensual union. Again, we have censored our observations when a child dies and when it stops living with its mother but not when it experiences a union dissolution of the mother.

**Table 39:** *Cumulative percent ever in marriage, by age of child, for children born to a non-married mother*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	15	11
2	26	18
3	35	25
4	43	30
6	53	45
9	65	57
12	73	--
15	77	--
Mean age: (at entry to marriage /conditional on marriage formation)	5	--
1st decile:	1	1
1st quartile:	2	3
Median:	6	7
3rd quartile:	14	--
Mean duration: (of all episodes /truncated after 15 years)	7	--

### 8.3 A competing-risks model of family transformation for children born in a consensual union

As in our presentation of male and female cohabitants' experiences in their unions (Section 6.2), we can estimate a competing-risks model for the actual experience of children born in consensual unions. We then follow them until they exit from the state of being in a family with two cohabiting parents – either through the event of a family dissolution of some kind (Table 41) or through the transformation of the parental union into a formal marriage (Table 40). The sum of these two tables then represents the cumulative percent of such children who will ever exit from the consensual-union status of their family of origin (Table 42).

**Table 40:** *Cumulative percent in marriage, by age of child, for children born in a consensual union, competing-risks life-table method with family dissolution as competing event*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	16	11
2	27	17
3	37	21
4	44	24
6	54	32
9	62	--
12	67	--
15	70	--
Mean age: (at entry to marriage /conditional on marriage formation)	4	--
1st decile:	1	1
1st quartile:	2	5
Median:	6	--
3rd quartile:	--	--

**Table 41:** *Cumulative percent out of union, by age of child, for children born in a consensual union, competing-risks life-table method with marriage formation of parents as competing event*

Age	Sweden (1987-93)	Hungary (1988-93)
0	0	0
1	4	7
2	8	11
3	11	16
4	14	24
6	19	39
9	20	--
12	21	--
15	22	--
Mean age: (at union disruption /conditional on disruption)	4	--
1st decile:	3	2
1st quartile:	--	5
Median:	--	--
3rd quartile:	--	--



=> **Table 42:** *Cumulative percent ever out of consensual-union status, by age of child, for children born in a consensual union*

<b>Age</b>	<b>Sweden (1987-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	20	18
2	35	28
3	48	37
4	58	48
6	73	71
9	82	--
12	88	--
15	92	--
Mean age: (at exit /conditional on exit from consensual-union status)	4	--
1st decile:	1	1
1st quartile:	2	2
Median:	4	5
3rd quartile:	7	--
Mean duration: (of all episodes /truncated after 15 years)	5	--

These tables once again demonstrate the transitional character of consensual-union type families in the two countries. In Hungary, about equal fractions of children born in a consensual union will end up in family dissolution and in marriage formation, but the number of observations here is too small to allow to follow them beyond pre-school ages. In Sweden, it is much more common for children born to cohabiting parents to leave the consensual-union status of their family through a marriage formation than through a union dissolution of their parents. Only a few percent of them still remain in the original family status when they reach age 15. Again, we have to keep in mind that the latter pattern partly reflects the elevated marriage-formation intensities of Swedish parents that were observed for 1989.

#### **8.4 Children's experience of family re-formation**

For children who experience a family dissolution, we can calculate the same type of measures of family formation as we did for children born to a lone woman, i.e., measures of to what extent these children enter a union of any kind (Table 43) or a marriage (Table 44). However, in the resulting life tables of family re-formation, we use a different time variable than in our previous models. In the present situation, we follow children by time since their experience of the union disruption, while we previously followed them by their age. Here we report on children's experiences after a disruption of their original union of birth and we present cumulative fractions who again enter any type of union and who enter a marital family (of their mother and any adult partner). We censor at a child's death, at its departure from its mother, and at its 15<sup>th</sup> birthday. We follow children during the first 10 years after the experience of a family disruption of the original family.

The two tables demonstrate that a majority of children who experience a union dissolution of their mother will also experience the formation of another union of hers. Around one third will also experience a marriage formation of their mother. The family re-formation process occurs at a somewhat faster pace in Hungary than in Sweden.

In addition, it is possible to combine the family-formation experiences of children born to a lone woman with those of children experiencing a union disruption, in order to make one common model of family formation (of children to lone women). However, we refrain from such an exercise since the basic time variable is completely different in the two situations. Differences in the composition among children in different countries also make a cross-country comparison very difficult.

**Table 43:** *Cumulative percent ever again in a union, by time since union disruption, for children experiencing parental separation*

<b>Duration (years)</b>	<b>Sweden (1987-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	11	15
2	22	23
3	32	39
4	41	47
6	51	57
8	57	68
10	62	68
Mean duration: (at re-entry into union /conditional on union formation within 10 years)	3	3
1st decile:	1	1
1st quartile:	3	3
Median:	6	5
3rd quartile:	--	--
Mean duration: (of all episodes /truncated after 10 years)	6	5

**Table 44:** *Cumulative percent ever in marriage, by time since union disruption, for children experiencing parental separation*

<b>Duration (years)</b>	<b>Sweden (1987-93)</b>	<b>Hungary (1988-93)</b>
0	0	0
1	0	3
2	3	5
3	6	11
4	11	18
6	19	28
8	30	34
10	39	38
Mean duration: (at entry to marriage /conditional on marriage formation within 10 years)	6	5
1st decile:	4	3
1st quartile:	7	6
Median:	--	--
3rd quartile:	--	--
Mean duration: (of all episodes /truncated after 10 years)	8	8

### 8.5 Summary measures of children's family experience

We conclude our presentation of children's family experience by giving a crude picture of the proportions of time that children in Sweden and Hungary spend in different family types. These are calculated from the reports of their mothers on their experience during the calendar-year period studied and our presentation corresponds to that of the experience of adult respondents as given in Section 7. We present one table that gives the fractions of childhood time / children by family type when summed up over all ages of children and we present diagrams that display these fractions at each single age of childhood. We differentiate between time spent in the following family statuses:

- time spent with a lone mother without ever having been in a union,
- time after the child left its mother (in order to live with the father or somewhere else),
- time with a lone mother following union disruption,
- time in the consensual union where the child was born,
- time in marriage in the union where the child was born, and,
- time in a union formed with another partner, i.e., in a step family (Note 11).

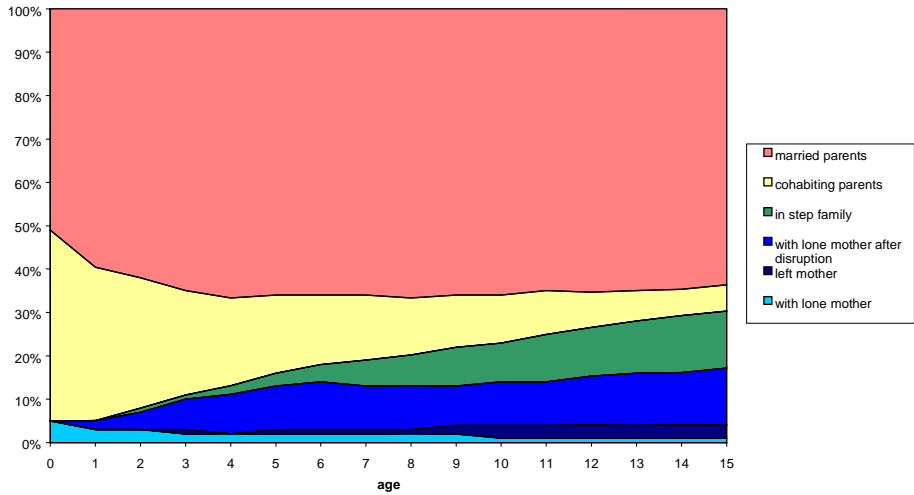
Table 45 reveals that, on the average, children in Sweden more often live with a lone mother than children in Hungary do. Nevertheless, 81 percent of reported childhood time in Sweden is spent in a family with the two biological parents, and almost two thirds of all time is spent in a marital family with both parents.

**Table 45:** *Percent of time spent in different family types at ages 0-14 years*

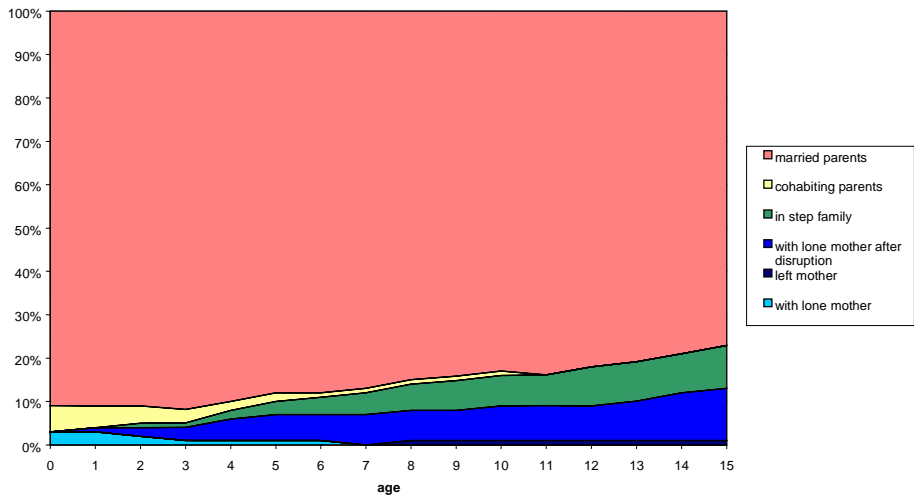
	<b>Sweden (1987-93)</b>	<b>Hungary (1988-93)</b>
Time with lone mother, from birth	2	1
Time with lone mother, after disruption	9	6
Time after leaving mother	2	0
==> Time with lone/no parent	12	8
Time with both parents in consensual union	17	2
Time with both parents in marriage	64	86
==> Time with both parents	81	87
Time in step union, with mother	6	5

The following diagrams show how these experiences are distributed at the different ages in the childhood period. They show, for example, that the experience of living in a family with the two parents in a consensual union is mainly concentrated to pre-school ages, while the experience of living with a lone mother or in a stepfamily is more concentrated to higher childhood ages.

**Figure 5:** Distribution of Swedish children, by family type, ages 0-15 years



**Figure 6:** Distribution of Hungarian children, by family type, ages 0-15 years



## 9. Life tables for other countries

A complete presentation with full tabulations for Sweden, Norway, Finland, France, the USA, Austria, Germany (East and West Germany separately), Flanders, Italy, Spain, the Czech Republic, Hungary, Slovenia, Latvia, Lithuania, and Poland is given in Appendix 2 of this study. It contains tables of exactly the same kind as presented in Sections 5-8, i.e., it provides 45 different sets of tabulations. Each set of tables is presented with one sub-set for the various Western European countries of our study and the USA, and another sub-set for the Eastern European countries that participated in the FFS. Our Tables 1-16 are calculated for men and for women, separately, so in these cases we also provide separate sub-sets of tabulations for the two sexes.

In addition, we offer our whole set of life tables in the form of a number of Excel files that the user is allowed to download and manipulate further, provided due reference is given to the journal *Demographic Research* and to the authors of this article. The tabulations can be downloaded here or from the HTML start-up page of this article:

<a href="#">Table 1</a>	<a href="#">Experience of nest-leaving</a>
<a href="#">Tables 2-7</a>	<a href="#">Experience of union formation of men and women</a>
<a href="#">Table 8</a>	<a href="#">Experience of becoming a parent</a>
<a href="#">Tables 9-11</a>	<a href="#">Experience of the combination of being a parent and being in different union statuses</a>
<a href="#">Tables 12-16</a>	<a href="#">Experience of specific contexts of family-formation/childbearing events</a>
<a href="#">Tables 17-18</a>	<a href="#">Childless couples: Experience of childbearing or separation</a>
<a href="#">Tables 19-23</a>	<a href="#">Consensual unions: Experience of marriage formation or separation</a>
<a href="#">Tables 24-28</a>	<a href="#">Couples' experience of union disruption</a>
<a href="#">Table 29</a>	<a href="#">Percent of time spent in different family types at ages 15-39</a>

<a href="#">Table 30</a>	<a href="#">Relative distribution of births by family type</a>
<a href="#">Tables 31-35</a>	<a href="#">Children’s experience of family disruption</a>
<a href="#">Tables 36-39</a>	<a href="#">Children’s experience of family formation</a>
<a href="#">Tables 40-42</a>	<a href="#">Competing-risks model for children born in consensual union</a>
<a href="#">Tables 43-44</a>	<a href="#">Children’s experience of family reconstitution</a>
<a href="#">Table 45</a>	<a href="#">Percent of time spent in different family types at ages 0-14</a>

## 10. Other possible measures ...

Evidently, it is possible to think of yet further life-table computations that capture other aspects of family dynamics of men, women, and children. Some such measures have already been used in the demographic literature. We will be content to briefly mention a few examples.

- Time spent in parenthood can be described in more detail. King (1999) does so for the USA. She differentiates between time as a biological parent and time in social parenthood, and she accounts for actual living arrangements of parents and their children.
- Step-family experience can be modeled in some detail, with separate models for men, women, and children, but our data sets are mostly too tiny for an appropriate life-table description of such matters.
- A stronger focus can be put on union order and birth order, for example, in describing to what extent various demographic events occur in a first or in a later union and to what extent people experience a higher-order union. Kiernan (1999a,b) pays attention to matters of this kind.



## **11. Further descriptions**

It is our hope that our system of demographic description can be applied also to other data sources that cover more countries and more recent calendar periods. It would, for example, be interesting to apply our system to data from the United Kingdom and further Anglo-Saxon countries in order to examine to what extent the demographic behavior in the USA resembles that of some other developed countries. In addition, our coverage of the family-demographic situation in Eastern and Central Europe is far from complete. We have, for example, no corresponding information on the demographic behavior in Russia. In addition, much of the now available data from countries of the former Soviet Bloc refers to the period just around the political and economical turnarounds in these countries. Evidently, there is a need to gather more updated information on the family-demographic affairs in a wide range of European countries, including countries in Western Europe. It is our hope that more fresh data sources with information on demographic life histories of men and women in Europe indeed will be available to researchers in a not too distant future (Note 12). The information from such sources could then be related to the already existing information in the present database of life-table descriptions.

## **12. Acknowledgements**

We are grateful to Jan M. Hoem for valuable advice during the work with this project and to discussions with him, Larry Bumpass, Ron Lesthaeghe, and Kathleen Kiernan during a working meeting on this project in Brussels on 27 May 2000. Many of the life-table measures we have used in our presentation were first suggested to us by Larry Bumpass. We thank the Advisory Group of the European Fertility and Family Surveys (FFS) program of comparative research for its permission, granted under identification number 75, to use the original FFS data for this study. In addition, we are grateful to the Stockholm University Demography Unit for its permission to use their cleaned version of the Swedish FFS. Finally, we thank Friederike Seichter for practical assistance in putting our tables together and a number of anonymous referees for many helpful comments on this manuscript.

## Notes

1. Any analysis of the dynamics in unions of durations above 15 years will be based only on the behavior of individuals who formed their union when being very young – since respondents were mostly younger than 40 years at the time the data were collected (see Table A). This results in tiny amounts of data at these particular durations and, perhaps more problematic, that they only represent the behavior of a selected group of people. As a consequence, we decide not to try following any union beyond its 15<sup>th</sup> birthday. For a previous version of our tabulations where our Tables 24-28 also covered durations up to 20 years after union formation, see Andersson and Philipov (2001). The same limitations hold for our study of the family-demographic experience of children. In countries that did not include a sufficient number of female respondents above age 40, we derive our information on teen-age children from women who became mothers when being relatively young.
2. The Belgian FFS only covers the Flemish-speaking parts of the country.
3. We have not made calculations on existing data from Switzerland, Estonia, or overseas New Zealand and Canada. In the future, we hope to be able to apply our system of description also to data from these countries and to similar survey data from Great Britain.
4. The FFS of Sweden in 1992/93 was directed to men born in 1949, 1959, and 1964, and to women born in 1949, 1954, 1959, 1964, and 1969. That of Norway in 1988/89 was directed to men born in 1945 and 1960, and to women born in 1945, 1950, 1955, 1960, 1965, and 1968.
5. The oldest respondents of the East German sample were 36 years old in 1989. This has consequences for the calculation of several of our life tables since we have no observations at the highest age interval of our Tables 1-16. In Table 29, we cannot calculate a summary measure of the time that men and women in East Germany typically spent in different family types at ages 15-39.
6. As an example, a person who exits from a union while still being childless can never have a first birth in a first union. Our Table 13 depicts the cumulative percent who ever “have a first birth ever in a first union”. In this particular case we keep the childless individuals who dissolve their first union in the age-specific “risk” population of individuals that has not yet experienced the decrement under study.
7. An alternative way of describing the various entries into parenthood would be to construct a set of multi-decrement life-tables where each individual simply is

followed until a first birth and then is assigned to its specific family context. Such a procedure would allow for a proper summary of, for example, Tables 14 and 16 into Table 8.

8. In principle, we can also construct a similar measure of the cumulative percent separated for married respondents with children. However, we refrain from such a presentation since, in this case, the time variable (the duration of the status as a parent in marriage) for Sweden mostly will depict the time since marriage formation (of parents) while for Hungary, it will describe mainly time since entry into parenthood (of married persons). The diversity in union-formation behavior between countries makes a cross-country comparison using such a measure rather dubious.
9. The diagrams are derived directly from the distribution of respondents over family states as reported by themselves for the calendar period we study. They are not based on any type of increment-decrement life-table analysis.
10. Here we use the term single as meaning “not living in a union”.
11. The union is defined as a stepfamily union only if it is formed later than 9 months after the birth of the child. In other cases, we assume that the union is formed by the two parents.
12. The plans of a new round of European family-demographic surveys within the framework of the so called “Gender and Generations Program” appear particularly promising. One feature of this program is also the inclusion of survey respondents above reproductive ages. Such an inclusion might prove to be beneficial for our purposes as well since it will remove several of the age- and duration-specific restrictions we now face when calculating our life-table measures.

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## Appendix 1: Data cleaning

In Table A1 of this Appendix, we report the number of excluded individuals, by type of error that we first found for a respondent, by country. In addition, we report the elements of the cleaning procedure that produced these exclusions:

1. If the month of birth of a respondent is missing, we impute the value of that month randomly. A missing month of interview is imputed to the end of the period when the actual survey was conducted.
2. Erroneous information on union formation: Excluded cases are reported in Table A1 under the heading *form.* (short for formation). We drop an individual if the number of unions is unknown or the year of a union formation is unknown. Examples of this kind occurred, for example, when we found individuals with no date of union formation but information that elsewhere said that the respondent indeed had entered a union (mainly in the data for Germany and Austria). In some countries, the number of reported unions for an individual sometimes seemed to be too high because of an incorrect summation of cohabitation and marriage pertaining to the same union (common in the data for Lithuania and Germany). In this situation, we keep the individual and use the number of unions as appearing in the sequence of reported events of union formation and union dissolution. We drop an individual if the month of a union formation is unknown and a birth is reported in the same year, since we need to know in what order such events have occurred. However, if there is no other event reported in the same year, we impute the month to a position in the middle of the year (common in the data for Austria, for dates of first cohabitation). If the union is dissolved in the same year as it is being formed, we impute a missing month of union formation to a lower value than that of the dissolution. If a previous union is dissolved in the same year, we impute the month to a higher value than that of the dissolution. If a marriage occurs in the same year and we have no month of union formation, we assume that it begins as a direct marriage, i.e., at marriage formation.
3. Erroneous information on union dissolution: Excluded cases are reported in Table A1 under the heading *disr.* (for disruption). We drop an individual if the year of a reported dissolution is unknown or if the date of dissolution is lower than the date of the formation of the same union. If a date of union dissolution is higher than that of the formation of a subsequent union, we instead change the date to be equal to the latter one. Missing months of union dissolution are handled in the same way as we handle missing months of union formation.

4. Erroneous information on childbearing: Excluded cases are reported in Table A1 under the heading *childb.* We drop an individual if the year and/or the month of the birth of a child (or the adoption of an adopted child) is unknown.

Table A1 first gives the *initial* number of respondents from each country (for Poland and the Czech Republic, these numbers only cover female respondents). The following three columns give the number of exclusions from errors of the types we reported above. A column marked *misc.* (for miscellaneous) reports additional omissions of individuals due to various other types of errors. We proceed to report the total number of *deleted* cases by country, and the *percent* of deleted individuals of the initial number of respondents. The last columns give the *final* number of respondents in our analysis, also given for *men* and *women* separately.

**Table A1:** *Number of respondents and exclusions of respondents from our sample*

Country	initial	form.	disr.	childb.	misc.	deleted	percent	final	men	women
Austria	6120	243	32	155	2	432	7.1	5688	1428	4260
Flanders	5433	11	17	153	5	186	3.4	5247	2104	3143
Czech Rep.	1735	3	8	0	5	16	0.9	1719	--	1719
Finland	5825	12	25	139	17	193	3.3	5632	1592	4040
France	4885	0	1	37	2	40	0.8	4845	1915	2930
E Germany	4976	129	62	94	6	291	5.8	4685	1875	2810
W Germany	5036	292	56	79	3	430	8.5	4606	1863	2743
Hungary	5487	20	35	34	1	90	1.6	5397	1899	3498
Italy	6030	44	24	23	19	110	1.8	5920	1175	4745
Latvia	4200	5	8	218	9	240	5.7	3960	1338	2622
Lithuania	5000	70	57	0	1	128	2.6	4872	1948	2924
Norway	5562	57	19	1	1	78	1.4	5484	1515	3969
Poland	4211	2	0	44	0	46	1.1	4165	--	4165
Slovenia	4559	23	16	38	5	82	1.8	4477	1716	2761
Spain	6013	15	11	41	14	81	1.3	5932	1951	3981
Sweden	4984	--	--	--	503	503	10.1	4481	1495	2986
USA	10847	62	234	40	1	337	3.1	10510	--	10510

For our calculations of life tables of the process of leaving the parental home, we had to make a number of additional exclusions. These were made if we had no information on the year of leaving the parental home but knew that a respondent had left home. As usual, a missing month was imputed to a value at the middle of the year.

In our analyses of children's family dynamics, we also had to make additional exclusions that are not reported in Table A1. These refer to children who no longer lived with their mother but had no date given for their departure from the mother. The situation mainly appears in the data for Norway where dates of children's departures are not given. For Lithuania and Poland, we have no information at all on the residential situation of children, so we do not know if a child still lives with the mother at the time of interview. For these two countries, we simply assume that each reported child continues to live with its mother until the 15<sup>th</sup> birthday (which is the upper age limit of our life tables on the demographic experience of children). This is not a problematic assumption since the data we have for the other countries reveal that practically all children actually live with their mother until that age. Finally, in the data set for France, we cannot distinguish between the situation when a child dies from that when it stops living with its mother. We keep these children in our analysis but censor our observation at any event of that kind.

## **Appendix 2: Tables 1-45**

We derive the following number of life tables in our presentation:

Tables 1-16 and 29, for men and women in 17 countries:	578 tables,
Tables 17-28, for unions in 17 countries:	204 tables,
Tables 30-45, for children in 17 countries:	272 tables,
Total number of life tables:	1054.

[Link to Appendix 2 \(pp. 145-270\)](#)

(also available from the HTML start-up page of this article)